



Abstract

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Energy saving and CO₂ reduction by boiler control optimization system "ULTY-V plus"

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Abstract

Operating conditions of coal fired boiler always fluctuate due to a change of coal properties (moisture, calorific value, etc.), a switch of coal types, ash deposition on steam tubes, a change in outside air temperature, and so forth. Main steam pressure is corrected by the boiler master control in order to stabilize the boiler. However, a time constant of coal fired boiler, which is an interval required for the system to reflect heat input after feeding fuel into a boiler, is rather long. In the meanwhile, the boiler operating conditions change. Accordingly, the revision of main steam pressure itself triggers the fluctuation of boiler conditions.

"ULTY-V plus" is the boiler control optimization system which can improve boiler efficiency and reduce CO₂ emission by directly correcting the fuel function. It is connected to the existing boiler control system. The AI function incorporated into "ULTY-V plus" lead to further improve the performance of energy saving.

It is also possible to coordinate a remote supervision system including on-site cameras and handy data loggers in a network using IoT technology.

We will contribute to the prevention of global warming and the realization of a sustainable society by reducing CO₂ emissions. "ULTY-V plus" is one of the powerful system for existing coal fired boilers.