

ABSTRACT

In order to support government programs to diversify energy, PT. Indonesia Power UP Suralaya uses coal as its main fuel. Unit 5 boilers at PT. Indonesia Power UP Suralaya was designed to build in accordance with coal quality standards using coal from PT. Bukit Asam NCV 5833.38 kcal / kg (ADB) to meet the production capacity of the plant as much as 4690.25 tons / day with the distribution of products from the milling equipment (pulverizer) for the combustion process feeds in the boiler that is 100% escapes the size of 200 mesh.

The process of burning coal in a boiler unit 5 at PT. Indonesia Power UP Suralaya is expected so that the coal entering the combustion chamber can burn completely. In fact, in the combustion process, coal in the combustion chamber cannot be burned as a whole, this is caused by several factors, namely insufficient air for combustion, not optimal grinding equipment because the quality of coal used is not in accordance with the standard, so this will result in a decrease efficiency of boiler performance and generating production capacity produced.

The research was conducted using coal quality from PT. Bukit Asam with a value of HGI 45, NCV 5627.69 kcal / kg (ADB) and coal quality from PT. Adaro with a value of HGI 46, NCV 5288.55 kcal / kg (ADB). The quality of coal from the two suppliers has a HGI value lower than the standard that should be ≥ 50 , the resulting heating value is lower than the standard NCV 5833.38 kcal / kg (ADB). HGI values lower than the standard result in coal being difficult to crush, so that the distribution of the resulting milling process is only 51% escapes to the size of 200 mesh, making the distribution of coal products the combustion process decreases, besides lower calorific value resulting in tonnage of coal requirements for combustion increase.

Efforts to solve these problems are by adding 1 unit of pulverizer to the grinding process and adding coal feed to the pulverizer so that the distribution of the product as coal feed into the boiler combustion processie 100% pass the size of 200 mesh can be fulfilled as needed coal combustion.