

HP CoSoL

Mixed solvent process for lube raffinate yield improvement

Lube refinery at HPCL Mumbai is producing different grades of lube base oils (LOBS) such as Spindle oil, 150 N, 500 N and Bright stock. Solvent extraction process is one of the important processes in lube refinery, which is used to remove aromatics from lube distillates in order to improve Viscosity Index (VI). N-Methyl-2-Pyrrolidone (NMP) is used as a solvent for all the lube distillates, but NMP is having high solvent power and lower selectivity towards the aromatics compared to other solvents such as Furfural.



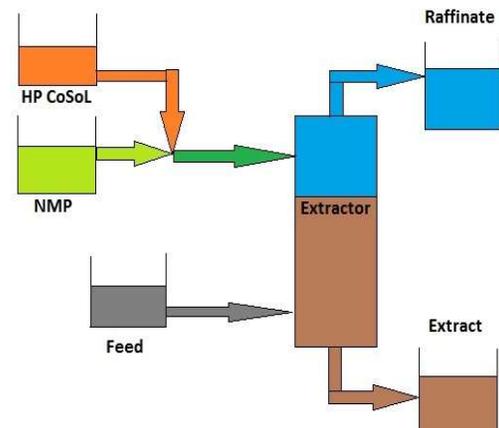
HPCL R&D has developed a highly selective HP CoSoL process for Lube Raffinate yield improvement. Based on successful lab scale results HPCoSoL process was implemented in Solvent extraction units of Mumbai HPCL refineries. HP CoSoL process was implemented from February 2017 at HPCL Mumbai refinery. The benefits of this process are:

Lube raffinate yield improvement by 2-3 wt% compared to base solvent system.

High selectivity towards polycyclic aromatics

Low cost compared to base solvent

Overall 7-8 TMT lube oil production improvement per annum.



HPCL developed HP CoSoL process to improve the lube raffinate yield improvement in solvent extraction unit. HPCoSoL process was implemented at Mumbai refinery and having high selectivity towards poly cyclic aromatics removal. HP CoSoL process could be used for all grades of lube oil production.