

EIL's Sulphur Portfolio – Helping Industry to Reduce Carbon Footprint

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Engineers India Limited (EIL) is a leading player in India's energy sector. EIL's Decarbonization approach includes – Rationalization & upgradation of facilities, Intervention of New Technologies, Heat Integration, Optimization of Process parameters, Focus on Steam & Power Network etc.

Sulphur Recovery is one of the main technology portfolios of EIL, wherein, EIL has been involved from concept to commissioning and has executed multiple projects in India. In this area, EIL offers various technologies for meeting emission targets of refineries. In the Sulphur recovery area, EIL offers following technologies:

- Conventional Sulphur Recovery Unit
- Tail Gas Treatment Unit
- SRU Oxygen enrichment for capacity & efficiency enhancement
- Sulphur Degassing process
- Liquid catalyst based SRU for lean acid gases
- Ammonia recovery from refinery Sour gases – to produce aqueous ammonia and anhydrous ammonia
- Amine Purification for HSS removal

These technologies, while meeting their required performance criteria, are being constantly upgraded for achieving energy efficiency and thereby reducing the carbon footprint.

EIL has realized / identified potential energy savings in the SRU which include rationalization of sulphur recovery units using oxygen enrichment, minimization of furnace heat loss, reduction of impact of HSS in amine unit, addressing channeling issues in catalyst, reduction in carbon foot print due to conversion of waste to value (Ammonia recovery from sour gases), options to reduce startup & shutdown times etc. Corresponding energy savings to the tune of 16000 MTOEs per annum have been realized, resulting in reduction of carbon footprint.

This paper summarizes various case studies implemented along with energy savings thereof.

Key words: Carbon footprint, Sulphur technologies, SRU, MTOEs, Energy efficiency, waste to value