NAME OF ORGANISATION WEBSITE LINK MINISTRY/DEPT

#### INDIAN OIL CORPORATION LIMITED https://iocl.com MoPNG

Available at "Indianoil for Suppliers/Future procurement plan

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	Refineries									
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accounting Unit	Estimat ed Value of procure ment in Rs/Cror es					
	Vessels/Drums/Tanks		1	Nos.	43.95					
	Pumps		48	Nos.	42.22					
	Reactors		Lot	3.00.	10.00					
	Column/Column Internals / Column Modification		Lot		268.26					
	Heat Ex/Air coolers/Fin Fan Coolers		30	Nos.	250.16					
	Filters		22	Nos.	32.08					
	Instrumentation items (DCS, PLC, Analyser, sensors, Flowmeter, Transmitter etc.)		75	Nos.	132 21					
	Instrument Cables		Lot		5.00					
	Electrical Items (Transformer, Switchboard,Switch gears, HV/MV Boards,Motors,Hoist,PFIC Panel,VFD,Genset)		Lot		210.46					
	Electrical Cables		Lot		3.6 0					
	Compressors/Blowers/ Fans	PSA Off Gas Compr./ PA Compr.	Lot		137.21					
	Heaters & Stacks		Lot		120.02					
	Bulk (Pipe/ Fittings/ Flanges/Valve)		Lot		388 96					
	Package Items(HVAC,ETP,Refiger ation,Cooling Tower,DI Guard,Chlorine Injection, Chemical Injection,Side Stream Filter,Ehylene BOG, TEG Barelling,Flare, Communication Mgmt Sytem, Nitrogen Cooling System, Control Monitoring System, Ambience Air Monitoring system,PCK metering Skid, Cathodic Protectin System, FDAS system, CCTV,Custody Transfer Metering Skid,Clean Agent System)		50	Pkg	485 92					
	Fire Fighting system/ equipment/package, Foam Concentrate, Manual & Remote Operated High Volume Longe Range Monitor with Accessories		Lot		50					
	Incinerator & Instr. Components		Lot		40					
	Mech items :EOT Crane,Forklift, Weigh Bridge,Industrial Lift,Belt & Screw conveyors/Dock leveller		70	Nos.	57.00					
	Lab Equipment		Lot		20					
	Spare Components (Compressor/ Pumps/Feed Coalescer)		lot		13.45					
	Vessels/Drums/Tanks		1	Nos.	43.95					
	Pumps		48	Nos.	42.22					

Reactors  Column/Column Internals / Column  Modification  Heat Ex/Air coolers/Fin Fan Coolers  Filters  Energy Dispersive X Ray Fluorescence (EDXRF) Analyzer  (ECX RIC CON CONTROL CO	s.	10.00 268.26 250.16 32.08
Modification  Heat Ex/Air coolers/Fin Fan Coolers  Filters  Energy Dispersive X Ray Fluorescence (EDXRF) Analyzer  Lot  30 Nos 22 Nos	s.	250.16
Heat Ex/Air coolers/Fin Fan Coolers  Filters  Energy Dispersive X Ray Fluorescence (EDXRF) Analyzer  Modification 30 Nos 22 Nos 1 Nos	s.	250.16
Filters 22 Nos Energy Dispersive X Ray Fluorescence (EDXRF) Analyzer 1 Nos	s.	
Energy Dispersive X Ray Fluorescence (EDXRF) Analyzer 1 No:		32.08
(EDXRF) Analyzer		02.00
That a manufaction the man (DCC DLC	S	0.5
Instrumentation items (DCS, PLC, Analyser, sensors, Flowmeter, Transmitter etc.)  75 Nos	S.	132.21
Instrument Cables Lot		5.00
Electrical Items (Transformer, Switchboard, Switch gears, HV/MV Boards, Motors, Hoist, PFIC Panel, VFD, Genset)  Lot		210.46
Electrical Cables Lot		3.60
Compressors/Blowers/ PSA Off Gas Compr./ PA		137.21
Lot		120.
Heaters & Stacks		02 388.
Bulk (Pipe/ Fittings/ Flanges/Valve)		388. 96
Catalyst Mixers and Pre-contacting Pot		5.00
Specialized Consultancy (Ethylene Dichloride/ Vinyl chloride Monomer unit under PVC Project Vadodara)  Lot		184
Specialized Consultancy (PVC Unit Vadodara)		126
Engaging Process Licensors - Basic design and engineering package -ERU		63
Engaging Process licensor (Supply of License, BDEP for Iso Propyl Alcohol Unit)		83
Nucleonic Level measurements system 12 No.	S	4
Purification Packages 1 Lot		80
Catalyst Support Grid along with support beams for DHDT Reactor Internals		25
Specialized technical services - Coke drum Inspection	t	0.8
Procurement Projected - For Repair & Maintenance of Refineries		
Sl. No Description of item  Broad specification Parameters  Quantity Unit	nting	Estimated Value of procurem ent in Rs/Cror es
1 Pump Spares	Lot	<b>5</b> 2
2 Mechanical Seal Spares	Lot	61
3 Bearings	Lot	5
4 Turbine Spares	Lot	125
5 Steam Engine Spares	Lot	1
6 Furnace Spares	Lot	15
	Lot	65
7 Compressor Spares		
	Lot	7
7 Compressor Spares	Lot Lot	7 2
7 Compressor Spares 8 Fan & Blower Spares		
7 Compressor Spares 8 Fan & Blower Spares 9 Agitator & Mixer Spares	Lot	2
7 Compressor Spares 8 Fan & Blower Spares 9 Agitator & Mixer Spares 10 ETP,LPG Plant Equipment Spares	Lot Lot	2 13
7 Compressor Spares 8 Fan & Blower Spares 9 Agitator & Mixer Spares 10 ETP,LPG Plant Equipment Spares 11 Air Conditioner Spares	Lot Lot Lot	2 13 2

15	Gear Box Spares			Lot	10
16	Motor Spares			Lot	4
17	Transformer, Battery, Switch Gear, Cable, Lamp etc. Spares			Lot	86
18		Liquid oxidation Catalyst for spent caustic regeneration	1.5	MT	2.18
19		Anti Oxidant (AO 1010) Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxy phenyl) propionate)	980	MT	40.15
20		Anti Oxidant AO 168/ AO9	1565	MT	42
21		A01076 (Octadecyl β – (3,5- di- tert -butyl-4-hydroxy phenyl)- propionate	110	MT	4.57
22		ATF Merox Catalyst - Pre impregnated activated charcoal	36	M3	0.81
23		Benzene hydrogenation catalyst for ISOM unit	2.1	MT	2.55
24		CAB catalyst	18	MT	3.13
25		CAB-2 catalyst (Blend of vanadium oxytrichloride & titanium tetrachloride 50/50)	35	MT	5.51
26		tetracinoride 50/50)			
26		Carbon Monoxide (CO) promoter catalyst additive for FCC Unit	16	MT	5.87
27		Catalyst for DCU LPG Merox Unit	547	L	0.28
28		Hindered amine light stabilizer(HALS) - Chimassorb 944	9	MT	0.93
29		Claus Catalyst (Al based)	151.2	M3	1.45
30		Claus Catalyst charge for Sulphur Recovery Unit (SRU)	22	M3	0.71
31		Chloride guard adsorbent for Continuous Catalytic Reforming Unit (CCRU) stabilizer feed	30.5	MT	0.9
32		2-Hydroxy-4-n- octoxybenzophenone (Cyasorb 531/ UV-1)	6	MT	0.75
33		Cyclo-Hexyl Methyl Methoxysilane (DONOR C)	33	MT	3.52
34		Di-ICyclo-Pentyl-Di- Methoxy-Silane (DONOR D)	3	MT	1.21
35		Slip additives (Erucamide )	125	MT	5.61
36		Ethylene drying and CO2 removal bed (Adsorbant)	8	МТ	0.37
37		Ethylene drying and CO2 removal bed (Foxed) for PP Unit	3	MT	0.43
38		Fluidized Catalytic Cracking Catalyst	4435	MT	153.25
39		Grease (VASELINE)	27	MT	0.72
40		Hydrotreating and Hydrocracking catalyst for	320	MT	80.25

		Hydrocracking unit			
41		Hydrotreating Catalyst for DHDT unit	478	MT	80.4
42		ISOM catalyst	24	MT	35
43	Chemicals, Catalyst & additives	Liquid oxidation Catalyst for spent caustic regeneration	1.59	MT	2.18
44		Low temp. hydrogenation catalyst (Tail Gas Treatment Unit)	21.57	МТ	1.77
45		Molecular sieves-desiccant (sodium-potassium-alumino silicate)	47.6	МТ	1.25
46		Optical brightener	1	MT	0.62
47		PEPQ (Phosphorous trichloride, reaction products with 1,1-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol) (secondary antioxidant)	186	МТ	19.80
48		Peroxide-101 (2, 5 Dimethyl-2,5-di (tert-butyl- peroxy) hexane)	140	МТ	15
49		PG/Pelargonic acid/ C8-C10 fatty acid	330	MT	9.5
50		PP Catalyst. A composition of Magnesium Chloride and 1,2 Benzene dicarboxylic acid,	7.5	МТ	24.20
51		PPA (Polymer Processing Additive)	40	MT	5.29
52		Propylene drying and CO2 removal bed for PP unit (Fixed bed)	9	МТ	0.24
53		Silica gel-desiccant (Compound of Silicon dioxide)	187	MT	4.30
54		T Fuel & U-Fuel for analysis of Cetane number	3690	Ltr	1.003
55		UV stabilizer 622	150	MT	8.80
56		ZN-180M (Avant CATALYST) or equivalent	240	Kg	0.75
57 58		ZSM-5 catalyst  Primary Reference Fuel	100 2840	MT Kg	8.74 0.44
59		(PRF) {ISO-Octane & n heptane} ATF (Aviation Turbine fuel) Merox catalyst – Pre impregnated activated charcoal	36	M3	0.81
60		DSTDP (distearyl thiodipropionate) - acts as a secondary antioxidant for PP polymers.	100	МТ	3.72
61		Speciality Grease - Mixture of higher paraffin hydrocarbon used as catalyst protection in Spheripol PP technology for production of Polypropylene.	15	МТ	0.40
62		Magnesium Aluminium Hydroxide Carbonate Hydrate (DHT 4A/Hycite 713) -used in reaction for	100	МТ	2.22

	I	T .,		1	1
		acid scavenging in polymer			
		production and processing			
		Systems.			
63		Alkyl Amine Ethoxylate (	107	MT	5.58
		ATMER 163 ) - for neutralization of		IMI I	
		Catalyst & Co catalyst and			
		works as anti- static agent.			
		Anitoxidant A0 3114(1,3,5-			
64		Tris(3,5-di-tert-butyl-4-	28		1.33
		hydroxy benzyl)-s-triazine-			
		2,4,6-(1H,3H,5H)trione) -		MT	
		specialized vis- breaking			
		chemical used for speci fic			
		PP grade			
		Non-Aromatic catalyst batch			
65		mineral oil (MINERAL OIL ) -	70		1.45
		used for		MT	
		diluting Donor in order to			
		have better accuracy of the			
		flow measure and also used			
		for flushi ng in TEAL area.			
		HDPE consumable	2		24.60
66		polymerization Catalyst -	8	MT	21.60
		used for		MT	
		polymerization reaction for			
		production of specific grade			
		of High density polyethylene			
	1	from Ethylene			5.70
67		Antioxidant (A0-1330) -	52		5.70
0/		prevents polymer from	52	MT	
		degradation caused by		141 1	
		exposure to heat, ultraviolet radiation (UV) and			
		mechanical shear			
		Desiccant for ethylene guard			
		bed (Fixed bed for ethylene			
68		purification) - used for	63		3.35
		removal of Carbon			
		monoxide, carbon dioxide,		MT	
		moisture from Ethylene feed			
		in Swing unit to Ultra low			
		levels.			
		ST65692 (Biphenyl) -			
69		approved additive Packages	60		1.20
0,		required for manufacturing	00	MT	1.20
		of Servo Duotherm S required		1.11	
		at Panipat Refinery			
7.0	1	Mixed Butylated Phenol	0.7.0		4.55
70		Antioxidant (ST4064) - used	87.3	MT	1.66
		in blending			
		in many lubricants			
	1	Hydrogenated Terphenyl			
71		(ST58606) -approved additive	304		9.09
/1		Packages required for	304	MT	9.09
		manufacturing of		1*1 1	
		Servotherm SHT 32			
		required by			
		IOCL Refinery.			
72		TEAL	21	MT	0.88
, 2		1200	21	1.11	0.00
=-		Cast Air Preheater Module /			
73		Cast & Glass Air Preheater	1	No	1.18
	Mechanical	Modules /			
	Stores	Glass Air Pre-Heater			
	1 000100	Grass rin 110 meater		I	I

104 C 105 C	Chemicals, Catalyst & additives Procure	FCC Catalyst Iso octane DMDS ment Projected _ Capex and Report Maint - Pipelines	3250 80 200	MT MT MT	108 3 15
104 C 105 C	Chemicals, Catalyst & additives Chemicals, Catalyst & additives Chemicals, Catalyst & additives	FCC Catalyst Iso octane DMDS	3250 80 200	MT MT	108
104 C 105 C	Chemicals, Catalyst & additives Chemicals, Catalyst & additives	FCC Catalyst Iso octane	3250 80	MT MT	108
104 C	hemicals, Catalyst & additives	FCC Catalyst	3250	MT	108
400 10		Methanol	20000	MT	75
	hemicals, Catalyst & additives	ISOM - Bensat / Penex catalyst	113	MT	154
101 C	hemicals, Catalyst & additives	Catalyst protecting agent (perchloroethylene)	1335	MT	25
100 C	hemicals, Catalyst & additives	CRU / CCRU Reformer Catalyst	41	МТ	64
99 C	hemicals, Catalyst & additives	Hydro treating catalysts (Regeneration & rejuvenation)	1100	MT	146
	hemicals, Catalyst & additives	PTA Hydrogenation catalyst	24	МТ	16
	Themicals, Catalyst & additives	Grading Catalyst	593	M3	78
	Themicals, Catalyst & additives	Silica MB	220	MT	6.40
	Chemicals, Catalyst & additives	Mono 2 Ethyl Hexyl Amine	18	MT	0.83
94 C	hemicals, Catalyst & additives	Nucleating Agent (HPNA)	50	MT	9.5
	ervice	Assay analysis of Fresh & Spent catalyst	2	No.	0.71
	Chemicals, Catalyst & additives Chemicals, Catalyst & additives	Poly Propylene Catalyst PD/ 2,4 Pentane dione	7.5 220	MT MT	27.45 12.11
	Chemicals, Catalyst & additives	Methanol	14400	MT	69.60
	Chemicals, Catalyst & additives	Mineral Oil (White Oil)	205	MT	6.22
	hemicals, Catalyst & additives	ISO-Octane	102	MT	2.55
	hemicals, Catalyst & additives	Hydro treating catalyst for DHDS Unit	56	MT	6.66
	hemicals, Catalyst & additives	Liquid oxidation catalyst for FCC Indmax Unit	555	Kg	0.83
		(Activated Alumina impregnated with Cobalt and Molybdenum Oxides).			
	Chemicals, Catalyst & additives	Hydrogenation Catalyst	52.3	M3	2.79
84 M	Mechanical Stores	KETONE) Radiant Coils	2	Set	38.26
83 C	hemicals, Catalyst & additives	MIBK (METHYL ISOBUTYL	300	MT	5.58
	hemicals, Catalyst & additives	RM 68 Master batch	110	MT	10.5
	hemicals, Catalyst & additives	DMDS	665	MT	24.05
	hemicals, Catalyst & additives	Base FCC catalyst for INDMAX Unit.	1170	MT	34.5
	hemicals, Catalyst & additives	GMS-90	250	MT	3.3
	hemicals, Catalyst & additives	CJ (Di- ethyl aluminum ethoxide)	34.8	МТ	3.12
	hemicals, Catalyst & additives	CD (Di- ethyl aluminum chloride)	34.8	MT	1.33
76		Rotary Tight Shut off Valve	4	No	0.60
75		Hydrogen Tubular Reformer Catalyst Tubes	36	No	3.61
74		Cutter Blades of Extruder	1600	No	2.19

Sl. No	Description of item	Broad specification Parameters	Quantity	Accounting Unit	Estimat ed Value of procure ment in Rs/Cror es
	Strainer (Nos)			Nos.	
	Transfer Pump (Nos)			Nos.	
	ACDB Panel (Nos)			Nos.	
	API 6D Ball Valves (Nos)			Nos.	

API 6D Valves (Nos)	Nos.	
Ball Valve (Nos)	Nos.	
Basket Strainer (Nos)	Nos.	
Control valve (Nos)	Nos.	
EEE (Nos)	Nos.	
Emergency evacuation equipment (Nos)	Nos.	
Engine Spares	Lot	15.5 0
ER Probe(Nos)	Nos.	0
F/F PUMP, Jockey pumps, water	Nos.	
filling pumps(Nos)		
Fire Fighting Pipes (km)	Km	
Fire Fighting Pump (Nos)	Nos.	
Flow Tee (Nos)	Nos.	
Globe Valve (Nos)	Nos.	
Heavy duty access Mats	Lot	
High Mast(Nos)	Nos.	
HOT crane (Nos)	Nos.	
HT Capacitor Panel(Nos)	Nos.	
HT Panel(Nos)	Nos.	
HT/LT/Control cables(km)	Km	
Instrumentation, Control & SCADA	Nos.	
System (Nos)		
Insulating coupling (Nos)	Nos.	
Jockey pump (Nos)	Nos.	
LT DG(Nos)	Nos.	
LT Panel(Nos)	Nos.	
Mainline pumping Unit (Nos)	Nos.	
Marine Hoses for SPM	Nos.	30.0
Mechanical Pipe End connector+		
Standard/Long seal Leak	Nos.	3.95
clamps+ Encapsulating Leak Clamps		
Metering skid assembly (consisiting		
of Filtration, Metering and Pressure		
Reduction units) of various sizes for		
providing connectivity to CGD Entities from Gas pipelines and	Nos.	
augmentation of existing facilities		
(Nos)		
Metering Skid Ph-III(Nos)	Nos.	
Metering Skid (Nos)	Nos.	
Misc. fire fighting equipment (Nos)	Nos.	
NRPL Mainline pumping unit	Nos.	70.0
Replacement	1105.	70.0
Other Marine Spares	Nos.	9.32
pipe fitting(Nos)	Nos.	7.52
Pipe (km)	Nos.	
Remote operated Valve (Nos)	Nos.	
Scrapper Barrel	Nos.	
Scrapper Barrer Separator Filter (Nos)	Nos.	
Small size (<4") misc. valve (Nos)	Nos.	
SRV (Nos)	Nos.	
Station pipes(km)	Nos.	
Steel Pipe (KM)	Km	
Steel Plate (MT)	Nos.	
sump pump and tank (Nos)	Nos.	
Swing check valve (Nos)	Nos.	
Telecom System (comprising of DC		
power, Networking system, CCTV system, Telephone system, OFC,	Nos.	

Transformer(Nos)		HDPE, etc.)(Nos)										
Valinar SPM Replacement project   1.00		Transformer(Nos)							No	S		
Buoy & accessaries   Nos.   Nos.		` `							110	J.		
2 Concrete Costed Pipe												
Valves		1							No	S.		
VALVES of all types(Nos)   Nos.   Nos.									Lo	t	4.00	
VFD (Nos)									_			
Cutter Blades of Extruder									_			
Cutter Blades of Extruder   1200   Nos   2.66		Load Pin Assembly					20		No	S	7.16	
Procurement Projected   Marketing - LPG Group   Stationary   Station		Cutter Blades of Extruder					1200	)	No	S	2.66	
Description of item		Crude Oil Blending Unit					2		No	S	38	
St.   Description of item		Procur	emen	t Projected _ Mark	eting -	LPG	Grou	ıp				
1		Description of item					Q	uantity	A	_	ed Value of procure ent in Rs/Cro	e m
Air Compressor	1	LPG Pump						5	No	S.	3.7	
Air Compressor   2 Nos.   0.61     Air Dryer   2 Nos.   0.35     DG Set   1 Nos.   0.38     Fire Engine   3 Nos.   0.52     Valve change without Evacuation   3 Nos.   0.8     Machine   16 Nos.   0.8     LPG Loading arm   16 Nos.   0.5     Carousel   1 Nos.   3.39     Computers   0 Nos.   0 Nos.   0     Additive dosing machines   0 Nos.   0 Nos.   0     Carousal Cards in Nos.   400 Nos.   2.80     Mech Seals (Refurbishing) Nos.for LPG   100 Nos.   2.80     Mech Seals (Refurbishing) Nos.for LPG   100 Nos.   3.00     Pump   Mech Seals (Refurbishing) Nos.for LPG   100 Nos.   2.20     Valves / Flanges / Gaskets / Spares in Nos.   3300 Nos.   8.25     Cables (Control / Power) in RMS   3300 Nos.   8.25     Cables (Control / Power) in RMS   33000 Nos.   2.20     Pressure / Temp   220 Nos.   2.20     Transmitters/Gauges in Nos.   3600 Nos.   5.40     Nos.   Conveyor Chain in RM   44000 Nos.   5.28     Air Ends of Screw Compressors   44 Nos.   2.20     Spares (Filters & Accessories) Air Comp in Nos.   1.38     LPG Vap Comp Seals / valves / Plates   330 Nos.   1.20     Lights and Fixtures / Bulbs / glands /   18 / Switches   12000 Nos.   1.20     Relays / Fuses   5500 Nos.   1.10     Printer Cartridges   5500 Nos.   1.10     Printer Cartridges   5500 Nos.   2.20     Structural steel for Conv / Misc Works in MT   24000 Nos.   2.20     Structural steel for Conv / Misc Works in MT   24000 Nos.   2.20     Structural steel for Conv / Misc Works in MT   2000 Nos.   1.71     Diesel / Fire Engine Spares / filters / glands   1.71     Diesel / Fire Engine Spares / filters / glands   1.72     Spares for Level gauges / transmitters   330 Nos.   3.3	2	*							No	S.		
DG Set		*							_			
Fire Engine   3   Nos.   0.52		*						2	No	S.	0.35	
Valve change without Evacuation   3   Nos.   0.8		DG Set							No	s.	0.38	
Machine   LPG Loading arm   16   Nos.   0.5		Fire Engine							No	S.	0.52	
LPG Loading arm								3	No	S.	0.8	
Carouse    1   Nos.   3.39												
Computers												
Additive dosing machines		1										
Carousal Cards in Nos.												
Mech Seals (Refurbishing) Nos.for LPG Pump									_		Ů	
Pump   Mech Seals New in Nos. for LPG Pump   25   Nos.   2.00     Valves / Flanges / Gaskets / Spares in Nos.   330   Nos.   8.25     Nos.   Cables (Control / Power) in RMs   33000   Nos.   0.50     Pressure / Temp												
Valves / Flanges / Gaskets / Spares in Nos.   330   Nos.   8.25		Pump						100				
Nos.   Cables (Control / Power) in RMs   33000   Nos.   0.50									No	S.		
Pressure / Temp		1	s in					330	No	S.	8.25	
Transmitters/Gauges in Nos.		Cables (Control / Power) in RMs						33000	No	S.	0.50	
Fire Engine   DG   DC Batteries in Nos.   S.40		Pressure / Temp						220	No	S.	2.20	
Nos.   Conveyor Chain in RM   44000   Nos.   5.28		Transmitters/Gauges in Nos.										
Conveyor Chain in RM		· , ,						3600	No	S.	5.40	
Air Ends of Screw Compressors   44   Nos.   2.20								44000	No	S.	5.28	
Spares (Filters & Accessories) Air Comp in Nos.  LPG Vap Comp Seals / valves / Plates  Lights and Fixtures / Bulbs / glands / JBs / Switches  Relays / Fuses  Relays / Fuses  Sprockets / Cylinders / Shafts / wearing strips / Pneumatic tubing / connectors  Misc Spares /Car (sensors / connectors / cables etc)  TLD / TLF Spares  Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters  12000  Nos.  1.20  12000  Nos.  1.10  24000  Nos.  24000  Nos.  24000  Nos.  210  Nos.  2.10  210  Nos.  2.20  5504  Associated as a series of the Engine Spares / filters / glands  Spares for Level gauges / transmitters  330  Nos.												
LPG Vap Comp Seals / valves / Plates  Lights and Fixtures / Bulbs / glands / JBs / Switches  Relays / Fuses  Relays / Fuses  Sprockets / Cylinders / Shafts / Wearing strips / Pneumatic tubing / connectors  Misc Spares / Car (sensors / connectors / cables etc)  TLD / TLF Spares  Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters  330 Nos.  1.20  Nos.  1.20  Nos.  1.10  Printer Cartridges  650 Nos.  24000 Nos.  4.80  Value  1.20  Nos.  1.10  Nos.  24000 Nos.  4.80  Nos.  2.10  Nos.  2.10  Nos.  5.04		Spares (Filters & Accessories) Air										
Lights and Fixtures / Bulbs / glands / JBs / Switches  Relays / Fuses  Relays / Fuses  Printer Cartridges  Sprockets / Cylinders / Shafts / Wearing strips / Pneumatic tubing / Connectors  Misc Spares / Car (sensors / Connectors / Cables etc)  TLD / TLF Spares  Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters  12000 Nos.  1.20  Nos.  1.10  Poss.  1.10  Nos.  24000 Nos.  24000 Nos.  4.80  Value of the convector of												
JBs / Switches   Relays / Fuses   5500   Nos.   1.10     Printer Cartridges   650   Nos.   0.33     Sprockets / Cylinders / Shafts / wearing strips / Pneumatic tubing / connectors   24000   Nos.   4.80     Misc Spares / Car (sensors / connectors / cables etc)   210   Nos.   2.10     TLD / TLF Spares   880   Nos.   2.20     Structural steel for Conv / Misc Works in MT   Diesel / Fire Engine Spares / filters / glands   720   Nos.   5.04     Spares for Level gauges / transmitters   330   Nos.   3.3			es						No	S.	0.99	
Relays / Fuses 5500 Nos. 1.10 Printer Cartridges 650 Nos. 0.33 Sprockets / Cylinders / Shafts / 24000 Nos. 4.80 wearing strips / Pneumatic tubing / connectors Misc Spares / Car (sensors / 210 Nos. 2.10 connectors / cables etc) TLD / TLF Spares 880 Nos. 2.20 Structural steel for Conv / Misc Works in MT Diesel / Fire Engine Spares / filters / glands Spares for Level gauges / transmitters 330 Nos. 3.3						12000	0	Nos.		1.20		
Printer Cartridges  Sprockets / Cylinders / Shafts / wearing strips / Pneumatic tubing / connectors  Misc Spares /Car (sensors / connectors / cables etc)  TLD / TLF Spares  Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters  650 Nos. 0.33  4.80  Nos. 2210  Nos. 2.10  Nos. 2.20  Nos. 450 Nos. 1.71  720 Nos. 5.04										2		
Sprockets / Cylinders / Shafts / wearing strips / Pneumatic tubing / connectors Misc Spares /Car (sensors / connectors / cables etc)  TLD / TLF Spares Structural steel for Conv / Misc Works in MT Diesel / Fire Engine Spares / filters / glands Spares for Level gauges / transmitters  24000 Nos. 4.80  4.80  880 Nos. 2.10  880 Nos. 4.71  720 Nos. 5.04												
wearing strips / Pneumatic tubing / connectors  Misc Spares /Car (sensors / 210 Nos. 2.10 connectors / cables etc)  TLD / TLF Spares 880 Nos. 2.20 Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters 330 Nos. 3.3		ŭ										
Misc Spares /Car (sensors / connectors / cables etc)  TLD / TLF Spares  Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters  210 Nos. 2.10  Nos. 1.71  Pos. 2.10  Nos. 2.20  Nos. 1.71  Total Nos. 2.20  Nos. 3.3	W	vearing strips / Pneumatic tubing /			4	24000	U	Nos.		4.80		
TLD / TLF Spares 880 Nos. 2.20 Structural steel for Conv / Misc Works 450 Nos. 1.71 in MT Diesel / Fire Engine Spares / filters / 720 Nos. 5.04 glands Spares for Level gauges / transmitters 330 Nos. 3.3	M	lisc Spares /Car (sensors /				210	)	Nos.	$\top$	2.10		
Structural steel for Conv / Misc Works in MT  Diesel / Fire Engine Spares / filters / glands  Spares for Level gauges / transmitters 330 Nos. 1.71  3.3						000		Noc		2 20		
in MT Diesel / Fire Engine Spares / filters /												
glands Spares for Level gauges / transmitters 330 Nos. 3.3	ir	n MT										
	g	lands										
Fire / SCADA / GMS Panel Spares /   320 Nos. 1.6												
	F	ire / SCADA / GMS Panel Spares /				320		Nos.		1.6		

CCTV spares / modules   110   Nos.   1.65     Load cells for weigh bridges / weighing scales / carousals   2.75     Centering Arms of carousals   2500   Nos.   0.30     Content are a content and a content are a content	CCTV spares / modules   110   Nos.   Load cells for weigh bridges / weighing scales / carousals   2500   Nos.			T	1	T	1
Load cells for weigh bridges / weighing scales / carousals	Load cells for weigh bridges / weighing scales / Carousals   2500   Nos.		MIMIC / sensors / transmitter			<u> </u>	
weighing scales / carousals   2500   Nos.   0.30	Weighing scales / carousals   2500   Nos.						
Centering Arms of carousals	Centering Arms of carousals				1100	Nos.	2.75
Sl.   Description of item   Broad specification   Parameters   Gamma   Parameters   Campaigness	SI.   Description of item   Broad specification   Parameters   G300000   Nos.				2500	1.7	0.00
Sl.   Description of item   Broad specification   Parameters   Quantity   Accounting   Operation   O	Sl.   Description of item   Broad specification   Quantity   Accourage   Acc			CIPC C. II. I		Nos.	0.30
SI.   Description of item   Broad specification   Parameters   Counting   Unit   In Rs/Crores	No.   Parameters   Un		Pro		5 & P		
Replacement   19 Kg Cylinders (Including New & Replacement)   47.5 Kg Cylinders (Including New & Replacement)   47.5 Kg Cylinders (Including New & Replacement)   5 Kg Cylinders (Including New & Replacement)   47.5 Kg Cylinders (Including New & Replacement)   48.5 KG Cylinders (Including New & Replacement)   425 KG Cylinders   3000 Nos.   19.76	Replacement   19 Kg Cylinders (Including New & Replacement)		-		Quantity		of procurement
19 Kg Cylinders (Including New & Replacement)	19 Kg Cylinders (Including New & Replacement)				6300000	Nos.	803.02
47.5 Kg Cylinders (Including New & Replacement)	A7.5 Kg Cylinders (Including New & Replacement)	3	19 Kg Cylinders (Including New &		800000	Nos.	140.04
5 Kg Cylinders (Including New & Replacement)       1000000       Nos.       86.67         425 KG Cylinders       3000       Nos.       19.76         Pressure Regulators       3500000       Nos.       50.70         Self Closing Valve       20800000       Nos.       175.00         Procurement Projected Marketing - Lubes         Broad specification Parameters       Quantity       Lunit       Value of procurement in Rs/Crores         1 Synthetic base oil Poly alfa olefin 6 CST       520       MT       13.77         2 ST5014 (Lithium Hydroxide Monohydrate)       300       MT       18.99         3 ST56058 (PIB 1000)       2359       MT       26.47         4 Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)       228.5       MT       9.00         5 PIB of higher molecular wt.(ST       277       MT       4.42	5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders Pressure Regulators Self Closing Valve  Procurement Projected _ Marketing - Lubes  Procurement Projected _ Marketing - Lubes  Broad specification Parameters  Quantity  Synthetic base oil Poly alfa olefin 6 CST  Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  Fig. Procurement Projected _ Marketing - Lubes  Account Un  Quantity  Account Un  Account Un  Account Un  Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  Fig. PIB of higher molecular wt.(ST 56032/ST 56036) Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)  Procurement Projected _ Pipelines  Procurement Projected _ Pipelines  Account Un	5			50000	Nos.	19.26
Pressure Regulators Self Closing Valve  Procurement Projected Marketing - Lubes  Procurement Projected Marketing - Lubes  Broad specification Parameters  Quantity  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000) ST5016 (ST, PAO 100(ST 55580)  PIB of higher molecular wt.(ST)  Self Closing Valve  Broad specification Parameters  Quantity  Accounting Unit Value of Procurement in Rs/Crores  Strianted Value of Polyale Strimated Value of Procurement in Rs/Crores  Accounting Unit Value of Procurement Value of Polyale Strimated Value of Procurement In Rs/Crores  Strimated Value of Polyale Strimated Value of Value Of	Pressure Regulators Self Closing Valve  Procurement Projected _ Marketing - Lubes  Broad specification Parameters  Quantity  1 Synthetic base oil Poly alfa olefin 6 CST 2 ST5014 (Lithium Hydroxide Monohydrate) 3 ST56058 (PIB 1000) 4 Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580) 5 PIB of higher molecular wt.(ST 56032/ST 56036) 6 Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)  Procurement Projected _ Pipelines  Procurement Projected _ Pipelines  Broad specification  Nos.  Account Units  Account Units  Account Units  Procurement Projected _ Pipelines  Account Units  Accoun	_	5 Kg Cylinders (Including New &		1000000	Nos.	86.67
Self Closing Valve   20800000   Nos.   175.00	Self Closing Valve  Procurement Projected _ Marketing - Lubes  Broad specification Parameters  Quantity  1 Synthetic base oil Poly alfa olefin 6 CST  2 ST5014 (Lithium Hydroxide Monohydrate)  3 ST56058 (PIB 1000)  4 Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  5 PIB of higher molecular wt.(ST 56032/ST 56036)  6 Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)  Procurement Projected _ Pipelines  Procurement Projected _ Pipelines  Broad specification  Account MT		425 KG Cylinders		3000	Nos.	19.76
Procurement Projected Marketing - Lubes  Broad specification Parameters  Quantity  Quantity  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000)  ST56058 (PIB 1000)  ST56058 (PIB 1000)  Procurement Projected Marketing - Lubes  Accounting Value of Poly alfa of Poly alfa olefin 6 Parameters  ST500 MT  ST500 MT  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000)  ST560	Procurement Projected _ Marketing - Lubes    SI.   Description of item   Parameters   Quantity   Un		Pressure Regulators		3500000	Nos.	50.70
Broad specification   Quantity   Counting   Unit   Value of procurement in Rs/Crores	Sl. Description of item Parameters  Description of item Parameters  Quantity  Description of item Parameters  Quantity  MT  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000)  Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  PIB of higher molecular wt.(ST 56032/ST 56036)  Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)  Procurement Projected Pipelines  Procurement Projected Pipelines  Account United States of the Market States of t		Self Closing Valve		20800000	Nos.	175.00
Broad specification   Quantity   Unit   Value of procurement in Rs/Crores	Sl.   Description of item   Parameters   Quantity   University		Procure	ement Projected _ Marketin	g - Lubes		
1       Synthetic base oil Poly alfa olefin 6       520       MT       13.77         2       ST5014 (Lithium Hydroxide Monohydrate)       300       MT       18.99         3       ST56058 (PIB 1000)       2359       MT       26.47         4       Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)       228.5       MT       9.00         5       PIB of higher molecular wt.(ST       277       MT       4.42	1         Synthetic base oil Poly alfa olefin 6 CST         520         MT           2         ST5014 (Lithium Hydroxide Monohydrate)         300         MT           3         ST56058 (PIB 1000)         2359         MT           4         Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)         228.5         MT           5         PIB of higher molecular wt.(ST 56032/ST 56036)         277         MT           6         Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)         289.41         MT    Procurement Projected _Pipelines  Account the property of the	Sl.	Description of item	_	Quantity	_	Value of
CST	CST	No	_				in Rs/Crores
Monohydrate)       2359       MT       26.47         4 Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)       228.5       MT       9.00         5 PIB of higher molecular wt.(ST       277       MT       4.42	Monohydrate	1	ž –		520	МТ	13.77
3       ST56058 (PIB 1000)       2359       MT       26.47         4       Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)       228.5       MT       9.00         5       PIB of higher molecular wt.(ST       277       MT       4.42	3   ST56058 (PIB 1000)   2359   MT	2			300	МТ	18.99
CST, PAO 100(ST 55580)       277       MT       4.42         5 PIB of higher molecular wt.(ST       277       MT       4.42	CST, PAO 100(ST 55580)	3			2359	MT	26.47
5 PIB of higher molecular wt.(ST 277 MT 4.42	FIB of higher molecular wt.(ST 56032/ST 56036)  Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)  Procurement Projected _Pipelines  Broad specification  Account Un	4			228.5	MT	9.00
56032/ST 56036)	6 Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)  Procurement Projected _Pipelines  Broad specification  Account Un	5	PIB of higher molecular wt.(ST		277	МТ	4.42
Synthetic base oil Poly alfa olefin 4 289.41 MT 10.20	Broad specification Account Un		Synthetic base oil Poly alfa olefin 4		289.41	MT	10.28
	Broad specification Account Un						
	Broad specification Un		CST, PAO 40(ST 55578)				
Broad specification Unit of procurement	No.		CST, PAO 40(ST 55578)	urement Projected _Pipelin	es es		
Si. Description of item Parameters Quantity in Rs/Crores	1 Marine Hoses 60 Nos.	6 Sl.	CST, PAO 40(ST 55578)  Proce	Broad specification		Accounting Unit	Estimated Value of procurement in Rs/Crores

