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
  ○ 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
Machining with Planing Machine Checklist for Operator

- 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)

  - Chip thickness for finishing cuts should be **2 MM OR LESS**
  - Thickness accuracy of a board should be within 0.1 mm
  - 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)
  - 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

  - 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

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