

## **IDI-20160050: DEVELOPMENT OF FCC CATALYST DEACTIVATION LAB-SCALE PROCESS.**

*The main objective of the project is to research and develop a new deactivation process of bizeolitic catalysts used in fluid catalytic cracking (FCC) in refineries, simulating real operating conditions.*

*The behavior of the additives against the time needed for deactivation has been studied and analyzed. The results make evident that the optimum time for the deactivation of the ZSM5 to reproduce the behavior of the additive in the industrial plant, in terms of yield to olefins in LPG It's 15 hours.*

*For light olefins C4 =, it seems that more hours of deactivation would be necessary in order to replicate the performances of the industrial plant, however, the improvement of the results do not justify so many hours of deactivation, especially since it would not be possible to reproduce propylene yields.*

*Regarding the impregnated catalyst, it seems evident that the impregnation and deactivation protocol is not adequate; the coke yield is too high due to the lack of passivation of the nickel and vanadium. The difference in the yields at C3 = and TC4 = in relation to the equilibrium catalyst are linked to the activity of the base catalyst but not to the activity of the ZSM5.*

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