# FINANCIAL YEAR 2024 - 25 Capex Procurement Projected \_ Refineries

		Projected _ Refineries			
Sl. No.	Description of item	Broad specification Parameters	Quantit y	Accountin g Unit	Estimate d Value of procure ment in Rs/Crores
1	Vessels/Drums/Tanks		1	No s.	10
2	Pumps		5	No S.	4.76
3	Reactors		Lot	3.	2.88
4	Column/Column Internals / Column Modification		Lot		20
5	Heat Ex/Air coolers/Fin Fan Coolers		5	No s.	35.88
6	Instrumentation items (DCS, PLC, Analyser, sensors, Flowmeter, Transmitter etc.)		Lot		165.02
7	Electrical Items (Transformer, Switchboard,Switch gears, HV/MV Boards,Motors,Hoist,PFIC Panel,VFD,Genset)		Lot		272.26
8	Compressors/Blowers/ Fans	PSA Off Gas Compr./ PA Compr.	Lot		20
9	Heaters & Stacks		Lot		33.73
10	Bulk (Pipe/ Fittings/ Flanges/Valve)		Lot		436.4
11	Package Items(HVAC,ETP,Refiger ation,Cooling Tower,DI Guard,Chlorine Injection, Chemical Injection,Side Stream Filter,Ehylene BOG, TEG Barelling,Flare, Communication Mgmt Sytem, Nitrogen Cooling System, Control Monitoring System, Ambience Air Monitoring system,PCK metering Skid, Cathodic Protectin System, FDAS system, CCTV,Custody Transfer Metering Skid,Clean Agent System)		28	pk g	146.83
12	Fire Fighting system/ equipment/package, Foam Concentrate, Manual & Remote Operated High Volume Longe Range Monitor with Accessories		Lot		78.55
13	Incinerator & Instr. Components		Lot		50
14	Lab Equipment		Lot		165.71
15	CLARIANT OleMax 101 (8mm Spheres)		62588	Kgs	49.5
	Support Balls (Ceramic/Alumina) - 12 mm Size		5460	Kgs	
16	Treater Adsorbent		1	Lot	13.2
17	Chloride Guard Bed Adsorbent		1	Lot	0.72
18	Dryer treater Adsorbent		1	Lot	9.6

Procurement Projected - For Repair & Maintenance of Refineries

Sl. No.	Description of item	Broad specification Parameters	Quantit y	g Unit	Estimated Value of procurem ent in Rs/Crores
1	Pump Spares			Lot	-
2	Mechanical Seal Spares			Lot	
3	Bearings			Lot	
4	Turbine Spares			Lot	
5	Steam Engine Spares			Lot	1
6	Furnace Spares			Lot	
7	Compressor Spares			Lot	67
8	Fan & Blower Spares			Lot	
9	Agitator & Mixer Spares			Lot	
	ETP,LPG Plant Equipment Spares			Lot	13
	Air Conditioner Spares			Lot	3
	Heat Exchanger Spares			Lot	
	Column/ Reactor Spares			Lot	
	Pipe & Pipe Fittings			Lot	
	Gear Box Spares Motor Spares			Lot	
17	Radiant Coil for SRT-III and SRT-VI		1	Lot Lot	200
17	heaters			LOC	200
18	Transformer, Battery, Switch Gear, Cable, Lampetc. Spares			Lot	88
19	Slide Valve Actuator			Lot	10
20		Liquid oxidation Catalyst for spent caustic regeneration	1.5	МТ	2.18
21		Anti Oxidant (AO 1010) Pentaerythritol tetrakis(3-(3,5-di-tert-butyl-4-hydroxyphenyl)propionate)	980	МТ	42.16
22		Anti Oxidant AO 168/ AO9	1565	МТ	44.11
23		AO1076 (Octadecyl β – (3,5-di- tert - butyl-4-hydroxy phenyl)- propionate	110		4.80
24		ATF Merox Catalyst - Pre impregnated activated charcoal	36	M3	0.81
25		Benzene hydrogenation catalyst for ISOM unit	2.1	MT	2.55
26		CAB catalyst		MT	3.29
27		CAB-2 catalyst (Blend of vanadium oxytrichloride & titanium tetrachloride 50/50)	35	МТ	5.79
28		Carbon Monoxide (CO) promoter catalyst additive for FCC Unit	16	MT	5.87
29		Catalyst for DCU LPG Merox Unit	547		0.28
30		Hindered amine light stabilizer(HALS) - Chimassorb 944		MT	0.93
31		Claus Catalyst (Al based)	151.2	M3	1.45
32		Claus Catalyst charge for Sulphur Recovery Unit (SRU)		M3	0.71
33		Chloride guard adsorbent for Continuous Catalytic Reforming Unit (CCRU) stabilizer feed	30.5	МТ	0.9
34		2-Hydroxy-4-n-octoxybenzophenone (Cyasorb 531/ UV-1)	6	MT	0.75
35		Cyclo-Hexyl Methyl Methoxysilane (DONOR C)	33	MT	3.69
36		Di-ICyclo-Pentyl-Di-Methoxy-Silane (DONOR D)	3	MT	1.21

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Chemicals, Catalyst & additives

		Г	1
Slip additives (Erucamide )	125		5.89
Ethylene drying and CO2 removal bed (Adsorbant)	8	MT	0.37
Ethylene drying and CO2 removal bed	3	MT	0.43
(Foxed) for PP Unit	3	141 1	0.43
Fluidized Catalytic Cracking Catalyst	4435	MT	160.91
Grease (VASELINE)		MT	0.72
Hydrotreating and Hydrocracking	320	MT	80.25
catalyst for Hydrocracking unit			
Hydrotreating Catalyst for DHDT unit	478		80.4
ISOM catalyst	1.59	MT	35 2.18
Liquid oxidation Catalyst for spent caustic regeneration	1.59	IVI I	2.18
			4.55
Low temp. hydrogenation catalyst (Tail Gas Treatment Unit)	21.57	MT	1.77
			105
Molecular sieves-desiccant (sodium-	47.6	MT	1.25
potassium-alumino silicate) Optical brightener		MT	0.62
-	1	1/1 1	0.02
PEPQ			40.00
(Phosphorous trichloride, reaction products with 1,1-biphenyl and 2,4-			19.80
bis(1,1-dimethylethyl)phenol)	186	MT	
(secondary antioxidant)			
Peroxide-101 (2, 5 Dimethyl-2,5-di			8.91
(tert-butyl-peroxy) henaxe)	92	MT	0.71
PG/Pelargonic acid/ C8-C10 fatty acid	330	MT	9.50
PP Catalyst.			
A composition of Magnesium Chloride	7.5		24.20
and 1,2 Benzenedicarboxylic acid,	7.5		24.20
1,2 Bis[2-cholro-1-		MT	
(chloromethyle)ethyl] ester.	40	MT	F 20
PPA (Polymer Processing Additive)		IVI I	5.29
Propylene drying and CO2 removal bed	9	МТ	0.24
for PP unit (Fixed bed)	107	MT	4.20
Silica gel-desiccant (Compound of Silicon dioxide)	187	IVI I	4.30
T Fuel & U-Fuel for analysis of Cetane	3690	Ltr	1.008
number	5070		1.000
UV stabilizer 622	150	MT	8.80
ZN-180M (Avant CATALYST) or	240	Kg	0.75
equivalent			
ZSM-5 catalyst		MT	8.74
Primary Reference Fuel (PRF) {ISO-	2840	Kg	0.46
Octane & n heptane} ATF (Aviation Turbine fuel) Merox			
catalyst – Pre impregnated	36	<sub>M</sub> 3	0.81
activated charcoal		IVI	
DSTDP (distearyl thiodipropionate) -	100		3.90
acts as a secondary	100	MT	3.90
antioxidant for PP polymers.			
Speciality Grease - Mixture of higher			
paraffin hydrocarbon used as catalyst	15		0.40
protection in Spheripol PP technology		MT	
for production of Polypropylene.			
Magnesium Aluminium Hydroxide	100		2.33
Carbonate Hydrate (DHT 4A/Hycite	100		
713 ) -used in reaction for acid		MT	
scavenging in polymer			
production and processing systems.			
Alkyl Amine Ethoxylate (ATMER 163	107	МТ	5.86
) - for neutralization of		MT	

		Catalyst & Co catalyst and works as			
65		anti- static agent.			
66		Anitoxidant AO 3114(1,3,5-Tris(3,5-di-tert-butyl-4-hydroxy benzyl)-s-triazine-2,4,6-(1H,3H,5H)trione) - specialized vis- breaking chemical used for speci fic PP grade	28	МТ	1.33
67		Non-Aromatic catalyst batch mineral oil (MINERAL OIL) - used for diluting Donor in order to have better accuracy of the flow measure and also used for flushing in TEAL area.	70	MT	1.45
68		HDPE consumable polymerization Catalyst - used for polymerization reaction for production of specific grade of High density polyethylene from Ethylene	8	MT	21.60
69		Antioxidant (AO-1330) -prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear	52	МТ	5.98
70		Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.	63	MT	3.35
71		ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery	60	MT	1.20
72		Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants	87.3	МТ	1.66
73		Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.	304	MT	9.09
74		TEAL	21	MT	0.88
75	Mechanical	Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules	1	No	1.18
76	Stores	Cutter Blades of Extruder	1600		2.19
77		Hydrogen Tubular Reformer Catalyst Tubes	36	No	3.61
78		Rotary Tight Shut off Valve	4	No	0.60
	Chemicals, Catalyst & additives	CD (Di- ethyl aluminum chloride)		MT	1.40
_	Chemicals, Catalyst & additives	CJ (Di- ethyl aluminum ethoxide)		MT	3.27
	Chemicals, Catalyst & additives	GMS-90		MT	3.3
	Chemicals, Catalyst & additives	Base FCC catalyst for INDMAX Unit.		MT	34.5
	Chemicals, Catalyst & additives	DMDS  PM (O Mostor batch		MT	25.25
	Chemicals, Catalyst & additives Chemicals, Catalyst & additives	RM 68 Master batch		MT MT	11.02
	Chemicals, Catalyst & additives  Chemicals, Catalyst & additives	MIBK (METHYL ISOBUTYL KETONE) Liquid oxidation catalyst for FCC		Kg	5.87 0.87
000		Indmax Unit		ME	
	Chemicals, Catalyst & additives	Hydro treating catalyst for DHDS Unit		MT	6.99
	Chemicals, Catalyst & additives	ISO-Octane Minoral Oil (White Oil)		MT MT	2.61
	Chemicals, Catalyst & additives Chemicals, Catalyst & additives	Mineral Oil (White Oil) Methanol	14400		6.53 73.08
	Chemicals, Catalyst & additives	Poly Propylene Catalyst		MT	28.82

97	Chemicals, Catalyst & additives	PD/ 2,4 Pentane dione	220	MT	12.71
98	Service	Assay analysis of Fresh & Spent	2	No.	0.7
99	Chemicals, Catalyst & additives	catalyst Silica MB	220	MT	6.4
	Chemicals, Catalyst & additives  Chemicals, Catalyst & additives	RFCCU catalyst	5600		20
	Chemicals, Catalyst & additives	Nucleating Agent (HPNA)		MT	9.9
	Chemicals, Catalyst & additives	Mono 2 Ethyl Hexyl Amine		MT	0.8
	Chemicals, Catalyst & additives	LPG Merox	10		0.0
		curement Projected _ Capex and			
		Repair & Maint - Pipelines			
					Estimated
61	5	Broad specification		g Unit	Value of
Sl. No.	Description of item	Parameters	Quantit		procurem
NO.			У		ent in
					Rs/Crores
1	Strainer (Nos)			Nos.	KS/CI OI ES
2	Transfer Pump (Nos)			Nos.	
3	ACDB Panel (Nos)			Nos.	
3 4	API 6D Ball Valves (Nos)			Nos.	
5	API 6D Valves (Nos)			Nos.	
6	Ball Valve (Nos)			Nos.	
7	Basket Strainer (Nos)			Nos.	
8	Control valve (Nos)			Nos.	
9	EEE (Nos)			Nos.	
10	Emergency evacuation equipment			Nos.	
11	(Nos)			1103.	
12	Engine Spares			Lot	15.50
13	ER Probe(Nos)			Nos.	10.00
14	F/F PUMP, Jockey pumps, water			Nos.	
15	filling pumps(Nos)				
16	Fire Fighting Pipes (km)			Km	
17	Fire Fighting Pump (Nos)			Nos.	
18	Flow Tee (Nos)			Nos.	
19	Globe Valve (Nos)			Nos.	
20	Heavy duty access Mats			Lot	
	High Mast(Nos)			Nos.	
	HOT crane (Nos)			Nos.	
23	HT Capacitor Panel(Nos)			Nos.	
24	HT Panel(Nos)			Nos.	
25	HT/LT/Control cables(km)			Km	
26	Instrumentation, Control & SCADA			Nos.	
27	System (Nos)				
28	Insulating coupling (Nos)			Nos.	
29	Jockey pump (Nos)			Nos.	
30	LT DG(Nos)			Nos.	
31	LT Panel(Nos)			Nos.	
31	Mainline pumping Unit (Nos)			Nos.	
	Marine Hoses for SPM			Nos.	48.00
32	Mechanical Pipe End connector+			<u> </u>	
	Standard/Long seal Leak			Nos.	1.22
33	clamps+ Encapsulating Leak Clamps				
34	Metering skid assembly				
35	(consisiting of Filtration, Metering and Pressure Reduction units) of				
36	various sizes for providing			Nos.	
37	connectivity to CGD Entities from			1105.	
38	Gas pipelines and				
39	augmentation of existing facilities				
40	(Nos)				
41	Metering Skid Ph-III(Nos)			Nos.	
42	Metering Skid(Nos)			Nos.	
	Misc. fire fighting equipment (Nos)			Nos.	

Misc. fire fighting equipment (Nos)

Nos.

43	NRPL Mainline pumping unit			Nos.	
44	Replacement				
45	Other Marine Spares			Nos.	11.30
46	pipe fitting(Nos)			Nos.	
47	Pipe (km)			Nos.	
48	Remote operated Valve (Nos)			Nos.	
49	Scrapper Barrel			Nos.	
49	Separator Filter (Nos)			Nos.	
50	Small size (<4") misc. valve (Nos)			Nos.	
50					
51	SRV (Nos)			Nos.	
31	Station pipes(km)			Nos.	
52	Steel Pipe (KM)			Km	
32	Steel Plate (MT)			Nos.	
53	sump pump and tank (Nos)			Nos.	
54	Swing check valve (Nos)			Nos.	
55	Telecom System (comprising of DC				
55	power, Networking system, CCTV				
	system, Telephone system, OFC,			Nos.	
	HDPE, etc.)(Nos)				
56	Transformer(Nos)			Nos.	
57	Vadinar SPM Replacement project				
	1. Buoy & accessaries				
	2. Concrete Coated Pipe			Nos.	
58	Valves			Lot	4.00
59	VALVES of all types(Nos)			Nos.	4.00
60	• • • • • • • • • • • • • • • • • • • •			Nos.	
	VFD (Nos)		20		21.00
61	Anti chafe Chain		20	Nos.	21.00
62	Mooring Bridle		26	Nos.	1.65
	Proc	urement Projected _ Marketing -			
		LPG Group		A	n .: . 1
		Proad englification			Estimated
C1	Description of item	Broad specification	Quantit	g Unit	Value of
Sl.	Description of item	Broad specification Parameters	Quantit	g Unit	Value of procurem
Sl. No.	Description of item		Quantit y	g Unit	Value of procurem ent
	Description of item		_	g Unit	Value of procurem ent in
No.			у	g Unit	Value of procurem ent in Rs/Crores
<b>No.</b>	LPG Pump		<b>y</b> 8	g Unit Nos.	Value of procurem ent in Rs/Crores
<b>No.</b> 1 2	LPG Pump LPG Compressor		<b>y</b> 8 4	g Unit  Nos.  Nos.	Value of procurem ent in Rs/Crores 6.24 1.51
1 2 3	LPG Pump LPG Compressor Air Compressor		8 4 5	Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8
1 2 3 4	LPG Pump LPG Compressor Air Compressor Air Dryer		8 4 5 0	Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8
1 2 3 4 5	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set		8 4 5 0	Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39
1 2 3 4 5 6	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine		8 4 5 0 1	Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73
1 2 3 4 5 6 7	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation		8 4 5 0	Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39
1 2 3 4 5 6 7 8	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine		8 4 5 0 1 4 5	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4
1 2 3 4 5 6 7 8 9	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm		8 4 5 0 1 4 5	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4
1 2 3 4 5 6 7 8 9 10	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel		8 4 5 0 1 4 5	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 1.4 1.04 3.54
1 2 3 4 5 6 7 8 9 10 11	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers		8 4 5 0 1 4 5 32 1	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0
1 2 3 4 5 6 7 8 9 10	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines		8 4 5 0 1 4 5 32 1 0	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0
1 2 3 4 5 6 7 8 9 10 11	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos.		8 4 5 0 1 4 5 32 1 0 0 400	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80
1 2 3 4 5 6 7 8 9 10 11 12 13	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for		8 4 5 0 1 4 5 32 1 0	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0
1 2 3 4 5 6 7 8 9 10 11 12 13 14	LPG Pump  LPG Compressor Air Compressor Air Dryer  DG Set Fire Engine  Valve change without Evacuation Machine  LPG Loading arm  Carousel  Computers  Additive dosing machines  Carousal Cards in Nos.  Mech Seals (Refurbishing) Nos.for  LPG Pump		8 4 5 0 1 4 5 32 1 0 400 100	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 0 2.80 3.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG		8 4 5 0 1 4 5 32 1 0 0 400	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump		8 4 5 0 1 4 5 32 1 0 400 100	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80 3.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares		8 4 5 0 1 4 5 32 1 0 400 100	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 0 2.80 3.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares in Nos.		8 4 5 0 1 4 5 32 1 0 400 100 25	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80 3.00 2.00 8.25
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares		8 4 5 0 1 4 5 32 1 0 400 100 25 3300	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80 3.00
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	LPG Pump LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares in Nos. Cables (Control / Power) in RMs		8 4 5 0 1 4 5 32 1 0 400 100 25 3300 0	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80 3.00 2.00 8.25 0.50
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	LPG Pump  LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares in Nos. Cables (Control / Power) in RMs		8 4 5 0 1 4 5 32 1 0 400 100 25 3300	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 0 2.80 3.00 2.00 8.25
No.  1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	LPG Pump  LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares in Nos. Cables (Control / Power) in RMs  Pressure / Temp Transmitters/Gauges in Nos.		8 4 5 0 1 4 5 32 1 0 400 100 25 330 3300 0 220	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80 3.00 2.00 8.25 0.50 2.20
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	LPG Pump  LPG Compressor Air Compressor Air Dryer DG Set Fire Engine Valve change without Evacuation Machine LPG Loading arm Carousel Computers Additive dosing machines Carousal Cards in Nos. Mech Seals (Refurbishing) Nos.for LPG Pump Mech Seals New in Nos. for LPG Pump Valves / Flanges / Gaskets / Spares in Nos. Cables (Control / Power) in RMs		8 4 5 0 1 4 5 32 1 0 400 100 25 3300 0	Nos. Nos. Nos. Nos. Nos. Nos. Nos. Nos.	Value of procurem ent in Rs/Crores 6.24 1.51 0.8 0 0.39 0.73 1.4 1.04 3.54 0 0 2.80 3.00 2.00 8.25 0.50

24 Nos.

25 Conveyor Chain in RM

4400 Nos. 0

5.28

26	Air Ends of Screw Compressors		45	Nos.	2.25
			+		
	Spares (Filters & Accessories) Air		550	Nos.	1.38
28	Comp in Nos.				
29	LPG Vap Comp Seals / valves /		330	Nos.	0.99
30	Plates				
	Lights and Fixtures / Bulbs / glands		1200	Nos.	1.20
31	/ JBs / Switches		0	1.00.	1.20
32	Relays / Fuses		5500	Nos	1.10
33					
34	Printer Cartridges		650	Nos.	0.33
35	Sprockets / Cylinders / Shafts / we	earing strips / Pneumatic tubing /	2400	Nos.	4.80
33	connectors		0		
	Misc Spares /Car (sensors /		210	Nos.	2.10
	connectors / cables etc)				
	TLD / TLF Spares		880	Nos.	2.20
	Structural steel for Conv / Misc				1.71
			450	Nos.	1./1
	Works in MT				
	Diesel / Fire Engine Spares / filters		720	Nos.	5.04
	/ glands				
	Spares for Level gauges /		330	Nos.	3.3
	transmitters				
	Fire / SCADA / GMS Panel Spares /	MIMIC / sensors / transmitter	320	Nos.	1.6
	CCTV spares / modules		110	Nos.	1.65
	Load cells for weigh bridges /		1100	INOS.	2.75
	weighing scales / carousals				
	Centering Arms of carousals		2500	Nos.	0.30
	Pro	curement of LPG Cylinders & P			
		Regulator			
				Accountin	Estimated
		Broad specification		g Unit	Value of
Sl.	Description of item	Parameters	Quantit		procurem
No.	bescription of item		v		ent
NO.			y		in
					Rs/Crores
-	4 4 0 77 6 11 1 67 1 11 17 0		600000		000
1	14.2 Kg Cylinders (Including New &		630000	Nos.	803.
	Replacement)		0		02
2	Replacement) 19 Kg Cylinders (Including New &			Nos.	02 140.
	Replacement) 19 Kg Cylinders (Including New & Replacement)		0		02
	Replacement) 19 Kg Cylinders (Including New & Replacement)		80000 0		02 140.
2	Replacement) 19 Kg Cylinders (Including New & Replacement) 47.5 Kg Cylinders (Including New &		80000 0 4000	Nos.	02 140. 04 15.4
2	Replacement) 19 Kg Cylinders (Including New & Replacement) 47.5 Kg Cylinders (Including New & Replacement)		0 80000 0 4000 0	Nos.	02 140. 04 15.4 1
2	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New &		0 80000 0 4000 0 150000	Nos.	02 140. 04 15.4 1
3 4	Replacement) 19 Kg Cylinders (Including New & Replacement) 47.5 Kg Cylinders (Including New & Replacement) 5 Kg Cylinders (Including New & Replacement)		0 80000 0 4000 0 150000	Nos. Nos.	02 140. 04 15.4 1 130. 01
2	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New &		0 80000 0 4000 0 150000	Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9
2 3 4 5	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders		0 80000 0 4000 0 150000 0 5000	Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9
3 4	Replacement) 19 Kg Cylinders (Including New & Replacement) 47.5 Kg Cylinders (Including New & Replacement) 5 Kg Cylinders (Including New & Replacement)		0 80000 0 4000 0 150000 0 5000	Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators		0 80000 0 4000 0 150000 5000 350000	Nos. Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders		0 80000 0 4000 0 150000 5000 350000	Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators		0 80000 0 4000 0 150000 5000 350000	Nos. Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	urement Projected Marketing -	0 80000 0 4000 0 150000 0 5000 350000 0 212000	Nos. Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	urement Projected _ Marketing -	0 80000 0 4000 0 150000 0 5000 350000 0 212000	Nos. Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	urement Projected _ Marketing - Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178.
2 3 4 5 6	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accountin	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00
2 3 4 5 6 7	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve		0 80000 0 4000 0 150000 0 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Nos.	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00
2 3 4 5 6 7	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accountin	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem
2 3 4 5 6 7	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00 Estimated Value of procurem ent
2 3 4 5 6 7	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6 CST	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 Quantit y	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 Quantit y	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores
2 3 4 5 6 7 <b>Sl. No.</b>	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00 Quantit y	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56
2 3 4 5 6 7 <b>Sl. No.</b>	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000)	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 <b>Quantit</b> <b>y</b> 550 325	Nos. Nos. Nos. Nos. Accounting Unit MT	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56 21.60
2 3 4 5 6 7 <b>Sl. No.</b>	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate) ST56058 (PIB 1000)  Synthetic base oil Poly alfa olefin	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 <b>Quantit</b> <b>y</b> 550 325	Nos. Nos. Nos. Nos. Accounting Unit	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proc  Proc  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate) ST56058 (PIB 1000)  Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 <b>Quantit</b> <b>y</b> 550 325 2477 280	Nos. Nos. Nos. Nos. Accounting Unit MT MT MT	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56 21.60 29.18 11.51
2 3 4 5 6 7 <b>Sl. No.</b>	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proce  Proce  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000)  Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  PIB of higher molecular wt.(ST	Lubes	0 80000 0 4000 0 150000 0 5000 350000 0 212000 00 212000 35000 350000 0 212000 212000 212000 212000 212000	Nos. Nos. Nos. Nos. Accounting Unit MT	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56 21.60
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Pressure Regulators  Proce  Proce  Proce  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate) ST56058 (PIB 1000) Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  PIB of higher molecular wt.(ST 56032/ST 56036)	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 212000 350000 212000 20000	Nos. Nos. Nos. Nos. Accounting Unit  MT  MT  MT  MT	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56 21.60 29.18 11.51 4.64
2 3 4 5 6 7 Sl. No.	Replacement)  19 Kg Cylinders (Including New & Replacement)  47.5 Kg Cylinders (Including New & Replacement)  5 Kg Cylinders (Including New & Replacement)  425 KG Cylinders  Pressure Regulators  Self-Closing Valve  Proce  Proce  Synthetic base oil Poly alfa olefin 6 CST  ST5014 (Lithium Hydroxide Monohydrate)  ST56058 (PIB 1000)  Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)  PIB of higher molecular wt.(ST	Lubes	0 80000 0 4000 0 150000 5000 350000 0 212000 00 <b>Quantit</b> <b>y</b> 550 325 2477 280	Nos. Nos. Nos. Nos. Accounting Unit  MT  MT  MT  MT	02 140. 04 15.4 1 130. 01 32.9 3 50.7 0 178. 00  Estimated Value of procurem ent in Rs/Crores 14.56 21.60 29.18 11.51

	CST, PAO 40(ST 55578)							
	Procurement Projected _Pipelines							
				Accountin	Estimated			
		Broad specification Parameters		g Unit	Value of			
Sl.	Description of item		Quantit		procureme			
No.			y		nt in			
					Rs/Crores			
1	Marine Hoses		100	Nos.	40			

### FINANCIAL YEAR 2025 - 26

### Capex Procurement Projected \_ Refineries

	Capex Procurement Projected _ Renneries						
Sl. No.	Description of item	Broad specification Parameters	Quan tity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
1	Vessels/Drums/Tanks		324	Nos.	240		
2	Pumps		659	Nos.	386		
3	Reactors		28	Nos.	168		
4	Column/Column Internals/Column Modification		79	Nos.	368		
5	Heat Ex/Air coolers/Fin Fan Coolers		473	Nos.	623		
6	Filters		11	Nos.	3		
7	Instrumentation items (DCS, PLC, Analyser,,sensors, Flowmeter,Transmitter etc.)		LOT	LOT	125		
8	Instrument Cables		LOT	LOT	2		
	Electrical Items (Transformer, Switchboard,Switch gears, HV/MV Boards,Motors,Hoist,PFIC Panel,VFD,Genset)		LOT	LOT	104		
10	Electrical Cables		LOT	LOT	10		
11	Compressors/Blowers/Fans		31	Nos.	350		
12	Heaters & Stacks		14	Nos.	257		
13	Bulk(Pipe/Fittings/Flanges/Valve)		LOT	LOT	144		
14	Package Items(HVAC,ETP,Refigeration,Co oling Tower,DI Guard,Chlorine Injection,Chemical Injection,Side Stream Filter,Ehylene BOG,TEG Barelling,Flare,Communication Mgmt Sytem,Nitrogen Cooling System,Control Monitoring System,Ambience Air Monitoring system,PCK metering Skid,Cathodic Protectin System,FDAS system,CCTV,Custody Transfer Metering Skid,Clean Agent System)		LOT	LOT	731		
15	Fire Fighting system/equipment/package, Foam Concentrate, Manual & Remote Operated High Volume Longe Range Monitor with Accessories		LOT	LOT	24		
16	Incinerator & Instr. Components		13	Nos.	28		
17	Mech items :EOT Crane,Forklift,Weigh Bridge,Industrial Lift,Belt & Screw conveyors/Dock leveller		17	Nos.	10		
18	Steam Turbine			Nos.			
19	Rotary Valves/Safety Valves/Control Valves/On-off Valves/Emergency Vent Valves/Shutdown Valves		LOT	LOT	75		
20	Mixers & Agitators		80	Nos.	19		
21	Driers		3	Nos.	2		

