

**250MW AIR-BLOWN IGCC DEMONSTRATION PLANT
IN JAPAN AND ITS FUTURE PROSPECT**

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<Abstract>

For effective use of precious fossil fuels, it is imperative to achieve high efficiency in power generation. Among fossil fuels, coals are most abundant resources and widely distributed all over the world. Therefore coals are stable in terms of supply and price, and have an economical advantage over similar fuel resources. However, due to higher carbon content, CO₂ emissions of coal are much higher than those of oil-fired power generation and LNG-fired power generation. From this reason in Japan, air-blown IGCC, a high efficiency power generation system is considered to be one of the most important and feasible technology that can minimize CO₂ emissions from coal-fired power generating plant. In this context, we have decided to conduct demonstration tests on 250MW Demonstration Plant as the final stage for its commercial applications.

This paper deals with the outline of the demonstration test project, and shows the analytical results obtained from SWOT and positioning analyses. It is found that air-blown IGCC is the technology which maintains the excellent balance between the cost effectiveness and environmental characteristics, having a good performance well suitable for replacing coal-fired power generation.