

# Radio Frequency Kiln Dried Timbers: *The Process*

**Radio Frequency** (RF) is a range of electromagnetic waves between audio and infrared, much like a cell phone. We use an amplifier to generate RF at a fixed frequency which allows us to control the heat so we can keep the wood at a consistent temperature throughout the

process. When RF is introduced to the wood, the water molecules will excite, align and exit the wood through the natural veins water traveled while the tree was alive.

### Radio Frequency Vacuum

(*RFV*) *Kiln Drying* is used to dry the entire timber evenly, right down to its center. Conventional methods only dry the outer 1" to 1 ½" of timber and could cause case hardening. When drying larger size timbers our technology dries evenly to the center of each piece and will not case harden the timber. Add the 250,000 lbs. of compressive loading used in the radio frequency kiln drying system – to hold the wood in place during the gentle drying cycle – to ensure the timber stays straighter, squarer and truer than when dried conventionally.

## RADIO FREQUENCY - Vacuum Dried Timbers #1& Btr FOHC



### Gentle Drying

A vacuum pump is added to the kiln system; which creates a low-pressure environment where lowtemperature drying can take place. This reduces the boiling point of water from 212° F to approximately 80° F to 100° F which provides a gentle drying environment.

#### **Keeping Things Straight**

The top compression plate distributes the RF waves and applies up to 250,000lbs of pressure to the timbers. This allows the timber to be held straight and flat during the drying process. Wood remembers to the way it is dried, straight.

#### Setting Pitch

At some point during the drying process the kilns are taken up to  $164^{\circ}$  F for 30 minutes to kill bugs and set the pitch. 98% of the time pitch is set, so it does not drip.



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