TreProX: Innovations in Training and Exchange of Standards for Wood Processing

OPEN AIR DRYING

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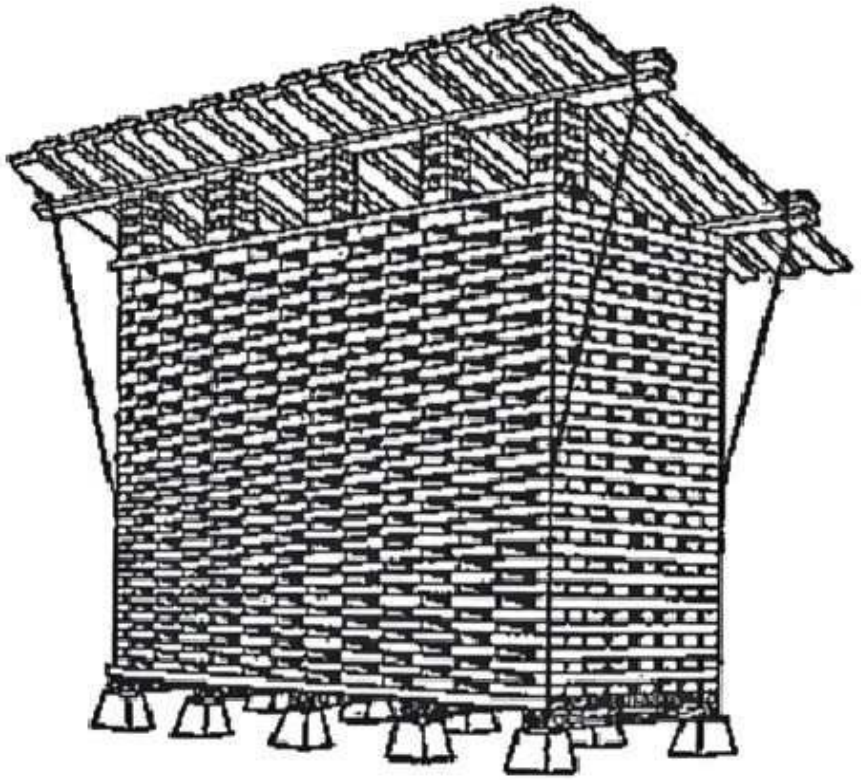
Open air drying:



Why dry wood?

Some important reasons to dry wood include:

- Better usability. Wood shrinks as it loses moisture and swells as it gains moisture. It should be dried to the % MC it will have during use.
- Reduced shipping costs. Dry wood weighs less (drying may reduce its weight by one-half or more). It is more profitable to transport wood than water.
- Less likelihood of stain or decay during transit, storage, and use.
- Reduced susceptibility to insect damage.
- Increased strength. As wood dries below 30% MC, most strength properties increase.

Why dry wood, cont.

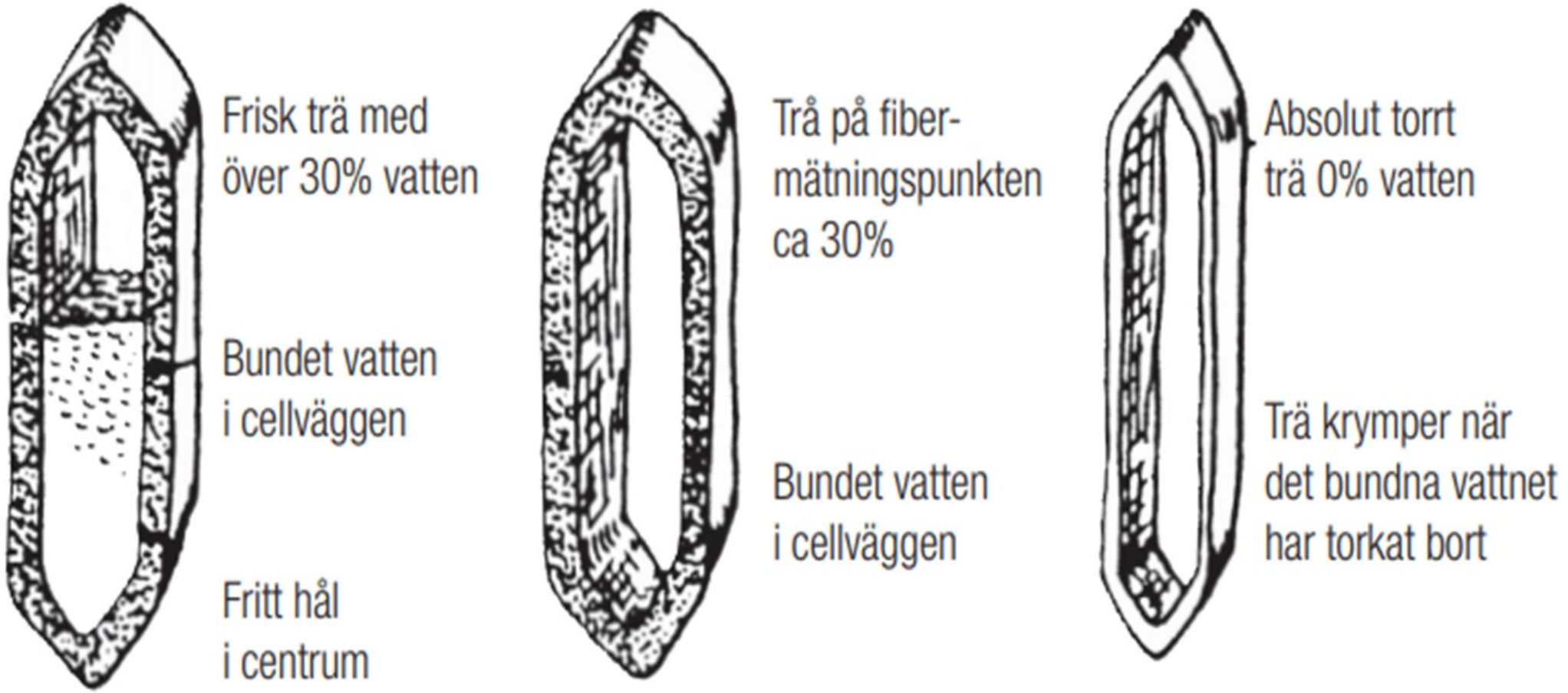
- Better “hold.” Nails, screws, and glue hold better in seasoned wood.
- Better finishing. Paints and finishes adhere better to seasoned wood.
- Better heat insulation. Dry wood is a better thermal insulator than wet wood.
- Better preservation. Dry wood must be used when treating with most wood preservatives.
- Added value. Drying the wood products before shipment adds value to the product.