22         Separators         5         No           23         Boiler         1         No           24         Lab Equipment         34         No           25         Pig Launcher & Pig Receiver         2         No           26         Marine Loading Arm         1         No	os. 6 os. 11
24         Lab Equipment         34         No           25         Pig Launcher & Pig Receiver         2         No           26         Marine Loading Arm         1         No	os. 11
25 Pig Launcher & Pig Receiver 2 No. 26 Marine Loading Arm 1 No.	
26 Marine Loading Arm 1 No	ns 1
26 Marine Loading Arm 1 No	
27   Inert Ceramic balls   LOT   LO	)T 1
Sample Coolers (DD & Sample	1
28 Bombs (PE) 54 No	os. 1
29 Mounded Bullet No	OS.
Spare Components (Compressor/Pumps/Feed LOT LOT Coalescer)	OT 24
31 Miscellaneous items (including FR approved project) LOT LO	OT 547
32 Intrinsically safe Terrestrial Trunked Radio (TETRA) sets	os 8.3
Procurement Projected - For Repair & Maintenance of Refineries	
Sl. No. Description of item Broad specification Parameters Quan tity Accounting Unit	Value of
1 Pump Spares Lot	57.6
2 Mechanical Seal Spares Lot	67.2
3 Bearings Lot	6
4 Turbine Spares Lot	139.2
5 Steam Engine Spares Lot	1.2
6 Furnace Spares Lot	16.8
7 Compressor Spares Lot	73.2
8 Fan & Blower Spares Lot	8.4
9 Agitator & Mixer Spares Lot	2.4
10 ETP,LPG Plant Equipment Spares Lot	14.4
11 Air Conditioner Spares Lot	2.4
12 Heat Exchanger Spares Lot	55.2
13 Column/ Reactor Spares Lot	40.8
14 Pipe & Pipe Fittings Lot	152.4
15 Gear Box Spares Lot	10.8
16 Motor Spares Lot	4.8
Transformer, Battery, Switch Gear, Cable, Lamp etc. Spares  Lot Lot	96
Liquid oxidation Catalyst for spent caustic regeneration 1.5 MT	2.616
Anti Oxidant (AO 1010) Pentaerythritol tetrakis(3-(3,5-ditert-butyl-4-hydroxyphenyl)propionate)  Anti Oxidant (AO 1010) Pentaerythritol tetrakis(3-(3,5-ditert-butyl-4-hydroxyphenyl)propionate)	44.26
20 Anti Oxidant AO 168/ AO9 1565 MT	46.31
A01076 (Octadecyl β – (3,5-di- tert - butyl-4-hydroxy phenyl)-propionate	5.04
Chemicals, Catalyst & additives  ATF Merox Catalyst - Pre impregnated activated charcoal  M3	0.972
Benzene hydrogenation catalyst for ISOM unit 2.1 MT	3.06
CAB catalyst 18 MT	3.45
CAB-2 catalyst (Blend of vanadium oxytrichloride & titanium 35 MT tetrachloride 50/50)	6.08
Carbon Monoxide (CO) promoter 16 MT	7.044

Catalyst for DCU IFG Merox Unit	1	catalyst additive for FCC Unit	1	1	
Hindered amine light stabilizer(HALS) - Chimassorb 944   9   MT   1.116	27	Catalyst for DCU LPG Merox Unit	547	L	0.336
Claus Catalyst (Albased)	28	Hindered amine light	9	MT	1.116
Claus Catalysts charge for Sulphur   Recovery Unit (SRU)   Chloride guard adsorbent for Continuous Catalysts Reforming Unit (CRU) stabilizer feed   2-Hydroxy-4-n- octoxybenzophenone (Cyasorb 531/ octoxybenzopheno) 30, octoxybenzophenone (Cyasorb 531/ octoxybenzopheno) 30, octoxybenzophenone (Cyasorb 531/ octoxybenzopheno) 30, octoxybenzophenoval bediator (Cyasorb 531/ octoxybenzophenoval bediator 61/ octoxybenzophenoval 61/ octoxybenzophenoval 61/ octoxybe	29		151.2	М3	1.74
Recovery Unit (SMI)					
Continuous Catalytic Reforming Unit (CRU) stabilizer feed   2-Hydrosy-4-n: octoxybenzophenone (Cyasorb 531/ UV-1)   UV-1   UV-	30		22	M3	0.852
1921   1921	31	Continuous Catalytic Reforming Unit	30.5	MT	1.08
Cyclo-Hexyl Methoy Methoxysilane (DONOR C)   Di-Hyclo-Pentyl-Di-Methoxy-Silane (DONOR C)   Di-Hyclo-Pentyl-Di-Methoxy-Silane (DONOR C)   Silip additives (Erucamide)   125   MT   6.18	32	octoxybenzophenone (Cyasorb 531/	6	МТ	0.9
Di-ICyclo-Pentyl-Di-Methoxy-Silane   3   MT   1.452     Slip additives (Erucamide)   125   MT   6.18     Slip additives (Erucamide)   125   MT   6.18     Slip additives (Erucamide)   125   MT   6.18     Slip additives (Erucamide)   8   MT   0.444     Sthylene drying and CO2 removal   8   MT   0.444     Sthylene drying and CO2 removal   3   MT   0.516     Slip additives (Erucamide)   7   MT   0.864     Slow (Erase) (NASELINE)   7   MT   0.864     Hydrotreating and Hydrocracking catalyst (or DHDT   17   17   18   18     Hydrotreating Catalyst for DHDT   18   MT   18     Hydrotreating Catalyst for DHDT   18   MT   18     Slow (Erase) (Nadation Catalyst for Spent   1.59   MT   2.616     Low temp. hydrogenation catalyst   1.59   MT   2.616     Low temp. hydrogenation catalyst   1.59   MT   2.124     Slow (Erucamide)   1.59   MT   2.3.76     PEPQ (Phosphorous trichloride, reaction products with 1.1-biphenyl and 2.4-bis(1.1-dimethylethyl)phenol)   1.36   MT   2.3.76     Slow (Erucamide)   1.30   MT   1.55     Slow (Erucamide)   1.30   MT	33		33	MT	3.88
Slip additives (Erucamide)   125    MT	34	Di-ICyclo-Pentyl-Di-Methoxy-Silane	3	МТ	1.452
Ethylene drying and CO2 removal bed (Adsorbant)	35	· · · · · · · · · · · · · · · · · · ·	125	MT	6.18
Ethylene drying and CO2 removal bed (Foxed) for PP Unit 168.96	36	Ethylene drying and CO2 removal			
Fluidized Catalytic Cracking Catalysts	37	Ethylene drying and CO2 removal	3	MT	0.516
Grease (VASELINE)	38		4435	MT	168.96
Hydrotreating and Hydrocracking catalyst for Hydrocracking unit   Hydrotreating Catalyst for Phdrocracking unit   Hydrotreating Catalyst for DHDT   478   MT   96.48					
Hydrotreating Catalyst for DHDT		Hydrotreating and Hydrocracking			
SOM catalyst	41	Hydrotreating Catalyst for DHDT	478	MT	96.48
Liquid oxidation Catalyst for spent caustic regeneration   1.59   MT   2.616	1.2		24	МТ	42
Caustic regeneration					
(Tail Gas Treatment Unit)	43		1.59	MT	2.616
Potassium-alumino silicate    47.6   MT   1.5	44	(Tail Gas Treatment Unit)	21.57	MT	2.124
Optical brightener	45		47.6	MT	1.5
Products with 1,1-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol) (secondary antioxidant)	46		1	MT	0.744
Peroxide-101 (2, 5 Dimethyl-2,5-di (tert-butyl-peroxy) henaxe)   92   MT   10.692	47	products with 1,1-biphenyl and 2,4-bis(1,1-dimethylethyl)phenol)	186	МТ	23.76
Acid   PP Catalyst. A composition of   PP Catalyst. A composition of   Magnesium Chloride and 1,2   Benzenedicarboxylic acid, 1,2 Bis[2-cholro-1- (chloromethyle)ethyl]   ester.   PPA (Polymer Processing Additive)   40   MT   6.348	48	Peroxide-101 (2, 5 Dimethyl-2,5-di	92	MT	10.692
Magnesium Chloride and 1,2   Benzenedicarboxylic acid, 1,2 Bis[2-cholro-1- (chloromethyle)ethyl]   ester.   PPA (Polymer Processing Additive)   40   MT   6.348	49	, , ,	330	MT	10.56
PPA (Polymer Processing Additive)	50	Magnesium Chloride and 1,2 Benzenedicarboxylic acid, 1,2 Bis[2-cholro-1- (chloromethyle)ethyl]	7.5	МТ	29.04
bed for PP unit (Fixed bed)   9   MT   0.288     Silica gel-desiccant (Compound of Silicon dioxide)   187   MT   5.16     T Fuel & U-Fuel for analysis of Cetane number   3690   Ltr   1.059     UV stabilizer 622   150   MT   10.56     ZN-180M (Avant CATALYST) or equivalent   240   Kg   0.9     ST   ZSM-5 catalyst   100   MT   10.488     Primary Reference Fuel (PRF) (ISO-2840   Kg   0.475	51		40	MT	6.348
Silica gel-desiccant (Compound of Silicon dioxide)   187   MT   5.16	52	Propylene drying and CO2 removal	9	MT	0.288
Cetane number 3690 Ltr 1.059  UV stabilizer 622 150 MT 10.56  ZN-180M (Avant CATALYST) or equivalent 240 Kg 0.9  ZSM-5 catalyst 100 MT 10.488  Primary Reference Fuel (PRF) {ISO-2840 Kg 0.475	53	Silica gel-desiccant (Compound of	187	МТ	5.16
55       UV stabilizer 622       150       MT       10.56         56       ZN-180M (Avant CATALYST) or equivalent       240       Kg       0.9         57       ZSM-5 catalyst       100       MT       10.488         Primary Reference Fuel (PRF) {ISO-       2840       Kg       0.475	54	T Fuel & U-Fuel for analysis of	3690	Ltr	1.059
56     equivalent     240     kg     0.9       57     ZSM-5 catalyst     100     MT     10.488       58     Primary Reference Fuel (PRF) {ISO-     2840     kg     0.475	55		150	MT	10.56
ZSM-5 catalyst 100 MT 10.488  Primary Reference Fuel (PRF) {ISO- 2840 Kg 0.475	56	ZN-180M (Avant CATALYST) or	240	Kg	
Primary Reference Fuel (PRF) {ISO-	57		100	MT	10.488
	58	Primary Reference Fuel (PRF) {ISO-	2840	Kg	0.475

ATF (Aviation Turbine fiel) Merox catalyst - Pre impregnated activated charcoal					ī	•
Charcoal						
DSTDP (disteary) thiodiproglonate)   acts as a secondary antioxidant for   100   MT   4.10   2.10	59			36	M3	0.972
PP polymers.   Specialty Grosses - Mixture of higher paraffin hydrocarbon used as catalyst protection in Spheripol Ptechnology for production of Polymorphene.   Napresium Aluminium Hydroxide Carbonate Hydrate (DHT 4A/Hydric 713) - used in reaction for acid scavenging in polymer production and processing system.   100						
Speciality Grease - Mixture of higher paraffin hydrocarbon used as catalyst protection in Spheripol PP technology for production of Polypropylene.   Magnesium Aluminium Hydroxide Carbonae hydrace (DHT 4A/hydrich 713 ) - used in reaction for acid scavenging in polymer production and processing systems.   Alkyl Amine Ethoxylate (ATMER 163 ) - for neutralization of Catalyst & Co catalyst and works as antistic agent.   Antioxidant A0 3114(1,3,5-Tris(3,5-di-tert-butyl-4-hydroxy benzyl)-settrazine-2,4,6-(11,41,81)-flyrione-1 specialized vis-breaking chemical used for specific Pg rade   Non-Aromatic catalyst batch mineral oil (MINERAL OIL) - used for diluting Denor in order to have better accuracy of the flow measure and also used for flushing in TEAL area.   HDPE consumable polymerization catalyst used for polymerization catalyst used for polymerization reaction for production of specific grade of High density polybythene from Ethylene Antioxidant (A0-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear Destocant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.	60			100	MT	4.10
Catalyst protection in Spheripol PP   15	]					
Polypropylene.	61			15	MT	0.48
Magnesium Aluminium Hydroxide Carbonate Hydrate (DHT 4A/Hydre 713 ) - used in reaction for acid scavenging in polymer production and processing systems.   Alkyl Amine Ethoxylate (ATMER 163) - for neutralization of Catalyst 8. Co catalyst and works as antistatic agent.   Antioxidant AO 3114(1,3.5-Tris(3.5-di-tert-butyl-4-hydroxy benzyl)-striazine-2,4.6-(H,B-H,Sfl)trione) - specialized vis- breaking chemical used for specific FP grade   Non-Aromatic catalyst back minical oil (MINERAL OIL) - used for dilluting Donor in order to have better accuracy of the flow measure and also used for flushing in TEAL area.   HDPE consumable polymerization Catalyst- used for polymerization reaction for production of specific grade of High density polyethylene from Ethylene   Antioxidant (AO-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear Desiccant for ethylene guard bed (Fixed bed for ethylene guard bed (Fixed bed for ethylene purification) - used for rethylene guard bed (Fixed bed for ethylene purification) - used for rethylene from Ethylene for in Swing unit to Ultra low levels.   ST65692 (Biphenyl) - approved additive Packages required for manufacturing of Servo Duotherm S required at Panipar Refinery Mixed Butylated Phenol Antioxidant (ST406) - used in blending in many lubricants   Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servo buotherm SHT 32 required by 10Ct. Refinery.   S73 MT 1.992   1.992						
Carbonate Hydrate (DHT AA/Hycite   100						
100   MT   2.45   100   100   MT   2.45   100   100   MT   2.45   100						
Seavenging in polymer production and processing systems.			Carbonate Hydrate (DHT 4A/Hycite			
Alkyl Amine Ethoxylate ( ATMER 163 ) - for neutralization of Catalyst & Co catalyst and works as antistate agent.   Antioxidant A0 3114(1,3,5-Tris(3,5-Tri	62			100	MT	2.45
Alkyl Amine Ethoxylare (ATMER 163) - for neutralization of Catalyst & Co catalyst and works as antistatic agent.			scavenging in polymer production			
Alkyl Amine Ethoxylare (ATMER 163) - for neutralization of Catalyst & Co catalyst and works as antistatic agent.			and processing systems.			
163   For neutralization of Catalyst						
Secondary   Seco	62			107	МТ	6 15
Static agent.	03			10/	IVI I	0.15
Antioxidant A0 3114(1,3,5-Tris(3,5-di-tert-butyl-4-hydroxy benzyl)-s-triazine-2,4,6-(1H,3H,5H)trione)-specialized vis- breaking chemical used for specific PP grade   Non-Aromatic catalyst batch mineral oil (MINERAL OIL) - used for diluting Donor in order to have better accuracy of the flow measure and also used for flushing in TEAL area.			_			
A						
Specialized vis- breaking chemical used for speci fic PP grade	64			28	MT	1.596
Section   Sect						
Ron-Aromatic catalyst batch mineral oil (MINERAL OIL) - used for diluting Donor in order to have better accuracy of the flow measure and also used for flushing in TEAL area.    HDPE consumable polymerization Catalyst - used for polymerization reaction for production of specific grade of High density polyethylene from Ethylene   Antioxidant (A0-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear						
Section						
Continue						
better accuracy of the flow measure and also used for flushing in TEAL area.  HDPE consumable polymerization Catalyst - used for polymerization reaction for production of specific grade of High density polyethylene from Ethylene  Antioxidant (A0-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear  Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Pre-Heater Module / Cast & Glass Air Preheater Modules / Glass & II No 1.416  Air Pre-Heater Modules  Cutter Blades of Extruder 1600 No 2.628  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve 4 No 0.72				70	M	1.74
and also used for flushing in TEAL area.  HDPE consumable polymerization Catalyst - used for production of specific grade of High density polyethylene from Ethylene  Antioxidant (AO-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear Desiscant for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) - approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servo Botherm SH 32 required by 10CL Refinery.  Cast Air Preheater Modules   Servo Botherm SH 32 required by 10CL Refinery.  Cast Air Preheater Modules   Glass Air Preheater Module	65			/0	IM'I'	1./4
Area.   HDPE consumable polymerization   Catalyst - used for polymerization   reaction for production of specific grade of High density polyethylene   from Ethylene   Antioxidant (AO-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear   Desiccant for ethylene guard bed (Fixed bed for ethylene purification)   - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.   ST65692 (Biphenyl) - approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery   Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants   Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required at Panipat Refinery.   Satisfied the part of the part o						
HDPE consumable polymerization Catalyst - used for polymerization reaction for production of specific grade of High density polyethylene from Ethylene Antioxidant (AO-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants Hydrogenated Terphenyl (ST5806) -approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  Cutter Blades of Extruder Hydrogen Tubular Reformer Catalyst Tubes Rotary Tight Shut off Valve  4 No 0.72			_			
Catalyst - used for polymerization reaction for production of specific grade of High density polyethylene from Ethylene Antioxidant (A0-1330) - prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.    ST65692 (Biphenyl) - approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants   Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragproved additive Packages required for manufacturing of Servo Duotherm Stragpro					1	
Feaction for production of specific grade of High density polyethylene from Ethylene Hantioxidant (A0-1330) -prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear    Posiciant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.    ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm Sequired at Panipat Refinery   Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants   Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.   ST654064)   ST654064)   ST654064   ST754064)   ST754064)   ST7540640   S						
grade of High density polyethylene from Ethylene Antioxidant (AO-1330) -prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass	66			8	MT	25.92
From Ethylene				-		
Antioxidant (AO-1330 ) -prevents polymer from degradation caused by exposure to heat, ultraviolet radiation (UV) and mechanical shear  Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Preheater M						
Formula			Antioxidant (A0-1330 ) -prevents			
by exposure to heat, ultraviolet radiation (UV) and mechanical shear  Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) - approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  72  Mechanical Stores  MT 1.44  1.992  1.992  1.0908  MT 1.992  1.416						6.00
Fadiation (UV) and mechanical shear  Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  MT  1.44  10.908  MT  1.992  10.908  MT  1.416  11. No 1.416  12. No 1.416  13. No 1.416  14. No 1.416  14. No 1.416  15. No 1.416  16. No 1.432  17. No 1.432  18. No 1.432  19. No 1.4332  19. No 1.4332  19. No 1.4332	67			52	MT	6.28
Desiccant for ethylene guard bed (Fixed bed for ethylene purification) - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Pre-Heater Modules / Glass Air Pre-Heater Modules  73  Mechanical Stores  Cutter Blades of Extruder Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72						
CFixed bed for ethylene purification   - used for removal of Carbon monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.    ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery   Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants   Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.    T2						1
Form						
monoxide, carbon dioxide, moisture from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules / Glass Air Pre-Heater Modules / Glass Air Pre-Heater Modules / Glass Air Preheater Modules / Glass Air Pre						
from Ethylene feed in Swing unit to Ultra low levels.  ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  Mechanical Stores  Cutter Blades of Extruder  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72	68			63	MT	4.02
Ultra low levels.   ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery   Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants   Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.   ST4064   ST						
ST65692 (Biphenyl) -approved additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  Mechanical Stores  Mechanical Stores  Cutter Blades of Extruder  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72						
69additive Packages required for manufacturing of Servo Duotherm S required at Panipat Refinery60MT1.4470Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants87.3MT1.99271Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.304MT10.90872Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules1No1.41673Mechanical StoresCutter Blades of Extruder1600No2.62874Hydrogen Tubular Reformer Catalyst Tubes36No4.33275Rotary Tight Shut off Valve4No0.72						†
manufacturing of Servo Duotherm S required at Panipat Refinery  Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  Mechanical Stores  Mechanical Stores  Mechanical Stores  Rotary Tight Shut off Valve  MI 1.44  1.44  No MI 1.44  1.44						
required at Panipat Refinery Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  Mechanical Stores  Cutter Blades of Extruder  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72	69			60	MT	1.44
Mixed Butylated Phenol Antioxidant (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules / Glass Air Pre-Heater Modules  Mechanical Stores  Cutter Blades of Extruder  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72						
70 (ST4064) - used in blending in many lubricants  Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  72 Mechanical Stores  Cutter Blades of Extruder  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72					<del> </del>	<u> </u>
71lubricantsIubricants<	70			873	мт	1 992
Hydrogenated Terphenyl (ST58606) - approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  73  Mechanical Stores  Cutter Blades of Extruder Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72	/ 0			07.3	141 1	1.772
71approved additive Packages required for manufacturing of Servotherm SHT 32 required by IOCL Refinery.304MT10.90872Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules1No1.41673Mechanical StoresCutter Blades of Extruder1600No2.62874Hydrogen Tubular Reformer Catalyst Tubes36No4.33275Rotary Tight Shut off Valve4No0.72						
for manufacturing of Servotherm SHT 32 required by IOCL Refinery.  Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Pre-Heater Modules  Mechanical Stores  Cutter Blades of Extruder Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  MI 10.908  10.908  No 1.416  No 2.628  No 4.332						
72Cast Air Preheater Module / Cast & Glass Air Preheater Modules / Glass Air Preheater Modules / Glass Air Preheater Modules1 No 1.41673Mechanical StoresCutter Blades of Extruder1600 No 2.62874Hydrogen Tubular Reformer Catalyst Tubes36 No 4.33275Rotary Tight Shut off Valve4 No 0.72	71			304	MT	10.908
Cast Air Preheater Module / Cast & Glass Air Preheater Modules / G						
72Glass Air Preheater Modules / Glass Air Pre-Heater Modules1No1.41673Mechanical StoresCutter Blades of Extruder1600No2.62874Hydrogen Tubular Reformer Catalyst Tubes36No4.33275Rotary Tight Shut off Valve4No0.72						
Air Pre-Heater Modules  Cutter Blades of Extruder  Hydrogen Tubular Reformer Catalyst Tubes  Rotary Tight Shut off Valve  Air Pre-Heater Modules  Cutter Blades of Extruder  1600 No 2.628  No 4.332  Rotary Tight Shut off Valve  4 No 0.72	72			1	No	1 116
73Mechanical StoresCutter Blades of Extruder1600No2.62874Hydrogen Tubular Reformer Catalyst Tubes36No4.33275Rotary Tight Shut off Valve4No0.72	12			1	INO	1.410
Hydrogen Tubular Reformer 36 No 4.332 Catalyst Tubes A No 0.72				4:0-		0.606
Catalyst Tubes  Rotary Tight Shut off Valve  4 No 0.72	73	Mechanical Stores		1600	No	2.628
75 Rotary Tight Shut off Valve 4 No 0.72	74.			36	No	4 332
, -	/ 4		Catalyst Tubes	30	140	T.JJL
, -	75		Rotary Tight Shut off Valve	4	No	0.72
DECIDENCE STREET OF LOCAL DESCRIPTION OF THE PROPERTY OF THE P	76		Benchmarking study for P-25 Project	1	No	2.4

77		License, Know-How, Process package, Catalyst(s), Proprietary equipment (if any) for production of Polyester Melt for continuous polymerization Unit along with project management consultancy services	1	Lot	214.8
78		Lining up of agency for platinum/palladium umpire analysis on limited global tender basis.	12	Lot	0.108
79	Specialty Services	Loss On Ignition (%) and Platinum content (%) testing in Continuous Catalytic Reformer (CCR) fresh catalyst	1	No	0.048
80		Maintenance of Welded Type Plate combine feed Exchanger of CRU	1	No	2.052
81		Off the shelf "Online e-Modules on Leadership Competencies"	1000	No	1.104
82		Supply of Basic Design and Engineering Package (BDEP), Catalyst(s), Proprietary items and assistance services for quality Revamp of BS-VI FCC GDS at Gujarat Refinery	1	Lot	25.94
83		Supply of License, Basic Engineering and Design package and equipment and services	1	Lot	128.64
84		Assay analysis of spent catalyst - required to quantify precious metal i.e. Palladium content in Spent catalyst for settlement of quantity of recovery of precious metal from spent catalyst.		Lot	0.144
85	Chemicals, Catalyst & Additives	TEAL	21	МТ	0.93
86	Chemicals, Catalyst & additives	CD (Di- ethyl aluminum chloride)	34.8	МТ	1.47
87	Chemicals, Catalyst & additives	CJ (Di- ethyl aluminum ethoxide)	34.8	МТ	3.44
88	Chemicals, Catalyst & additives	GMS-90	250	МТ	3.8
89	Chemicals, Catalyst & additives	Base FCC catalyst for INDMAX Unit.	1170	MT	34.5
90	Chemicals, Catalyst & additives	DMDS	665	МТ	26.51
91	Chemicals, Catalyst & additives	RM 68 Master batch	110	МТ	11.58
92	Chemicals, Catalyst & additives	MIBK (METHYL ISOBUTYL KETONE)	300	MT	6.16
93	Mechanical Stores	Radiant Coils	2	Set	42.08
94	Chemicals, Catalyst & additives	Hydrogenation Catalyst (Activated Alumina impregnated with Cobalt and Molybdenum Oxides).	52.3	М3	3.07
95	Chemicals, Catalyst & additives	Liquid oxidation catalyst for FCC Indmax Unit	555	Kg	0.92
96	Chemicals, Catalyst & additives		56	MT	7.34
97	Chemicals, Catalyst & additives	ISO-Octane	102	MT	2.67
98	Chemicals, Catalyst & additives	Mineral Oil (White Oil)	205	MT	6.86
99	Chemicals, Catalyst & additives	Methanol	14400	MT	76.73
ш	auaitives	L	ı	1	<u> </u>

100	Chemicals, Catalyst &	Poly Propylene Catalyst	7.5	МТ	30.27
100	additives Chemicals, Catalyst &	Poly Propylene Catalyst			
101	additives	PD/ 2,4 Pentane dione	220	MT	13.35
102	Service	Assay analysis of Fresh & Spent catalyst	1	No.	0.80
103	Chemicals, Catalyst & additives	Nucleating Agent (HPNA)	50	МТ	10.42
104	Chemicals, Catalyst & additives	Mono 2 Ethyl Hexyl Amine	18	MT	0.91
105	Chemicals, Catalyst & additives	Hydro treating Catalyst	14.82	<b>M</b> <sup>3</sup>	1.43
106	Chemicals, Catalyst & additives	Silica MB	220	MT	7.16
	Proc	urement Projected _ Capex and Repa & Maint - Pipelines	ir		
		& Maint - Pipennes	1	1	Estimated Value
Sl. No.	Description of item	Broad specification Parameters	Quanti ty	Accounti ng Unit	of procurement in Rs/Crores
1	Strainer (Nos)				
2	Transfer Pump (Nos)				
	ACDB Panel (Nos)		147	Nos.	19.27
4	API 6D Ball Valves (Nos)			Nos.	26.63
5	API 6D Valves (Nos)			Nos.	9.35
6	Ball Valve (Nos)		7	Nos.	72.60
7	Basket Strainer (Nos)		60	Nos.	8.53
8	Control valve (Nos)		75	Nos.	14.76
9	EEE (Nos)		15.0 0	Nos.	6.13
10	Emergency evacuation equipment (Nos)		74	Nos.	23.98
11	Engine Spares		Lot	Lot	16.80
	ER Probe (Nos)		59	Nos.	7.67
	F/F PUMP, Jockey pumps, water filling pumps (Nos)				0.00
14	Fire Fighting Pipes (km)		0.17 5	Km	0.07
15	Fire Fighting Pump (Nos)		3	Nos.	0.60
	Flow Tee (Nos)		99	Nos.	12.38
	Globe Valve (Nos)		74	Nos.	1.22
18	Heavy duty access Mats		Lot	Lot	6.23
19	High Mast (Nos)		80	Nos.	9.59
	HOT crane (Nos)		8	Nos.	10.73
	HT Capacitor Panel (Nos)		5	Nos.	0.76
	HT Panel(Nos)		5	Nos.	10.38
	HT/LT/Control cables(km)			Km	1.82
24	Instrumentation, Control & SCADA System (Nos)		10	Nos.	13.81
	Insulating coupling (Nos)			Nos.	4.60
	Jockey pump (Nos)		2	Nos.	0.05
	LT DG(Nos)			Nos.	4.55
	LT Panel(Nos)		38	Nos.	6.00
	Mainline pumping Unit (Nos) Marine Hoses for SPM		22	Nos.	67.81 96.00
31	Mechanical Pipe End connector+ Standard/Long seal Leak clamps+ Encapsulating Leak			Nos.	4.1
	Clamps Metering skid assembly				
	(consisting of Filtration, Metering and Pressure		4		9.1

	Reduction units) of various			Nos.	
	sizes for providing				
	connectivity to CGD Entities				
	from Gas pipelines and				
	augmentation of existing				
	facilities (Nos)				
33	Metering Skid Ph-III(Nos)		8	Nos.	43.04
34				Nos.	
	Metering Skid(Nos)		4	ł	27.85
35	Misc. fire fighting equipment		47	Nos.	
	(Nos)				27.90
36	NRPL Mainline pumping unit				
	Replacement				
37	Other Marine Spares			Nos.	10.10
	*				10.18
38	pipe fitting(Nos)		1273	Nos.	
			00		1.62
39	Pipe (km)		146.	Nos.	
0,	i ipe (kiii)		1	1105.	134.03
40	- 1771 GV			N.T.	
	Remote operated Valve (Nos)		23	Nos.	1.92
41	Scrapper Barrel		72	Nos.	12.46
42	Separator Filter (Nos)		2	Nos.	3.24
					J.L 1
43	Small size (<4") misc. valve		103	Nos.	F 40
	(Nos)		<u> </u>		5.18
44	SRV (Nos)		1	Nos.	0.17
	Station pipes(km)		2.3	Nos.	3.53
				Km	3.33
46	Steel Pipe (KM)		_	Km	
			8		2352.00
47	Steel Plate (MT)		168	Nos.	
1			0		10.92
48	sump pump and tank (Nos)		1	Nos.	0.16
49	Swing check valve (Nos)		100	Nos.	2.62
1	Telecom System (comprising of				
50	DC power, Networking system,		10		113.34
	CCTVt Toland			Nos.	
1	CCTV system, Telephone			1103.	
	system, OFC, HDPE, etc.)(Nos)				
51	Transformer(Nos)		10	Nos.	74.52
	Vadinar SPM Replacement				
52	project				
34	1			Noc	
1	1. Buoy & accessaries			Nos.	
L_	2. Concrete Coated Pipe		<u>L</u>		
53	Valves		Lot	Lot	5
54	VALVES of all types(Nos)		200	Nos.	
					0.1.5.5
55	VFD (Nos)		15	Nos.	24.00
56	Anti-Chafe Chains for Vadinar		14		0.97
30			14	No	0.97
57	Subsea Hoses for Paradip SPM-I		2	No	0.04
5/	Subsea noses for Paradip SPM-I			INO	0.84
			<u> </u>	<u> </u>	
	Pro	<mark>curement Projected _ Marketing - LPC</mark>	ì		
		Group			
					Estimated
		Prood angaifigation			
G1 33	B	Broad specification			Value of
SI. No.	Description of item	Parameters	_		procurement
			ty	ng Unit	in Rs/Crores
1	LPG Pump		14	Nos.	10.34
2	LPG Compressor		14	Nos.	6.77
	•				
3	Air Compressor		15	Nos.	2.30
4	Air Dryer		4	Nos.	0.77
5	DG Set		7	Nos.	3.47
6	Fire Engine		14	Nos.	1.92
			4	Nos.	1.74
7				INOS	1
	Valve change without		4	1103.	4 40
	Evacuation Machine		4		1.12
8			16	Nos.	1.12 0.53
	Evacuation Machine LPG Loading arm		16	Nos.	0.53
9	Evacuation Machine		16 20		

Computers

20 200

Nos.

