



हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड  
Hindustan Petroleum Corporation Limited

# HP SprayMax

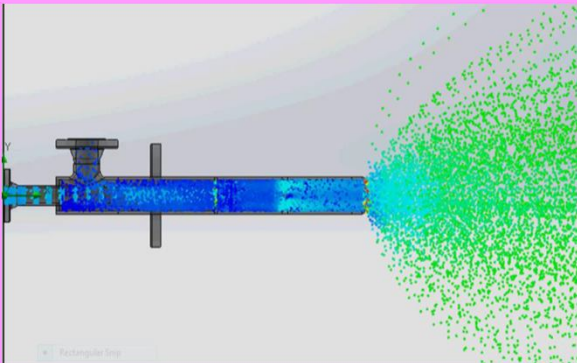
FCC Feed Nozzles

HPCL's 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 vapor phase catalytic cracking of hydrocarbon molecules occurs. FCC feed injection nozzles are proprietary equipment of technology licensors. Indian refiners have been 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 Govt. of India.

## Key Differentiators

- ☀ Multi-stage atomization
- ☀ Internals to enhance steam-oil mixing
- ☀ Erosion resistant
- ☀ Simple design for ease of fabrication
- ☀ Reduced fabrication time



## SprayMax Advantage

- ❖ Fine Atomization of FCC feed
- ❖ Efficient utilization of steam
- ❖ Reduce dry gas and delta coke
- ❖ Increased conversion
- ❖ Reduced pressure drop
- ❖ Suit-to-site design
- ❖ Long service life
- ❖ Cost-effective



## Commercial Experience

- ❑ First commercialization in 2016
- ❑ Successfully implemented in 3 HPCL FCC units
- ❑ Conversion increase: 0.5 - 1 wt%
- ❑ >6 years in service



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