Open air drying:

- Not the best choice, but we've got what we've got…
- It is an uncontrolled process, but some rules:
  - #1: Place the drying location as high as possible.
  - #2: ASAP, bring the surface below the fibre saturation point (See next slide)
  - #3: Dry slowly, to avoid fissures and cracks.
  - #4: In the case of Iceland, the use of thermal heat in mobile kilns should be considered!

Open air drying:

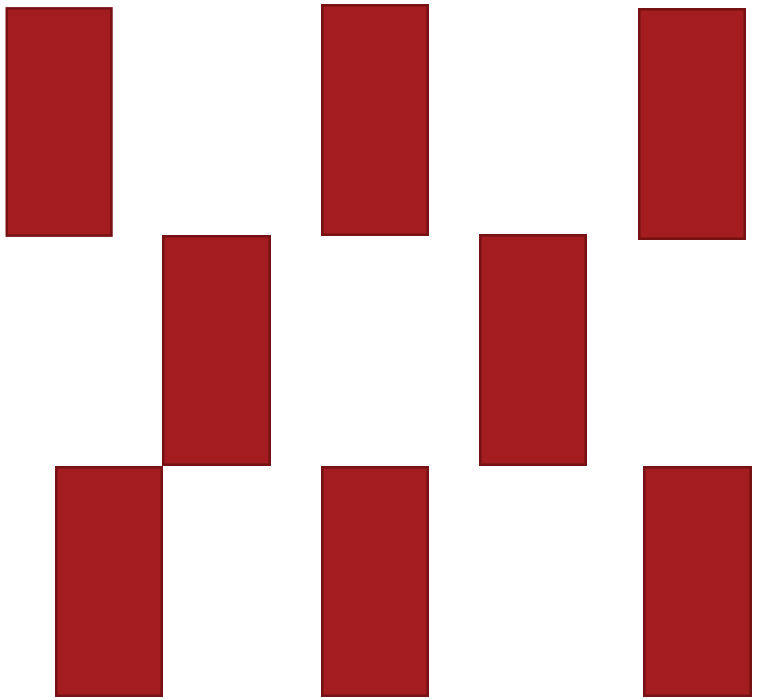
Fig. 1

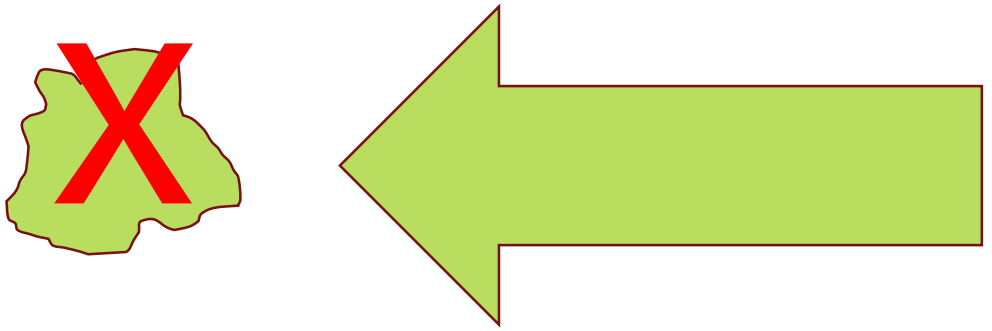


Freshly sawn timber **Saturation point** **Absolutely dried timber**

Open air drying:

- If possible, place stacks square to the wind:





Avoid sheltering trees and buildings

Open air drying:

Stacking:

- Stack on sleepers.
- 1m wide.
- Stickers >32x32mm.
- Stickers for each meter.
- Stickers at both ends.
- CLEAN SAWDUST FROM LUMBER BEFORE STACKING!

Open air drying:

Sawdust left on surface

Open air drying:

Stack lumber with stickers in a straight line above sleepers (”Flying Carpenters (FC)”)

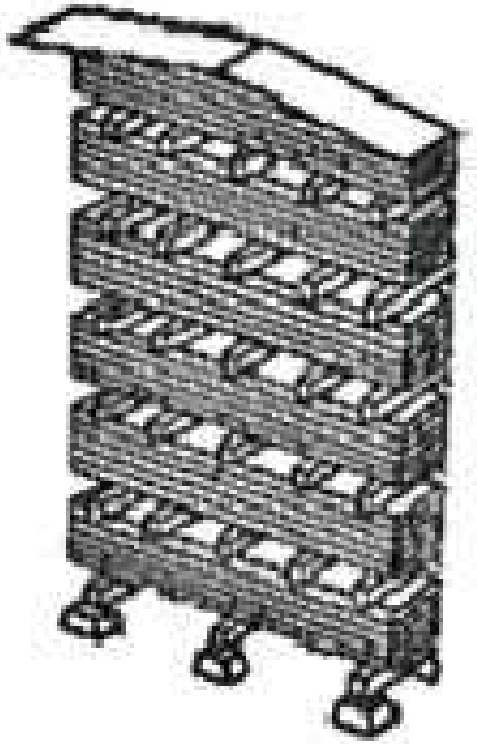
Open air drying:

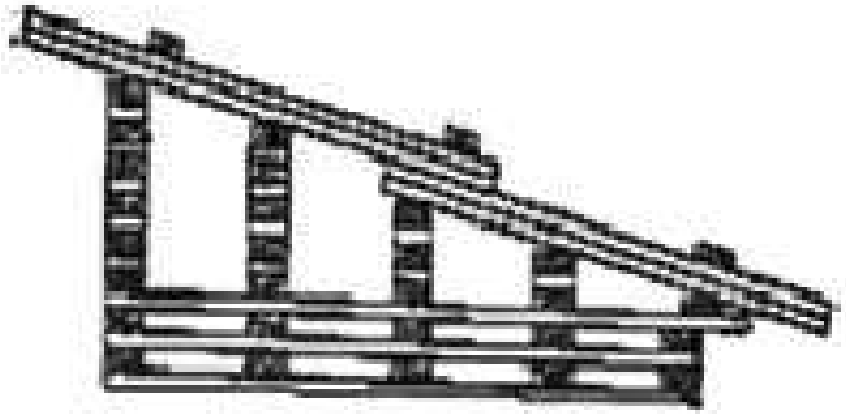
Keep space beween boards an lumber for air circulation, i.e.: equivalent to one finger (FC)

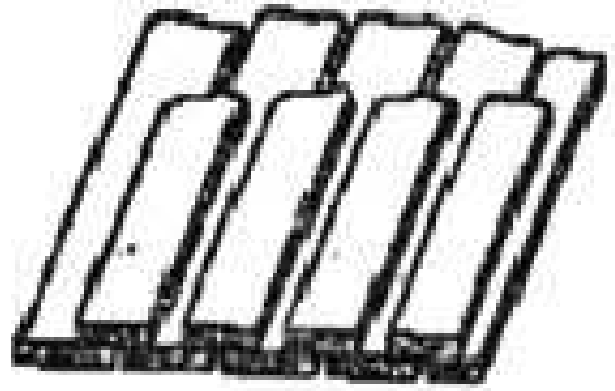
Open air drying:

Do not waste the whole process by leaving dried timber uncovered in the rain…

Open air drying:







Open air drying:

Purpose of stickers:

- Separating the layers
- Transforming the weight of the lumber to the sleepers
- Keeping the stack together during transport

Open air drying:

Stickers:

- Must be free of rot, mould and bluestain
- Different species than the sawn material
- Keep dry, out of rain
- Keep free of soil

Open air drying:

Open air drying time:

- Difficult to calculate
- Low humidity = drying will occur
- High humidity = no drying
- Best in late spring and summer, worst in sep-oct