

Abstract

METHOD AND APPARATUS FOR QUENCHING A HOT GASEOUS STREAM

The invention comprises a process for cracking liquid hydrocarbon feed to produce cracked gaseous hydrocarbons comprising feeding a liquid hydrocarbon feed stream to an olefins furnace; cracking the liquid hydrocarbon feed stream in the olefins furnace to produce a gaseous cracked effluent stream; feeding the cracked effluent from the olefins furnace to a primary transfer line heat exchanger (TLE) having two sections; injecting a first wetting fluid in a weight ratio of wetting fluid to hot gaseous effluent tangentially into the hot gaseous effluent stream at a particular location in the second section of the primary TLE; feeding the hot gaseous effluent stream exiting from the TLE to a separator; separating a separator bottoms stream comprising tar and heavier hydrocarbons and a separator product stream comprising an olefin product; and recovering an olefin product from the separator product stream.

Fig. 1