1.20

11	Additive deciments all the		F0	Nos	10.00
	Additive dosing machines		50	Nos.	10.80
12	Carousal Cards in Nos. Mech Seals (Refurbishing)		360 93	Nos. Nos.	3.02
13	Nos.for LPG Pump		93	NOS.	3.35
14	Mech Seals New in Nos. for LPG		20	Nos.	3.33
14	Pump		20	1103.	1.92
15	Valves / Flanges / Gaskets /		270	Nos.	1.72
	Spares in Nos.		270	1103.	8.10
16	Cables (Control / Power) in RMs		2790	Nos.	0.10
	, , , , , ,		0		0.50
17	Pressure / Temp		186	Nos.	
	Transmitters/Gauges in Nos.				2.23
18	Fire Engine / DG / DC Batteries		3100	Nos.	
	in Nos.				5.58
19	Conveyor Chain in RM		4550	Nos.	
			0		6.55
	Air Ends of Screw Compressors		37	Nos.	2.22
21	Spares (Filters & Accessories)		465	Nos.	4.00
22	Air Comp in Nos.		270	NT	1.39
22	LPG Vap Comp Seals / valves / Plates		279	Nos.	1.01
23	Lights and Fixtures / Bulbs /		9300	Nos	1.01
2.5	glands / JBs / Switches		7300	1103.	1.12
24	Relays / Fuses		4650	Nos.	1.12
	Printer Cartridges			Nos.	0.34
		wearing strips / Pneumatic tubing /	1860		3.72
-	connectors	5 1-7	0		- ·
27	Misc Spares /Car (sensors /		186	Nos.	
	connectors / cables etc)				2.23
	TLD / TLF Spares			Nos.	2.23
29	Structural steel for Conv / Misc		400	Nos.	
	Works in MT				1.82
	Diesel / Fire Engine Spares /		651	Nos.	
	filters / glands		270	NT	5.47
	Spares for Level gauges / transmitters		279	Nos.	3.35
		es / MIMIC / sensors / transmitter	279	Nos.	1.395
	CCTV spares / modules			Nos.	1.67
	Load cells for weigh bridges /			Nos.	1.07
	weighing scales / carousals		700	1100.	2.70
35	Centering Arms of carousals		2250	Nos.	0.32
		Procurement of LPG Cylinders & P			
		Regulator	1	1	
					Estimated
Cl No	Decement on of items	Broad specification	0	A	Value
51. NO.	Description of item	Parameters	Quanti ty	Accoun ting	of procureme
			ty	Unit	nt in
				Offic	Rs/Crores
1	14.2 Kg Cylinders (Including		110000	Nos.	-,
	New & Replacement)		00		1686.32
2	19 Kg Cylinders (Including New		90000	Nos.	
	& Replacement)		0		168.05
3	47.5 Kg Cylinders (Including		5000	Nos.	00.44
<u> </u>	New & Replacement)		0	N.T.	23.11
4	5 Kg Cylinders (Including New &		200000	Nos.	200.01
5	Replacement)		3000	Nos.	208.01 23.71
6	425 KG Cylinders Pressure Regulators		750000	Nos.	43./1
0	i ressure negulators		0	1405.	130.38
7	Self Closing Valve		198000	Nos.	130.30
′			00	1.00.	199.20
			1		= +
	P	rocurement Projected _ Marketing -			

		Lubes			
Sl. No.	Description of item	Broad specification Parameters		g Unit	Estimated Value of procurement in Rs/Crores
1	Synthetic base oil Poly alfa olefin 6 CST		600	MT	15.89
	ST5014 (Lithium Hydroxide Monohydrate)		325	MT	22.68
3	ST56058 (PIB 1000)		2601	MT	32.18
4	Synthetic base oil Poly alfa olefin 100 CST, PAO 100(ST 55580)		300	MT	12.95
5	PIB of higher molecular wt.(ST 56032/ST 56036)		306	MT	4.88
6	Synthetic base oil Poly alfa olefin 4 CST, PAO 40(ST 55578)		317	МТ	12.85
	   Pr	ocurement Projected _Pipelines			
Sl. No.	Description of item	Broad specification Parameters		g Unit	Estimated Value of procurement In Rs/Crores
1	Marine Hoses		60	Nos	24

	FINANCIAL YEAR 2026 - 27							
	Capex Procurement Projected _ Refineries							
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores			
1	Vessels/Drums/Tanks		324	Nos.	240			
	Repair	& Maintenance/Operations Proj	ected _ Refin	eries				
1	Chloride Guard		25.00	MT	0.45			
2	Corrossion inhibitor		598.00	kg	0.03			
3	Perchloroethylene		18,159.48	kg	0.28			
4	Feed Inhibitor (Poly Flo- 130)		12,650.00	kg	0.72			
5	Antifoam		1,000.00	kg	0.10			
6	MEA		130.00	kg	0.00			
7	DMDS		1,917.00	kg	0.05			
8	Sulfolane		8,395.00	kg	0.17			
9	Desorbent		202,760.0	kg	4.71			
10	Catalyst		24	MT	90.00			
11	Manganese acetate(MT)		221	MT	4.83			
12	Cobalt acetate(MT)		70	MT	12.17			
13	oxalic acid(MT)		248	MT	2.30			
14	HBr(KG)		688	MT	12.36			
15	Acetic acid(KG)		27770	MT	151.37			
16	n-Propyl acetate(KG)		550	MT	8.52			
17	TEAL		340	MT	22.0			
18	Z-501		21	MT	77.7			
19	Zn-stearate		199	MT	3.6			
20	Ca-stearate		598	MT	9.0			
21	Irganox 1010		1148	MT	90.0			
22	Irgafos 168		1840	MT	145.0			
23	Viton FFGB		66	MT	14.6			
24	Licowax PED 191		100	MT	6.9			
25	Tinuvin 622		20	MT	1.4			
26	Optical Brightner		1	MT	1.3			
27	Lynx 200HAH		2	MT	9.1			
28	HDPE Catalyst (LYNX 200 HAH Or Z-501)		4	MT	15.2			
29	ZN-111-4 N		24.78	MT	87.87			
30	PP catalyst		15.75	MT	53.47			
31	MINERAL OIL		102.25	MT	3.20			
32	GREASE		35.00	MT	1.09			
33	DONOR C		26.25	MT	2.26			
34	Donor D		5.25	MT	1.78			
35	ATMER 163		105.00	MT	7.24			
36	GMS 90		437.50	MT	13.16			

37	CAST	385.00	MT	5.39
38	DHT 4A	175.00	MT	5.36
39	Erucamide	52.50	MT	2.41
40	Luperox 101	87.50	MT	11.98
41	Sylobloc 45H	87.50	MT	1.33
42	Irganox 3114	52.50	MT	3.50
43	DSTDP	175.00	MT	7.66
44	A0-1330	14.00	MT	1.56
45	NX 8000	315.00	MT	112.19
46	HPN20 E	14.00	MT	4.03
		175000.0		4.03
47	MINERAL OIL NEW (local)	0	MT	2.10
48	HPNA	87.50	MT	19.14
49	NA-21	27.00	MT	14.19
50	PEPQ additive	150.00	MT	29.98
51	Zinc Stearate	8.00	MT	0.22
52	ZN-180M (Non phthalate	0.16	MT	1 21
53	catalyst for polymers) CAB	16.65	MT	1.31 4.82
54	CT	15.23	MT	
55	CAB-2	27.60	MT	0.77
56	CD CD	27.60	MT	5.88
			-	1.24
57	CJ	28.80	MT	2.63
58	A06	96.00	MT	7.27
59	A08	100.00	MT	7.22
60	A09	130.00	MT	9.39
61	AO5	220	MT	7.52
62	SILICA MB	300.00	MT	4.39
63	PROCESSING AID	200.00	MT	10.52
64	SLIP	100.00	MT	4.59
65	cyasorb UV 531(UV1)	2.00	MT	0.32
66	Chimassorb 944 (UV4)	10.00	MT	1.34
67	PG	350.00	MT	10.94
68	PD	220.00	MT	14.69
69	CYCLOHEXANE (IC)	5000.00	MT	36.13
70	ACTIVATED ALUMINA	3240.00	MT	55.53
71	(IC) Therminol VP-1	70.00	MT	
72	Iso butyl alcohol	1.50	MT	2.98
73	Optical brightener	0.50	MT	0.02
74	Cast MB	150.00	MT	0.40 2.55
75	Silica Gel	187.00	MT	
76	Molecular Seive	25.00	MT	3.76
70	Ceramic Ball (Bed	23.00		0.87
	Support) -		MT	
77	6mm Diameter	2.42	MT	0.03
78	10mm Diameter	1.10	MT	0.01
79	12mm Diameter	1.65	MT	0.02
80	20mm Diameter	1.20	MT	0.01
81	Ethylene Purification bed	0.00	MT	0.00
82	Mono-2-Methyl hexyl	18.00	МТ	
	amine(2014)			0.76
83	LC-2253 catalyst	25.00	MT	11.58
84	Catalyst(AVANT ZN-111-	17	MT	4.72

TEAL   110		4)				
MINERAL OIL FOR PP	0.5			110	MT	0.04
ST   GREASE FOR PP						
BONORC CELECTIVITY						
SONTROLAGENT    18						0.03
PUNITE Extrusion Additives	88			18	MT	0.14
Additives	89			62	MT	0.06
NATIBLOC					MT	-
PEROXIDE	90			170	MT	0.02
93   GMS 99-ANTISTATIC   16   MT   0.01     94   FRUCAMIDE-SLIP AGENT   130   MT   0.04     95   DHT4A-ACID SCAVENGER   154   MT   0.03     96   CALCIUM-STEARATE   50   MT   0.01     97   IRGAFOS 168   565   MT   0.05     98   IRGANOX 1010   280   MT   0.05     99   P-EPQ   65   MT   0.06     101   Chemicals, Catalyst & additives   Pacol catalyst   48   MT   3.87     102   Chemicals, Catalyst & additives   Andrews   100   MT   1.9     104   Additives   Additives   Andrews   100   MT   1.9     105   Chemicals, Catalyst & additives   100   MT   1.9     106   Chemicals, Catalyst & additives   100   MT   1.9     107   Chemicals, Catalyst & additives   100   MT   1.9     108   Chemicals, Catalyst & additives   100   MT   1.9     109   Chemicals, Catalyst & additives   100   MT   1.9     100   Chemicals, Catalyst & additives   100   MT   1.9     101   Chemicals, Catalyst & additives   100   MT   1.9     102   Chemicals, Catalyst & additives   100   MT   1.9     103   Chemicals, Catalyst & additives   100   MT   1.9     104   Chemicals, Catalyst & additives   100   MT   1.9     105   Chemicals, Catalyst & additives   100   MT   1.9     107   Chemicals, Catalyst & additives   100   MT   1.0   1.0     108   Methanol   100   T0   0.06     109   DMDS   80   T0   1.57     110   MEA for ATU   37208   KG   0.48     111   Antifoam for BEU   10   T0   1.17     112   TBC   46   T0   1.17     113   Silicone Oil   5   T0   0.14     114   Sodium Nitrite   120000   KG   0.84     115   NMP Solvent (BDEU)   117   T0   7.63     116   Anion Resin   25269   L   0.42     117   Cation Resin   25269   L   0.42     119   Tri sodium Phosphate   28   T0   0.08	91			60	MT	0.11
93         AGENT         16         MT         0.01           94         ERUCAMIDE-SLIP AGENT         130         MT         0.04           95         DHT4A-ACID SCAVENGER         1154         MT         0.03           96         CALCIUM-STEARATE         50         MT         0.05           97         IRGAFOS 168         565         MT         0.05           98         IRGANOX 1010         280         MT         0.05           99         P-EPQ         65         MT         0.06           101         A0 3114         50         MT         0.06           102         Chemicals, Catalyst & additives         48         MT         35.25           102         Chemicals, Catalyst & additives         Unionfining catalyst         48         MT         3.87           103         Additives         N-Pentane         100         MT         1.9           104         Chemicals, Catalyst & additives         Iso-octane         104         MT         2.92           105         Chemicals, Catalyst & additives         Bot Oil         MT         0.023           106         Chemicals, Catalyst & additives         Additives         Clay F-24X         8	92	HYPERFORM HPN20E		8	MT	0.26
95         DHT4A-ACID SCAVENGER         154         MT         0.03           96         CALCIUM-STERARTE         50         MT         0.01           97         IRGAFOS 168         565         MT         0.05           98         IRGANOX 1010         280         MT         0.05           99         P-EPQ         65         MT         0.14           100         A0 3114         50         MT         0.06           101         Chemicals, Catalyst & additives         Pacol catalyst         23.1         MT         35.25           102         Chemicals, Catalyst & additives         Unionfining catalyst         48         MT         3.87           103         Chemicals, Catalyst & additives         Iso-octane         100         MT         1.9           104         Chemicals, Catalyst & additives         Hot Oil         60         MT         5.53           105         Chemicals, Catalyst & additives         PEP DRIER         0.8         MT         0.023           107         Chemicals, Catalyst & additives         Additives         0.8         MT         0.27           108         Methanol         10         TO         0.06           109	93			16	MT	0.01
96         CALCIUM-STEARATE         50         MT         0.01           97         IRGAPOS 168         565         MT         0.05           98         IRGANOX 1010         280         MT         0.05           99         P-EPQ         65         MT         0.06           101         Chemicals, Catalyst & additives         23.1         MT         0.06           102         Chemicals, Catalyst & additives         48         MT         35.25           102         Chemicals, Catalyst & additives         100         MT         1.9           103         Chemicals, Catalyst & additives         Iso-octane         100         MT         2.92           104         Chemicals, Catalyst & additives         Hot Oil         60         MT         5.53           105         Chemicals, Catalyst & additives         PEP DRIER         0.8         MT         0.023           107         Chemicals, Catalyst & additives         PEP DRIER         0.8         MT         0.27           108         Methanol         10         TO         0.06           109         DMDS         80         TO         1.57           110         MEA for ATU         37208         KG <td>94</td> <td>ERUCAMIDE-SLIP AGENT</td> <td></td> <td>130</td> <td>MT</td> <td>0.04</td>	94	ERUCAMIDE-SLIP AGENT		130	MT	0.04
97         IRGAFOS 168         565         MT         0.05           98         IRGANOX 1010         280         MT         0.05           99         P-EPQ         65         MT         0.14           100         AO 3114         50         MT         0.06           101         Chemicals, Catalyst & additives         Pacol catalyst         23.1         MT         35.25           102         Chemicals, Catalyst & additives         Unionfining catalyst         48         MT         3.87           103         Chemicals, Catalyst & additives         N-Pentane         100         MT         1.9           104         Amalities         N-Pentane         100         MT         1.9           105         Chemicals, Catalyst & additives         Iso-octane         104         MT         2.92           105         Chemicals, Catalyst & additives         Hot Oil         60         MT         5.53           106         Chemicals, Catalyst & additives         PEP DRIER         0.8         MT         0.023           107         Chemicals, Catalyst & additives         Reported         10         TO         0.06           109         DMDS         Reported         Reported	95	DHT4A-ACID SCAVENGER		154	MT	0.03
98         IRGANOX 1010         280         MT         0.05           99         P-EPQ         65         MT         0.14           100         AO 3114         50         MT         0.06           101         Chemicals, Catalyst & additives additives         Unionfining catalyst         23.1         MT         35.25           102         Chemicals, Catalyst & additives additives         Unionfining catalyst         48         MT         3.87           103         Chemicals, Catalyst & additives additives         N-Pentane         100         MT         1.9           104         Chemicals, Catalyst & additives         Iso-octane         104         MT         2.92           105         Chemicals, Catalyst & additives         Hot Oil         60         MT         5.53           106         Chemicals, Catalyst & additives         PEP DRIER         0.8         MT         0.023           107         Chemicals, Catalyst & additives         Baditives         0.8         MT         0.27           108         Methanol         10         TO         0.06         0.06           109         DMDS         80         TO         1.57           110         MEA for ATU         37208	96	CALCIUM-STEARATE		50	MT	0.01
99         P-EPQ         65         MT         0.14           100         AO 3114         50         MT         0.06           101         Chemicals, Catalyst & additives         23.1         MT         35.25           102         Chemicals, Catalyst & additives         Unionfining catalyst         48         MT         3.87           103         Chemicals, Catalyst & additives         N-Pentane         100         MT         1.9           104         Chemicals, Catalyst & additives         Iso-octane         104         MT         2.92           105         Chemicals, Catalyst & additives         Hot Oil         60         MT         5.53           106         Chemicals, Catalyst & additives         B         MT         0.023           107         Chemicals, Catalyst & additives         Clay F-24X         8         MT         0.27           108         Methanol         10         TO         0.06           109         DMDS         80         TO         1.57           110         MEA for ATU         37208         KG         0.48           111         Antifoam for BEU         10         TO         1.17           112         TBC         46	97	IRGAFOS 168		565	MT	0.05
100         AO 3114         50         MT         0.06           101         Chemicals, Catalyst & additives         Pacol catalyst         23.1         MT         35.25           102         Chemicals, Catalyst & additives         Unionfining catalyst         48         MT         3.87           103         Chemicals, Catalyst & additives         N-Pentane         100         MT         1.9           104         Additives         Iso-octane         104         MT         2.92           105         Chemicals, Catalyst & additives         Iso-octane         104         MT         2.92           105         Chemicals, Catalyst & additives         Bot Oil         60         MT         5.53           106         Chemicals, Catalyst & additives         Bot Oil         0.8         MT         0.023           107         Chemicals, Catalyst & additives         Clay F-24X         8         MT         0.27           108         Methanol         10         TO         0.06           109         DMDS         80         TO         1.57           110         MEA for ATU         37208         KG         0.48           111         Antifoam for BEU         10         TO	98	IRGANOX 1010		280	MT	0.05
101   Chemicals, Catalyst & additives   23.1   MT   35.25     102   Chemicals, Catalyst & Unionfining catalyst   48   MT   3.87     103   Chemicals, Catalyst & Amount   1.9     104   Chemicals, Catalyst & Amount   1.9     104   Chemicals, Catalyst & Amount   1.9     105   Chemicals, Catalyst & Amount   1.9     106   Chemicals, Catalyst & Amount   1.9     107   Chemicals, Catalyst & Amount   1.9     108   Chemicals, Catalyst & Amount   1.9     109   Chemicals, Catalyst & Amount   1.9     100   Chemicals, Catalyst & Amount   1.9     101   Chemicals, Catalyst & Amount   1.0     102   Chemicals, Catalyst & Amount   1.0     103   Chemicals, Catalyst & Amount   1.0     104   Chemicals, Catalyst & Amount   1.0     105   Chemicals, Catalyst & Amount   1.0     107   Chemicals, Catalyst & Amount   1.0     108   Methanol   1.0   1.0     109   DMDS   1.57     110   MEA for ATU   1.17     111   Antifoam for BEU   1.17     112   TBC   1.17     113   Silicone Oil   5   TO     1.17     114   Sodium Nitrite   1.20000   KG   0.84     115   NMP Solvent (BDEU)   1.17   TO   7.63     116   Anion Resin   1.2632   L   0.10     117   Cation Resin   1.2632   L   0.10     118   Activated carbon   2.5   KG   0.19     119   Tri sodium Phosphate   2.8   TO   0.08     110   To   1.17     111   Tri sodium Phosphate   1.0     111   Tri sodium Phosphate   1.0     112   Tri sodium Phosphate   1.0   1.0     113   To   1.0     114   Table   1.0   1.0     115   Tri sodium Phosphate   1.0     116   Amount   1.0   1.0     117   Tri sodium Phosphate   1.0   1.0     118   Activated carbon   1.0   1.0     119   Tri sodium Phosphate   1.0   1.0     110   To   1.0     111   112   Tri sodium Phosphate   1.0     112   Tri sodium Phosphate   1.0   1.0     113   Table   1.0   1.0     114   Table   1.0   1.0     115   1.0   1.0     116   1.0   1.0     117   118   1.0   1.0     118   1.0   1.0     119   110   1.0     110   1.0   1.0     110   1.0   1.0     111   1.0   1.0     112   1.0   1.0     113   1.0   1.0     114   1.0   1.0     115   1.0   1.0     116	99	P-EPQ		65	MT	0.14
Additives	100			50	MT	0.06
Additives	101	additives	Pacol catalyst	23.1	MT	35.25
103   additives   N-Pentane   100   MT   1.9     104   Chemicals, Catalyst & Iso-octane   104   MT   2.92     105   Chemicals, Catalyst & additives   Hot Oil   60   MT   5.53     106   Chemicals, Catalyst & additives   PEP DRIER   0.8   MT   0.023     107   Chemicals, Catalyst & Clay F-24X   8   MT   0.27     108   Methanol   10   TO   0.06     109   DMDS   80   TO   1.57     110   MEA for ATU   37208   KG   0.48     111   Antifoam for BEU   10   TO   1.17     112   TBC   46   TO   1.17     113   Silicone Oil   5   TO   0.14     114   Sodium Nitrite   120000   KG   0.84     115   NMP Solvent (BDEU)   117   TO   7.63     116   Anion Resin   25269   L   0.42     117   Cation Resin   12632   L   0.10     118   Activated carbon   25   KG   0.19     119   Tri sodium Phosphate   28   TO   0.08     100   MT   2.92   TO   0.08     108   MT   0.023     109   MT   0.023     100   MT   0.023     100   MT   0.023     110   TO   0.06     111   TO   0.06     112   TBC   1.07   1.07     113   Silicone Oil   1.07   1.07     114   Sodium Nitrite   1.07   1.07     115   NMP Solvent (BDEU)   1.07   1.07     116   Activated carbon   2.5   KG   0.19     117   Tri sodium Phosphate   2.8   TO   0.08	102	additives	Unionfining catalyst	48	MT	3.87
104   additives   104   MT   2.92     105	103	additives	N-Pentane	100	MT	1.9
Additives	104	additives	Iso-octane	104	MT	2.92
Additives   PEP DREK   10.8   MT   10.023	105	additives	Hot Oil	60	МТ	5.53
107         additives         Clay F-24X         8         M1         0.27           108         Methanol         10         TO         0.06           109         DMDS         80         TO         1.57           110         MEA for ATU         37208         KG         0.48           111         Antifoam for BEU         10         TO         1.17           112         TBC         46         TO         1.17           113         Silicone Oil         5         TO         0.14           114         Sodium Nitrite         120000         KG         0.84           115         NMP Solvent (BDEU)         117         TO         7.63           116         Anion Resin         25269         L         0.42           117         Cation Resin         12632         L         0.10           118         Activated carbon         25         KG         0.19           119         Tri sodium Phosphate         28         TO         0.08	106	additives	PEP DRIER	0.8	МТ	0.023
109       DMDS       80       TO       1.57         110       MEA for ATU       37208       KG       0.48         111       Antifoam for BEU       10       TO       1.17         112       TBC       46       TO       1.17         113       Silicone Oil       5       TO       0.14         114       Sodium Nitrite       120000       KG       0.84         115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	107		Clay F-24X	8	МТ	0.27
110       MEA for ATU       37208       KG       0.48         111       Antifoam for BEU       10       TO       1.17         112       TBC       46       TO       1.17         113       Silicone Oil       5       TO       0.14         114       Sodium Nitrite       120000       KG       0.84         115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	108	Methanol		10	ТО	0.06
111       Antifoam for BEU       10       TO       1.17         112       TBC       46       TO       1.17         113       Silicone Oil       5       TO       0.14         114       Sodium Nitrite       120000       KG       0.84         115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	109	DMDS		80	ТО	1.57
112       TBC       46       TO       1.17         113       Silicone Oil       5       TO       0.14         114       Sodium Nitrite       120000       KG       0.84         115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	110	MEA for ATU		37208	KG	0.48
113       Silicone Oil       5       TO       0.14         114       Sodium Nitrite       120000       KG       0.84         115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	111	Antifoam for BEU		10	ТО	1.17
114       Sodium Nitrite       120000       KG       0.84         115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	112	ТВС		46	ТО	1.17
115       NMP Solvent (BDEU)       117       TO       7.63         116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	113	Silicone Oil		5	ТО	0.14
116       Anion Resin       25269       L       0.42         117       Cation Resin       12632       L       0.10         118       Activated carbon       25       KG       0.19         119       Tri sodium Phosphate       28       TO       0.08	114	Sodium Nitrite		120000	KG	0.84
117 Cation Resin       12632       L       0.10         118 Activated carbon       25       KG       0.19         119 Tri sodium Phosphate       28       TO       0.08	115	NMP Solvent (BDEU)		117	ТО	7.63
118Activated carbon25KG0.19119Tri sodium Phosphate28TO0.08	116	Anion Resin		25269	L	0.42
119 Tri sodium Phosphate 28 TO 0.08	117	Cation Resin		12632	L	0.10
1 0.08	118	Activated carbon		25	KG	0.19
120 Oxygen Scavenger 22 TO	119	Tri sodium Phosphate		28	ТО	0.08
	120	Oxygen Scavenger		22	ТО	

	(Hydrazine)			0.77
121	Morphline	91	ТО	2.28
122	Anthracite	1	ТО	0.00
123	ETHYLENE DI-CHLORIDE	9	то	0.05
124	POTASSIUM CARBONATE	3789	KG	0.04
125	BORIC ACID	300	то	4.26
126	VANADIUM PENTOXIDE	600	то	0.09
127	CYCLE WATER SYSTEM ANTIFOAM (OLEYL ALCOHOL)	120	KG	0.01
128	CO2 REMOVAL SECTION ANTIFOAM (UCON 50 HB 5100)	133	ТО	5.36
129	CATION RESIN BEDS	21632	KG	0.58
130	ANION RESIN BEDS	30979	KG	1.13
131	MPTS Resin	4	то	2.84
132	Di ammonium phosphate(DAP),100%	9	ТО	0.06
133	Alum,70%	38	ТО	0.04
134	Urea,100%	15	то	0.03
135	Sodium hydroxide, 100%	2191	то	6.83
136	Sulphuric Acid, 98%	95	ТО	0.40
137	DOPE	10	то	0.05
138	DWPE	8	то	0.03
139	Hydrogen peroxide	1895	то	6.52
140	Activated carbon	25263	KG	0.08
141	Silica Sand	25	то	7.66
142	VOC Activated Carbon	13	то	0.22
143	CHLORINE, LIQUID IN 900KG CYLINDER	436	то	0.29
144	HYDROCHLORIC ACID	7636	то	2.79
145	POLY ALUMINIUM CHLORIDE	632	ТО	0.66
146	Poly eletrolyte	16	ТО	0.09
147	ANION RESIN FOR MB EXCHANGER/SBA/WBA/S AC	25269	L	0.42
148	CATION RESIN FOR MB EXCHANGER/SBA/WBA/	12632	L	0.11
149	SODIUM HYDROXIDE,CAUSTIC SODA LYE,NaOH	2191	ТО	6.83
150	SULPHURIC ACID (98%)	1091	ТО	1.06

			1		
151	DEWATERING POLY ELCTROLYTE, POWDER FORM		5	KG	0.10
152	ACTIVATED CARBON		25	KG	0.19
153	Garnet Sand		31	KG	0.17
154	Anthracite		1	KG	0.00
155	Quartz Sand		218	KG	0.13
156	CORROSION INHIBITOR		3	то	0.02
157	BIOCIDES,OXIDISING		1	то	0.00
158	HYDRAZINE HYDRATE (PURITY BY MASS 80%)		22	ТО	0.77
159	Tri Sodium Phosphate		28	ТО	0.08
160	Morpholine-100%		91	ТО	2.28
161	POLYMERIC DISPERSANT-TYPE- II(TER)		119	МТ	1.19
162	Acetylene Convertor	Olemax 201	79940	KG	52.23
163	Methanator	Meth 134	7	KG	0.00
164	MAPD Convertor	Olemax 353	18270	KG	34.44
165	C4HU Bed-1	Olemax -350	6930	KG	16.50
166	C4HU Bed-2	Olemax -452	6960	KG	24.80
167	PGHU (DPG-I)	Olemax - 601	35230	KG	126.00
168	CGC Dryer	Grace MS 562C	143790	KG	60.57
169	Hydrogen Dryer	Grace MS 564C	21840	KG	0.5
170	Condensate Stripper Dryer	Grace MS 564C	67740	KG	0.5
171	Ethylene Dryer	Grace MS 562C	10610	KG	0.5
172	Arsine Treater	UOP GB 238	3400	KG	0.80
173	EO Silver Catalyst	Syndox 400-8	140000	KG	250.00
174	CCRU stab feed Chloride Guard	Stab feed Chloride Guard	40	MT	1.3
175	CCRU NHT Catalyst	CCRU-NHT catalyst	8	MT	1.15
176	DHDS Catalyst	Hydrotreating catalyst	45	MT	6
177	OHCU Catalyst (RFQ by RHQ)	Hydrotreating and Hydrocracking catalyst	451.82	m3	150
178	HCU Catalyst (RFQ by RHQ)	Hydrotreating and Hydrocracking catalyst	376	m3	69
179	PDS Catalyst	Hydrotreating catalyst	57	MT	5.32
180	LPG Merox Catalyst	Merox catalyst (Liquid state continuous dosing)	547	Liters	0.28
181	New DHDT	Hydrotreating Catalyst	262	MT	31
182	DHDT-Pygas Unit	Diolefin Reactor Catalyst	12.7	MT	17
183	Claus catalyst (SRU-56)	Alumina based catalyst	70.7	m3	1.05
184	Chemicals, Catalyst & additives	CRU Reduction circuit Chloride Guard (17-DR2A/B)	33.3	m3	0.56
185	Chemicals, Catalyst & additives	ISOM NHT catalyst	10	m3	0.65
186	Chemicals, Catalyst & additives	MSQ S Guard Catalyst	3.8	m3	0.5
187	Chemicals, Catalyst & additives	MSQ Methanator Catalyst	3	m3	0.77
188	Chemicals, Catalyst &	ISOM Make up gas Drier	26.5	m3	1.1

	additives	adsorbent			
189	Chemicals, Catalyst & additives	ISOM Feed Drier adsorbent	32	m3	1.5
190	Chemicals, Catalyst & additives	Octamax Dimer Reactor catalyst	38	m3	0.87
191	Chemicals, Catalyst & additives	NPRU Drier molecular sieves	10.8	МТ	0.37
192	Chemicals, Catalyst & additives	FCCU Catalyst	1741	MT	57.8
193	Chemicals, Catalyst & additives	SRU- Claus catalyst (1 train)	20	m3	0.55
194	DHDT-1	DHDT catalyst	340	MT	29.10
195	SRU-3	SRU-3 Claus catalyst	158	MT	1.20
196	TGTU	Low temperature TGTU catalyst	32.4	MT	2.85
197	HGU-3	HGU-3 Pre-reformer	14.2	М3	2.83
198	HGU-3	HGU-3 S/Cl guard catalyst	9.8/8	MT	0.29/0.2
199	ISOM	ISOM NHT catalyst	8	MT	0.76
200	ISOM	ISOM Methanator catalyst	3.2	MT	1.05
201	ISOM	PENEX feed drier adsorbent	8	MT	0.42
202	ISOM	PENEX MUG drier adsorbent	2.2	MT	0.12
203	ISOM	PENEX LPG chloride treater adsorbent	0.6	МТ	0.08
204	ISOM	PENEX MUG treater adsorbent	1.6	MT	0.04
205	ISOM	PENEX feed sulphur guard	5	MT	0.65
206	DHDT-1/ISOM	DMDS	60	MT	1.02
207	MSQ	LPG Chloride guard	1.6	m3	0.03
208	MSQ	Net gas chloride guard	44	m3	0.99
209	MSQ	Air drier desssicant	327	Kg	0.01
210	DHDT-II	DHDT-II Grading catalysts, Hydrotreating catalysts	231	MT	30.00
211	HGU-IV	HGU-4 2nd Hydrogenator	8.6	М3	1.00
212	HGU-IV	HGU-4 MT shift reactor	35.4	М3	6.00
213	HGU-IV	HGU-4 LT shift reactor	48.9	М3	10.00
214	HGU-IV	HGU-4 Reformer	30.7	М3	6.00
215	VGO-HDT	VGO-HDT catalyst	638.4	m3	76.71
216	Coker Merox	Coker Merox catalyst	0.7	m3	0.24
217	Coker Merox	Anthracite coal for Coker Merox	3.2	m3	0.00
218	Coker Merox	Silica sand	12	MT	0.01
219	ATF Merox	ATF clay	114	m3	0.40
220	CRU-NHT	CRU NHT catalyst	9.5	MT	1.10
221	Aus/VDU	High TAN chemical for AUs, VDU	10	MT	0.70
222	LAB	Pacol catalyst	23.1	MT	35.25
223	LAB	Unionfining catalyst	48	MT	3.87
224	LAB	N-Pentane	100	MT	1.90
225	LAB	Iso-octane	50	MT	1.54
226	LAB	Hot Oil	60	MT	5.53
227	LAB	PEP DRIER	0.8	MT	0.02
228	LAB	Clay F-24X	8	MT	0.27
229	HGU-1	HGU-1 HT Shift	35.3	М3	1.76
230	HGU-1	HGU-1 Reformer	24.18	М3	2.40
231	HGU-1	HGU-1 S/Cl guard catalyst	6.7/3.8	MT	0.2/0.1
232	GHC N2 plant	Adsorbers	1.25	MT	0.04
233	DHDS	DHDS catalyst	300	MT	26.00
234	FCCU	FCCU catalyst	700	MT	14.22

235	FCCU	CO promoter	1.5	MT	0.18			
236	N2 plant	Liquid Nitrogen	4000	MT	3.20			
237	GRSPF N2 plant	N2U-Activated Alumina and Molecular Sieves	7.15	MT	0.15			
238	FCCU	Silica sand	48.53	m3	0.02			
239	Chemicals, Catalyst & additives	MIBK (METHYL ISOBUTYL KETONE)	300	MT	6.47			
	Capex Procurement Projected _ Marketing							
Sl.				Accoun	Estimated Value of			
No.	Description of item	Broad specification Parameters	Quantity	ting Unit	procurement in Rs/Crores			
_	Description of item	Broad specification Parameters	Quantity		P			
_	Description of item	Broad specification Parameters	Quantity		P			
_	-	Broad specification Parameters  & Maintenance/Operations Proj		Unit	P			
_	-	-		Unit	P			

	Capex Procurement Projected _ Pipelines							
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores			
	Repair	& Maintenance/Operations Pro	jected _ Pipe	lines				
			•	•				

	Capex Procurement Projected _ BD						
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
	Rep	air & Maintenance/Operations F	rojected_B	D			

	Capex Procurement Projected _ R&D						
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
	Repair & Maintenance/Operations Projected _ R&D						

	FINANCIAL YEAR 2027 - 28						
		Capex Procurement Projected _ l	Refineries				
Sl. No.	Description of item	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores			
	Repair & Maintenance/Operations Projected _ Refineries						
1 Silica MB		220	MT	7.90			
2	Chemicals, Catalyst & additives	MIBK (METHYL ISOBUTYL KETONE)	300	MT	6.79		

	Capex Procurement Projected _ Marketing						
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
	Repair & Maintenance/Operations Projected _ Marketing						
1	ST56058 (PIB 1000)		2601	MT	35.45		
2	PIB of higher molecular wt.(ST 56032/ST 56036)		306	МТ	5.38		

	Capex Procurement Projected _ Pipelines						
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
	Repair & Maintenance/Operations Projected _ Pipelines						

	Capex Procurement Projected _ BD						
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
	Repair & Maintenance/Operations Projected _ BD						

	Capex Procurement Projected _ R&D						
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accoun ting Unit	Estimated Value of procurement in Rs/Crores		
	Repa	air & Maintenance/Operations P	rojected _ R&	&D			

