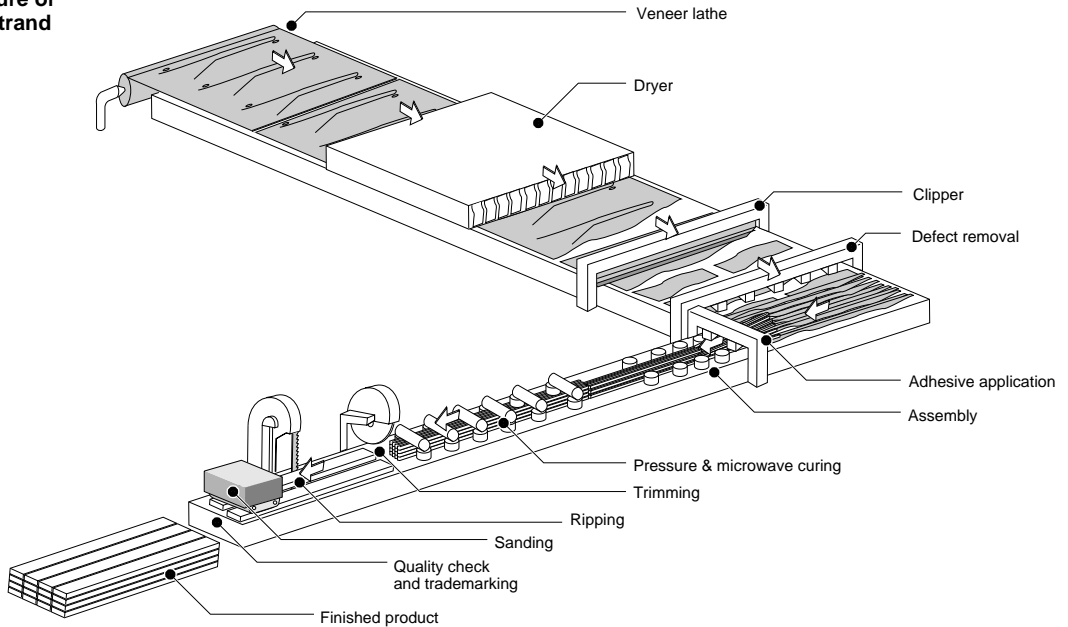


Figure 3.17  
**Manufacture of  
 Parallel Strand  
 Lumber**



The billet is cross cut to desired lengths, rip sawn to produce rough stock dimensions or custom sizes, and sanded down to finish dimensions. Larger dimensions are produced by edge gluing billets together using techniques common to those used for the manufacture of glulam.

### Quality Control

The PSL manufacturing process includes tight controls on the raw material inputs, product assembly, and finished product properties to ensure a consistent, high quality, reliable product. Because the process involves the removal of strength reducing defects from the wood strands, the main quality control procedure is the checking for consistent density in the finished product.

Process control is monitored by resident quality control testing and quality assurance inspections are made by the American Plywood Association (APA). APA monitoring includes random checks of process parameters and testing procedures, and review of test results.

Testing of the glue bond quality and the mechanical properties is done daily and complemented by more stringent tests of each day's production at the APA laboratory.

PSL is a proprietary product which has been evaluated and accepted for use by the Canadian Construction Materials Centre (CCMC) and by the Council of American Building Officials (CABO).

A standard for the manufacture of PSL (and other structural composite materials such as laminated veneer lumber (LVL)) is under development by ASTM. This standard will outline procedures for establishing, monitoring and re-evaluating structural capacities of structural composite lumber and will also detail minimum requirements for establishment of quality control, assurance and audit.

### Strength and Appearance

Parallel strand lumber exhibits the dark glue line of glue-laminated timber except that the glue lines are much more numerous.