

## Sources of Data

The sources of these data together with a brief description of the reactors on which they were obtained are as follows:

### Montebello Data

The Montebello Data for Run 49 with Allan Wood catalyst were obtained from the detailed yield calculation sheets included in the appendix of partial report TDC 802 - 37 P.

The data for Run 63 on Brownsville's Mill Scale catalyst and for Run 59 on spent CM&S catalyst were obtained from the daily yield calculation sheets which were sent to us from Montebello by mail.

The data for the single points representing parts of Runs 57, 64, 65 & 66 with Mill Scale catalyst were obtained from the calculation sheets included in the undated report which Mr. duBois Eastman presented at the recent Tulsa Meeting with Stanolind.

All these data were obtained on the 11 3/4" I. D. Reactor which is described in detail in P.R. 37 P referred to above. This reactor is a straight pipe 30 ft. long with 3-2" sched. 80 pipes about 18 ft. long inside the reactor for cooling. Steaming water is used as the cooling medium. The 11 ft. above the cooling tubes is disengaging space. An external cyclone is used to separate the carried over fines from the reactor effluent but no fines are returned to the unit. Preheat of the total feed is varied automatically to control reactor bed temperature.

### Stanolind Data

The Stanolind Data for Run D-201-29 on Allan Wood Catalyst were obtained from the calculation sheets included in the appendix of partial report TDC 802 - 37 P. and the data for the other runs on Mill Scale Catalyst from the Tulsa Meeting Report referred to above.

The Stanolind D-201 reactor is 8" I.D. about 20 ft. long and is cooled by an external jacket. About 6 to 8 ft. of the upper part of the reactor is expanded to provide catalyst disengaging space. An external cyclone is used and feed preheat is varied automatically as at Montebello.

#### Beacon Data

The Beacon data for old runs 7024, 7027 and 8001 on Spent CM&S Catalyst were taken from the 1947 Report (EDG #1). The first two were made on a 1 5/8" I.D. stirred reactor and the other on a 3/4" I.D. 9 ft. long baffled reactor similar to that still in use and on which the other data shown on the graphs were obtained. This reactor is topped with a catalyst disengaging space 4 to 6" in diam. and about 2 ft. long and filters are used to knock back the catalyst. These laboratory reactors are jacket cooled and the total feed is normally regularly preheated to about 600°F.

#### HRI Data

The HRI data on spent CM&S catalyst were reproduced from the 1947 correlation referred to above. They were obtained on an 1 1/2" I.D. reactor 18 1/2 ft. long with 19 - 1" ex. hvy. tubes provided for cooling with Dowtherm. An expanded section about 2 ft. long was provided for catalyst disengaging and filters were used for final catalyst separation. In the particular runs shown here the total feed was preheated to 600 - 650°F.