		FINANCIAL YEAR 2022 – 23			
		Capex Procurement			
Sl. No.	Description of item	Projected R&D  Broad specification  Parameters	Quantit y	Accountin g Unit	Estimate d Value of procure ment in Rs/Cror es
1	Heavy End Hydroprocessing Pilot Plant (part)	Capacity up to 1000 g/hr, H2 rate up to 600 SLPH, Pressure 200 bar, temperature 500 degC	1	No.	11.89
2	DCS card	temperature 300 dege	1	No.	0.11
	A3 Printer	Color laser printer	1	No.	0.02
	GC-FID/TCD	-	1	lot	0.40
	Sulfur/ Chloride		1	Lot	0.60
	GC-VUV		1	Lot	1.00
	GC-MS GPC with multiple detector		1 1	Lot lot	1.00 2.00
	Up-gradation of NMR 500 MHz FT NMR		1	No	3.33
10	FT-IR Spectrometer		1	NO	1.50
	Laboratory Equipments (Muffle furnace, Vacuum Oven, pH Meter, Hot Plate, Refrigerator)		1	lot	0.15
	Particle size analyzer		1	no	0.40
	Lab furniture(syn block)		1	lot	0.95
	Density for LPG Hot filtration tester				0.12 0.15
	Cu strip corrosion for LPG (D1838)				0.13
	KFT				0.30
18	Dual Beam UV-Vis Spectrophotometer		1	No	0.05
	20L Automatic Rotary Evaporation System		1	No	0.25
	Continuous Flow Reactor System Gas Distribution System		1	No No	0.20 1.2
22	Upgradation		1	NT.	0.50
	Automatic Titrator with KF Explosion Proof Refrigerators		4	No No s	0.50 0.12
24	Explosion Proof Freezers		2	No s	0.08
25	Waste Plastic pyrolysis unit		1	No	4
26	Styrene Purification Unit to convert Crude Styrene from waste to monomer grade Styrene (approx. 1- 2 TPD Continuous unit)		1	No	35
	High Pressure Autoclaves		1	No	0.78
	UTM with accessories Spares of Electrolroyer and		1 1	No Lot	1.2 0.35
30	compressor unit AMC of Hydrogen Infrastructure		1	Lot	0.76
	AMC of BELSORP HP instrument		1	Lot	0.76
	AMC of BET Surface area Analyzer		1	Lot	0.01
33	Spares of BELSORP HP instrument		1	Lot	0.04
	Spares of BET Surface area Analyzer		1	Lot	0.04
	Solar based Hydrogen Infrastructure		1	No s.	48.23
	Biomass Shredder		1	No s	0.02
	Crusher		1	No s	0.02
38	Natural gas and bio-CNG reforming based hydrogen infrastructure		1	No s	39.1

	T	T	1	1			
39	Development of oxy-steam biomass gasification process		1	Lot	7.68		
40	Micro scale reactor unit		1	No	4.8		
41	Fume hood		1	s. No	0.07		
42	Liquid GC		1	s. No	0.6		
				S.			
43	Integrated Gasification Plant		1	No s.	22		
44	Gasket fabrication machine for stack	For air cooled fuel cell air/water cooled	1	No s.	0.7		
45	SOFC/ SOEC cell fabrication facility	i. Planetary Ball Milling machine 240 v, 50-60 Hz, 2800 Watt ii. Benchtop ultrathin Coating System ( X-Y-Z motion) for coating fuel cell iii. Screen Printing machine ( Screen Size up to 15 x 20 cm2 & Max Print area 40x35cm2) iv. PLANETARY VACUUM MIXER v. Overhead Stirrer – Direct Drive Stirrer – ~40 Ltr		No s.	6		
		Gas Characterizer for fuel cell					
	Scanning electron microscope		1	no	1.2		
	Planetary Mixer & Vibrating table		1	no	.02		
48	Renewal of Aspen Engineering Suite Software	Network license for 5 years term with SMS (AMC)		Lu mp su	2.36		
40	Fixed bed reactor cum adsorption		1	m	2.1		
47	setup  Multi-Channel, multi compartment		1	lot	3.0		
	glove box with integrated facilities of: Weighing balance 2. Spin Coater/Slot-die Coater/Ink-Jet Coater 3. Programmed Hot Plate 4. Solar simulator 5. Vapour Deposition Setup (2) 6. Probe system for measurement 7. IV tester 8. Lamination unit						
	Catalyst Slurry		1	no	2.28		
	Chemisorption		1	no	1.11		
	Spray Dryer		1	no	0.61		
	Dialometer		1 1	no	0.89		
	Lab Scale Hydrogen Furnace (with Scrubber & Gas Suction)		1	no	2.031		
55	Lab Scale Hydrogen Furnace (with Scrubber & Gas Suction)		1	no	2.37		
	Nanometals and Metal oxide Synthesis Facility		1	lot	12.77		
	SRV		1	no	1.88		
	LFW-1		1	no	2.95		
59	Lab Equipments - Grease Kettle – 2Kg and 5 Kg Automatic Penetrometer Drop point apparatus Wheel bearing leakage tester( variable RPM)		04	No s.	1.20		
	Procurement Projected - For Repair & Maintenance						
SI	Description of item	Broad specification Parameters	Quantit	Accountin	Estimated Value		
J1.	Description of item	i arameters	Quantit	ALCOUNTIE	ĮVI		

No.			у	g Unit	procure ment in Rs/Cror es
1	Reactors for 4 MRU		8	Nos.	0.50
2	Dryer spares		16	Nos.	0.05
3	Tescom regulator spares		5	Nos.	0.10
4	Maintenance for single cell and stack test stations		1	Lot	0.03
5	Instrumentation Spares for pilot plant		4	Lot	-
6	Spares parts for Fuel cell stations		1 set		0.3
7	TECS (AMC) of ANSYS CFD software		1	SU	0.085
8	AMC of DCN Analyzer		1	SU	0.025
9	AMC of MATLAB software		1	SU	0.03
10	Acrylic plates	For ASTM D 1404 Deleterious particle test			
11	Up-gradation of Existing Agilent make 500 MHz FT- NMR Spectromete		1	SU	3.35
-					

## FINANCIAL YEAR 2023 - 24

## Capex Procurement Projected R&D

		Projected R&D			
Sl. No.	Description of item	Broad specification Parameters	Quantit y	Accountin g Unit	Estimate d Value of procure ment in Rs/Cror es
1	Hydrogen compressors	Capacity 15 NM3 each, Diaphram type, 250 bar	. 2	No.	8
2	SIMDIST		1	No	0.40
	Biodiesel-Analyser		1	No	0.40
	UPLC-MS (with multiple detector)		1	lot	2.00
	HPLC with PDA/RI		1	lot	1.50
6	Rotavapor		1	No	0.15
7	FT-NIR Spectrometer		1	No	0.50
8	ICP-OES		1	No	1.00
9	Silver corrosion				0.10
10	Automatic smoke point				0.20
11	Vapor pressure analyzer for LPG				0.11
12	Fuel analyzer for higher alcohol blended gasoline				0.16
13	Diesel analyzer				0.60
14	Abel flash point apparatus				0.18
15	Magnetic Hotplates		10	No s	0.10
16	Automatic Multipurpose Reactor System		1	No	0.20
17	Vacuum Ovens		2	No s	0.20
18	Particle Size Analyzer		1	No	0.20
	Density meter		1	No	0.10
20	Twin Screw extruder with accessories		1	No	1.0
21	Solar based Hydrogen Infrastructure		1	No s.	8.03
22	Biomass gasification based		1	No	20.0
	hydrogen production demo plant			S	
23	Single cell test station for PEM fuel cell with utilities		1	No s.	2
24	PEM fuel cell system test station	Upto 10 kW	1	No	5

				s.	
25			1	No	
23	Universal Testing Machine (UTM)		1	S.	1.50
26			1	No	1.50
20	Hydrogen determinator		1	S	1.00
27	Sample cutting & modification		1	No	1.00
	equipment		1	S.	0.20
28			1	No	0.20
20	Thermal conductivity measurement		1	S.	0.60
29	Molecular Modeling Software &	Network license with HPC core server		No	
	hardware	& customized service	1		2.0
	TGA with GC		1	no	1.76
	Lab Equipments -		04	No	1.30
	Flow pressure test equipment (DIN			S.	2.50
	Method)				
	Grease Workers (02 Nos.)				
	Oxidation stability test apparatus				
	Lincoln Ventimeter apparatus				
	* *				
	Proc	urement Projected - For Repair &			
		Maintenance			
					Estimated
		Broad specification			Value
Sl.	Description of item	Parameters	Quantit	Accountin	of
	_		**	a IInit	
No.			y	g omi	procure
No.			y	g Unit	ment in
No.			y	gomi	ment in
No.			y	gomt	-
	Control valve trims			Nos	ment in Rs/Cror
1			8 1		ment in Rs/Cror es
1	Other pilot plant spares like spares		8	Nos	ment in Rs/Cror es
1	Other pilot plant spares like spares of pumps, compressors, heaters,		8	Nos	ment in Rs/Cror es
1 2	Other pilot plant spares like spares		8	Nos	ment in Rs/Cror es 0.10
1 2	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.		8	Nos lot	ment in Rs/Cror es 0.10
1 2 3 4	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc. AMC of BELSORP HP instrument		8	Nos lot	ment in Rs/Cror es  0.10  0.40 0.01
1 2 3 4 5	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument  AMC of BET Surface area Analyzer  Spares of BELSORP HP instrument		8	Nos lot Lot Lot	ment in Rs/Cror es 0.10 0.40 0.01 0.01
1 2 3 4 5 6	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc. AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer		8 1 1 1	Nos lot Lot Lot	ment in Rs/Cror es 0.10 0.40 0.01 0.01 0.04
1 2 3 4 5 6 7	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument  AMC of BET Surface area Analyzer  Spares of BELSORP HP instrument		8 1 1 1	Nos lot Lot Lot Lot Lot Lot	ment in Rs/Cror es 0.10 0.40 0.01 0.01 0.04 0.04 0.04
1 2 3 4 5 6 7 8	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station		8 1 1 1	Nos lot  Lot Lot Lot Lot Lot Lot Lot	ment in Rs/Cror es 0.10 0.40 0.01 0.01 0.04 0.04 0.02
3 4 5 6 7 8 9	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument  AMC of BET Surface area Analyzer  Spares of BELSORP HP instrument  Spares of BET Surface area Analyzer  AMC for micro gas chromatograph		8 1 1 1	Nos lot  Lot Lot Lot Lot Lot Lot Lot Lot Lot	ment in Rs/Cror es 0.10 0.40 0.01 0.01 0.04 0.04 0.02
1 2 3 4 5 6 7 8 9 10	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument  AMC of BET Surface area Analyzer  Spares of BELSORP HP instrument  Spares of BET Surface area Analyzer  AMC for micro gas chromatograph  Spares for fuel cell station  TECS (AMC) of ANSYS CFD software  AMC of DCN Analyzer		8 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03
1 2 3 4 5 6 7 8 9 10 11	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument  AMC of BET Surface area Analyzer  Spares of BELSORP HP instrument  Spares of BET Surface area Analyzer  AMC for micro gas chromatograph  Spares for fuel cell station  TECS (AMC) of ANSYS CFD software  AMC of DCN Analyzer  AMC of MATLAB software		8 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033
1 2 3 4 5 6 7 8 9 10 11	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument  AMC of BET Surface area Analyzer  Spares of BELSORP HP instrument  Spares of BET Surface area Analyzer  AMC for micro gas chromatograph  Spares for fuel cell station  TECS (AMC) of ANSYS CFD software  AMC of DCN Analyzer		8 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU	ment in Rs/Cror es  0.10  0.40 0.01 0.01 0.04 0.02 0.5 0.09 0.03
1 2 3 4 5 6 7 8 9 10 11 12	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings	For ASTM D 1743 corrosion preventive test	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 200	Nos lot  Lot Lot Lot Lot Lot SU SU SU	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033
1 2 3 4 5 6 7 8 9 10 11 12	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings	For ASTM D 1743 corrosion preventive test Confocal microscope system should be	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es  0.10  0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033 0.04
1 2 3 4 5 6 7 8 9 10 11 12	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings  Confocal Microscope with	For ASTM D 1743 corrosion preventive test	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033
1 2 3 4 5 6 7 8 9 10 11 12	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings  Confocal Microscope with	For ASTM D 1743 corrosion preventive test Confocal microscope system should be capable of analyzing various fixed &	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033 0.04
1 2 3 4 5 6 7 8 9 10 11 12	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings  Confocal Microscope with	For ASTM D 1743 corrosion preventive test Confocal microscope system should be capable of analyzing various fixed & Live Cell, biological samples and	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033 0.04
1 2 3 4 5 6 7 8 9 10 11 12	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings  Confocal Microscope with	For ASTM D 1743 corrosion preventive test Confocal microscope system should be capable of analyzing various fixed & Live Cell, biological samples and	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es 0.10 0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033 0.04
1 2 3 4 5 6 7 8 9 10 11 12 13	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings  Confocal Microscope with	For ASTM D 1743 corrosion preventive test Confocal microscope system should be capable of analyzing various fixed & Live Cell, biological samples and	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es  0.10  0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033 0.04
1 2 3 4 5 6 7 8 9 10 11 12 13	Other pilot plant spares like spares of pumps, compressors, heaters, valves, tubing, etc.  AMC of BELSORP HP instrument AMC of BET Surface area Analyzer Spares of BELSORP HP instrument Spares of BET Surface area Analyzer AMC for micro gas chromatograph Spares for fuel cell station TECS (AMC) of ANSYS CFD software AMC of DCN Analyzer AMC of MATLAB software Bearings  Confocal Microscope with	For ASTM D 1743 corrosion preventive test Confocal microscope system should be capable of analyzing various fixed & Live Cell, biological samples and protein interactions	8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Nos lot  Lot Lot Lot Lot Lot SU SU SU Nos.	ment in Rs/Cror es  0.10  0.40 0.01 0.04 0.04 0.02 0.5 0.09 0.03 0.033 0.04

## Projected R&D

Sl. No.	Description of item	Broad specification Parameters	Quantit y	Accountin g Unit	Estimate d Value of procure ment in Rs/Cror es
1	H2 cylinder bank	250 bar H2 pressure	1	lot	0.20
2	N/S Analyser		1	No	0.60
3	HPLC with RI/PDA/CAD		1	lot	1.20

FT-Raman Spectrometer						
TEM	4	FT-Raman Spectrometer		1	lot	1.25
Cu corrosion apparatus	5			1	Lot	5.00
8   Weighing balance (2 No. through GEM)	6	Density meter				0.15
GEM	7	Cu corrosion apparatus				0.12
10   Refractive Index apparatus	8	Weighing balance (2 No. through				0.4
11   Refractometer (ATF)   0.30     12   Rancimat apparatus   0.30     3   PMCC flash point   0.15     4   Overhead Digital Stirrers   10   No   0.15     5   Benchtop Automatic Rotary   1   No   0.12     Evaporation System   1   No   0.12     Evaporation System   1   No   0.15     6   Multi-Purpose Fixed Bed Reactor   1   No   1.50     7   Magnetic Hotplates   3   No   0.30     8   PEM fuel single cell station along with utilities   s.       9   PEM fuel cell stack tests station   0-20 kW   1   No   15     9   Fuel cell stack assembly   For 1-50 kW   1   No   10     1   C-S Analyser   1   No   2.5     1   No   API 579 Software   1   No   3.5     3   No   4   No   4.78     4   Renewal of CFD Software &   hardware   Perpetual network license   1   No   0.6     5   Struck (Bill Mill   1   1   1   1   1   1   1     8   ETV-ICP for Graphite   1   no   1.58     9   Fressure Reactor   4   No   4.78     1   Grease kettle - 10 Kg   Water spray off test apparatus   Refractometer   1   Refractometer	9	Pour point bath apparatus				0.22
12   Rancimat apparatus   0.30   13   PMCC flash point   0.15   14   Overhead Digital Stirrers   10   No   0.15   15   Senchtop Automatic Rotary   1   No   0.12   Evaporation System   1   No   0.15   15   Multi-Purpose Fixed Bed Reactor   1   No   1.50   17   Magnetic Hotplates   3   No   0.30   18   PEM fuel single cell station along   with utilities   3   No   5   Sentimental System   1   No   15   Sentimental System   1   No   15   Sentimental System   1   No   15   Sentimental System   1   No   10   Sentimental System   1   No   10   Sentimental System   1   No   Sentiment	10	Refractive Index apparatus				0.15
13   PMCC flash point   10   No   0.15	11	Refractometer (ATF)				0.30
14   Overhead Digital Stirrers   10   No   0.15	12	Rancimat apparatus				0.30
S   S   S   S   S   S   S   S   S   S						0.15
Evaporation System	14	Overhead Digital Stirrers		10		0.15
Unit   Magnetic Hotplates   3   No   0.30     18   PEM fuel single cell station along with utilities   5     19   PEM fuel cell stack tests station   0-20 kW   1   No   15     20   Fuel cell stack assembly   For 1-50 kW   1   No   10     21   C-S Analyser   1   No   S.   1.00     22   API 579 Software   1   No   S.   0.50     23   hydraulic press   1   No   S.   0.10     24   Renewal of CFD Software & Perpetual network license   2   No   2.0     25   Renewal of Molecular modeling software   License with HPC core   1   No   0.6     26   Three Roll Mill   1   lot   2.03     27   Homogernizer Lab Scale   1   no   1.17     28   ETV-ICP for Graphite   1   no   1.58     29   High Pressure Reactor   4   No   4.78     30   Freeze Dryer   2   no   3.21     31   Lab Equipments - Grease kettle - 10 Kg   Water spray off test apparatus   Refractometer	15			1	No	0.12
18   PEM fuel single cell station along with utilities   0-200 Watts   3   No   5	16	_		1	No	1.50
with utilities         s.           19 PEM fuel cell stack tests station         0-20 kW         1 No 15 s.           20 Fuel cell stack assembly         For 1-50 kW         1 No 10 s.           21 C-S Analyser         1 No s.         1 No S.           22 API 579 Software         1 No s.         0.50           23 hydraulic press         1 No s.         0.10           24 Renewal of CFD Software & hardware         Perpetual network license         2 No.         2.0           25 Renewal of Molecular modeling software         License with HPC core         1 No.         0.6           26 Three Roll Mill         1 lot         2.03           27 Homogernizer Lab Scale         1 no         1.17           28 ETV-ICP for Graphite         1 no         1.58           29 High Pressure Reactor         4 No         4.78           30 Freeze Dryer         2 no         3.21           31 Lab Equipments - Grease kettle - 10 Kg         O4 No         0.90           Water spray off test apparatus         Refractometer         S.						
S.   S.   S.   S.   S.   S.   S.   S.	18		0-200 Watts	3		5
S.   21	19	PEM fuel cell stack tests station	0-20 kW	1		15
1	20	Fuel cell stack assembly	For 1-50 kW	1		10
22 API 579 Software1No s.0.5023 hydraulic press1No s.0.1024 Renewal of CFD Software & hardwarePerpetual network license2No. 2.025 Renewal of Molecular modeling softwareLicense with HPC core1No.0.626 Three Roll Mill1lot2.0327 Homogernizer Lab Scale1no1.1728 ETV-ICP for Graphite1no1.5829 High Pressure Reactor4No4.7830 Freeze Dryer2no3.2131 Grease kettle - 10 Kg Water spray off test apparatus Refractometer04No s.0.90	21	C-S Analyser		1	No	1.00
1 No   S.   0.10	22			1	No	
24Renewal of CFD Software & hardwarePerpetual network license2No.2.025Renewal of Molecular modeling softwareLicense with HPC core1No.0.626Three Roll Mill1lot2.0327Homogernizer Lab Scale1no1.1728ETV-ICP for Graphite1no1.5829High Pressure Reactor4No4.7830Freeze Dryer2no3.2131Lab Equipments - Grease kettle - 10 Kg Water spray off test apparatus Refractometer04No0.90	23			1	No	
25Renewal of Molecular modeling softwareLicense with HPC core1No.0.626Three Roll Mill1lot2.0327Homogernizer Lab Scale1no1.1728ETV-ICP for Graphite1no1.5829High Pressure Reactor4No4.7830Freeze Dryer2no3.2131Lab Equipments - Grease kettle - 10 Kg Water spray off test apparatus Refractometer04No0.90	24		Perpetual network license	2		
27 Homogernizer Lab Scale       1       no       1.17         28 ETV-ICP for Graphite       1       no       1.58         29 High Pressure Reactor       4       No       4.78         30 Freeze Dryer       2       no       3.21         31 Lab Equipments - Grease kettle - 10 Kg Water spray off test apparatus Refractometer       04       No       0.90	25		License with HPC core	1	No.	0.6
28 ETV-ICP for Graphite       1       no       1.58         29 High Pressure Reactor       4       No       4.78         30 Freeze Dryer       2       no       3.21         31 Lab Equipments - Grease kettle - 10 Kg Water spray off test apparatus Refractometer       04       No       0.90	26	Three Roll Mill		1	lot	2.03
29 High Pressure Reactor       4       No       4.78         30 Freeze Dryer       2       no       3.21         31 Lab Equipments - Grease kettle - 10 Kg       04       No       0.90         Water spray off test apparatus Refractometer       8       8       8				1	no	1.17
29 High Pressure Reactor       4       No       4.78         30 Freeze Dryer       2       no       3.21         31 Lab Equipments - Grease kettle - 10 Kg       04       No       0.90         Water spray off test apparatus Refractometer       8       8       8				1	no	1.58
31 Lab Equipments - Grease kettle – 10 Kg Water spray off test apparatus Refractometer				4	No	4.78
Grease kettle – 10 Kg  Water spray off test apparatus  Refractometer		3		2	no	3.21
	31	Grease kettle – 10 Kg Water spray off test apparatus Refractometer		04		0.90

## Procurement Projected - For Repair & Maintenance

ТЕМ

Sl. No.	Description of item	Broad specification Parameters	•		Estimated Value of procure ment in Rs/Cror es
	Pilot plant spares like spares of		1	Lot	0.50
	check valves, weigh scales, PLC				
	cards, etc.				
2	AMC of BELSORP HP instrument		1	Lot	0.01
3	AMC of BET Surface area Analyzer		1	Lot	0.01
4	Spares of BELSORP HP instrument		1	Lot	0.04
5	Spares of BET Surface area Analyzer		1	Lot	0.04
6	AMC of DCN Analyzer		1	SU	0.035

7	AMC of MATLAB software	1	SU	0.037
8				

		FINANCIAL YEAR 2025 - 26			
		Capex Procurement			
		Projected R&D	1	ı	
Sl. No.	Description of item	Broad specification Parameters	Quantit y	Accountin g Unit	Estimate d Value of procure ment in Rs/Cror es
1	Micro Reactor Unit	Capacity up to 150 g/hr, H2 rate up to 500 SLPH, Pressure 180 bar, temperature 450 degC	2	No.	6
2	GC-FID				0.40
3	CHNS Analyser				0.50
4	TGA-IR				0.95
	Up-gradation of Jeol NMR or New NMR		1	lot	3.33
6	Mini Flash point tester				0.16
	Micro distillation apparatus				0.39
8	WSIM analyzer				0.18
	Viscometer-SVM				0.32
10	JFTOT				0.90
11	RSSOT analyzer				0.20
12	Oxidation Stability analyzer				0.20
	Melting Point Apparatus		1	No	0.10
	Rheotens		1	No	0.75
15	TGA		1	No	0.80
16	Business Analytics Software	Perpetual license with customized service	2	No	0.5
17	Renewal of MATLAB Software	Perpetual named network license with 1 year warranty	5	No.	0.2
18	Balls and plates for tribometer		200	Nos	0.04
19					
	Proc	urement Projected - For Repair & Maintenance			
Sl. No.	Description of item	Broad specification Parameters	Quantit y	Accountin g Unit	Estimated Value of procure ment in Rs/Cror es
	Pilot plant spares of level controllers, chillers, pressure gauges, etc				0.50
	AMC of BELSORP HP instrument		1	Lot	0.01
	AMC of BET Surface area Analyzer		1	Lot	0.01
	Spares of BELSORP HP instrument		1	Lot	0.04
	Spares of BET Surface area Analyzer		1	Lot	0.04
	TECS (AMC) of ANSYS CFD software		2	SU	0.19
7	AMC of DCN Analyzer		1	SU	0.04

		FINANCIAL YEAR 2026	-27		
		Capex Procurement Projected R&D	i.		
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accounting Unit	Estimated Value of procurement in Rs/Crores
1	pH meter	Microprocessor based, Touch Screen, -2 to +20 pH range, Corrosion resistant	2	Each	0.12
2	Automatic viscometer	Temperature range =+15 to 100 Deg C, Touch screen, No change of capillary for different samples	1	Each	0.6
3	Tackiness tester	Upto 100N force, Microprocessor based, wide temperature operability	1	Each	0.5
4	Measurement Instruments		1	LOT	0.2
5	VACUUM DISTILLATION UNIT	ASTM D1160	1	No	0.8
6	POTSTILL DISTILLATION UNIT-2 L SIZE	ASTM D5236	1	No	2
7	TBP DISTILLATION UNIT-6 L SIZE	ASTM D2892	1	No	3
8	PMCC FLASH POINT TESTER	ASTM D93	1	No	0.2
9	AUTO SMOKE POINT TESTER	ASTM D1322	1	No	0.2
10	AUTO DENSITY METER WITH AUTOSAMPLER	ASTM D4052	1	No	0.6
11	AUTO POUR POINT ANALYZER	ASTM D5949	1	No	1.3
12	AUTO MCRT TESTER	ASTM D4530	1	No	0.2
13	AUTOMATIC HEATED OIL CENTRIFUGE	ASTM D4007	1	No	0.2
14	Advanced Moulding machine		1	Nos.	0.2
15	Sample Polishing machine		1	Nos.	0.35
16	Metallic samples cutting machine		1	Nos.	0.4
17					Nil
18	EV gearbox efficiency test rig	FZG EV transmission test facility as per international standards.	1	Crores	8

19	Hydraulic Oil Test Rig	Gear/Piston/Vane pump based hydraulic oil test rig as	1	Crores	2
20	Copper Strip Corrosion Test Apparatus	per international standards ASTM D130, Capacity: 16-20 test tubes	1	Nos	0.09
	rest Apparatus	Maximum Temperature: 190°C (374°F)			
		Temperature Control Stability: ±1°C (±2°F)			
		Heater Range: 0-750W Bath Medium: water or high			
		temperature heater transfer fluid			
21	Automatic TAN & TBN Titrators	Microprocessor based, automatic, Touch controlled or PC controlled	1	Nos	0.54
		potentiometric titrators system with fully automatic sample changer for			
		determination of TBN (total Base Number) of non-			
		aqueous medium as per ASTM methods D2896, D4739 and TAN (Total Acid			
		Number) as per ASTM D664 in parallel.			
22	Tapered Bearing Simulator Viscometer	ASTM D4683, Measurement: viscosities at multiple	1	Nos	0.99
		shear rates (50,000 to >7 million sec-1) and temperatures (40°C to			
23	Inline Batch Mixer	200°C).  Min Bulk Blend Capacity:	1	Nos	0.34
23	mine Batch Mixer	100kg Maximum Bulk Blend Capacity: 200Kg		1103	0.51
		Blending Temperature: 65degC Motor RPM: 400-800rpm			
24	Demulsibility test	Air pressure: 2 bar Capacity: Two (2) sample-	1	Nos	0.2
	apparatus	water mixtures Maximum			
		Temperature: 212°F (100°C) Temperature Control: Microprocessor			
		digital control with LED display			
25	Copper Strip Corrosion	ASTM D130,	1	Nos	0.1
	Test Apparatus	Capacity: 16-20 test tubes Maximum Temperature: 190°C			
		Temperature Control Stability: ±1°C			
26	Laboratory refrigerator with explosion proof interiors	Temp 0-15 Deg C 700 lts capacity	2	Nos	0.1
27	High precision Electronic Balance	1. 5-place readability .Capacity upto 220g.Readability down to 0.01 mg 2. 4-place readability	4	Nos	0.2

		.Capacity up to 320g.Readability down to 0.1 mg			
28	Digital Laboratory Water bath	Body -Stainless steel Temp Range: 5degC to 90 deg C Capacity 50 lts	2	Nos	0.02
29	Foaming Bath	Systerm to conforms to the specifications of ASTM D892 to Foaming of lubricating oils in three sequences 24 °C, 93.5 °C and 24 °C.  The system shoud consist of blown with a controlled volume of air at different specified temperatures.  Microprocessor PID control provides quick temperature stabilization without overshoot.	1	EA	0.3
30	Blending Kettle for synthetic Lubricants including PID temperature controller and Filtration unit	SL Dept required for blending of Synthetic Lubricants for conducting trail at differnt places. The system should have jacketed heating connected with Temperature control system along with PID. Further, system should have high speed Over head stirrer for proper uniform blending along with filtration unit. Mass balance weing schale for proper measurment of incredents/components is essentials.	1	EA	0.5
31	TG/DSC Analyzer with Quadrupole mass	Max temperature= 1000 °C	1	NO	0.7
32	spectroscopy Autoclaves	Capacity=2-5 Lit	4	NO	0.8
33	Drier and furnaces	Capacity=1-5 Kg	3	NO	0.3
34	Temperature controlled incubator shaker	1 7 0	10	Nos	5
35	Automated Low Temperature Sample Storage System		2	Nos	4
36	Flow cytometry, cell sorting, and cell counting		1	Nos	2
37	Stabinger Apparatus		1	No.	0.45
38	Rust Test		1	No.	0.12
39	Hydrolytic Stability Test Apparatus		1	No.	0.35
40	Centrifuge Machine		1	No.	0.15
41	Compounding line	All the equipments' advancements in 26-27 will govern their specifications	1	Nos.	2
42	DSC	All the equipments' advancements in 26-27 will govern their specifications	1	Nos.	1.5
43	Hot Plates	All the equipments' advancements in 26-27 will govern their specifications	10	Nos.	0.2

44	Automatic Titrator with KF	All the equipments' advancements in 26-27 will govern their specifications	1	Nos.	0.5
45	Low Temperature Impact Tester	All the equipments' advancements in 26-27 will govern their specifications	1	Nos.	0.8
46	Dynamic light scattering- particle size analyzer		1	No	0.05
47	Image-Pro software		1	No	0.02
48	GC-FID/ECD		1	No	0.5
49	2D-HPLC-with multiple detector		1	No	1.5
50	HPLC-Orbitrop/IMS		1	No	2.5
51	Autodensitymeter	as per ASTM D 4052	1	No.	0.2
52	Fuel analyzer for middle distllates	as per ASTM D 5845, D 6277, D 7806, D7777, EN 238, ISO 15212, IP 559	1	No.	0.32
53	Auto Kinematic viscometer	as per ASTM D445	1	No.	0.6
54	Manual Pour point bath appararus	as per ASTM D97	1	No.	0.14
55	SVM 3001 Viscometer for fuel	as per ASTM D7042	1	No.	0.3
56	Rapid Small Scale Oxidation Test (RSSOT) provides a complete oxidation stability analysis of petroleum products	as per ASTM D2525/D7545	1	No.	0.25
57	Flash Point apparatus, PMCC	as per ASTM D93	1	No.	0.1
58	Thermal Oxidationb Stabilty analyser for Jet fuels	as per ASTM D3241	1	No.	0.8

	FINANCIAL YEAR 2026-27								
	Repair & Maintenance (R&D)								
Sl. No.	Description of item	Broad specification Parameters	Quantity	Accounting Unit	Estimated Value of procurement in Rs/Crores				
1	Pilot plant repair	Gaskets, seals, valaves, condensor, hose pipe, VFD drives, Circulation system, chiller	1	Each	0.1				
2	Maintenance spares, UPS Batteries etc., for various Equipments, Pilot Plants, MRU, MFUs & MAT units etc.		1	LOT	0.2				
3	CAMC/ AMCs for UPS systems, Access Control System, CCTV, PA Systems, X-Ray Baggage Scanning systems, Calibration, etc.		1	LOT	0.55				
4	SPARES FOR VARIOUS DISTILLATION UNITS		1	LOT	0.4				
5	SPARES FOR VARIOUS LABORATORY UNITS		1	LOT	0.3				

6	AMC of Zwick creep machines		1	Nos.	0.25
7	AMC of Electron Probe Micro Analyzer		1	Nos.	0.1
8					Nil
9	Spares/Test consumable of FAG FE9,Emcor,FZG Gears,HFFR,SRV, MTM, BOCLE,LVFA, HFFM tribmeter	Test consumables required as per the ASTM, DIN, IP and Customised test methods.	1 lot	Crores	1.5
10	Spares, Consumables, Chemicals, Glass wares Repair & Maintenance and AMC	Catalyst preparation equipments, Catalyst Deactivation unit, High through put catalyst preparation and screening units, Micro activity test units, Characterization equipments, GC's and miscellaneous items		NO	1.6
11					
12					
13	Routene manitenace of Biotechnology lab equipments		1	No	1
14	RULER Calibration		1	No.	0.01
15	BDV Calibration		2	No.	0.01
16	Cannon Automatic Viscometer Calibration		1	No.	0.01
17	Stabinger Calibration		1	No.	0.01
18	GC-FID/ECD	AMC/Spares	1	Lot	0.02
19	2D-HPLC-with multiple detector	AMC/Spares	1	Lot	0.01
20	HPLC-Orbitrop/IMS	AMC/Spares	1	Lot	0.05

