



INDEcoP2F
Plastics to Fuel Technology

INDEcoP2F®

Co-processing Waste Plastic in Delayed Coker

Plastic pollution has become one of the most serious environmental issues, as consumption of disposable plastic products is rapidly increasing worldwide. Conventional disposal methods such as landfill and incineration contribute to more pollution. Considering these challenges in handling waste plastic, IndianOil R&D developed a need-of-the-hour eco-friendly technology, INDEcoP2F®, for co-processing of waste plastics in Delayed Coker unit to convert to fuels.

The technology is commercially demonstrated in one of the IndianOil refineries by co-processing about 1.5 wt% waste plastic in Delayed Coker Unit (DCU). The technology has the capability to achieve conversion of ~ 95 wt% of waste plastic to fuel, thus improving refinery margin.



Salient Features

- Employs patented process configuration for waste plastic injection
- Sustainable operation of Delayed Coker unit (DCU), no impact on furnace operation
- No requirement of reduction in feed throughput
- Insignificant impact on product quality
- Robust design capable of operating DCU in waste plastic processing mode and conventional mode



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Major Benefits

- Ability to handle waste plastic - PE/PP and metal additised multi-layered packaging (MLP)
- High conversion of waste plastic to fuel (>95 wt%)
- Improvement in GRM and enables circular economy of plastic
- Contribution towards plastic neutrality and waste plastic disposal management
- Easily implemented in existing Delayed Coker Unit with minimum downtime

Commercial Experience

- Successfully demonstrated co-processing of 0.5-1.3 wt% metal-additised MLP waste plastic in 170 KTA DCU in one of the IndianOil refineries.
- 95 wt% waste plastic converted to fuel.
- No significant changes in the quality of Coke as well as liquid products.

