CATALYTIC REACTOR WITH QUENCH DEVICE PROVIDED WITH TANGENTIAL INJECTION OF A QUENCH FLUID

ABSTRACT

The catalytic reactor is composed of an enclosure 1 comprising at least two beds of solid catalyst 2 and 11 separated by a collector plate 6 cooperating with a quench box 7. The reactor comprises an injection nozzle 5 disposed in the collecting region 4 located above the collector plate 6. The injection nozzle 5 consists of a tube comprising a single orifice located at the end of the tube, and the maximum distance between the enclosure and the nozzle is in the range 0 to 40 cm. The end of the injection nozzle 5 is composed of a tubular portion configured so as to inject fluid into the collecting region 4 in a substantially horizontal direction and forming an angle in the range -10° to +10° with respect to the direction tangential to the wall of the enclosure 1 at said tubular portion.

Figure 1