



P. T. PINDO DELI PULP & PAPER MILLS

Improved Boiler Burning Efficiency, Firing Rates and Exhaust Gas Metering

SUMMARY OF THE OPTION

PT. Pindo Deli Pulp & Paper produces photocopy paper, specialty paper and tissue paper with a production capacity of 1,465,000 tons per year. The GERIAP project focused in machine number 8 (PM# 8) that produces mainly the photocopy paper with a production capacity of 240,000 tons per year.

Pindo 2 Power House has four stand-by steam boilers that are used to provide steam to the paper mills when one of the main boilers is not operating. Three of the boilers are LP Boilers, 10 barg steam, which is let down to the LP steam system (5.2 barg). The fourth stand-by boiler is a MP Boiler, 16 barg. These boilers are emergency boilers supporting the main boiler. The estimated period of usage for the stand-by boilers are approximately one month per year or about 2 X 8 hours per month. However, the boilers are always kept warm for emergency start-up. These boilers are normally NG fired, with a solar (Diesel) backup firing system.

The plant has state-of-the-art combustion analyzer tool. Although, the combustion efficiencies of the auxiliary boilers are not regularly inspected, the combustion analysis is done bi-annually (earlier: once a year). Meanwhile, the boilers do have automatic oxygen trimming equipment to control combustion efficiency.

The observations made in the stand-by boilers 1, 2, 3 and 4 were found to have high vibrations in the boilers during the operation. PT. Pindo Deli had the boiler manufacturer identify the root cause of these high vibrations in boilers 1, 2, 3, 4 and it was found that high firing rates with NG fuel was the cause. The boilers have since been repaired and the boilers combustion has been adjusted for combustion efficiency.

Stand-by boilers are rarely in operation as the emergency boilers are functional only for about 2 X 8 hours per month, hence when the exhaust gas flow analyses was done, complete data was not made available. Gas flow data for two months before and after combustion adjustment is not available for the same reason as the normal boilers, because it is operated only in emergency. Gas flow data cannot be compared, because there is no data for comparison to know the effect of combustion adjustment.

The adjustment in the combustion showed that the gas flow is still in the standard range. The observation was made on a standard basis because the plant has no comparison for stand-by boilers.

KEYWORDS

Indonesia, Pulp & Paper, Boilers & Thermic Fluid Heaters



FOR MORE INFORMATION

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