

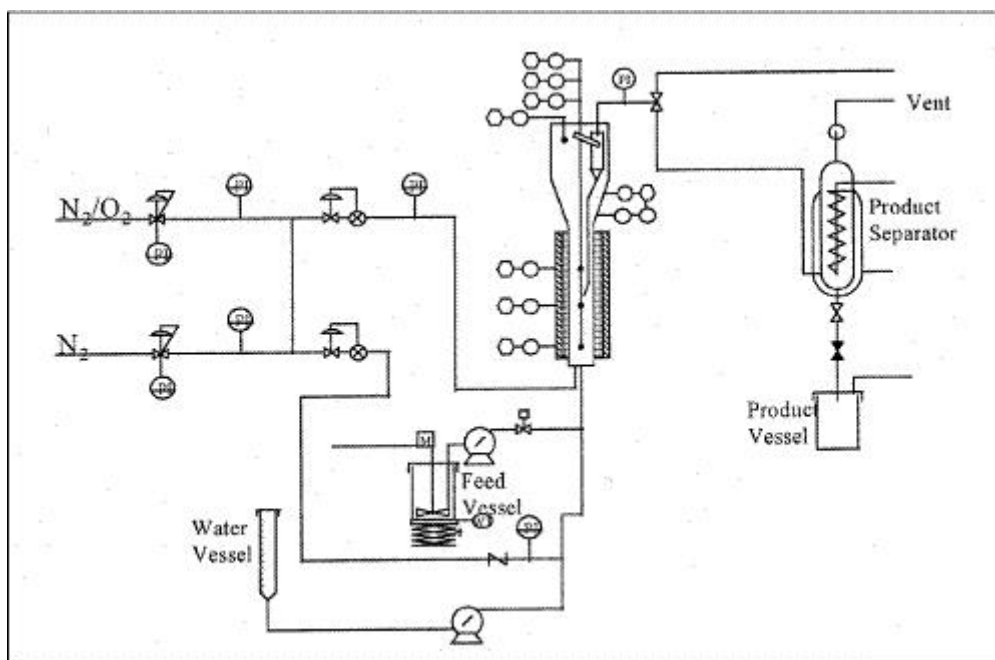
## CDU UNIT

The CPERI cyclic deactivation unit (CDU), designed by Xytel, is fully computerized and simulates satisfactorily the E-cats by depositing metals on FCC catalysts. This laboratory method is considered to be the most widely acceptable for FCC catalyst aging. The CDU mimics the FCC catalyst deactivation the catalyst in repeat cycles: cracking, stripping and regeneration. LEFH follows a specific protocol where the complete CDU run consists of 54 cycle, of which each cycle follows a cracking, a stripping and a regeneration step. Each cycle holds for about 60 min.



*CDU Unit*

The cracking step is taken place at 500°C for 50s. The stripping is carried out with nitrogen for about 180 sec at 500 °C. The regeneration holds for 2580 sec at 788 °C. The regeneration is achieved by a mixture of O<sub>2</sub> and N<sub>2</sub>.



*Schematic diagram of CDU unit*