

CASE STUDY – LUMBER

RESULTS

Introducing Aquafilm technology has solved the recurring problem of water carry-over in steam, which had a drastic effect on the efficiency of the drying process. The use of volatile organic ingredients is clearly more advantageous than other conventional methods. Aquafilm improves the efficiency of operations, reduces blowdown rates, increases energy savings, and promotes treatment program stability.

“The boiler’s
power capacity is now
working at 105%.”

Condition of the boiler tubes after
using Aquafilm for 6 months.



CHALLENGE

Steam boiler operation in the wood drying industry poses several challenges. Surge demands for steam promotes water carry-over, which drastically reduces drying performance due to the loss of steam energy. In addition, carry-over also makes the boiler behave erratically due to water level fluctuations, pipe ‘sloughing’ problems, hot water losses, and difficulties controlling the treatment program.

At the drying plant, there were few alternatives other than lowering boiler water conductivity to reduce water carry-over. This already very inefficient method involved increasing the blowdown rate and, consequently, resulted in a costly loss of energy and treated water.



SOLUTION

The conductivity maintained in the boiler water is connected to the concentration cycle attained before performing deconcentration blowdowns to eliminate the dissolved solids accumulated in water. These solids come from makeup water, but also from treatment products used to protect equipment against corrosion and scaling. These products usually contain minerals and directly affect water conductivity.

The Aquafilm program was introduced and replaced conventional treatment methods to control water carry-over and reduce blowdown rates. Aquafilm was recommended due to its low contribution to boiler water conductivity as the treatment relies on the use of volatile organic ingredients.

More than a water treatment solution.

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