

ABSTRACT

PROCESS FOR EFFECTING DEEP HDS OF HYDROCARBON FEEDSTOCKS.

The invention pertains to a process for reducing the sulphur content of a hydrocarbon feedstock to a value of less than 500 ppm, which process comprises contacting a feedstock with a 95% boiling point of 450°C or less and a sulphur content of 0.1 wt.% or more in the presence of hydrogen under conditions of elevated temperature and pressure with a first catalyst comprising a Group VI hydrogenation metal component and a Group VIII hydrogenation metal component on an oxidic carrier, after which at least part of the effluent from the first catalyst is led to a second catalyst comprising a Group VI hydrogenation metal component and a Group VIII hydrogenation metal component on an oxidic carrier which comprises 1 to 15 wt.% of silica, calculated on the weight of the catalyst.

The use of a silica-containing catalyst in the second bed shows an improvement over the use of a second catalyst with an alumina carrier in the production of products with a sulphur content of less than 500 ppm, preferably less than 350 ppm. An improvement in hydrodenitrogenation activity is also obtained.