

A Study of Vanadium leaching effect of Spent RHDM Catalyst

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In the recent trend of oil refining industries, the capacity of Heavy Oil Upgrading(HOU) facility has increased remarkably to meet the rising demand for light fuels such as gasoline and diesel. Prior to HOU process, the hydro-catalytic treatment of heavy oil is indispensable to eliminate the heavy metals(mainly V, Ni) and sulfur contained in heavy oil by using RHDM(Residue Hydrodemetallation) and RHDS(Residue Hydrodesulfurization) catalyst respectively. But there are several economic and environmental problems in disposal of spent hydrotreating catalyst because of very short of life span. The utilization of spent RHDM catalyst is limited to the reclamation of metals compared to that of spent RHDS catalyst which has been tried to be regenerated or to be rejuvenated. Therefore, in this study, the possibility of use as SCR catalyst was investigated by adequate leaching of vanadium from spent RHDM catalyst because vanadium component deposited over spent RHDM catalyst surface can be acted as the active component of SCR catalyst.