

The Study and the Use of the Bifunctional Catalyst Pt/Re for Obtaining High Octane Number of the Gasoline

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Abstract : The original function of the process of platforming is to develop heavy naphtha (HSRN), coming from the atmospheric unit of distillation with a weak octane number (NO=44), to obtain a mixture of fuels à number octane raised by catalytically supporting specific groups of chemical reactions. The installation is divided into two sections: Section hydrobon. Section platforming. The rafinat coming from the bottom of column 12C2 to feed the section platforming, is divided into two parts whose flows are controlled and mixed with gas rich in hydrogen. Bottom of the column, we obtain stabilized reformat which is aspired by there pump to ensure the heating of the column whereas a part is sent towards storage after being cooled by the air cooler and the condenser. In catalytic catalyst of reforming, there is voluntarily associated a hydrogenating function-dehydrogenating, brought by platinum deposited, with an acid function brought by the alumina support (Al₂O₃). The mechanism of action of this bifunctional catalyst depends on the severity of the operation, of the quality of the load and the type of catalyst. The catalyst used in the catalytic process of reforming is a very elaborate bifunctional catalyst whose performances are constantly improved thanks to the experimental research supported on an increasingly large comprehension of the phenomena. The American company Universel Oil petroleum (UOP) marketed several series of bimetallic catalysts such as R16, R20, R30, and R62 consisted Platinum/Rhenium on an acid support consisted the alumina added with a halogenous compound (chlorine).

Keywords : platforming, amelioration, octane number, catalyst

Conference Title : ICCEPT 2014 : International Conference on Chemical Engineering and Process Technology

Conference Location : Istanbul, Türkiye

Conference Dates : December 22-23, 2014