	FINANCIAL YEAR- 2022-23							
		LUBES ADDITIVES & S			REMENT			
	Additive	Alternate			LIVILIVI			
1	1245	1244		15.17	MTs	0.63		
2	1410	1414		280.48	MTs	7.01		
3	1415	1415/1417/1418		252.25	MTs	5.36		
4	1419	1413/1417/1410		1.10	MTs	0.02		
5	1504			11.03	MTs	0.02		
6	1539	1244		5.72	MTs	0.42		
7	1567	1526		287.53	MTs	7.94		
8	1604	1490		1,484.63	MTs	29.15		
9	1623	1617		1,576.58	MTs	34.71		
10	1658	1659		3,307.50	MTs	70.85		
11	1660	1678		869.87	MTs	19.15		
12	1685	1617/1772+4574		11.61	MTs	0.32		
13	1708	1017/1772 1371		5.29	MTs	0.38		
14	1722			4.77	MTs	0.25		
15	1724			155.22	MTs	3.86		
16	1734	1732		889.70	MTs	18.57		
17	2010	1732		10.80	MTs	0.21		
18	2010			26.92	MTs	0.35		
19	2120	2118		16.98	MTs	1.10		
20	2130	2098		11.03	MTs	1.08		
21	3002	2070		1,967.14	MTs	27.46		
22	3006			9.64	MTs	0.09		
23	3008			107.67	MTs	1.43		
24	3010			34.35	MTs	0.76		
25	3012			505.88	MTs	5.42		
26	3028			30.35	MTs	0.93		
27	3039			3.75	MTs	0.03		
28	3066			6.14	MTs	0.41		
29	3084			43.74	MTs	2.16		
30	3088			0.55	MTs	0.01		
31	3090			12.57	MTs	0.33		
32	3098			7.44	MTs	1.02		
33	3514			1,433.25	MTs	19.26		
34	3544			189.63	MTs	1.98		
35	3554			102.92	MTs	1.78		
36	3558			134.51	MTs	2.16		
37	3570			166.30	MTs	2.20		
38	3572			30.43	MTs	0.22		
39	3574			1,653.75	MTs	16.59		
40	3575			130.08	MTs	1.42		
41	3580			0.55	MTs	0.91		
42	4025			5.51	MTs	0.24		
43	4027			1.10	MTs	0.02		
44	4047			0.13	MTs	0.02		
45	4058			4.90	MTs	1.38		
46	4064			160.94	MTs	2.97		
47	4096			81.14	MTs	1.83		
48	4098			4.94	MTs	0.21		
49	4529	4542		209.48	MTs	11.01		
50	4543			6.62	MTs	1.99		
51	4556			23.04	MTs	4.15		
52	4587			0.28	MTs	0.01		
53	5012			4.96	MTs	0.02		
54	5014			314.38	MTs	21.70		
55	5016			2.76	MTs	0.02		
56	5021			5.51	MTs	0.06		

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57	5028		1.98	MTs	0.07
58	5044		171.99	MTs	1.63
59	5060		119.32	MTs	0.81
60	5067		55.13	MTs	1.46
61	5080		0.88	MTs	0.02
62	5082	5076	165.38	MTs	3.94
63	5516		1.65	MTs	0.01
64	5522		148.64	MTs	4.38
65	5523		0.35	MTs	0.03
66	5534		2.48	MTs	0.10
67	5560		5.21	MTs	0.06
68	6001		3.86	MTs	0.22
69	6011		101.68	MTs	3.16
70	6012		130.04	MTs	3.77
71	6017	6038/6102	7.68	MTs	0.18
72	6051		403.05	MTs	17.88
73	6084	6082	101.87	MTs	1.30
74	6100	6037	224.00	MTs	9.46
75	6102	6038/6017	465.94	MTs	6.63
76	6202		11.03	MTs	0.32
77	6210		5.29	MTs	0.32
78	6218		1.10	MTs	0.04
79	6548		19.29	MTs	0.82
80	6552		51.13	MTs	2.45
81	6554		1.35	MTs	0.07
82	6566		55.76	MTs	2.01
83	6590		0.40	MTs	0.03
84	7014		0.55	MTs	0.02
85	7024		0.44	MTs	0.12
86	7029		0.44	MTs	0.02
87	8002		37.93	MTs	2.25
88	8014	22221	50.72	MTs	1.64
89	8038	80381	5.17	MTs	0.33
90	8052		1.65	MTs	0.03
91	8072		0.55	MTs	0.01
92	8075		30.87	MTs	0.42
93	8089		15.44	MTs	1.11
94	8102	04.00 (04.00	0.66	MTs	0.01
95	8121	8133/8120	694.80	MTs	11.74
96	8138		31.02	MTs	1.18
97	8153		0.22	MTs	0.01
98 99	8171 8194		4.40 66.15	MTs MTs	0.02 1.65
100	8194		0.55	MTs	0.94
100	8528 8540		1.65	MTs	0.94
101	8540		8.17	MTs	0.18
102	40621	4062	49.65	MTs	1.68
103	55901	5590	2.38	MTs	0.10
105	56036	56032	2.38	MTs	3.61
106	56058	30032	2,679.08	MTs	31.08
107	65548		0.88	MTs	0.02
107	65562		134.51	MTs	1.62
109	65646	65684/65682	99.23	MTs	1.83
110	65654	65684/65682	52.92	MTs	0.95
111	1050	03001/03002	25.00	MTs	2.88
112	1256		0.41	MTs	0.01
113	1300		2.45	MTs	0.14
114	1304		29.98	MTs	1.07
115	1350		114.31	MTs	3.54
116	1414		171.95	MTs	4.55
110	1111		1/1./5	1/11/3	1.55

1 1		1	1	1 1	
117	1418	1296	13.72	MTs	0.57
118	1426		11.11	MTs	0.29
119	1427		47.55	MTs	1.21
120	1431		2.36	MTs	0.10
121	1436		3.62	MTs	0.22
122	1442		1.31	MTs	0.08
123	1453		45.88	MTs	1.89
124	1468		184.43	MTs	5.78
125	1475		1,460.13	MTs	32.32
126	1477		6.84	MTs	0.22
127	1478		12.11	MTs	0.28
128	1482		46.80	MTs	1.62
129	1490	1604	101.07	MTs	2.30
130	1492	1474	396.10	MTs	13.20
131	1496		4.48	MTs	0.36
132	1500		18.43	MTs	0.67
133	1505		81.27	MTs	2.32
134	1512		1.79	MTs	0.05
135	1516		23.20	MTs	0.66
136	1527	1242	13.23	MTs	1.01
137	1541		2.87	MTs	0.09
138	1545	1599/1613	386.62	MTs	8.06
139	1546		603.29	MTs	13.27
140	1552	1554	709.35	MTs	18.23
141	1560		65.30	MTs	2.04
142	1573		67.08	MTs	2.37
143	1574		25.03	MTs	0.91
144	1585		1.30	MTs	0.07
145	1586		81.29	MTs	2.34
146	1587		104.87	MTs	3.71
147	1589		64.13	MTs	2.49
148	1596		2.30	MTs	0.06
149	1597		8.12	MTs	0.48
150	1617	1774/1772	1,433.25	MTs	26.95
151	1618	·	10.64	MTs	0.47
152	1619	1410	421.97	MTs	9.11
153	1632		37.52	MTs	2.26
154	1642		741.99	MTs	22.14
155	1644		343.71	MTs	12.68
156	1652	1658	551.25	MTs	12.07
157	1659	1658	1,068.37	MTs	20.85
158	1662		22.38	MTs	1.08
159	1664		11.90	MTs	0.74
160	1672		4.17	MTs	0.21
161	1674		799.53	MTs	37.03
162	1676		1,055.40	MTs	27.25
163	1678	1660	350.12	MTs	8.92
164	1682		155.67	MTs	4.94
165	1684		300.28	MTs	8.18
166	1694	1660	669.68	MTs	15.14
167	1700		0.89	MTs	0.04
168	1710	1712/1714	220.50	MTs	6.82
169	1718	•	1.72	MTs	0.10
170	1728		17.99	MTs	0.82
171	1730		1.68	MTs	0.09
172	2006		61.29	MTs	3.60
173	2014		0.75	MTs	0.08
174	2046		3.51	MTs	0.15
175	2061		45.25	MTs	3.07
176	2064		5.02	MTs	0.42
1,0	200 r		5.02	1,119	V. 12

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177	2065		33.08	MTs	2.27
178	2067		4.74	MTs	1.06
179	2068		2.62	MTs	0.42
180	2082		1.37	MTs	0.12
181	2116		213.28	MTs	12.94
182	2117		177.38	MTs	7.81
183	2124		111.99	MTs	6.66
184	2146		9.05	MTs	1.51
185	2152	2158	5.07	MTs	1.72
186	2154		65.90	MTs	5.16
187	2160		673.10	MTs	43.81
188	2170		1.88	MTs	0.18
189	2176		6.59	MTs	0.51
190	2182		0.23	MTs	0.02
191	3001		13.90	MTs	1.18
192	3080		5.86	MTs	0.46
193	3082		0.65	MTs	0.05
194	4540		6.26	MTs	0.22
195	4552		1.05	MTs	0.07
196	4554	4528	57.26	MTs	2.35
197	4562	4528	40.06	MTs	1.78
198	4569		2.00	MTs	0.27
199	4598		20.70	MTs	1.03
200	4600		1.40	MTs	0.15
201	4602		4.84	MTs	0.40
202	6000	6114	385.88	MTs	12.40
203	6008		25.20	MTs	1.65
204	6028		259.96	MTs	3.83
205	6030		8.93	MTs	0.44
206	6032		63.15	MTs	3.25
207	6037	6100	515.97	MTs	24.56
208	6038		1,207.72	MTs	17.27
209	6039		1.63	MTs	0.12
210	6063		341.84	MTs	19.15
211	6078		16.11	MTs	1.20
212	6092		2,015.79	MTs	37.85
213	6110		3.58	MTs	0.25
214	6204		11.00	MTs	0.44
215	6212		30.69	MTs	1.88
216	6556		18.43	MTs	0.89
217	6558		110.25	MTs	7.11
218	6562		6.17	MTs	0.38
219	6594		6.90	MTs	0.40
220	6596		1.47	MTs	0.12
221	6598		107.21	MTs	5.69
222	7012		1.28	MTs	0.14
223	7022		16.12	MTs	1.93
224	7040		2.43	MTs	0.53
225	8026		1.77	MTs	0.15
226	8027		4.75	MTs	0.87
227	8040		3.49	MTs	0.23
228	8082		19.79	MTs	1.29
229	8180		14.55	MTs	1.10
230	20041	2004/20042	30.87	MTs	2.21
231	56038		13.38	MTs	0.38
232	56040		1.64	MTs	0.10
233	65630		17.86	MTs	1.50
234	80381		1.10	MTs	0.07
		1006/1001	400.64	3.470	2.02
235 236	1233 1236	1236/1231	103.64	MTs MTs	3.92

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237	1274		2.17	MTs	0.20
238	1515		165.38	MTs	5.70
239	1544		7.12	MTs	0.25
240	1551	1507/1534	24.84	MTs	1.05
241	1553	1599+3001/1543+460	128.13	MTs	3.08
		1			
242	1557		8.17	MTs	0.27
243	1575	1738/1770	8.89	MTs	0.25
244	1594	1516	20.74	MTs	0.69
245	1608	2002	0.22	MTs	0.02
246	1638	1647	141.12	MTs	3.70
247	1643	1617/1585+1621	352.80	MTs	5.75
248	1668	1547	53.80	MTs	1.91
249	1683	1317	0.62	MTs	0.04
250	1740		926.10	MTs	44.08
251	1746		384.24	MTs	8.57
252			100.97		
	1748			MTs	3.26
253	1750		31.51	MTs	1.24
254	1766		76.73	MTs	1.81
255	2050		73.78	MTs	1.23
256	2066		37.29	MTs	3.00
257	2092		19.11	MTs	1.05
258	2098		7.64	MTs	0.92
259	2136		39.69	MTs	3.52
260	2184		79.39	MTs	4.82
261	3014		293.47	MTs	3.60
262	3022		2.21	MTs	0.02
263	3030		50.59	MTs	0.45
264	3074		108.05	MTs	1.49
265	3086		1.10	MTs	0.01
266	3102		267.29	MTs	3.03
267	3520		28.22	MTs	0.65
268	3522		3.31	MTs	0.04
269	4010		588.74	MTs	2.77
270	4053		63.50	MTs	4.26
271	4072		0.64	MTs	0.08
272	4072		0.04	MTs	0.03
			13.89		
273	4100			MTs	0.25
274	4535		44.10	MTs	7.78
275	4550		0.22	MTs	0.08
276	4558		63.50	MTs	2.38
277	4595		0.79	MTs	0.10
278	4597		141.40	MTs	6.32
279	4614		0.44	MTs	0.02
280	5004		2.76	MTs	0.02
281	5011		54.66	MTs	1.32
282	5050		5.51	MTs	0.14
283	5052		5.51	MTs	0.14
284	5053		8.82	MTs	0.84
285	5064		41.23	MTs	2.33
286	5074		4.41	MTs	0.04
287	5082	5076	112.19	MTs	2.10
288	5084		3.35	MTs	0.08
289	5514		3.97	MTs	0.04
290	6025	6012/6015	164.32	MTs	4.16
291	6074		210.79	MTs	8.78
292	6096		57.11	MTs	1.65
293	6104		41.29	MTs	1.65
294	6108		90.10	MTs	1.23
295	6200	6037	1.24	MTs	0.06
493	0200	0037	1.44	141 1 2	0.00

	Additive	Alternate				0.66
		LUBES ADDITIVES & S	PECIALITY BASE	OILS PROCUP	REMENT	
	<u>.                                      </u>	<u>'</u>	NCIAL YEAR- 202	<u> </u>		
349	1764	1666/1756		55.13	MTs	2.30
348	2007	20071		3.31	MTs	0.30
347	8162	81621/81622/81623		110.25	MTs	4.20
345 346	6006 1768	6118 1770		3,307.50 55.13	MTs MTs	57.07 1.71
344	6102	6038		3,307.50	MTs	59.04 57.07
343	1752	1756/1758		55.13	MTs	2.03
342	8145	8144		66.15	MTs	3.33
341	55576			209.48	MTs	9.25
340	55572		-	220.50	MTs	9.76
339	55552			198.45	MTs	8.27
338	55580			220.50	MTs	10.08
337	55578			275.63	MTs	12.14
336	55570	3.31		496.13	MTs	20.66
335	6082	6084		207.60	MTs	2.72
334	4565	4568		211.76	MTs	10.00
332	2101	2100		396.90	MTs	16.06
331 332	2042 2101	2100		0.21 200.54	MTs MTs	0.02 10.32
330	1744			2.92	MTs	0.12
329	1742			15.44	MTs	0.36
328	1738			13.23	MTs	0.39
327	1732			635.02	MTs	16.34
326	1711			91.07	MTs	2.66
325	1673			18.04	MTs	0.67
324	1647	1668		149.41	MTs	4.22
323	1543	1599/1613		2,182.95	MTs	42.91
322	1306			1.35	MTs	0.05
321	1244	1245		220.50	MTs	10.76
320	1206	108		10.38	MTs	0.63
319	1052			3.53	MTs	0.23
318	65706			19.05	MTs	1.94
317	65694			94.59	MTs	1.69
315	65642 65644			1.99 1.56	MTs MTs	0.07 0.06
314 315	65584			57.99	MTs	1.79
313	65568			0.88	MTs	0.03
312	65550			275.63	MTs	3.84
311	65538			275.38	MTs	2.26
310	63552			296.13	MTs	9.90
309	56060			17.00	MTs	0.58
308	8598			1.24	MTs	0.07
307	8594			3.31	MTs	0.12
306	8176			6.35	MTs	0.60
305	8118			2.88	MTs	0.60
303	8108			0.55	MTs	0.39
302	8086			4.85	MTs	0.39
301 302	6560 6588			0.81 280.81	MTs MTs	0.04 3.60
300	6550			0.39	MTs	0.02
299	6546			6.62	MTs	0.31
298	6544			26.80	MTs	1.26
297	6216			198.45	MTs	3.66
	6214			27.56	MTs	1.23

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4	1419		1.16	MTs	0.03
5	1504		11.58	MTs	0.44
6	1539	1244	6.01	MTs	0.29
7	1567	1526	301.91	MTs	8.34
8	1604	1490	1,558.86	MTs	30.61
9	1623	1617	1,655.40	MTs	36.44
10	1658	1659	3,472.88	MTs	74.39
11	1660	1678	913.37	MTs	20.11
12	1685	1617/1772+4574	12.19	MTs	0.34
13	1708		5.56	MTs	0.40
14	1722		5.01	MTs	0.26
15	1724		162.98	MTs	4.05
16	1734	1732	934.19	MTs	19.50
17	2010		11.34	MTs	0.22
18	2034		28.26	MTs	0.36
19	2120	2118	17.83	MTs	1.15
20	2130	2098	11.58	MTs	1.13
21	3002		2,065.49	MTs	28.83
22	3006		10.12	MTs	0.10
23	3008		113.05	MTs	1.51
24	3010		36.07	MTs	0.80
25	3012		531.18	MTs	5.69
26	3028		31.87	MTs	0.98
27	3039		3.94	MTs	0.03
28	3066		6.45	MTs	0.43
29	3084		45.93	MTs	2.27
30	3088		0.58	MTs	0.01
31	3090		13.20	MTs	0.35
32	3098		7.81	MTs	1.07
33	3514		1,504.91	MTs	20.22
34	3544		199.11	MTs	2.08
35	3554		108.06	MTs	1.86
36	3558		141.23	MTs	2.27
37	3570		174.62	MTs	2.31
38	3572		31.95	MTs	0.23
39	3574		1,736.44	MTs	17.42
40	3575		136.59	MTs	1.50
41	3580		0.58	MTs	0.96
42	4025		5.79	MTs	0.25
43	4027		1.16	MTs	0.02
44	4047		0.14	MTs	0.02
45	4058		5.14	MTs	1.45
46	4064		168.99	MTs	3.12
47	4096		85.20	MTs	1.93
48	4098		5.19	MTs	0.22
49	4529	4542	219.95	MTs	11.56
50	4543		6.95	MTs	2.09
51	4556		24.19	MTs	4.36
52	4587		0.30	MTs	0.01
53	5012		5.21	MTs	0.02
54	5014		330.10	MTs	22.78
55	5016		2.89	MTs	0.02
56	5021		5.79	MTs	0.07
57	5028		2.08	MTs	0.07
58	5044		180.59	MTs	1.71
59	5060		125.28	MTs	0.85
60	5067		57.88	MTs	1.53
61	5080		0.93	MTs	0.02
62	5082	5076	173.64	MTs	4.13
63	5516		1.74	MTs	0.01
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64	5522		156.07	MTs	4.60
65	5523		0.37	MTs	0.03
66	5534		2.60	MTs	0.11
67	5560		5.48	MTs	0.06
68	6001		4.05	MTs	0.23
69	6011		106.76	MTs	3.32
70	6012		136.54	MTs	3.95
71	6017	6038/6102	8.07	MTs	0.19
72	6051		423.20	MTs	18.77
73	6084	6082	106.96	MTs	1.36
74	6100	6037	235.20	MTs	9.94
75	6102	6038/6017	489.24	MTs	6.96
76	6202		11.58	MTs	0.33
77	6210		5.56	MTs	0.34
78	6218		1.16	MTs	0.04
79	6548		20.26	MTs	0.86
80	6552		53.68	MTs	2.57
81	6554		1.42	MTs	0.07
82	6566		58.55	MTs	2.11
83	6590		0.42	MTs	0.03
84	7014		0.58	MTs	0.02
85	7024		0.46	MTs	0.13
86	7029		0.46	MTs	0.02
87	8002		39.82	MTs	2.36
88	8014		53.25	MTs	1.72
89	8038	80381	5.43	MTs	0.35
90	8052		1.74	MTs	0.03
91	8072		0.58	MTs	0.01
92	8075		32.41	MTs	0.44
93	8089		16.21	MTs	1.17
94	8102		0.69	MTs	0.01
95	8121	8133/8120	729.54	MTs	12.33
96	8138		32.58	MTs	1.24
97	8153		0.23	MTs	0.01
98	8171		4.62	MTs	0.03
99	8194		69.46	MTs	1.74
100	8528		0.58	MTs	0.99
101	8540		1.74	MTs	0.19
102	8560	1062	8.58	MTs	0.07
103	40621	4062	52.13	MTs	1.77
104	55901	5590	2.50	MTs	0.10
105 106	56036 56058	56032	291.72 2,813.03	MTs MTs	3.79 32.64
106	65548		0.93	MTs	0.03
107	65548		141.23	MTs	1.70
108	65646	65684/65682	104.19	MTs	1.70
1109	65654	65684/65682	55.57	MTs	1.92
111	1050	03004/03004	26.25	MTs	3.03
112	1256		0.44	MTs	0.01
113	1300		2.57	MTs	0.01
114	1304		31.48	MTs	1.12
115	1350		120.03	MTs	3.71
116	1414		180.54	MTs	4.78
117	1418	1296	14.40	MTs	0.60
118	1426	1270	11.66	MTs	0.30
119	1427		49.93	MTs	1.27
120	1431		2.48	MTs	0.11
121	1436		3.80	MTs	0.23
122	1442		1.38	MTs	0.08
123	1453		48.18	MTs	1.98
120	1100		10.10	1.113	1.70

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124	1468		193.65	MTs	6.07
125	1475		1,533.14	MTs	33.93
126	1477		7.18	MTs	0.23
127	1478		12.71	MTs	0.30
128	1482		49.14	MTs	1.70
129	1490	1604	106.12	MTs	2.41
130	1492	1474	415.90	MTs	13.86
131	1496		4.71	MTs	0.38
132	1500		19.35	MTs	0.70
133	1505		85.33	MTs	2.44
134	1512		1.88	MTs	0.05
135	1516		24.36	MTs	0.69
136	1527	1242	13.89	MTs	1.06
137	1541		3.02	MTs	0.09
138	1545	1599/1613	405.95	MTs	8.46
139	1546		633.45	MTs	13.93
140	1552	1554	744.82	MTs	19.14
141	1560		68.56	MTs	2.14
142	1573		70.44	MTs	2.49
143	1574		26.28	MTs	0.96
144	1585		1.37	MTs	0.07
145	1586		85.35	MTs	2.46
146	1587		110.12	MTs	3.89
147	1589		67.34	MTs	2.61
148	1596		2.42	MTs	0.06
149	1597		8.52	MTs	0.50
150	1617	1774/1772	1,504.91	MTs	28.30
151	1618		11.17	MTs	0.49
152	1619	1410	443.06	MTs	9.57
153	1632		39.39	MTs	2.37
154	1642		779.09	MTs	23.24
155	1644		360.90	MTs	13.31
156	1652	1658	578.81	MTs	12.67
157	1659	1658	1,121.79	MTs	21.89
158	1662		23.50	MTs	1.13
159	1664		12.50	MTs	0.78
160	1672		4.38	MTs	0.22
161	1674		839.51	MTs	38.88
162	1676		1,108.17	MTs	28.62
163	1678	1660	367.63	MTs	9.36
164	1682		163.46	MTs	5.18
165	1684		315.30	MTs	8.59
166	1694	1660	703.17	MTs	15.90
167	1700	1=10/1=1	0.94	MTs	0.04
168	1710	1712/1714	231.53	MTs	7.16
169	1718		1.81	MTs	0.11
170	1728		18.89	MTs	0.86
171	1730		1.77	MTs	0.09
172	2006		64.35	MTs	3.78
173	2014		0.79	MTs	0.08
174	2046		3.68	MTs	0.15
175	2061		47.51	MTs	3.22
176	2064		5.27	MTs	0.44
177	2065		34.73	MTs	2.38
178	2067		4.98	MTs	1.11
179	2068		2.75	MTs	0.44
180	2082		1.44	MTs	0.12
181	2116		223.95	MTs	13.59
182	2117		186.25	MTs	8.20
183	2124		117.58	MTs	6.99

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184	2146		9.51	MTs	1.59
185	2152	2158	5.32	MTs	1.80
186	2154		69.20	MTs	5.41
187	2160		706.75	MTs	46.00
188	2170		1.97	MTs	0.19
189	2176		6.92	MTs	0.54
190	2182		0.25	MTs	0.02
191	3001		14.60	MTs	1.24
192	3080		6.16	MTs	0.48
193	3082		0.68	MTs	0.06
194	4540		6.58	MTs	0.23
195	4552		1.11	MTs	0.07
196	4554	4528	60.12	MTs	2.47
197	4562	4528	42.07	MTs	1.87
198	4569		2.10	MTs	0.29
199	4598		21.74	MTs	1.08
200	4600		1.47	MTs	0.16
201	4602		5.08	MTs	0.42
202	6000	6114	405.17	MTs	13.02
203	6008		26.46	MTs	1.74
204	6028		272.96	MTs	4.02
205	6030		9.38	MTs	0.46
206	6032		66.31	MTs	3.41
207	6037	6100	541.77	MTs	25.79
208	6038	9199	1,268.11	MTs	18.13
209	6039		1.71	MTs	0.12
210	6063		358.93	MTs	20.11
211	6078		16.92	MTs	1.26
212	6092		2,116.58	MTs	39.74
213	6110		3.76	MTs	0.26
214	6204		11.55	MTs	0.46
215	6212		32.23	MTs	1.97
216	6556		19.35	MTs	0.93
217	6558		115.76	MTs	7.47
218	6562		6.48	MTs	0.40
219	6594		7.24	MTs	0.42
220	6596		1.54	MTs	0.13
221	6598		112.57	MTs	5.98
222	7012		1.35	MTs	0.14
223	7012		16.92	MTs	2.03
224	7040		2.55	MTs	0.56
225	8026		1.86	MTs	0.16
226	8026		4.99	MTs	0.16
227	8047		3.66	MTs	0.92
228	8040		20.78	MTs	1.36
			ı		
229	8180	2004/20042	15.28	MTs	1.15
230	20041	2004/20042	32.41	MTs	2.32
231	56038		14.05	MTs	0.40
232	56040		1.72	MTs	0.11
233	65630		18.75	MTs	1.58
234	80381	4226/4224	1.15	MTs	0.07
235	1233	1236/1231	108.82	MTs	4.12
236	1236		0.72	MTs	0.03
237	1274		2.28	MTs	0.21
238	1515		173.64	MTs	5.98
239	1544		7.48	MTs	0.27
240	1551	1507/1534	26.08	MTs	1.10
241	1553	1599+3001/1543+460 1	134.54	MTs	3.24
242	1557		8.58	MTs	0.29

243	1575	1720 /1770	9.34	MTs	0.27
243	1575 1594	1738/1770 1516	21.77	MTs	0.27
245	1608	2002	0.23	MTs	0.73
245	1638	1647	148.18	MTs	3.89
247	1643	1617/1585+1621	370.44	MTs	6.04
247	1668	1547	56.49	MTs	2.01
249	1683	1547	0.65		0.04
250				MTs	
250	1740 1746		972.41 403.45	MTs MTs	46.29 9.00
252	1748		106.02	1	
				MTs	3.43
253 254	1750		33.08 80.57	MTs	1.30
255	1766			MTs	1.90
256	2050		77.47	MTs	1.29
	2066		39.15	MTs	3.14
257	2092		20.07	MTs	1.11
258	2098		8.02	MTs	0.97
259	2136		41.67	MTs	3.69
260	2184		83.36	MTs	5.06
261	3014		308.15	MTs	3.78
262	3022		2.32	MTs	0.02
263	3030		53.12	MTs	0.47
264	3074		113.45	MTs	1.57
265	3086		1.16	MTs	0.01
266	3102		280.65	MTs	3.18
267	3520		29.64	MTs	0.69
268	3522		3.47	MTs	0.04
269	4010		618.17	MTs	2.91
270	4053		66.68	MTs	4.48
271	4072		0.67	MTs	0.09
272	4074		0.23	MTs	0.03
273	4100		14.59	MTs	0.27
274	4535		46.31	MTs	8.17
275	4550		0.23	MTs	0.09
276	4558		66.67	MTs	2.50
277	4595		0.83	MTs	0.11
278	4597		148.47	MTs	6.63
279	4614		0.46	MTs	0.02
280	5004		2.89	MTs	0.02
281	5011		57.39	MTs	1.39
282	5050		5.79	MTs	0.14
283	5052		5.79	MTs	0.15
284	5053		9.26	MTs	0.88
285	5064		43.29	MTs	2.45
286 287	5074	F07/	4.63	MTs	0.04
	5082	5076	117.80	MTs	2.20
288	5084		3.52	MTs	0.08
289	5514	6012 /6015	4.17	MTs	0.04
290	6025	6012/6015	172.53	MTs	4.37
291	6074		221.33	MTs	9.22
292	6096		59.96	MTs	1.73
293	6104		43.35	MTs	1.73
294	6108	(007	94.61	MTs	1.29
295	6200	6037	1.30	MTs	0.06
296	6214		28.94	MTs	1.29
297	6216		208.37	MTs	3.84
298	6544		28.14	MTs	1.32
299	6546		6.95	MTs	0.33
300	6550		0.41	MTs	0.02
301	6560		0.85	MTs	0.04
302	6588		294.85	MTs	3.78

305 306	8118 8176		3.03 6.67	MTs MTs	0.63 0.63
307	8594		3.47	MTs	0.03
308	8598		1.30	MTs	0.08
309	56060		17.85	MTs	0.61
310	63552		310.94	MTs	10.40
311	65538		289.15	MTs	2.37
312	65550		289.41	MTs	4.03
313	65568		0.93	MTs	0.03
314	65584		60.89	MTs	1.88
315	65642		2.09	MTs	0.07
316	65644		1.64	MTs	0.06
317	65694		99.32	MTs	1.77
318	65706		20.00	MTs	2.04
319	1052		3.70	MTs	0.24
320	1206	108	10.90	MTs	0.66
321	1244	1245	231.53	MTs	11.30
322	1306	4500/4642	1.42	MTs	0.05
323	1543	1599/1613	2,292.10	MTs	45.06
324 325	1647 1673	1668	156.88 18.95	MTs MTs	4.43 0.70
325	16/3		95.62	MTs	2.79
326	1711		666.78	MTs	17.16
328	1732		13.89	MTs	0.41
329	1742		16.21	MTs	0.38
330	1744		3.06	MTs	0.13
331	2042		0.22	MTs	0.02
332	2101	2100	210.57	MTs	10.83
333	2134	2131	416.75	MTs	16.86
334	4565	4568	222.35	MTs	10.51
335	6082	6084	217.98	MTs	2.85
336	55570		520.93	MTs	21.70
337	55578		289.41	MTs	12.74
338	55580		231.53	MTs	10.58
339	55552		208.37	MTs	8.68
340	55572		231.53	MTs	10.25
341	55576		219.95	MTs	9.71
342	8145	8144	69.46	MTs	3.50
343	1752	1756/1758	57.88	MTs	2.14
344 345	6102 6006	6038	3,472.88 3,472.88	MTs	61.99 59.92
345	1768	6118 1770	3,472.88 57.88	MTs MTs	1.79
347	8162	81621/81622/81623	115.76	MTs	4.41
348	2007	20071	3.47	MTs	0.31
349	1764	1666/1756	57.88	MTs	2.41
217	1701	•	ICIAL YEAR- 2024-25	1113	
			PECIALITY BASE OILS PROCU	REMENT	
	Additive	Alternate			
1	1245	1244	16.72	MTs	0.70
2	1410	1414	309.22	MTs	7.73
3	1415	1415/1417/1418	278.11	MTs	5.91
4	1419		1.22	MTs	0.03
5	1504		12.16	MTs	0.47
	1539	1244	6.31	MTs	0.31
6		1526	317.00	MTs	8.75
7	1567	1526			
	1567 1604 1623	1490 1617	1,636.80 1,738.17	MTs MTs	32.14 38.27

11     1660     1678       12     1685     1617/1772+4574       13     1708       14     1722       15     1724	959.03 12.80 5.83	MTs MTs	21.11
13 1708 14 1722		MTs	0.25
14 1722	5.83		0.35
		MTs	0.42
15 1724	5.26	MTs	0.27
	171.13	MTs	4.26
16 1734 1732	980.90	MTs	20.47
17 2010	11.91	MTs	0.23
18 2034	29.67	MTs	0.38
19 2120 2118	18.72	MTs	1.21
20 2130 2098	12.16	MTs	1.19
21 3002	2,168.77	MTs	30.27
22 3006	10.62	MTs	0.10
23 3008	118.71	MTs	1.58
24 3010	37.88	MTs	0.84
			5.97
25 3012	557.74	MTs	
26 3028	33.46	MTs	1.03
27 3039	4.13	MTs	0.03
28 3066	6.77	MTs	0.46
29 3084	48.23	MTs	2.38
30 3088	0.61	MTs	0.01
31 3090	13.86	MTs	0.36
32 3098	8.20	MTs	1.12
33 3514	1,580.16	MTs	21.23
34 3544	209.07	MTs	2.19
35 3554	113.47	MTs	1.96
36 3558	148.29	MTs	2.38
37 3570	183.35	MTs	2.42
38 3572	33.55	MTs	0.24
39 3574	1,823.26	MTs	18.29
40 3575	143.42	MTs	1.57
41 3580	0.61	MTs	1.01
42 4025	6.08	MTs	0.26
43 4027	1.22	MTs	0.02
44 4047	0.15	MTs	0.02
45 4058	5.40	MTs	1.52
46 4064	177.44	MTs	3.27
47 4096	89.46	MTs	2.02
48 4098	5.45	MTs	0.23
49 4529 4542	230.95	MTs	12.14
50 4543	7.29	MTs	2.19
51 4556	25.40	MTs	4.58
52 4587	0.31	MTs	0.01
53 5012	5.47	MTs	0.01
54 5014	346.60	MTs	23.92
55 5016			0.02
	3.04	MTs	
56 5021	6.08	MTs	0.07
57 5028	2.19	MTs	0.08
58 5044	189.62	MTs	1.79
59 5060	131.55	MTs	0.89
60 5067	60.78	MTs	1.61
61 5080	0.97	MTs	0.02
62 5082 5076	182.33	MTs	4.34
63 5516	1.82	MTs	0.01
64 5522	163.87	MTs	4.83
65 5523	0.39	MTs	0.03
66 5534	2.73	MTs	0.11
67 5560	5.75	MTs	0.06
68 6001	4.25	MTs	0.24
69 6011	112.10	MTs	3.49
70 6012	143.37	MTs	4.15

