

# **IDEAS ON HOW TO IMPROVE DRYING AND MAINTENANCE**

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Yakama Forest Products is owned by the Yakama Nation. The mill has been running for about 5 years. The Yakama Nation has 750,000 acres of timber land, with half the timber land set aside for environmental reasons. The biggest ponderosa pine tree in Washington state stands on the Yakama Nation's timber land. The ponderosa pine tree is 11 feet in diameter at the butt. The mill cuts down fall logs and cuts small logs 10" in diameter only. Other timber is sold on the open market.

## **Money Saving Ideas**

We return our condensate to a high pressure deaerator. This system is under pressure and condensate is pumped back by our new TLV traps. I am very impressed with the traps. Unlike bucket traps, the TLV traps work with check valves from coils and to condensate. The trap inside works like your home toilet's fill reservoir.

The trap fills up and condensate is pumped to the condensate line and deaerator. Our coils are never water logged. We have run these traps for six months now. The traps have already paid for themselves in reduced fuel costs. I also feel our lumber dries better.

## **RFO Fuel**

We run our boilers on RFO (refined oil). The upside to this is costs. Presently we are paying 43 cents a gallon. We save about \$500,000 a year running RFO over diesel. The downside is ash content. This means blowing ash out of boilers rear tubes two times a month. Boilers are cleaned every six months.

## **End Baffles**

We use chains for end baffles which will stay in place. Hooks and springs only work for a short time, then you replace them. Chain will last (Figure 1).

## **Pulling fans off motor shafts**

We made a tool to pull our fans. We loosen nuts from bolts, put the tool up to fan, hit the fan hub with a sledge hammer, pull coupler. The tool helps us cut time and change out fan motors quickly. The average time for a fan motor change is 45 minutes. The 45 minutes includes checking for direction and greasing.

## **COE Computer/Accudry**

COE has interfaced the Accudry system to their pc. The Accudry system is very accurate. Our quality and over dry has just about vanished. The Accudry system works unlike other systems I have used. To use this system you place strips on top of the

bottom unit and at bottom courses of the same unit. These strips never have to be cleaned. Our strips have cooked on pitch and resins from wood. This system isn't affected by buildup. I was amazed and skeptical at first. But the proof is in the finished product.

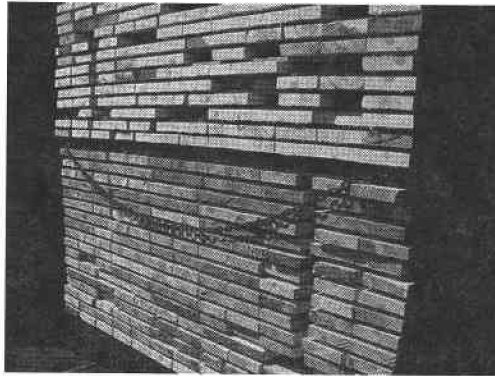
We have stopped hot checking the lumber in kiln all together. Our quality runs 90% #2 and BTR; 3% #3, 3% utility, and 4% wets on average drying hemlock. We dry ponderosa pine, ESLP, and Douglas-fir all over 225 degrees. The drying times are:

- winter hemlock is dried at 235°F drying time 30 hours
- winter ponderosa pine is dried at 235°F, dry time 25 hours
- winter ESLP is dried at 230°F dry time 20 hours
- winter Douglas-fir is dried at 235°F dry time 17 hours
- Douglas-fir lam stock is dried at 230°F dry time 22 hours

I am really excited to work on summer schedules to see what we can accomplish. One of the pluses we have is the timber comes from our land and schedules only change with the seasons. We dry 5 + million board feet a month in 3 single track kilns during the winter months.

We are building a large log mill, planer, and dry kiln/boilers. There will be five each 106' COE kilns. I plan to dry ponderosa pine shop in 76 hours or less.

You can have quality and quantity with the right kilns, boilers, proper training and the proper traps, drying system, and fan speeds.



**FIGURE 1.** Chain for holding baffles in place.