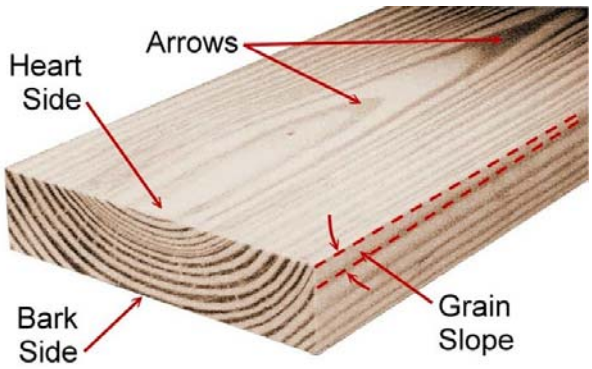
Machining with Planing Machine
Checklist for Operator

Before using the planing machine

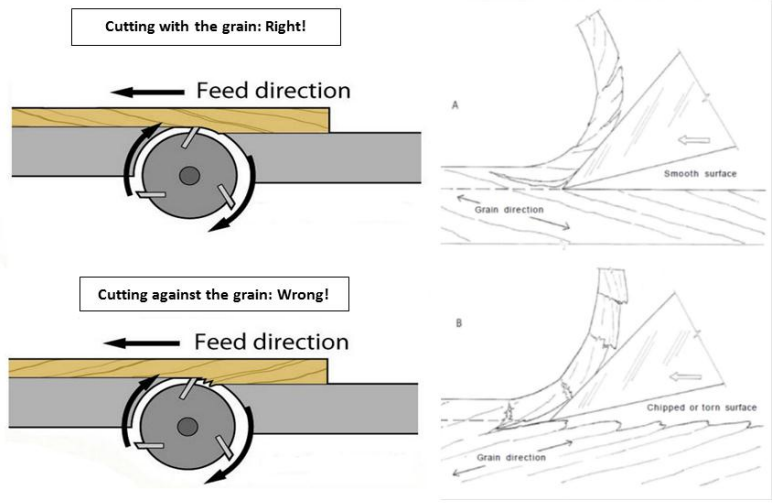
- ✓ Assess the sharpness of the cutting tool (i.e. knives, cutters) and replace when necessary
- ✓ Assess condition of the wood by checking moisture content with a calibrated moisture meter
    - o Use seasoned material kiln-dried properly to 10-12% moisture content
- ✓ Validate machining parameters with supervisor based on product requirements or as recommended by the tooling and/or machine manufacturers

During

- ✓ Inspect the lumber to find the grain direction and slope by looking at the edge of the board



- ✓ Feed the boards into the machine so that cutting tools are cutting **WITH THE GRAIN OR DOWNHILL**



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- ✓ Measure chip thickness at start-up by comparing board thickness before and after planning with high-precision equipment such as a calliper (recommended sampling: 5 boards and 3 measures per board)

  - o Chip thickness for finishing cuts should be **2 MM OR LESS**
  - o Thickness accuracy of a board should be within 0.1 mm
  - o Pay attention to the motor speed as you plane (If the motor bogs down, the depth of cut is too deep or the feed rate is too fast)
  - o If the board chips or tears out even though you think you're planing downhill, turn the board around and feed it in the opposite direction (If the tear-out continues, reduce the depth of cut)

- ✓ Check the surface of produced boards at start-up by counting the number of knife marks per 2.54 cm and adjust feed rates and cutter-head speeds

  - o Best surface for finish lumber is produced with **12 TO 25 KNIFE MARKS PER 2.54 CM**

- ✓ Regularly assess wood surface and check machining conditions

  - o Out-of-square or out-of-line edges due to saw or fence maladjustment
  - o Loose feeding mechanisms
  - o Rough surface due to dull knife
  - o Vibrating knife
  - o Burnished wood surface
  - o Machine's exhaust system is capable of clearing debris from the cutterhead