71	6017	6038/6102	8.47	MTs	0.20
72	6051	0030/0102	444.36	MTs	19.71
73	6084	6082	112.31	MTs	1.43
74	6100	6037	246.96	MTs	10.43
75	6102	6038/6017	513.70	MTs	7.31
76	6202	0000,001.	12.16	MTs	0.35
77	6210		5.83	MTs	0.35
78	6218		1.22	MTs	0.05
79	6548		21.27	MTs	0.90
80	6552		56.37	MTs	2.70
81	6554		1.49	MTs	0.08
82	6566		61.47	MTs	2.22
83	6590		0.44	MTs	0.03
84	7014		0.61	MTs	0.02
85	7024		0.48	MTs	0.13
86	7029		0.49	MTs	0.02
87	8002		41.81	MTs	2.48
88	8014		55.91	MTs	1.80
89	8038	80381	5.70	MTs	0.36
90	8052		1.82	MTs	0.03
91	8072		0.61	MTs	0.01
92	8075		34.03	MTs	0.47
93	8089		17.02	MTs	1.23
94	8102		0.73	MTs	0.01
95	8121	8133/8120	766.01	MTs	12.94
96	8138		34.20	MTs	1.30
97	8153		0.24	MTs	0.01
98	8171		4.85	MTs	0.03
99	8194		72.93	MTs	1.82
100	8528		0.61	MTs	1.04
101	8540		1.82	MTs	0.20
102	8560		9.01	MTs	0.08
103	40621	4062	54.73	MTs	1.86
104	55901	5590	2.63	MTs	0.11
105	56036	56032	306.31	MTs	3.98
106	56058		2,953.68	MTs	34.27
107	65548		0.97	MTs	0.03
108	65562	(5(0)) ((5(0))	148.29	MTs	1.78
109	65646	65684/65682	109.40	MTs	2.02
110	65654	65684/65682	58.34	MTs	1.05
111 112	1050 1256		27.56	MTs	3.18
112	1300		0.46 2.70	MTs MTs	0.01 0.15
113	1304		33.05	MTs	1.18
115	1304		126.03	MTs	3.90
116	1414		189.57	MTs	5.02
117	1414	1296	15.12	MTs	0.63
118	1426	1270	12.25	MTs	0.32
119	1427		52.42	MTs	1.33
120	1431		2.61	MTs	0.11
121	1436		3.99	MTs	0.25
122	1442		1.45	MTs	0.09
123	1453		50.58	MTs	2.08
124	1468		203.33	MTs	6.37
125	1475		1,609.79	MTs	35.63
126	1477		7.54	MTs	0.24
127	1478		13.35	MTs	0.31
128	1482		51.60	MTs	1.78
129	1490	1604	111.43	MTs	2.53
130	1492	1474	436.69	MTs	14.55
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1 1	1	1	1	1 1	
131	1496		4.94	MTs	0.40
132	1500		20.32	MTs	0.73
133	1505		89.59	MTs	2.56
134	1512		1.97	MTs	0.06
135	1516		25.57	MTs	0.73
136	1527	1242	14.59	MTs	1.11
137	1541		3.17	MTs	0.10
138	1545	1599/1613	426.25	MTs	8.88
139	1546		665.13	MTs	14.63
140	1552	1554	782.06	MTs	20.10
141	1560		71.99	MTs	2.25
142	1573		73.96	MTs	2.62
143	1574		27.59	MTs	1.01
144	1585		1.44	MTs	0.08
145	1586		89.62	MTs	2.58
146	1587		115.62	MTs	4.09
147	1589		70.71	MTs	2.74
148	1596		2.54	MTs	0.07
149	1597	1774/1772	8.95	MTs	0.53
150	1617	1774/1772	1,580.16	MTs	29.71
151 152	1618	1410	11.73 465.22	MTs MTs	0.51 10.05
	1619	1410			
153	1632		41.36	MTs	2.49
154 155	1642 1644		818.04 378.95	MTs MTs	24.40 13.98
156	1652	1658	607.75	MTs	13.31
157	1652	1658	1,177.88	MTs	22.99
158	1662	1030	24.67	MTs	1.19
159	1664		13.12	MTs	0.82
160	1672		4.59	MTs	0.23
161	1674		881.49	MTs	40.83
162	1676		1,163.57	MTs	30.05
163	1678	1660	386.01	MTs	9.83
164	1682	1000	171.63	MTs	5.44
165	1684		331.06	MTs	9.02
166	1694	1660	738.33	MTs	16.69
167	1700		0.98	MTs	0.04
168	1710	1712/1714	243.10	MTs	7.52
169	1718	,	1.90	MTs	0.12
170	1728		19.83	MTs	0.91
171	1730		1.85	MTs	0.09
172	2006		67.57	MTs	3.97
173	2014		0.83	MTs	0.09
174	2046		3.87	MTs	0.16
175	2061		49.88	MTs	3.38
176	2064		5.54	MTs	0.46
177	2065		36.47	MTs	2.50
178	2067		5.23	MTs	1.17
179	2068		2.89	MTs	0.46
180	2082		1.51	MTs	0.13
181	2116		235.14	MTs	14.27
182	2117		195.56	MTs	8.61
183	2124		123.46	MTs	7.34
184	2146	2	9.98	MTs	1.67
185	2152	2158	5.59	MTs	1.89
186	2154		72.66	MTs	5.69
187	2160		742.09	MTs	48.30
188	2170		2.07	MTs	0.20
189	2176		7.26	MTs	0.57
190	2182		0.26	MTs	0.02

191   3001   15.33   MTs   1.30   192   3080   6.47   MTS   0.06   194   4540   6.90   MTS   0.24   195   4552   1.16   MTS   0.08   196   4554   4552   1.16   MTS   0.08   196   4555   4552   4.528   44.17   MTS   1.96   198   4569   2.21   MTS   0.30   199   4598   2.231   MTS   0.17   201   4602   5.34   MTS   0.17   201   4602   5.34   MTS   0.44   2202   6000   6114   425.43   MTS   1.36   203   6008   27.79   MTS   1.82   205   6030   9.85   MTS   0.49   206   6032   6032   6032   6032   6032   6038   1.331.51   MTS   2.708   208   6038   1.331.51   MTS   2.708   209   6039   1.80   MTS   2.711   1.212   6092   2.222.41   MTS   0.13   210   6063   376.88   MTS   2.111   211   6078   1.776   MTS   2.12   2.12   6092   2.222.41   MTS   0.13   2.12   2.12   6092   2.222.41   MTS   0.13   2.12   2.12   6.092   2.222.41   MTS   0.13   2.12   2.12   6.092   2.222.41   MTS   0.13   2.12   2.12   6.092   2.222.41   MTS   0.28   2.13   6.10   3.95   MTS   0.49   2.13   6.06   3.76.88   MTS   2.11   2.11   6.078   2.176   MTS   2.078   2.177   6.558   MTS   0.428   2.177   MTS   2.13   2.178		·		į	•	ī
193						
194						
195						
196		4540			MTs	
197					MTs	
198	196	4554	4528	63.12	MTs	2.59
199	197	4562	4528	44.17	MTs	1.96
200	198	4569		2.21	MTs	0.30
201	199	4598		22.83	MTs	1.13
202   6000   6114   425.43   MTs   13.67	200	4600		1.54	MTs	0.17
203	201	4602		5.34	MTs	0.44
204   6028   286.60   MTs   4.22	202	6000	6114	425.43	MTs	13.67
205   6030   9.85   MTs   0.49	203	6008		27.79	MTs	1.82
206   6032   6100   568.86   MTs   27.08	204	6028		286.60	MTs	4.22
207         6037         6100         568.86         MTs         27.08           208         6038         1,331.51         MTs         19.04           209         6039         1.80         MTs         0.13           210         6063         376.88         MTs         21.11           211         6078         1.7.76         MTs         1.32           212         6092         2,222.41         MTs         1.47           213         6110         3.95         MTs         0.28           214         6204         12.13         MTs         0.48           215         6212         33.34         MTs         0.07           216         6556         20.32         MTs         0.98           217         6558         121.55         MTs         0.98           218         6562         6.81         MTs         0.44           220         6594         7.60         MTs         0.44           220         6596         1.62         MTs         0.13           221         6598         118.20         MTs         0.15           222         7012         1.42         MTs <td>205</td> <td>6030</td> <td></td> <td>9.85</td> <td>MTs</td> <td>0.49</td>	205	6030		9.85	MTs	0.49
208         6038         1,331.51         MTs         19.04           209         6039         1.80         MTs         0.13           210         6063         376.88         MTs         21.11           211         6078         17.76         MTs         1.32           212         6092         2,222.41         MTs         41.72           213         6110         3.95         MTs         0.28           214         6204         12.13         MTs         0.48           215         6212         33.84         MTs         2.07           216         6556         20.32         MTs         0.98           217         6558         121.55         MTs         0.98           218         6562         6.81         MTs         0.42           219         6594         7.60         MTs         0.44           220         6596         1.62         MTs         0.13           221         6598         118.20         MTs         0.44           222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         2.13	206	6032		69.62	MTs	3.58
1.80   MTs   0.13	207	6037	6100	568.86	MTs	27.08
210	208	6038		1,331.51	MTs	19.04
211	209	6039		1.80	MTs	0.13
212   6092   2,222.41   MTs   41.72     213	210	6063		376.88	MTs	21.11
213	211	6078		17.76	MTs	1.32
12.13   MTs   0.48	212	6092		2,222.41	MTs	41.72
215	213	6110		3.95	MTs	0.28
216         6556         20.32         MTs         0.98           217         6558         121.55         MTs         7.84           218         6562         6.81         MTs         0.42           219         6594         7.60         MTs         0.44           220         6596         1.62         MTs         0.13           221         6598         118.20         MTs         6.28           222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         2.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         0.41           231         56030         1.81         MTs	214	6204		12.13	MTs	0.48
217         6558         121.55         MTs         7.84           218         6562         6.81         MTs         0.42           219         6594         7.60         MTs         0.13           220         6596         1.62         MTs         0.13           221         6598         118.20         MTs         6.28           222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         2.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.11           233         65630         19.69         MTs	215	6212		33.84	MTs	2.07
218         6562         6.81         MTs         0.42           219         6594         7.60         MTs         0.44           220         6596         1.62         MTs         0.13           221         6598         118.20         MTs         6.28           222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         2.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41         232         56040         1.81         MTs         0.11         34         80381         1.21         MTs         0.08         235	216	6556		20.32	MTs	0.98
219	217	6558		121.55	MTs	7.84
220         6596         1.62         MTs         0.13           221         6598         118.20         MTs         6.28           222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         0.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26<	218	6562		6.81	MTs	0.42
221         6598         118.20         MTs         6.28           222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         2.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.03           237         1274         2.39<	219	6594		7.60	MTs	0.44
222         7012         1.42         MTs         0.15           223         7022         17.77         MTs         2.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39 <td>220</td> <td>6596</td> <td></td> <td>1.62</td> <td>MTs</td> <td>0.13</td>	220	6596		1.62	MTs	0.13
223         7022         17.77         MTs         2.13           224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.28           239         1544         7.85 <td>221</td> <td>6598</td> <td></td> <td>118.20</td> <td>MTs</td> <td>6.28</td>	221	6598		118.20	MTs	6.28
224         7040         2.68         MTs         0.59           225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.08           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1	222	7012		1.42	MTs	0.15
225         8026         1.95         MTs         0.17           226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241	223	7022		17.77	MTs	2.13
226         8027         5.24         MTs         0.96           227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16	224	7040		2.68	MTs	0.59
227         8040         3.85         MTs         0.26           228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.08           235         1233         1236/1231         114.26         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs	225	8026		1.95	MTs	0.17
228         8082         21.82         MTs         1.43           229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.28	226	8027		5.24	MTs	0.96
229         8180         16.04         MTs         1.21           230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/170         9.80         MTs <t< td=""><td>227</td><td>8040</td><td></td><td>3.85</td><td>MTs</td><td>0.26</td></t<>	227	8040		3.85	MTs	0.26
230         20041         2004/20042         34.03         MTs         2.44           231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86	228	8082		21.82	MTs	1.43
231         56038         14.76         MTs         0.41           232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs<	229	8180		16.04	MTs	1.21
232         56040         1.81         MTs         0.11           233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58	230	20041	2004/20042	34.03	MTs	2.44
233         65630         19.69         MTs         1.66           234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/	231	56038		14.76	MTs	0.41
234         80381         1.21         MTs         0.08           235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248	232	56040		1.81	MTs	0.11
235         1233         1236/1231         114.26         MTs         4.32           236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         0.04	233	65630		19.69	MTs	1.66
236         1236         0.76         MTs         0.03           237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         2.11           249         1683         0.04         0.68         MTs         0.04	234	80381		1.21	MTs	0.08
237         1274         2.39         MTs         0.22           238         1515         182.33         MTs         6.28           239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         2.11           249         1683         0.04         0.68         MTs         0.04	235	1233	1236/1231	114.26	MTs	4.32
238       1515       182.33       MTs       6.28         239       1544       7.85       MTs       0.28         240       1551       1507/1534       27.39       MTs       1.16         241       1553       1599+3001/1543+4601       141.27       MTs       3.40         242       1557       9.01       MTs       0.30         243       1575       1738/1770       9.80       MTs       0.28         244       1594       1516       22.86       MTs       0.76         245       1608       2002       0.24       MTs       0.02         246       1638       1647       155.58       MTs       4.08         247       1643       1617/1585+1621       388.96       MTs       6.34         248       1668       1547       59.32       MTs       2.11         249       1683       0.68       MTs       0.04	236	1236		0.76	MTs	0.03
239         1544         7.85         MTs         0.28           240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         2.11           249         1683         0.68         MTs         0.04	237	1274		2.39	MTs	0.22
240         1551         1507/1534         27.39         MTs         1.16           241         1553         1599+3001/1543+4601         141.27         MTs         3.40           242         1557         9.01         MTs         0.30           243         1575         1738/1770         9.80         MTs         0.28           244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         2.11           249         1683         0.68         MTs         0.04	238	1515		182.33	MTs	6.28
241       1553       1599+3001/1543+4601       141.27       MTs       3.40         242       1557       9.01       MTs       0.30         243       1575       1738/1770       9.80       MTs       0.28         244       1594       1516       22.86       MTs       0.76         245       1608       2002       0.24       MTs       0.02         246       1638       1647       155.58       MTs       4.08         247       1643       1617/1585+1621       388.96       MTs       6.34         248       1668       1547       59.32       MTs       2.11         249       1683       0.68       MTs       0.04	239	1544		7.85	MTs	0.28
242       1557       9.01       MTs       0.30         243       1575       1738/1770       9.80       MTs       0.28         244       1594       1516       22.86       MTs       0.76         245       1608       2002       0.24       MTs       0.02         246       1638       1647       155.58       MTs       4.08         247       1643       1617/1585+1621       388.96       MTs       6.34         248       1668       1547       59.32       MTs       2.11         249       1683       0.68       MTs       0.04	240	1551		27.39	MTs	1.16
243       1575       1738/1770       9.80       MTs       0.28         244       1594       1516       22.86       MTs       0.76         245       1608       2002       0.24       MTs       0.02         246       1638       1647       155.58       MTs       4.08         247       1643       1617/1585+1621       388.96       MTs       6.34         248       1668       1547       59.32       MTs       2.11         249       1683       0.68       MTs       0.04	241	1553	1599+3001/1543+4601	141.27	MTs	3.40
244         1594         1516         22.86         MTs         0.76           245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         2.11           249         1683         0.68         MTs         0.04	242	1557		9.01	MTs	0.30
245         1608         2002         0.24         MTs         0.02           246         1638         1647         155.58         MTs         4.08           247         1643         1617/1585+1621         388.96         MTs         6.34           248         1668         1547         59.32         MTs         2.11           249         1683         0.68         MTs         0.04	243	1575	1738/1770	9.80	MTs	0.28
245     1608     2002     0.24     MTs     0.02       246     1638     1647     155.58     MTs     4.08       247     1643     1617/1585+1621     388.96     MTs     6.34       248     1668     1547     59.32     MTs     2.11       249     1683     0.68     MTs     0.04	244	1594	1516	22.86	MTs	0.76
246     1638     1647     155.58     MTs     4.08       247     1643     1617/1585+1621     388.96     MTs     6.34       248     1668     1547     59.32     MTs     2.11       249     1683     0.68     MTs     0.04	245	1608	2002	0.24	MTs	0.02
248     1668     1547     59.32     MTs     2.11       249     1683     0.68     MTs     0.04	246		1647		MTs	4.08
249 1683 0.68 MTs 0.04	247	1643	1617/1585+1621	388.96	MTs	6.34
	248	1668	1547	59.32	MTs	2.11
250 1740 1 021 02 MTc 40 C0	249	1683	1	0.68	MTs	0.04
40.00   1/40       1,021.03   M1S   48.00	250	1740		1,021.03	MTs	48.60

امعا	4546			Lam	l 0.45
251	1746		423.62	MTs	9.45
252	1748		111.32	MTs	3.60
253	1750		34.73	MTs	1.37
254	1766		84.60	MTs	1.99
255	2050		81.34	MTs	1.35
256	2066		41.11	MTs	3.30
257	2092		21.07	MTs	1.16
258	2098		8.42	MTs	1.02
259	2136		43.76	MTs	3.88
260	2184		87.53	MTs	5.31
261	3014		323.56	MTs	3.97
262	3022		2.43	MTs	0.02
263	3030		55.78	MTs	0.50
264	3074		119.12 1.22	MTs	1.64
265	3086			MTs	0.01
266	3102		294.69	MTs	3.34
267	3520		31.12	MTs	0.72
268 269	3522 4010		3.65 649.08	MTs MTs	0.05 3.05
269	4010		70.01	MTs	3.05 4.70
270	4053		0.71	MTs	0.09
271	4072		0.71	MTs	0.09
273	4100		15.32	MTs	0.03
274	4535		48.62	MTs	8.58
275	4550		0.24	MTs	0.09
276	4558		70.01	MTs	2.62
277	4595		0.88	MTs	0.11
278	4597		155.89	MTs	6.97
279	4614		0.49	MTs	0.02
280	5004		3.04	MTs	0.02
281	5011		60.26	MTs	1.46
282	5050		6.08	MTs	0.15
283	5052		6.08	MTs	0.16
284	5053		9.72	MTs	0.93
285	5064		45.45	MTs	2.57
286	5074		4.86	MTs	0.04
287	5082	5076	123.69	MTs	2.31
288	5084		3.70	MTs	0.09
289	5514		4.38	MTs	0.05
290	6025	6012/6015	181.16	MTs	4.59
291	6074		232.40	MTs	9.68
292	6096		62.96	MTs	1.82
293	6104		45.52	MTs	1.81
294	6108		99.34	MTs	1.36
295	6200	6037	1.37	MTs	0.07
296	6214		30.39	MTs	1.36
297	6216		218.79	MTs	4.04
298	6544		29.55	MTs	1.39
299	6546		7.29	MTs	0.34
300	6550		0.43	MTs	0.02
301	6560		0.89	MTs	0.04
302	6588		309.59	MTs	3.97
303	8086		5.35	MTs	0.43
304	8108		0.61	MTs	0.17
305	8118		3.18	MTs	0.66
306	8176		7.00	MTs	0.66
307 308	8594 8598		3.65 1.37	MTs	0.13
308	56060		1.37	MTs MTs	0.08 0.64
310	63552		326.48	MTs	10.92
210	03332		320.48	141 1 2	10.74

311	65538		303.61	MTs	2.49
312	65550		303.88	MTs	4.23
313	65568		0.97	MTs	0.03
314	65584		63.94	MTs	1.97
315	65642		2.20	MTs	0.08
316	65644		1.72	MTs	0.06
317	65694		104.29	MTs	1.86
318	65706		21.00	MTs	2.14
319	1052		3.89	MTs	0.25
320	1206	108	11.44	MTs	0.69
321	1244	1245	243.10	MTs	11.86
322	1306		1.49	MTs	0.05
323	1543	1599/1613	2,406.70	MTs	47.31
324	1647	1668	164.72	MTs	4.65
325	1673		19.89	MTs	0.73
326	1711		100.40	MTs	2.93
327	1732		700.11	MTs	18.02
328	1738		14.59	MTs	0.43
329	1742		17.03	MTs	0.40
330	1744		3.22	MTs	0.14
331	2042		0.23	MTs	0.02
332	2101	2100	221.10	MTs	11.37
333	2134	2131	437.58	MTs	17.70
334	4565	4568	233.46	MTs	11.04
335	6082	6084	228.88	MTs	3.00
336	55570		546.98	MTs	22.78
337	55578		303.88	MTs	13.38
338	55580		243.10	MTs	11.11
339	55552		218.79	MTs	9.11
340	55572		243.10	MTs	10.76
341	55576		230.95	MTs	10.20
342	8145	8144	72.93	MTs	3.67
343	1752	1756/1758	60.78	MTs	2.24
344	6102	6038	3,646.52	MTs	65.09
345	6006	6118	3,646.52	MTs	62.92
346	1768	1770	60.78	MTs	1.88
347	8162	81621/81622/81623	121.55	MTs	4.63
348	2007	20071	3.65	MTs	0.33
349	1764	1666/1756	60.78	MTs	2.53
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	FINANCIAL YEAR- 2025-26						
		LUBES ADDITIVES & SPECI		JREMENT			
Sl. No.	Additive	Alternate	Qty	UOM	Value in Rs crore		
1	1245	1244	17.56	MTs	0.74		
2	1410	1414	324.68	MTs	8.12		
3	1415	1415/1417/1418	292.02	MTs	6.21		
4	1419		1.28	MTs	0.03		
5	1504		12.77	MTs	0.49		
6	1539	1244	6.63	MTs	0.33		
7	1567	1526	332.85	MTs	9.19		
8	1604	1490	1718.64	MTs	33.75		
9	1623	1617	1825.08	MTs	40.18		
10	1658	1659	3828.85	MTs	82.02		
11	1660	1678	1006.98	MTs	22.17		
12	1685	1617/1772+4574	13.44	MTs	0.37		
13	1708		6.12	MTs	0.44		
14	1722		5.52	MTs	0.28		
15	1724 1734	1722	179.69	MTs	4.47 21.49		
16		1732	1029.95	MTs			
17 18	2010 2034		12.51 31.15	MTs MTs	0.24		
19	2034	2118	19.66	MTs	1.27		
20	2120	2098	12.77	MTs	1.25		
21	3002	2098	2277.21	MTs	31.78		
22	3002		11.15	MTs	0.11		
23	3008		124.65	MTs	1.66		
24	3010		39.77	MTs	0.88		
25	3012		585.63	MTs	6.27		
26	3028		35.13	MTs	1.08		
27	3039		4.34	MTs	0.03		
28	3066		7.11	MTs	0.48		
29	3084		50.64	MTs	2.50		
30	3088		0.64	MTs	0.01		
31	3090		14.55	MTs	0.38		
32	3098		8.61	MTs	1.18		
33	3514		1659.17	MTs	22.29		
34	3544		219.52	MTs	2.30		
35	3554		119.14	MTs	2.06		
36	3558		155.70	MTs	2.50		
37	3570		192.52	MTs	2.54		
38	3572		35.23	MTs	0.25		
39	3574		1914.42	MTs	19.20		
40	3575		150.59	MTs	1.65		
41	3580		0.64	MTs	1.06		
42	4025		6.38	MTs	0.27		
43	4027		1.28	MTs	0.02		
44	4047		0.16	MTs	0.02		
45	4058		5.67	MTs	1.60		
46	4064		186.31	MTs	3.43		
47	4096		93.93	MTs	2.12		
48	4098		5.72	MTs	0.24		
49	4529	4542	242.50	MTs	12.75		
50	4543		7.65	MTs	2.30		
51	4556		26.67	MTs	4.81		
52	4587		0.33	MTs	0.01		
53	5012	1	5.74	MTs	0.02		
54	5014		363.93	MTs	25.12		
55	5016		3.19	MTs	0.02		
56	5021		6.38	MTs	0.07		

58         5           59         5           60         5           61         5           62         5           63         5           64         5           65         5           68         6           70         6           71         6           73         6           74         6           75         6           76         6           77         6           80         6           81         6           82         6           83         6           84         7           86         7           87         8           88         8           89         8           90         8           91         8	5028 5044 5060 5067 5080 5082 5516 5522 5523 5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6552 6554 66566 6690	5076 6038/6102 6082 6037 6038/6017	2.30 199.10 138.13 63.82 1.02 191.45 1.91 172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.08 1.88 0.93 1.69 0.02 4.56 0.01 5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.05
59         5           60         5           61         5           62         5           63         5           64         5           65         5           68         6           70         6           71         6           72         6           74         6           75         6           76         6           77         6           79         6           80         6           81         6           82         6           84         7           85         7           86         7           87         8           88         8           89         8           90         8           91         8	5060 5067 5080 5082 5516 5522 5523 5534 5560 6001 6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6556	6038/6102 6082 6037	138.13 63.82 1.02 191.45 1.91 172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.93 1.69 0.02 4.56 0.01 5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
60       5         61       5         62       5         63       5         64       5         65       5         66       5         67       5         68       6         70       6         71       6         72       6         74       6         75       6         76       6         77       6         80       6         81       6         82       6         83       6         84       7         85       7         86       7         87       8         88       8         89       8         90       8         91       8	5067 5080 5082 5516 5522 5523 5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6548 6552 6554 6566	6038/6102 6082 6037	63.82 1.02 191.45 1.91 172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	1.69 0.02 4.56 0.01 5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
61       5         62       5         63       5         64       5         65       5         66       5         67       5         68       6         70       6         71       6         72       6         73       6         74       6         75       6         78       6         79       6         80       6         81       6         82       6         83       6         84       7         85       7         86       7         87       8         88       8         89       8         90       8         91       8	5080 5082 5516 5522 5523 5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6548 6552 6554 6566	6038/6102 6082 6037	1.02 191.45 1.91 172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.02 4.56 0.01 5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37
62       5         63       5         64       5         65       5         67       5         68       6         70       6         71       6         72       6         75       6         76       6         79       6         80       6         81       6         82       6         83       6         84       7         85       7         86       7         87       8         88       8         89       8         90       8         91       8	5082 5516 5522 5523 5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6548 6552 6554 6566	6038/6102 6082 6037	191.45 1.91 172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	4.56 0.01 5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37
63       5         64       5         65       5         66       5         67       5         68       6         70       6         71       6         72       6         73       6         74       6         75       6         78       6         79       6         81       6         82       6         83       6         84       7         85       7         86       7         87       8         88       8         89       8         90       8         91       8	5516 5522 5523 5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6548 6552 6554 6566	6038/6102 6082 6037	1.91 172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.01 5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37
64       5         65       5         66       5         67       5         68       6         69       6         70       6         71       6         73       6         74       6         75       6         76       6         79       6         80       6         81       6         82       6         83       6         84       7         85       7         86       7         87       8         88       8         89       8         90       8         91       8	5522 5523 5534 5560 6001 6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6556	6082 6037	172.06 0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	5.07 0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37
65 5 66 5 67 5 68 6 69 6 70 6 71 6 72 6 73 6 74 6 75 6 76 6 77 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	5523 5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6548 6552 6554 6566	6082 6037	0.41 2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.03 0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
66       5         67       5         68       6         69       6         70       6         71       6         72       6         74       6         75       6         76       6         80       6         81       6         82       6         83       6         84       7         85       7         86       7         87       8         88       8         89       8         90       8         91       8	5534 5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6554	6082 6037	2.87 6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.12 0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37
66 5 67 5 68 6 69 6 70 6 71 6 72 6 73 6 74 6 75 6 76 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8 91 8	5560 6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6548 6552 6554 6566	6082 6037	6.04 4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.06 0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37
68 6 69 6 70 6 71 6 71 6 72 6 73 6 74 6 75 6 76 6 77 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8 91 8	6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6556	6082 6037	4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
68 6 69 6 70 6 71 6 71 6 72 6 73 6 74 6 75 6 76 6 77 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8 91 8	6001 6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6556	6082 6037	4.46 117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.25 3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
69 6 70 6 71 6 71 6 72 6 73 6 74 6 75 6 76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6011 6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6556	6082 6037	117.71 150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	3.66 4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
70 6 71 6 72 6 73 6 74 6 75 6 76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6012 6017 6051 6084 6100 6102 6202 6210 6218 6554 6554	6082 6037	150.54 8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	4.36 0.21 20.70 1.50 10.95 7.68 0.37 0.37
71 6 72 6 73 6 74 6 75 6 76 6 77 6 78 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6017 6051 6084 6100 6102 6202 6210 6218 6554 6554 6566	6082 6037	8.89 466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	0.21 20.70 1.50 10.95 7.68 0.37
72 6 73 6 74 6 75 6 76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6051 6084 6100 6102 6202 6210 6218 6554 6554 6566	6082 6037	466.58 117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs	20.70 1.50 10.95 7.68 0.37
73 6 74 6 75 6 76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8 91 8	6084 6100 6102 6202 6210 6218 6548 6552 6554	6037	117.93 259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs MTs MTs MTs MTs MTs MTs MTs	1.50 10.95 7.68 0.37 0.37
74 6 75 6 76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6100 6102 6202 6210 6218 6548 6552 6554 6566	6037	259.31 539.39 12.77 6.12 1.28 22.33 59.19	MTs MTs MTs MTs MTs MTs MTs	10.95 7.68 0.37 0.37
75 6 76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6102 6202 6210 6218 6548 6552 6554 6566		539.39 12.77 6.12 1.28 22.33 59.19	MTs MTs MTs MTs MTs	7.68 0.37 0.37
76 6 77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6202 6210 6218 6548 6552 6554 6566	0038/0017	12.77 6.12 1.28 22.33 59.19	MTs MTs MTs MTs	0.37 0.37
77 6 78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6210 6218 6548 6552 6554 6566		6.12 1.28 22.33 59.19	MTs MTs MTs	0.37
78 6 79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6218 6548 6552 6554 6566		1.28 22.33 59.19	MTs MTs	
79 6 80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6548 6552 6554 6566		22.33 59.19	MTs	0.05
80 6 81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6552 6554 6566		59.19		0.05
81 6 82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6554 6566			1 3 470	0.95
82 6 83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8	6566		1156	MTs	2.84
83 6 84 7 85 7 86 7 87 8 88 8 89 8 90 8 91 8			1.56	MTs	0.08
84 7 85 7 86 7 87 8 88 8 89 8 90 8 91 8	65UN		64.54	MTs	2.33
85 7 86 7 87 8 88 8 89 8 90 8 91 8			0.46	MTs	0.03
86     7       87     8       88     8       89     8       90     8       91     8	7014		0.64	MTs	0.02
87 8 88 8 89 8 90 8 91 8	7024		0.50	MTs	0.14
88 8 89 8 90 8 91 8	7029		0.51	MTs	0.02
89 8 90 8 91 8	8002		43.90	MTs	2.60
90 8 91 8	8014		58.71	MTs	1.89
91 8	8038	80381	5.99	MTs	0.38
	8052		1.91	MTs	0.03
	8072		0.64	MTs	0.01
92 8	8075		35.73	MTs	0.49
93 8	8089		17.87	MTs	1.29
94 8	8102		0.77	MTs	0.01
95 8	8121	8133/8120	804.31	MTs	13.59
96 8	8138		35.91	MTs	1.37
97 8	8153		0.25	MTs	0.01
	8171		5.09	MTs	0.03
	8194		76.58	MTs	1.91
	8528		0.64	MTs	1.09
	8540		1.91	MTs	0.21
	8560		9.46	MTs	0.08
	40621	4062	57.47	MTs	1.95
	55901	5590	2.76	MTs	0.12
	56036	56032	321.63	MTs	4.18
	56058		3101.36	MTs	35.98
	65548		1.02	MTs	0.03
	65562		155.70	MTs	1.87
	65646	65684/65682	114.87	MTs	2.12
	65654	,			
		65684/65682	61.26	MTs	1.10
	1050		28.94	MTs	3.34
			0.48	MTs	0.01
	1256		2.84	MTs	0.16
	1256 1300		34.70	MTs	1.24
	1256 1300 1304		132.33	MTs	4.10
116 1	1256 1300 1304 1350		199.05	MTs	5.27

117	1418	1296	15.88	MTs	0.66
118	1426		12.86	MTs	0.34
119	1427		55.04	MTs	1.40
120	1431		2.74	MTs	0.12
121	1436		4.19	MTs	0.26
122	1442		1.52	MTs	0.09
123	1453		53.11	MTs	2.18
124	1468		213.50	MTs	6.69
125	1475		1690.28	MTs	37.41
126	1477		7.92	MTs	0.25
127	1478		14.02	MTs	0.33
128	1482		54.18	MTs	1.87
129	1490	1604	117.00	MTs	2.66
130	1492	1474	458.52	MTs	15.28
131	1496		5.19	MTs	0.42
132	1500		21.34	MTs	0.77
133	1505		94.07	MTs	2.69
134	1512		2.07	MTs	0.06
135	1516		26.85	MTs	0.77
136	1527	1242	15.32	MTs	1.17
137	1541		3.33	MTs	0.11
138	1545	1599/1613	447.56	MTs	9.32
139	1546		698.39	MTs	15.36
140	1552	1554	821.16	MTs	21.11
141	1560		75.59	MTs	2.36
142	1573		77.66	MTs	2.75
143	1574		28.97	MTs	1.06
144	1585		1.51	MTs	0.08
145	1586		94.10	MTs	2.71
146	1587		121.40	MTs	4.29
147	1589		74.25	MTs	2.88
148	1596		2.67	MTs	0.07
149	1597		9.40	MTs	0.56
150	1617	1774/1772	1659.17	MTs	31.20
151	1618		12.32	MTs	0.54
152	1619	1410	488.48	MTs	10.55
153	1632		43.43	MTs	2.61
154	1642		858.94	MTs	25.62
155	1644		397.90	MTs	14.68
156	1652	1658	638.14	MTs	13.98
157	1659	1658	1236.77	MTs	24.14
158	1662		25.90	MTs	1.25
159	1664		13.78	MTs	0.86
160	1672		4.82	MTs	0.24
161	1674		925.56	MTs	42.87
162	1676		1221.75	MTs	31.55
163	1678	1660	405.31	MTs	10.32
164	1682		180.21	MTs	5.71
165	1684		347.61	MTs	9.47
166	1694	1660	775.25	MTs	17.52
167	1700		1.03	MTs	0.04
168	1710	1712/1714	255.26	MTs	7.90
169	1718		2.00	MTs	0.13
170	1728		20.82	MTs	0.96
171	1730		1.94	MTs	0.09
172	2006		70.95	MTs	4.17
173	2014		0.87	MTs	0.09
174	2046		4.06	MTs	0.17
175	2061		52.37	MTs	3.55
176	2064		5.82	MTs	0.48

