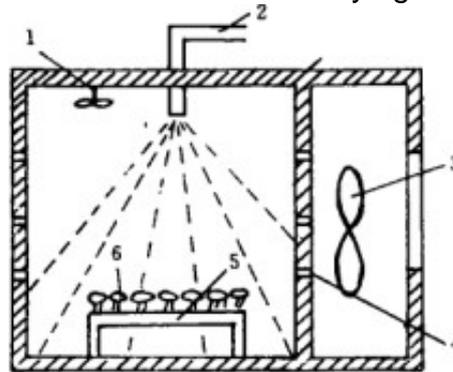


Study on microwave drying of wood

Wuxi No.2 Furniture Factory developed a [wood microwave dryer](#) in May 1977. Through several years of production practice, the technical performance of the [microwave drying equipment](#) is basically stable, and the drying production is relatively normal. Sometimes it can maintain two shifts of production, and has accumulated certain production experience, which is beneficial to the research and popularization of wood microwave drying technology in China. Contribution.

In order to summarize the experience, make the drying standard and promote the drying production, Northeast Forestry College cooperated with Wuxi Furniture Factory II. During 1981-1982, the productive technology experiment of wood microwave drying was carried out



under the production conditions of the factory.

The test equipment and methods The test equipment is a microwave dryer with a Novo cavity, which consists of a microwave source, a resonant cavity, an energy suppressor, a humidity exhaust device and a transmission system.

The working frequency of the microwave source is 915 ± 25 MW, and the microwave power is 20 kW. The inner size of the Novo cavity is 800 x 1000 x 1160 mm. The shape suppressor is 1 m wide and 70 mm in height.

The dehumidification device is to have a series of dehumidification holes at the top of the resonant cavity, and to achieve dehumidification through the air duct with No. 5 centrifugal fan. The transmission speed of the conveyor system is 0.5-7 m/min. The continuously adjustable timber is taken from the wood used for furniture production in factories. Most of the timbers are air-dried for a certain period of time, and they are all sapwood without obvious. The moisture content of the test material is determined by the Shuai Qian method.

Before and after each passing through the dryer, weigh the weight at that time, calculate the moisture content at that time, according to the final moisture content requirements, determine the number of passing through the dryer. Each batch of test materials was divided into three to four groups after drying and setting. One group was sawn at that time, and then each group was sawn at 24, 48, 72 hours after balancing. The layered moisture content of the test material and the sawing of the stress test piece are referred to the "sawn timber drying criterion" of the Soviet Union. Distribution of the final moisture content in the length of the specimen, calculated from

the center, is sawn at intervals of 180 mm (1.2 m) and 172 mm (0.8 m) respectively.