

2-2 The development of sub-bituminous coal utilization and promotion technology

The low rank coal such as sub-bituminous and lignite has been used only in the producing countries because of its high moisture content, low calorific value and high spontaneous combustion property despite of its abundant reserves equal to that of bituminous coal.

However, the utilization of low rank coal begins to make a mark because of its low NO_x and SO_x emissions under the circumstance of worldwide emission regulation reinforcement on NO_x and SO_x of recent years. Particularly, Taiwan and Korea, which import most of coal from foreign countries likewise Japan, have been increased the sub-bituminous coal import with low environment load and price, and also some Japanese electric company started to import the sub-bituminous coal.

On the other hand, the sub-bituminous coal has many technical subjects on the use of existing boilers in the step of transportation, storage and combustion because it ignites spontaneously and has low ash fusion temperatures.

This study proposes the guideline for sub-bituminous coal utilization on the optimum selection of blend coal and boiler operation condition by using the computer simulation technology etc., aiming at the utilization and promotion of sub-bituminous coal at the existing boiler from the standpoint of environmental performance improvement on coal utilization and the stable coal supply in future

The term of this study is four years from 1998 to 2001 fiscal year. In this presentation, the extraction of technical subjects for sub-bituminous coal utilization and their countermeasures, the acquisition of combustion data from test and commercial facilities and the study of the optimum operating condition on the commercial boiler by the computer simulation are reported.

Construction of guideline for sub-bituminous coal utilization

