EQUIPMENT

The Stratco reactor at Montebello consists of a 16 inch diameter tube 20 feet long, provided with a contacting section at the bottom and a separating section at the top. The contacting section is 12 feet long and contains an annular space around a central draft tube. The draft tube is 9 inches in internal diameter and 12 inches in external diameter. A central shaft carries 17 pumping impellers which, together with 17 corresponding baffles fitted to the inside of the draft tube, serves to pump the catalyst up through the draft tube from bottom to top, the catalyst returning to the bottom through the annular space. Feed gas is introduced at the bottom and gas oil cooling jackets are provided around the contacting section both on the external shell and on the draft tube.

The separating section contains a separating wheel which is 12 inches in diameter and 43 inches long. This wheel is made up of a shaft 4½ inches in diameter to

which 12 rectangular blades are welded axially to make a star wheel. This wheel is contained in a sleeve 13 inches in diameter in which a series of tangential slots are cut to permit the passage of catalyst. There are five rows of slots with 4 slots per row. The lower two rows of slots are 1/4" wide and the upper three rows are 1/8" wide, the length of the slots being 7 inches in all cases. Catalyst laden gas enters the separating wheel at the bottom and the entrained catalyst is thrown to the outside of the wheel by centrifugal force. The separated catalyst escapes through the slots in the sleeve and falls through the annular space and returns to the dense phase. The present tests were carried out with a bag filter attached to the outlet, the amount of catalyst lost from the wheel being determined by weighing the filter bag and its contents.