

2 - 1 Development of Entrained-bed Coal Flash Pyrolysis Process (CPX)

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Entrained-bed coal flash pyrolysis process is expected as one of the most advantageous way of comprehensive and efficient use of coal, because it is possible to yield multiple components such as a high-value-added gas and raw materials for chemicals. The characteristic features of our pyrolysis process exists in obtaining the heat supply necessary for pyrolysis reaction from the hot gas generated by gasification of recycling char, which leads high heat efficiency process.

In order to evaluate the process concept and system, We have conducted 100 t/d pilot plant tests for 2-years since 1999.

Through the pilot plant tests, we obtained the technologies to continue the stable operation for long time. We also demonstrated that the carbon-conversion rate in the gasifier and the yields of pyrolysis products were almost as same as those of PRU experiments. As a result we could reach the targets about the heat value of process gas and the heat efficiency.

In this paper we describe the main results of pilot plant tests.

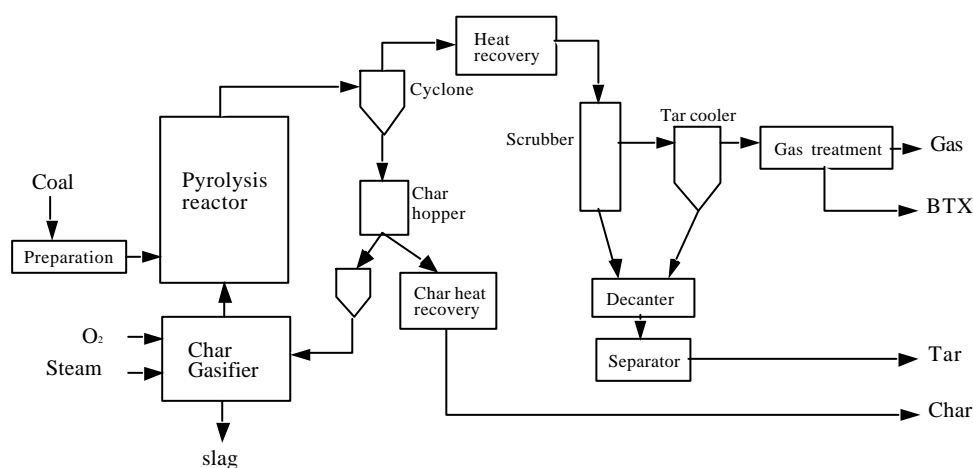


Fig. 1 Pilot Plant Flow Diagram