Information on Drying Softwood Confiers with a Container Dry Kiln by Global Energy

Global Energy LLC

[TEL] 608-238-6001

[Email] greg@globalmicroturbine.com

https://globalmicroturbine.com/information-on-drying-softwood-confiers-with-a-container-dry-kiln-by-global-energy.html

Information by Global Energy Container Kiln for drying softwoods (conifers)

This webpage QR code

PDF Version of the webpage (maximum 10 pages)

Kiln Drying Conifer Softwoods

Kiln Drying Softwoods (Conifers)

This is the notes section of Dry Kiln Schedules for Commercial Woods.

Conventional and Elevated Temperature Schedules: Softwoods (Tables 200-316) This group of tables contains schedules suggested for use with softwood (conifer) lumber and are typically used with steam-heated kilns. However, a few tropical hardwoods are dried under these schedules. Both moisture content (MC)-controlled schedules for products requiring very close control of final MC, such as furniture, millwork, and cabinet stock, and time-controlled schedules more generally used for drying products used in construction are listed. In a few of the schedule headings, the word modified appears in parentheses after the coded designation, e.g., Table 1 T3-F4S (Modified). This means we have modified the suggested schedule(s) form Agriculture Handbook 188, Dry Kiln Operator's Manual, so that the wet-bulb temperature (WBT) is never less than 90 deg. F. During periods of hot humid weather, it may not be possible to achieve WBT's below 90 deg. F. even with continuous venting. When energy conservation is a prime consideration, continuous venting may not be the best overall alternative as heat is lost in this process of controlling the WBT or relative humidity in the kiln. As a practical approach, we have suggested limiting the minimum WBT to 90 deg. F. Most schedules have dry-bulb temperatures between 110 and 200 deg. F.

————————————————-

Softwoods (Conifers)

This section lists schedules for drying softwood (coniferous) species in steam-heated kilns and direct-fired kilns operated at temperatures between 90 and 200 deg. F. The suggested schedules are divided into two groups: (A) those where changes in schedule are based on MC of the wood, and (B) those where changes in schedule are based on time. For products requiring very close control of final MC, such as furniture, millwork, and cabinet stock, better results may be obtained using the MC-controlled schedules. These are essentially the same as those listed in U.S. Department of Agriculture Handbook 188, Dry Kiln Operator's Manual. Use of sample boards is required. As mentioned in the previous section on hardwood, some schedule modification may be desirable to meet product requirements or changing timber resources. Modified schedules frequently used in the northeastern United States are listed in the Index to Schedules under Comments. For the suggested schedules where the changes are made based on elapsed time in the kiln, considerable changes have been made from Agriculture Handbook 188. These time schedules are based on drying from the green condition unless otherwise noted. When drying partly air-dried of partly kiln-fired western softwood stock, choose the appropriate schedule from the Index, but use a 10 deg. F wet-bulb depression for about 10 hours prior to entering the proper step of the schedule. We feel these schedules are more appropriate for modern equipment and wood resource, should be more efficient, and require less kiln residence time. Suggested Procedure for Frozen or Snow-Covered Softwood Lumber Snow-covered or frozen softwood lumber requires a low-heat cycle prior to setting the drying schedule to prevent degrade in most species. General practice in the western United States is to turn off the spray line, with vents open and the heat on, for 8 to 18 hours depending on amount of snow or quantity of frozen lumber. The dry-bulb temperature should not exceed 100 to 105 deg. F. A frequently used practice in the northeastern United States is to run about 12 hours at 95 deg. F dry-bulb temperature with spray off and vents closed.