177	2065		38.29	MTs	2.63
178	2067		5.49	MTs	1.23
179	2068		3.03	MTs	0.48
180	2082		1.59	MTs	0.14
181	2116		246.90	MTs	14.98
182	2117		205.34	MTs	9.04
183	2124		129.63	MTs	7.71
184	2146		10.48	MTs	1.75
185	2152	2158	5.87	MTs	1.98
186	2154		76.29	MTs	5.97
187	2160		779.19	MTs	50.72
188	2170		2.17	MTs	0.21
189	2176		7.62	MTs	0.60
190	2182		0.27	MTs	0.02
191	3001		16.10	MTs	1.37
192	3080		6.79	MTs	0.53
193	3082		0.76	MTs	0.06
194	4540		7.25	MTs	0.25
195	4552		1.22	MTs	0.08
196	4554	4528	66.28	MTs	2.72
197	4562	4528	46.38	MTs	2.06
198	4569	1320	2.32	MTs	0.32
199	4598		23.97	MTs	1.19
200	4600		1.62	MTs	0.18
201	4602		5.61	MTs	0.46
202	6000	6114	446.70	MTs	14.35
203	6008	0114	29.18	MTs	1.91
203	6028		300.93	MTs	4.43
205	6030		10.34	MTs	0.51
206	6032		73.10	MTs	3.76
207	6037	6100	597.30	MTs	28.43
208	6038	0100	1398.09	MTs	19.99
209	6039		1.89	MTs	0.14
210	6063		395.72	MTs	22.17
210	6078			-	1.39
211	6092		18.65 2333.53	MTs MTs	43.81
-			4.15		
213 214	6110		12.74	MTs	0.29
	6204			MTs	0.50
215	6212		35.53	MTs	2.17
216	6556		21.34	MTs	1.03
217	6558		127.63	MTs	8.23
218	6562		7.15	MTs	0.44
219	6594		7.98	MTs	0.46
220	6596		1.70	MTs	0.14
221	6598		124.11	MTs	6.59
222	7012		1.49	MTs	0.16
223	7022		18.66	MTs	2.24
224	7040		2.81	MTs	0.62
225	8026		2.05	MTs	0.18
226	8027		5.50	MTs	1.01
227	8040		4.04	MTs	0.27
228	8082		22.91	MTs	1.50
229	8180		16.84	MTs	1.27
230	20041	2004/20042	35.73	MTs	2.56
231	56038		15.50	MTs	0.43
232	56040		1.90	MTs	0.12
233	65630		20.67	MTs	1.74
234	80381		1.27	MTs	0.08
235	1233	1236/1231	119.97	MTs	4.54
236	1236		0.80	MTs	0.03

237	1274		2.51	MTs	0.23
238	1515		191.45	MTs	6.59
239	1544		8.24	MTs	0.29
240	1551	1507/1534	28.76	MTs	1.22
241	1553	1599+3001/1543+4601	148.33	MTs	3.57
242	1557		9.46	MTs	0.32
243	1575	1738/1770	10.29	MTs	0.29
244	1594	1516	24.00	MTs	0.80
245	1608	2002	0.25	MTs	0.02
246	1638	1647	163.36	MTs	4.28
247	1643	1617/1585+1621	408.41	MTs	6.66
248	1668	1547	62.29	MTs	2.22
249	1683		0.71	MTs	0.04
250	1740		1072.08	MTs	51.03
251	1746		444.80	MTs	9.92
252	1748		116.89	MTs	3.78
253	1750		36.47	MTs	1.44
254	1766		88.83	MTs	2.09
255	2050		85.41	MTs	1.42
256	2066		43.17	MTs	3.47
257	2092		22.12	MTs	1.22
258	2098		8.84	MTs	1.07
259	2136		45.95	MTs	4.07
260	2184		91.91	MTs	5.58
261	3014		339.74	MTs	4.17
262	3022		2.55	MTs	0.02
263	3030		58.57	MTs	0.53
264	3074		125.08	MTs	1.72
265	3086		1.28	MTs	0.01
266	3102		309.42	MTs	3.51
267	3520		32.68	MTs	0.76
268	3522		3.83	MTs	0.05
269	4010		681.53	MTs	3.20
270	4053		73.51	MTs	4.94
271	4072		0.75	MTs	0.09
272	4074		0.25	MTs	0.03
273	4100		16.09	MTs	0.29
274	4535		51.05	MTs	9.01
275	4550		0.25	MTs	0.09
276	4558		73.51	MTs	2.75
277	4595		0.92	MTs	0.12
278	4597		163.68	MTs	7.32
279	4614		0.51	MTs	0.02
280	5004		3.19	MTs	0.02
281	5011		63.27	MTs	1.53
282	5050		6.38	MTs	0.16
283	5052		6.38	MTs	0.17
284	5053		10.21	MTs	0.98
285	5064		47.72	MTs	2.70
286	5074		5.10	MTs	0.04
287	5082	5076	129.87	MTs	2.43
288	5084		3.89	MTs	0.09
289	5514		4.60	MTs	0.05
290	6025	6012/6015	190.22	MTs	4.82
291	6074		244.02	MTs	10.16
292	6096		66.11	MTs	1.91
293	6104		47.80	MTs	1.90
294	6108		104.31	MTs	1.43
295	6200	6037	1.44	MTs	0.07
296	6214		31.91		1.43

297	6216		229.73	MTs	4.24
298	6544		31.03	MTs	1.46
299	6546		7.65	MTs	0.36
300	6550		0.45	MTs	0.02
301	6560		0.93	MTs	0.04
	6588		325.07		4.17
302				MTs	
303	8086		5.62	MTs	0.45
304	8108		0.64	MTs	0.18
305	8118		3.34	MTs	0.69
306	8176		7.35	MTs	0.69
307	8594		3.83	MTs	0.14
308	8598		1.44	MTs	0.08
309	56060		19.68	MTs	0.67
310	63552		342.80	MTs	11.47
311	65538		318.79	MTs	2.61
312	65550		319.07	MTs	4.44
313	65568		1.02	MTs	0.03
314	65584		67.14	MTs	2.07
315	65642		2.31	MTs	0.08
316	65644		1.81	MTs	0.06
317	65694		109.50	MTs	1.95
318	65706		22.05	MTs	2.25
319	1052		4.08	MTs	0.26
320	1206	108	12.01	MTs	0.72
321	1244	1245	255.26	MTs	12.45
322	1306		1.56	MTs	0.05
323	1543	1599/1613	2527.04	MTs	49.68
324	1647	1668	172.96	MTs	4.88
325	1673		20.88	MTs	0.77
326	1711		105.42	MTs	3.08
327	1732		735.12	MTs	18.92
328	1738		15.32	MTs	0.45
329	1742		17.88	MTs	0.42
330	1744		3.38	MTs	0.15
331	2042		0.24	MTs	0.02
332	2101	2100	232.16	MTs	11.94
333	2134	2131	459.46	MTs	18.59
334	4565	4568	245.13	MTs	11.59
335	6082	6084	240.32	MTs	3.15
336	55570	0007	574.33	MTs	23.92
337	55578		319.07	MTs	14.05
338	55580		255.26		
				MTs	11.67
339	55552		229.73	MTs	9.57
340	55572		255.26	MTs	11.30
341	55576	0144	242.50	MTs	10.71
342	8145	8144	76.58	MTs	3.85
343	1752	1756/1758	63.82	MTs	2.35
344	6102	6038	3828.85	MTs	68.34
345	6006	6118	3828.85	MTs	66.07
346	1768	1770	63.82	MTs	1.97
347	8162	81621/81622/81623	127.63	MTs	4.86
348	2007	20071	3.83	MTs	0.35
349	1764	1666/1756	63.82	MTs	2.66

	FINANCIAL YEAR- 2026-27  LUBES ADDITIVES & SPECIALITY BASE OILS PROCUREMENT					
	Additive	Alternate	Qty	UOM	Value in Rs crore	
1	1245	1244	18.43	MTs	0.77	
2	1410	1414	340.92	MTs	8.52	
3	1415	1415/1417/1418	306.62	MTs	6.52	
4	1419		1.35	MTs	0.03	
5	1504		13.41	MTs	0.52	
6	1539	1244	6.96	MTs	0.34	
7	1567	1526	349.49	MTs	9.65	
8	1604	1490	1804.57	MTs	35.43	
9	1623	1617	1916.33	MTs	42.19	
10	1658	1659	4020.29	MTs	86.12	
11	1660	1678	1057.33	MTs	23.27	
12	1685	1617/1772+4574	14.11	MTs	0.39	
13	1708		6.43	MTs	0.46	
14	1722		5.80	MTs	0.30	
15	1724		188.67	MTs	4.70	
16	1734	1732	1081.44	MTs	22.57	
17	2010		13.13	MTs	0.25	
18	2034		32.71	MTs	0.42	
19	2120	2118	20.64	MTs	1.33	
20	2130	2098	13.41	MTs	1.31	
21	3002		2391.07	MTs	33.37	
22	3006		11.71	MTs	0.11	
23	3008		130.88	MTs	1.74	
24	3010		41.76	MTs	0.93	
25	3012		614.91	MTs	6.58	
26	3028		36.89	MTs	1.14	
27	3039		4.55	MTs	0.03	
28	3066		7.46	MTs	0.51	
29	3084		53.17	MTs	2.62	
30	3088		0.67	MTs	0.01	
31	3090		15.28	MTs	0.40	
32	3098		9.04	MTs	1.23	
33	3514		1742.13	MTs	23.41	
34	3544		230.50	MTs	2.41	
35	3554		125.10	MTs	2.16	
36	3558		163.49	MTs	2.62	
37	3570		202.14	MTs	2.67	
38	3572		36.99	MTs	0.26	
39	3574		2010.14	MTs	20.16	
40	3575		158.12	MTs	1.73	
40	3580		0.67	MTs	1.73	
42	4025		6.70	MTs	0.29	
42 43	4025		1.35	MTs	0.29	
44	4047		0.17	MTs	0.02	
45	4058		5.95	MTs	1.68	

97	8153		0.26	MTs	0.01
98	8171		5.35	MTs	0.01
99	8194		80.41	MTs	2.01
100	8528		0.67	MTs	1.15
100	8540		2.01	MTs	0.22
101	8560		9.93	MTs	0.22
		4062			
103	40621	4062	60.34	MTs	2.05
104	55901	5590	2.90	MTs	0.12
105	56036	56032	337.71	MTs	4.39
106	56058		3256.43	MTs	37.78
107	65548		1.07	MTs	0.03
108	65562	CT CO 4 (CT CO)	163.49	MTs	1.96
109	65646	65684/65682	120.61	MTs	2.23
110	65654	65684/65682	64.32	MTs	1.16
111	1050		30.38	MTs	3.51
112	1256		0.51	MTs	0.01
113	1300		2.98	MTs	0.17
114	1304		36.44	MTs	1.30
115	1350		138.95	MTs	4.30
116	1414		209.00	MTs	5.53
117	1418	1296	16.67	MTs	0.69
118	1426		13.51	MTs	0.35
119	1427		57.79	MTs	1.47
120	1431		2.88	MTs	0.12
121	1436		4.40	MTs	0.28
122	1442		1.60	MTs	0.10
123	1453		55.76	MTs	2.29
124	1468		224.17	MTs	7.02
125	1475		1774.79	MTs	39.28
126	1477		8.31	MTs	0.26
127	1478		14.72	MTs	0.34
128	1482		56.89	MTs	1.96
129	1490	1604	122.85	MTs	2.79
130	1492	1474	481.45	MTs	16.04
131	1496		5.45	MTs	0.44
132	1500		22.40	MTs	0.80
133	1505		98.77	MTs	2.82
134	1512		2.17	MTs	0.07
135	1516		28.19	MTs	0.80
136	1527	1242	16.09	MTs	1.22
137	1541		3.49	MTs	0.11
138	1545	1599/1613	469.94	MTs	9.79
139	1546		733.31	MTs	16.13
140	1552	1554	862.22	MTs	22.16
141	1560		79.37	MTs	2.48
142	1573		81.54	MTs	2.89
143	1574		30.42	MTs	1.11
144	1585		1.59	MTs	0.09
145	1586		98.81	MTs	2.84
146	1587		127.47	MTs	4.51

1.47	1500	T	77.07	MT	2.02
147	1589		77.96	MTs	3.02
148	1596		2.80	MTs	0.08
149	1597	1551/1550	9.87	MTs	0.58
150	1617	1774/1772	1742.13	MTs	32.76
151	1618	4440	12.93	MTs	0.56
152	1619	1410	512.91	MTs	11.08
153	1632		45.60	MTs	2.75
154	1642		901.89	MTs	26.90
155	1644		417.79	MTs	15.41
156	1652	1658	670.04	MTs	14.67
157	1659	1658	1298.61	MTs	25.35
158	1662		27.20	MTs	1.31
159	1664		14.46	MTs	0.90
160	1672		5.06	MTs	0.25
161	1674		971.84	MTs	45.02
162	1676		1282.84	MTs	33.13
163	1678	1660	425.58	MTs	10.84
164	1682		189.22	MTs	6.00
165	1684		364.99	MTs	9.94
166	1694	1660	814.01	MTs	18.40
167	1700		1.08	MTs	0.04
168	1710	1712/1714	268.02	MTs	8.29
169	1718		2.09	MTs	0.13
170	1728		21.86	MTs	1.00
171	1730		2.04	MTs	0.10
172	2006		74.50	MTs	4.38
173	2014		0.92	MTs	0.10
174	2046		4.27	MTs	0.18
175	2061		54.99	MTs	3.73
176	2064		6.11	MTs	0.51
177	2065		40.21	MTs	2.76
178	2067		5.77	MTs	1.29
179	2068		3.19	MTs	0.51
180	2082		1.66	MTs	0.14
181	2116		259.24	MTs	15.73
182	2117		215.60	MTs	9.49
183	2124		136.11	MTs	8.09
184	2146		11.00	MTs	1.84
185	2152	2158	6.16	MTs	2.08
186	2154		80.11	MTs	6.27
187	2160		818.15	MTs	53.25
188	2170		2.28	MTs	0.22
189	2176		8.00	MTs	0.63
190	2182		0.29	MTs	0.02
191	3001		16.90	MTs	1.43
192	3080		7.13	MTs	0.55
193	3082		0.79	MTs	0.07
194	4540		7.61	MTs	0.26
195	4552		1.28	MTs	0.09
196	4554	4528	69.59	MTs	2.86
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197	4562	4530	48.70	МТа	2.16
		4528		MTs	
198	4569		2.44	MTs	0.33
199	4598		25.17	MTs	1.25
200	4600		1.70	MTs	0.19
201	4602		5.89	MTs	0.49
202	6000	6114	469.04	MTs	15.07
203	6008		30.64	MTs	2.01
204	6028		315.98	MTs	4.65
205	6030		10.86	MTs	0.54
206	6032		76.76	MTs	3.95
207	6037	6100	627.17	MTs	29.86
208	6038		1467.99	MTs	20.99
209	6039		1.98	MTs	0.14
210	6063		415.51	MTs	23.27
211	6078		19.58	MTs	1.46
212	6092		2450.21	MTs	46.00
213	6110		4.35	MTs	0.31
214	6204		13.37	MTs	0.53
215	6212		37.31	MTs	2.28
216	6556		22.40	MTs	1.08
217	6558		134.01	MTs	8.64
218	6562		7.51	MTs	0.46
219	6594		8.38	MTs	0.49
220	6596		1.79	MTs	0.14
221	6598		130.32	MTs	6.92
222	7012		1.57	MTs	0.17
223	7022		19.59	MTs	2.35
224	7040		2.95	MTs	0.65
225	8026		2.15	MTs	0.19
226	8027		5.78	MTs	1.06
227	8040		4.24	MTs	0.29
228	8082		24.06	MTs	1.58
229	8180		17.68	MTs	1.33
230		2004/20042	37.52		2.69
	20041	2004/20042		MTs	
231	56038		16.27	MTs	0.45
232	56040		2.00	MTs	0.12
233	65630		21.71	MTs	1.83
234	80381	1006/1001	1.33	MTs	0.09
235	1233	1236/1231	125.97	MTs	4.76
236	1236		0.84	MTs	0.03
237	1274		2.63	MTs	0.24
238	1515		201.02	MTs	6.92
239	1544		8.65	MTs	0.31
240	1551	1507/1534	30.20	MTs	1.28
241	1553	1599+3001/1543+4601	155.75	MTs	3.75
242	1557		9.93	MTs	0.33
243	1575	1738/1770	10.80	MTs	0.31
244	1594	1516	25.20	MTs	0.84
245	1608	2002	0.26	MTs	0.02
246	1638	1647	171.53	MTs	4.50
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247	1643	1617/1585+1621	428.83	MTs	6.99
248	1668	1547	65.40	MTs	2.33
249	1683		0.75	MTs	0.04
250	1740		1125.69	MTs	53.58
251	1746		467.04	MTs	10.42
252	1748		122.73	MTs	3.97
253	1750		38.29	MTs	1.51
254	1766		93.27	MTs	2.19
255	2050		89.68	MTs	1.49
256	2066		45.32	MTs	3.64
257	2092		23.23	MTs	1.28
258	2098		9.28	MTs	1.12
259	2136		48.25	MTs	4.28
260	2184		96.50	MTs	5.85
261	3014		356.72	MTs	4.38
262	3022		2.68	MTs	0.02
263	3030		61.50	MTs	0.55
264	3074		131.33	MTs	1.81
265	3086		1.35	MTs	0.01
266	3102		324.90	MTs	3.68
267	3520		34.31	MTs	0.79
268	3520		4.02	MTs	0.06
269	4010		715.61		3.36
270	4010		77.19	MTs	5.18
				MTs	
271	4072 4074		0.78	MTs	0.10
272			0.26	MTs	0.03
273	4100		16.89	MTs	0.31
274	4535		53.60	MTs	9.46
275	4550		0.26	MTs	0.10
276	4558		77.19	MTs	2.89
277	4595		0.97	MTs	0.12
278	4597		171.87	MTs	7.68
279	4614		0.54	MTs	0.02
280	5004		3.35	MTs	0.02
281	5011		66.44	MTs	1.61
282	5050		6.70	MTs	0.17
283	5052		6.70	MTs	0.18
284	5053		10.72	MTs	1.03
285	5064		50.11	MTs	2.83
286	5074	5076	5.36	MTs	0.04
287	5082	5076	136.37	MTs	2.55
288	5084		4.08	MTs	0.10
289	5514	C042/C045	4.83	MTs	0.06
290	6025	6012/6015	199.73	MTs	5.06
291	6074		256.22	MTs	10.67
292	6096		69.41	MTs	2.01
293	6104		50.19	MTs	2.00
294	6108		109.52	MTs	1.50
295	6200	6037	1.51	MTs	0.08
296	6214		33.50	MTs	1.50

205	(21)	Г	244.22	M	1445
297	6216		241.22	MTs	4.45
298	6544		32.58	MTs	1.53
299	6546		8.04	MTs	0.37
300	6550		0.47	MTs	0.02
301	6560		0.98	MTs	0.04
302	6588		341.32	MTs	4.38
303	8086		5.90	MTs	0.47
304	8108		0.67	MTs	0.19
305	8118		3.51	MTs	0.73
306	8176		7.72	MTs	0.73
307	8594		4.02	MTs	0.14
308	8598		1.51	MTs	0.09
309	56060		20.66	MTs	0.71
310	63552		359.94	MTs	12.04
311	65538		334.73	MTs	2.75
312	65550		335.03	MTs	4.66
313	65568		1.07 70.49	MTs	0.03
314	65584			MTs	2.17
315	65642		2.43	MTs	0.09
316	65644		1.90	MTs	0.07
317	65694		114.98	MTs	2.05
318	65706		23.15	MTs	2.36
319	1052	100	4.29	MTs	0.28
320	1206	108	12.61	MTs	0.76
321	1244	1245	268.02	MTs	13.08
322	1306 1543	1599/1613	1.64 2653.39	MTs	0.06
324	1647	1668	181.60	MTs MTs	52.16
325	1673	1008	21.93	MTs	0.80
326	1711		110.69	MTs	3.23
327	1732		771.87	MTs	19.87
328	1732		16.09	MTs	0.47
329	1742		18.78	MTs	0.44
330	1744		3.55	MTs	0.15
331	2042		0.25	MTs	0.02
332	2101	2100	243.76	MTs	12.54
333	2134	2131	482.43	MTs	19.51
334	4565	4568	257.39	MTs	12.17
335	6082	6084	252.34	MTs	3.31
336	55570		603.05	MTs	25.11
337	55578		335.03	MTs	14.75
338	55580		268.02	MTs	12.25
339	55552		241.22	MTs	10.04
340	55572		268.02	MTs	11.86
341	55576		254.62	MTs	11.25
342	8145	8144	80.41	MTs	4.05
343	1752	1756/1758	67.01	MTs	2.47
344	6102	6038	4020.29	MTs	71.76
345	6006	6118	4020.29	MTs	69.37
346	1768	1770	67.01	MTs	2.07
	1 2.00	<u> </u>	J 1	1113	_,,,

347	8162	81621/81622/81623	134.01	MTs	5.10
348	2007	20071	4.02	MTs	0.36
349	1764	1666/1756	67.01	MTs	2.79

	FINANCIAL YEAR- 2021-22  ENGG MATERIAL PROCUREMENT							
SN	Description of Item	Broad specification parameters	Qty	Accounti ng Unit	Estimated value of Procureme nt value in Crores			
1	Pipeline	API 5L / IS3589 /IS1258	99,642	RM	34.01			
2	Steel Plates	IS 2062 Gr B	22,752	TO	144.44			
3	Pump	Centrifugal Pump	151	EA	11.57			
4	Pump	Fire Pump	27	EA	4.88			
5	Pump	Screw Pump	18	EA	1.05			
6	Valve	Manual Ball / Gate / Butterfly Valves	1,392	EA	1.86			
7	Valve	Motorized Ball / Gate / Butterfly Valves	1,007	EA	23.18			
8	Valve	Double Block & Bleed Valve (DBBV)	150	EA	7.69			
9	Valve	TOBV with Pneumatic or EH Actuator (ROSOV)	108	EA	9.35			
10	Valve	TOBV with Electrical Actuator	226	EA	11.84			
11	MFM	Mass Flow Meter	5	EA	3.13			

		FINANCIAL YEAR- 2022	2-23					
ENGG MATERIAL PROCUREMENT								
SN	Description of Item	Broad specification parameters	Qty	Accounti ng Unit	Estimated value of Procurement value in Crores			
1	Pipeline	API 5L / IS3589 /IS1258	1,04,624	RM	35.71			
2	Steel Plates	IS 2062 Gr B	23,890	ТО	151.66			
3	Pump	Centrifugal Pump	159	EA	12.14			
4	Pump	Fire Pump	28	EA	5.13			
5	Pump	Screw Pump	19	EA	1.10			
6	Valve	Manual Ball / Gate / Butterfly Valves	1,462	EA	1.96			
7	Valve	Motorized Ball / Gate / Butterfly Valves	1,057	EA	24.34			
8	Valve	Double Block & Bleed Valve (DBBV)	158	EA	8.07			
9	Valve	TOBV with Pneumatic or EH Actuator (ROSOV)	113	EA	9.82			
10	Valve	TOBV with Electrical Actuator	237	EA	12.43			
11	MFM	Mass Flow Meter	5	EA	3.29			
		FINANCIAL YEAR- 2022 ENGG MATERIAL PROCUR						
SN	Description of Item	Broad specification parameters	Qty	Accounti ng Unit	Estimated value of Procurement value in Crores			
1	Pipeline	API 5L / IS3589 /IS1258	1,09,855	RM	37.49			
2	Steel Plates	IS 2062 Gr B	25,085	TO	159.24			
	1_		1		40.55			

167

29 EA

EA

12.75

5.38

Centrifugal Pump
Fire Pump

3 Pump

4 Pump

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5	Pump	Screw Pump	20	EA	1.16
6	Valve	Manual Ball / Gate / Butterfly Valves	1,535	EA	2.05
7	Valve	Motorized Ball / Gate / Butterfly Valves	1,110	EA	25.56
8	Valve	Double Block & Bleed Valve (DBBV)	166	EA	8.48
9	Valve	TOBV with Pneumatic or EH Actuator (ROSOV)	119	EA	10.31
10	Valve	TOBV with Electrical Actuator	249	EA	13.05
11	MFM	Mass Flow Meter	5	EA	3.46
		FINANCIAL YEAR- 2024			
		ENGG MATERIAL PROCUR	1	T	
SN	Description of Item	Broad specification parameters	Qty	Accounti ng Unit	Estimated value of Procurement
					value in Crores
1	Pipeline	API 5L / IS3589 /IS1258	1,15,348	RM	value in Crores 39.37
1 2	Pipeline Steel Plates	API 5L / IS3589 /IS1258 IS 2062 Gr B	1,15,348 26,339	RM TO	
	-	, , ,			39.37
2	Steel Plates	IS 2062 Gr B	26,339	ТО	39.37 167.20
2 3	Steel Plates Pump	IS 2062 Gr B Centrifugal Pump	26,339 175	TO EA	39.37 167.20 13.39
2 3 4 5 6	Steel Plates Pump Pump	IS 2062 Gr B Centrifugal Pump Fire Pump Screw Pump Manual Ball / Gate / Butterfly Valves	26,339 175 30	TO EA EA	39.37 167.20 13.39 5.65
2 3 4 5	Steel Plates Pump Pump Pump	IS 2062 Gr B Centrifugal Pump Fire Pump Screw Pump Manual Ball / Gate / Butterfly Valves Motorized Ball / Gate / Butterfly Valves	26,339 175 30 21	TO EA EA EA	39.37 167.20 13.39 5.65 1.21
2 3 4 5 6 7	Steel Plates Pump Pump Pump Valve	IS 2062 Gr B Centrifugal Pump Fire Pump Screw Pump Manual Ball / Gate / Butterfly Valves Motorized Ball / Gate / Butterfly Valves Double Block & Bleed Valve (DBBV)	26,339 175 30 21 1,612	TO EA EA EA EA	39.37 167.20 13.39 5.65 1.21 2.16
2 3 4 5 6	Steel Plates Pump Pump Pump Valve Valve	IS 2062 Gr B Centrifugal Pump Fire Pump Screw Pump Manual Ball / Gate / Butterfly Valves Motorized Ball / Gate / Butterfly Valves Double Block & Bleed Valve	26,339 175 30 21 1,612 1,166	TO EA EA EA EA EA	39.37 167.20 13.39 5.65 1.21 2.16
2 3 4 5 6 7	Steel Plates Pump Pump Pump Valve Valve	IS 2062 Gr B Centrifugal Pump Fire Pump Screw Pump Manual Ball / Gate / Butterfly Valves Motorized Ball / Gate / Butterfly Valves Double Block & Bleed Valve (DBBV) TOBV with Pneumatic or EH	26,339 175 30 21 1,612 1,166	TO EA EA EA EA EA EA	39.37 167.20 13.39 5.65 1.21 2.16 26.83 8.90 10.83
2 3 4 5 6 7 8	Steel Plates Pump Pump Pump Valve Valve Valve Valve	IS 2062 Gr B Centrifugal Pump Fire Pump Screw Pump Manual Ball / Gate / Butterfly Valves Motorized Ball / Gate / Butterfly Valves Double Block & Bleed Valve (DBBV) TOBV with Pneumatic or EH Actuator (ROSOV) TOBV with Electrical	26,339 175 30 21 1,612 1,166 174	TO EA EA EA EA EA EA EA	39.37 167.20 13.39 5.65 1.21 2.16 26.83 8.90

	FINANCIAL YEAR- 2026-27								
	LPG Group Projected PROCUREMENT								
SN	Description of Item	Broad specification parameters	Qty	Accounti ng Unit	Estimated value of Procurement value in Crores				
1	LPG Pump		15	Nos.	9.97				
2	LPG Compressor		20	Nos.	8.70				
3	Air Compressor		20	Nos.	2.76				
4	Air Dryer		25	Nos.	4.32				
5	DG Set		10	Nos.	4.46				
6	Fire Engine		12	Nos.	1.48				
7	Valve change without Evacuation Machine		6	Nos.	1.51				

8	LPG Loading arm	16	Nos.	0.48
9	Carousel	12	Nos.	44.25
10	Computers	0	Nos.	0.00
11	Additive dosing machines	20	Nos.	4.14
12	Carousal Cards in Nos.	288	Nos.	2.72
13	Mech Seals (Refurbishing) Nos.for LPG Pump	15	Nos.	0.47
14	Mech Seals New in Nos. for LPG Pump	10	Nos.	1.00
15	Valves / Flanges / Gaskets / Spares in Nos.	600	Nos.	15.75
16	Cables (Control / Power) in RMs	6000	Nos.	0.09
17	Pressure / Temp Transmitters/Gauges in Nos.	20	Nos.	0.21
18	Fire Engine / DG / DC Batteries in Nos.	300	Nos.	0.47
19	Conveyor Chain in RM	50000	Nos.	6.30
20	Air Ends of Screw Compressors	0	Nos.	0.00
21	Spares (Filters & Accessories) Air Comp in Nos.	300	Nos.	0.79
22	LPG Vap Comp Seals / valves / Plates	600	Nos.	1.90
23	Lights and Fixtures / Bulbs / glands / JBs / Switches	10000	Nos.	1.05
24	Relays / Fuses	6000	Nos.	1.26
25	Printer Cartridges	0	Nos.	0.00
26	Sprockets / Cylinders / Shafts / wearing strips / Pneumatic tubing / connectors	20000	Nos.	4.20
27	Misc Spares /Car (sensors / connectors / cables etc)	400	Nos.	4.20
28	TLD / TLF Spares	800	Nos.	2.10
29	Structural steel for Conv / Misc Works in MT	1000	Nos.	3.99
30	Diesel / Fire Engine Spares / filters / glands	250	Nos.	2.63
31	Spares for Level gauges / transmitters	 500	Nos.	10.00

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32	Fire / SCADA / GMS Panel Spares / MIMIC / sensors / transmitter	350	Nos.	2.45
33	CCTV spares / modules and Electronic Items for CCTV system	150	Nos.	3.04
34	Load cells for weigh bridges / weighing scales / carousals	300	Nos.	0.79
35	Centering Arms of carousals	1200	Nos.	0.15
36	14.2 Kg Cylinders (Including New & Replacement)	 4500000	Nos.	704.79
37	19 Kg Cylinders (Including New & Replacement)	500000	Nos.	91.53
38	47.5 Kg Cylinders (Including New & Replacement)	5000	Nos.	1.98
39	5 Kg Cylinders (Including New & Replacement)	500000	Nos.	41.7
40	425 KG Cylinders	5000	Nos.	37.73
41	Pressure Regulators	5000000	Nos.	80.86
42	Self-Closing Valve	3000000 0	Nos.	294.63

Sr No.	Name of Machinery/ Component	Number of the Machinery/ components likely to be procured in next 5 years				Estimated value of these procurements in next 5 years (INR Cr.)							
		2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
1	Pump Spares	Lot	Lot	Lot	Lot	Lot	Lot	48	49	51	52	53	53
2	Mechanical Seal Spares	Lot	Lot	Lot	Lot	Lot	Lot	56	58	59	61	62	62
3	Bearings	Lot	Lot	Lot	Lot	Lot	Lot	5	5	5	5	5	6
4	Turbine Spares	Lot	Lot	Lot	Lot	Lot	Lot	116	119	122	125	129	130
5	Steam Engine Spares	Lot	Lot	Lot	Lot	Lot	Lot	1	1	1	1	1	1
6	Furnace Spares	Lot	Lot	Lot	Lot	Lot	Lot	14	15	15	15	16	16
7	Compressor Spares	Lot	Lot	Lot	Lot	Lot	Lot	61	62	64	65	67	68
8	Fan & Blower Spares	Lot	Lot	Lot	Lot	Lot	Lot	7	7	7	7	7	7
9	Agitator & Mixer Spares	Lot	Lot	Lot	Lot	Lot	Lot	2	2	2	2	2	2
10	ETP,LPG Plant Equipment Spares	Lot	Lot	Lot	Lot	Lot	Lot	12	12	12	13	13	13
11	Air Conditioner Spares	Lot	Lot	Lot	Lot	Lot	Lot	2	2	2	2	3	3
12	Heat Exchanger Spares	Lot	Lot	Lot	Lot	Lot	Lot	46	47	48	49	51	52
13	Column/ Reactor Spares	Lot	Lot	Lot	Lot	Lot	Lot	34	35	36	37	38	39
14	Pipe & Pipe Fittings	Lot	Lot	Lot	Lot	Lot	Lot	127	130	133	137	140	142
15	Gear Box Spares	Lot	Lot	Lot	Lot	Lot	Lot	9	9	9	10	10	10
16	Motor Spares	Lot	Lot	Lot	Lot	Lot	Lot	4	4	4	4	5	5
17	Transformer, Battery, Switch Gear, Cable, Lamp etc. Spares	Lot	Lot	Lot	Lot	Lot	Lot	80	82	84	86	88	89