

Fireye InSight Scanner is Integral for Safe Operation

APPLICATION: Recovery Boiler



A new Kvaerner recovery boiler with a capacity of 1680 tons/day, dry solids was installed as part of an overall mill upgrades program at the Weyerhaeuser Dryden pulp and paper mill to meet new emissions standards. Completion of this part of the project was during the latter part of the first quarter of 2004.

An important part of the safety system on this boiler is Fireye "Insight" flame scanners installed on both the warm-up burners and load burners.

The primary safety function of these scanners is to monitor their individual natural gas flames and communicate their status for "flame-off and on" condition back to the burner management system (BMS).

This task is made extremely difficult by the liquor burning process in the background and requires each flame scanner to be able to discriminate its individual natural gas flame against these bright background conditions.

Also, one of the burners is designed to burn this plant's none-condensable-gasses (NCG's) creating their own distinctive flame patterns and conditions. The installed Fireye Insight scanner model 95UVS1-1 scanner, using solid-state UV sensor technique combined with its ability to "learn" flame on and off conditions against difficult background conditions, proved well up to the task.

The Insight's "unitized" design internally completes the flame signal to a contact closure and 4-20mA control-signal back to the boiler's BMS. The keypad-display located at the back of the scanner allows for local information display and ease of set-up during commissioning. The commissioning procedure for all ten scanners combined took no more than one full day to complete.

Today this recovery boiler has been operating at load for several months with these Insight scanners playing their important part in its overall safe operation.



Thinking Beyond the Traditional...

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