

# TECHNICAL NOTE NUMBER 136

FOREST PRODUCTS LABORATORY - U. S. FOREST SERVICE - MADISON, WISCONSIN

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## KILLING MOLDS ON LUMBER BY STEAMING

Molds thrive on the surface of wood when it is moist and warm. In a dry kiln molds often develop on the surface of the lumber to such an extent that they seriously obstruct the circulation of air through the pile. This is such a decided hindrance to successful kiln drying that steps must be taken to prevent the mold growth. Various experiments have been made by the Forest Products Laboratory to find a means of accomplishing this result without injury to the lumber.

The safest method found of stopping the growth of mold on lumber in a kiln is to steam the stock at 180° F. for a period not exceeding an hour. This treatment heats the surface of the stock sufficiently to kill the mold, and at the same time the saturated air prevents too rapid surface drying, so that the injurious effects which otherwise would be produced on the wood by such high temperatures are largely if not entirely avoided.

Unless it is desired to relieve drying stresses at the same time, the interior of the stock should be heated as little as possible. Hence, the steam supply should be sufficient to reach the desired temperature in 25 or 30 minutes. To accomplish this result, plenty of live steam at a pressure of at least 70 pounds gauge must be available. The size of supply line and the number and size of perforations that may be required in the steam jet line will vary with local conditions; it is impossible to make them too large or too numerous, since the quicker the steam is supplied the better the effect.

Care should be taken to see that the stock cools in nearly saturated air. Otherwise the surface will dry too rapidly, and casehardening difficulties will set in.