

Kiln Drying Subject Of Lengthy Article; All Facts In Case Given Consideration

Every activity in the manufacture of lumber, from the stump to the car has, has a bearing on the kiln capacity or the quantity to the dried stock, according to a writer in Circulation, the house organ of the Northwest Blower Kiln Co. The facts are so well set forth and so entirely applicable to all dry kiln users alike that the Lumberlogue reproduces the article in full:

Below is a brief discussion of the various lumbering activities that have a bearing on the success of the kiln operation and it will be observed that practically every activity from stump to car has a bearing on either the kiln capacity or the quality of the dried stock.

Falling and bucking is often carried on so far ahead of the logging operation that there is a tendency for the logs to sour and start to blue stain before the lumber reaches the kiln. It is well known that this class of logs are not only difficult to dry because of their condition, but they reduce the capacity of the kilns since they require much slower drying schedules and more careful operation throughout, to avoid excessive degrade.

The same condition is true where the logs are decked and left in the woods an unusually long time before being brought to the log pond and mill. So-called "hot" logs produce lumber that is easier to dry. It is not possible under certain operating conditions to supply strictly "hot" logs to the mills at all times, but it is believed that there is not sufficient effort made to avoid sour logs.

The condition in the log ponds is somewhat similar to that in the woods in that very frequently the boom men takes the most accessible logs each day into the mill rather than keep the entire log supply moving uniformly through the pond. As a result of carelessness in the booming operation, many logs are allowed to sour and blue stain in the pond that would not get in this condition under systematic selection of pond operation.

Sawing

Poor sawing is one of the commonest causes of poor kiln drying, owing to the fact that extra heavy boards do not permit holding boards of normal thickness flat between the stickers. This causes warping and subsequent splitting in the rolls at the planer. Scant sawing also causes scant boards to warp and increases the amount of redress developed. This redress may be due strictly to scant thickness, but is often due to the warping of such stock lying between two pieces of normal thickness and lack of uniformity in dressing the warped pieces. Warping cannot be avoided in any kiln where the board is not held flat, since the two surfaces do not have the same character of wood and different surface stresses are developed on the two faces, even though the drying may be absolutely uniform on both faces.

The segregations of lumber for different kiln trucks should be as complete and correct as sorting conditions will permit. The aim should be to keep stock requiring the same drying schedules segregated. Stock of uniform lengths should be put on the same trucks, as far as possible. Both of these segregations materially assist in obtaining maximum kiln capacity and the best possible quality. Thicknesses should never be mixed in the same stock truck or kiln charge.

Loading

In loading the trucks care should be taken to see that the stickers are placed directly above one another (or directly opposite one another in edge stacking), and that there are ample stickers to keep the lumber flat while drying. There is no economy in attempting to save money by cutting down the number of stickers used in each course, since the extra cost is insignificant compared with the damage done through having insufficient stickers.

Where the drying system requires a special flue or chimney built in the load, care should be taken to see that these are properly built. The entire success of the drying operation often hinges on the care and accuracy with which this loading is done.

Green storage tracks should be covered to protect the lumber from the sun during the summer and where excessive winds are experienced, the storage tracks should be protected by windbreaks. These sheds are essential in the winter to keep rain and snow from depositing on the lumber, as such moisture increases steam consumption and the drying time as well.

Steam

There are few kiln operators, even at the larger plants, who have sufficient steam to meet all of their requirements and to enable them to dry their lumber on exactly the desired schedule. In almost every plant there is constant friction between the power plant and the dry kiln department over the question of steam and most of this friction is due to misunderstanding. Years ago kilns were used, operated on exhaust steam

and any spare steam that the sawmill might have, but the general policy was to let the kilns get along as best they could. This was the attitude of the management as well as the power plant. With modern kilns and better understanding of kiln requirements, and a realization that a battery of kilns require steam to make a proper showing of its potential earning, there is no real excuse for friction between the two departments. It is more a question of having the management outline a definite steam program for the kiln operator, and insisting that the power plant meet the kiln requirements for steam at the sawmill or elsewhere.

Instruments

Many kiln operators are handicapped through inability to have requisitions for necessary and satisfactory instruments approved. Temperature and humidity recording instruments, an electric oven for drying out moisture samples, and scales for weighing moisture samples for determining moisture content, are as essential to good kiln operations as are a set of books to the bookkeeping department. Kilns have a more direct bearing on the earnings of the plant.

Leaky roofs are probably the greatest detriment to good kiln drying in the average operation, although neglect in tightening of steam fittings, lack of repairs to doors, walls, and lack of proper mill wringing of mechanical equipment are other important items that reduce the drying capacity of kilns. These leaks waste steam and make the entire operation more difficult. Failure to properly keep up the battery is usually due to absence of appreciation of its importance.

Planing

There should be close cooperation between the planing mill and the dry kiln. Lumber which is not properly dried will not surface satisfactorily, but on the other hand, lumber which is too dry will break up in the machine unnecessarily. The dressing of any lumber while it is still "hot" is bad practice. There is more or less confusion between defects caused by dull planer knives and those caused by improperly dried lumber. Cases of dispute should be carefully investigated by an impartial authority and the cause of unsatisfactory machining definitely established. Moisture content tests are the surest means of ascertaining whether lumber is dry. Unless the stock is obviously wet, it is not possible to ascertain its condition without actual moisture content tests, owing to the variation in the density and texture of individual pieces.

Resawing

When it is desired to kiln dry items so that they can be resawed to fit orders, it must be borne in mind that special schedules are necessary.

The reason for this is that case hardening must be eliminated and positively uniform conditions are necessary through the piece to prevent warping or cupping.

Inability to provide for special drying treatment for resaw stock has been responsible for the general impression that kiln dried stock cannot be resawn.

Sale promises should not be made for special items without assurance that there is ample kiln capacity available to allow sufficient time to dry the stock properly. Many cases have come up where sales promises have required pulling stock from the kiln only partly dry and complaints received and handed down to the kiln operator for improper drying at the time the stock left the kilns. Promises as to moisture content of kiln dried stock made by the sales department should be carefully checked with tests made by the kiln operator on stock of the same character dried under normal conditions, and provision for special drying made where necessary.

While aboard ship, Pat's pal was taken away by death. Two sacks of coal were fastened to his body. It was then lowered into the sea.

Pat, who was watching closely, exclaimed:

"Mot Gawd! Wat will the devil think when he sees Molke brangin' his own fuel!"

Help Wanted

We have been receiving many contributions lately and we want more. We are getting too much on one side of a question. The best correspondents so far developed have been railroad men. Maybe it's because they don't work and have lots of time to write.

Now we want more dope. We want letters from cooks. Cooks must have lots of ideas on camp life and we'd like to print them.

We'd also like to hear from camp waitresses. It's a cinch they ought to have ideas no one else has.

Also, we want more Paul Bunyan dope, from anyone.

And if there is anyone else in camp who knows of anything funny, or anything that might make news—shoot it in.

This week you may expect a visit from the puddle jumper which will have as a passenger Howard Winard. We plan to visit all the camps during the time he isn't enjoying the malarial shivers and those who have met him before will please prepare in the usual way. Finally, you are missing a lot if you don't subscribe to

The Lumberlogue