

With over 55 thousand hectares of land for Pine plantation forest in the state of Paraná, Berneck handles its products from the preparation of seedlings, planting, pruning, thinning, harvesting to the final processing.

Berneck's new sawmill, started in 2007, has a production capacity of 300.000 m<sup>3</sup>/year with state of the art machinery imported from Canada, Germany and other countries that lead this technology.

At Berneck, the pine lumber is sawn with precision and high volumes through the tridimensional optic scanners that visualize each log digitally with high definition for a superior cutting plan, band saw for better recovery and precision, guided gang edger, high precision kilns along with other high technology equipments.

All our sawn lumber is kiln dried and heat treated or to our client's demand.

At this moment Berneck grades the sawn lumber by visual face quality in 5 basic groups described as bellow.

**Clear all sides**

In this grade there exist 4 faces free of pith. Normally consists of sideboards without knots or with firm knots, where the sum of the diameters does not surpass 50% of the width of the boards for every meter in length on both faces. Defects such as heavy resin pockets, extensive wane, heavy wrapping and twisting are removed to other grades.

This grade does not admit pieces that present:

- loose, empty, decay or tie knots
- active or inactive insect holes
- splits or cracks
- more than 10% of blue or brown spots
- resin pockets
- pith

**Clear 1 side**

One face complies with the standard described above and the other face allows firm knots in any interval, also without pith. Defects such as heavy resin pockets, extensive wane, heavy wrapping and twisting are removed to other grades.

**A+ Grade**

In this grade there exist 4 faces free of pith. In some instances however, if pith shows on one face for less than 15cm it is allowed, depending on the location. Normally consists of sideboards with few knots and a higher density lumber (from 500 to 600 kg/m<sup>3</sup>). Big defects such as heavy resin pockets, extensive wane, heavy wrapping and twisting are removed to B Grade.

We do not grade by knots, therefore this grade may contain all types of knots.

**Select Grade**

This grade is mill-run from the center block and it may present boards with:

- all sides without pith
- pith on one face
- pith on both faces
- up to 15% of defects such as:
  - . wane and dead edges in small places of the board (never in its entire length)
  - . bow, wrapping and twisting
  - . splits and cracks
  - . heavy resin pockets
  - . inactive insect holes

**B Grade**

This grade consists of the fall-down of all other grades. It has pieces free of pith, but with heavy twisting; pieces with pith, but with heavy resin content; pieces with pith on one face, but with heavy wane on its edged... In sum, all defects which other grades do not accept are accepted in this grade. We do not produce B grade, but it is a consequence of our production. Therefore, this grade can only be sold from stock.