

1 - 2 ADVANCED PFBC COMBINED CYCLE SYSTEM

Keywords : High Efficiency Generation, CO₂ Reduction, PDU Test, A-PFBC,

Fluidized Bed, Limestone Dry Desulfurization, CaS Oxidization

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The A-PFBC system incorporates the partial gasification of coal in a gasifier, the desulfurization of H₂S in a limestone desulfurizer, and the combustion and oxidization of gasifier char and desulfurizer CaS in a PFBC oxidizer. A-PFBC system has the advantages of higher plant efficiency, which potential exists of 46% HHV(net plant efficiency).

From 1996, CCUJ, EPDC and CEPCO(joined in 1999) started the A-PFBC PDU (Process Development Unit) Test Project being mainly aimed for a process verification, operation & control confirmation, comprehension of desulfurization & oxidization characteristic. The capacity of PDU test plant is 15ton/day class. Its foundation work for construction was started at EPDC's Wakamatsu site in 1999, and the PDU test plant was constructed in July 2001.

From August 2001 through March 2003, the PDU Test Run will be conducted for data acquisition, verification, and evaluation of the A-PFBC system.

This paper presents the outline of the A-PFBC system and the progress of the PDU research.

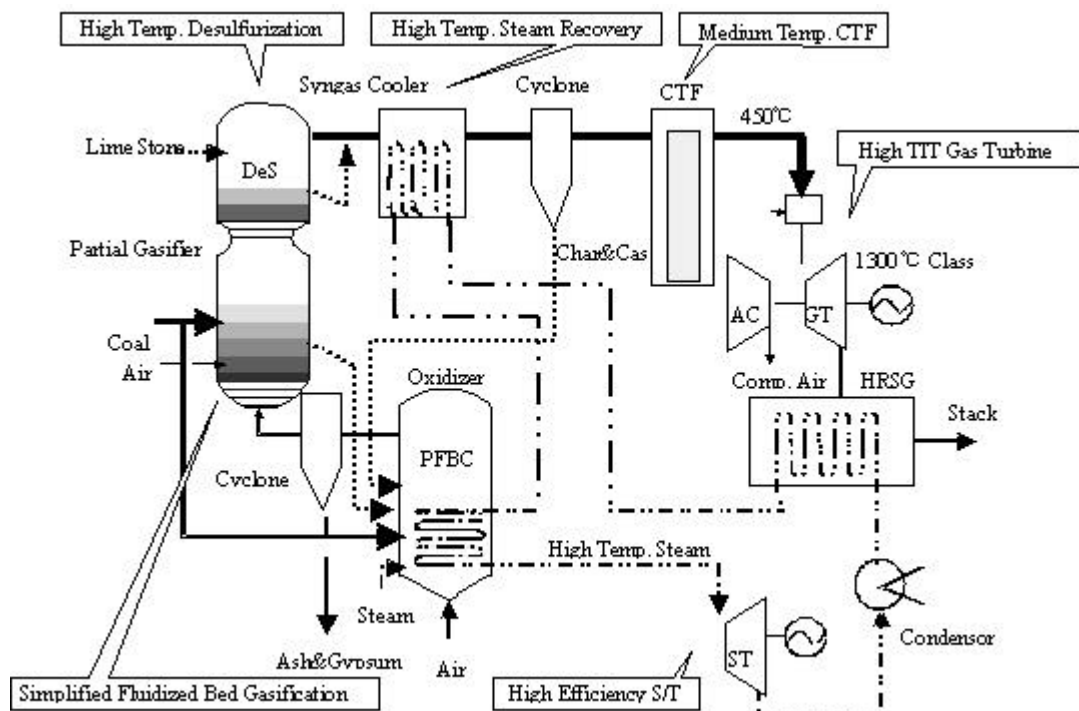


Figure 1. A-PFBC(Series Type) Simplified Flow Diagram