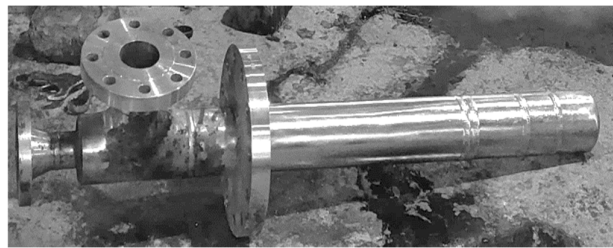


# SPRAYMAX FCC FEED NOZZLES

## An Initiative towards Indigenizing FCC hardware

FCC feed injection nozzles play a critical role of atomizing the dense and viscous FCC feed into fine droplets and spraying them over a hot stream of catalyst in the riser where catalytic cracking of large hydrocarbon molecules occurs. FCC feed injection nozzles are proprietary devices and supplied by only a few technology licensors. Indian refiners are conventionally relying on the foreign licensors for procuring feed nozzles, which is a time-consuming and costly affair. To reduce this dependence on foreign licensors and to achieve higher operational reliability, HPCL has developed cost-effective and efficient SprayMax FCC feed injection nozzles to promote the 'Make in India' initiative of Government of India. These nozzles were produced with Cost-Efficiency and the design-to-delivery period was less than three months. SprayMax nozzles possess excellent erosion resistance provided by the superior metallurgy of the nozzle tip and efficiently utilize steam to achieve high degree of atomization aided by unique internals. SprayMax nozzles were commissioned in 3 out of 4 FCC units of HPCL refineries in Mumbai and Vishakhapatnam.



The nozzles were installed with minimum hardware changes and no modification in the riser.

Some of the early commissioned SprayMax nozzles are in operation for around 4 years and helped in increasing the conversion of the FCC unit by around 1 wt% compared to previously installed nozzles. HPCL is ready to offer SprayMax nozzles to other interested refineries.