

Study performance and combustion characteristic of tiny-oil burner system at Coal Fired Steam Power Plant (CFSP) 2x300 mw = Kajian kinerja dan karakteristik pembakaran pada sistem tiny-oil burner di PLTU 2x300 mw

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Abstrak

Teknik pembakaran pada boiler dengan menggunakan tiny oil burner adalah teknologi baru yang dapat menghemat bahan bakar minyak dan ramah lingkungan. Aplikasi dari tiny oil burner pada boiler PC dapat mengurangi konsumsi minyak HSD, memastikan kestabilan pembakaran pada kondisi beban rendah dan mencegah kehilangan energi panas pada ruang bakar. Teknologi tiny oil burner tersebut digunakan pada sub-critical Pulverized Coal (PC) boiler di PLTU Labuan 300 MW.

Tujuan dari penelitian ini adalah untuk mengetahui kinerja dan karakteristik pembakaran dari tiny oil burner pada kondisi start up di boiler PLTU Labuan 300 MW. Dari analisa data operasi dapat diketahui kinerja hasil dari performance test dan karakteristik pembakaran berupa theoretical combustion air, air-fuel ratio, excess air, energy transfer dan coal ignition process.

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On the boiler combustion technique, tiny oil burner technology is new. Tiny oil burner is a technology that can save fuel and environmentally friendly technologies. Application of the tiny oil burners in a PC boiler can reduce the consumption of HSD oil, ensuring stable combustion at low load conditions and prevents loss of heat energy in the combustion chamber. The research of combustion tiny-oil burner system was conducted at Labuan CFSP 2X300 MW.

The purpose of this research was to determine the performance and combustion characteristics of tiny oil burners based on operational data of tiny-oil. With this research are expected to know the performance of tiny oil system and combustion characteristic such as theoretical air combustion, air-fuel ratio, excess air, energy transfer and coal ignition process.