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The new lumber standards (ALS 20-70) are now in force. These standards have been slow in coming but are here to stay. Most of us will agree that some type or degree of standards are needed to unify the lumber products as sold to, or in the market place. For that purpose, ALS 20-70 is beneficial in that it designates lumber sizes and maximum moisture contents as a factor of strength values in softwood grades. Since this is a kiln club meeting, let's restrict ourselves to the topic of moisture contents now required: the problems related to drying 95 percent of our lumber to less than 20 percent moisture content.

Perhaps I'm slightly in error by referring to the problems (plural) in drying lumber. In reality, there is only one problem: wet lumber. But for some, that one problem is a real headache. That is why I spoke about "drying 95 percent of our lumber to less than 20 percent moisture content." To me, that wording is more descriptive than "allowing 5 percent of our lumber to be 20 percent moisture content and up." Remember that we are allowed a total of 5 percent off grade which includes errors in both moisture content and grade.

Wet lumber may be our only problem in meeting the new moisture content requirements, but we can write a long list of conditions which are the cause of wet lumber. For example, we could list: poor air velocities, uneven air flows, uneven heat distribution, thick and thin lumber, poor stickering and crib stacking, unequal initial moisture contents, sinker streaks or pockets, mixed species, etc. Now I'll bet that each of our mill operations fall into at least one or more of those categories. Some of these may be corrected in due time, but others are impractical due to some
particular mill situation.

Since we have certain inherent drying problems, we may tend to or be forced to overdry much of our stock in hopes of bringing down the wet lumber. Inspectors from several grading agencies have told me that they have received no recent complaints on wet lumber but have, in fact, had several complaints on over-dry stock. Now that is interesting— the standards were established to deter the sale of wet lumber, but the complaints tend toward over-dry stock because it is more difficult to saw, nail, drill and machine. The complaints should have started in the sawmill office, because over-dry stock results in degrade losses due to bow, crook, twist and cup. These mean dollar losses to the sawmill.

Some mill operations can handle a certain percentage of stock for redry. This allows them to shorten their drying schedule, reduce the percentage of overdry, and improve the general quality of drying. Many of those mills which can redry have or are installing in-line moisture detectors and drop-out systems ahead of the planer to reduce the chance of having "wet" lumber pulled off the dry chain. This is the proper place to pull out the wet pieces. If done after planing, substandard sizes result as subsequent shrinkage follows due to further drying.

Some dry kiln operators hope that these moisture detectors will solve their problem of wet lumber. But please remember that the moisture meter is a detector; it does not equalize the moisture gradient within a board or overall moisture content between boards. If the detector is properly adjusted, moisture content requirements can be met at the grading station. Within the mill yard and operations, however, wet lumber is still a problem because it has to be recycled for additional drying. So the kiln operator should be encouraged to use the best drying practices possible. Drop out meters are good monitors that will compliment proper drying; but mills operating with poor kiln drying practices will find moisture meters to be sassy tattle-tales.

Several people have asked me if high temperature drying can be used in accord with the new lumber standards. In the proper application, I believe high temperatures can be used successfully. I say this based on personal experience and because these kilns generally have better control over wet and dry bulb conditions than do many of the older conventional kilns. We have no control over air drying conditions, so severe exposures can result due to direct sunlight and low humidities. Consequently, the costly situation of over-dry stock can result from air drying yards as well as dry kilns that are not properly operated.

In closing, we see that the old problem of wet lumber is still our big thorn. Good kiln drying practices are the only known solutions to this problem. Moisture detectors and drop-out systems can assist good drying, but they cannot cure poorly dried lumber. As for the use of high temperature drying, it is applicable to certain species of wood if proper drying practices are followed. These are not easy times for the kiln operator who is pushed for production.

I sincerely hope that the American Lumber Standards committee, the various grading agencies, and the sawmill managers can compromise on persistent problems such as sinker stock in white fir and hemlock.