

KIL-MO-TROL*

By E. E. Ramsey, Tolo Lumber Driers, Central Point, Oregon

The Kil-Mo-Trol is an electrical system designed to measure the moisture content of lumber in different parts of the kiln charge at any time while the kiln is in operation without going into the kiln. Sample boards are not used but tests are made directly on the lumber which is to be used in production. Moisture content in either the shell or core can be measured when desired in any part of the kiln where a station has been set up by turning the switch of the Station Selector to that particular station and reading the moisture content on a moisture meter which is electrically connected to the Switch Selector Box. The Station Selector and Moisture Meter are located in the kiln office or near the other kiln control instruments.

A station is the point at which contact is made with the board. It consists of 2 long, insulated, stainless steel contact pins driven to the center of the board and a short, uninsulated, stainless steel contact driven to a depth of 1/4". The stations may be located any where in the load and if a sufficient number are set up when the charge is built up, the entire drying process can be studied. For example, the operator will know where the drying is fast or slow, the effects produced by the reversal of circulation whether stresses are being developed because of wide differences in moisture contents between shell and core. All of the readings are made either in the kiln office or near the other kiln control instruments.

Certain components of the Kil-Mo-Trol system may also be used for checking the moisture content of lumber in the interior of air drying piles. This is important because the boards that dry slowly are located in the middle of the pile and normally cannot be reached to permit moisture measurement. It is, accordingly, possible to determine exactly when the lumber is dry and ready for use or below the fibre saturation point so as to avoid the danger of honeycombing during kiln drying.

The number and location of stations depends on the size of the pile, the distance between piles, and the air circulation in the area. When lumber is air-seasoned before kiln drying, the load cables should be installed at the time of stacking. If the lumber is handled in packages and transferred from the drying yard to the kiln without restacking, the Kil-Mo-Trol Stations are located within the lumber at the time of packaging. The lumber can then be tested at regular intervals so as to determine when it is dry enough to be kiln dried. After the package is placed in the kiln, the load cable is then connected to the Kil-Mo-Trol Main Cable.

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4/4 P. PINE COMMON

	Kil-Mo-Trol Readings	Temperatures			
		D.B.		W.B.	
24 hrs.	Station No. 1	27%	140	-	115
	Station No. 2	27%		-	
	Station No. 3	29%			
	Station No. 4	30%			
	Station No. 5	35%			
48 hrs.	Station No. 1	18%	150	-	115
	Station No. 2	20%			
	Station No. 3	16%			
	Station No. 4	23%			
	Station No. 5	28%			
64 hrs.	Station No. 1	8%	150	-	112
	Station No. 2	16%			
	Station No. 3	9%			
	Station No. 4	16%			
	Station No. 5	24%			

Actual moisture content of Stations

No. 1	7%
No. 2	13%
No. 3	7%
No. 4	15%
No. 5	20%

4/4 P. PINE COMMON

	Kil-Mo-Trol Readings	Temperatures			
		D.B.		W.B.	
24 hrs.	Station No. 1	28%	140	-	115
	Station No. 2	28%			
	Station No. 3	42%			
	Station No. 4	34%			
	Station No. 5	24%			
48 hrs.	Station No. 1	22%	150	-	115
	Station No. 2	24%			
	Station No. 3	29%			
	Station No. 4	25%			
	Station No. 5	17%			
60 hrs.	Station No. 1	15%	150	-	112
	Station No. 2	20%			
	Station No. 3	25%			
	Station No. 4	19%			
	Station No. 5	11%			

Actual moisture content of Stations

No. 1	11%
No. 2	15%
No. 3	19%
No. 4	15%
No. 5	10%