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# SAWMILLING OF WOOD



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## Production unit - sawmill company

### SAWMILL

A cost-effective unit that:

- uses a heterogeneous natural product as an input raw material – part of a trunk or tree = logs
- mechanical technology, mainly cutting, divides this raw material longitudinally and transversely, removes its unsuitable parts and sorts it according to predetermined parameters
- produces a technically defined product – lumber
- treats production waste for further use
- has a definable economic characteristic at least at the level of separate cost accounting



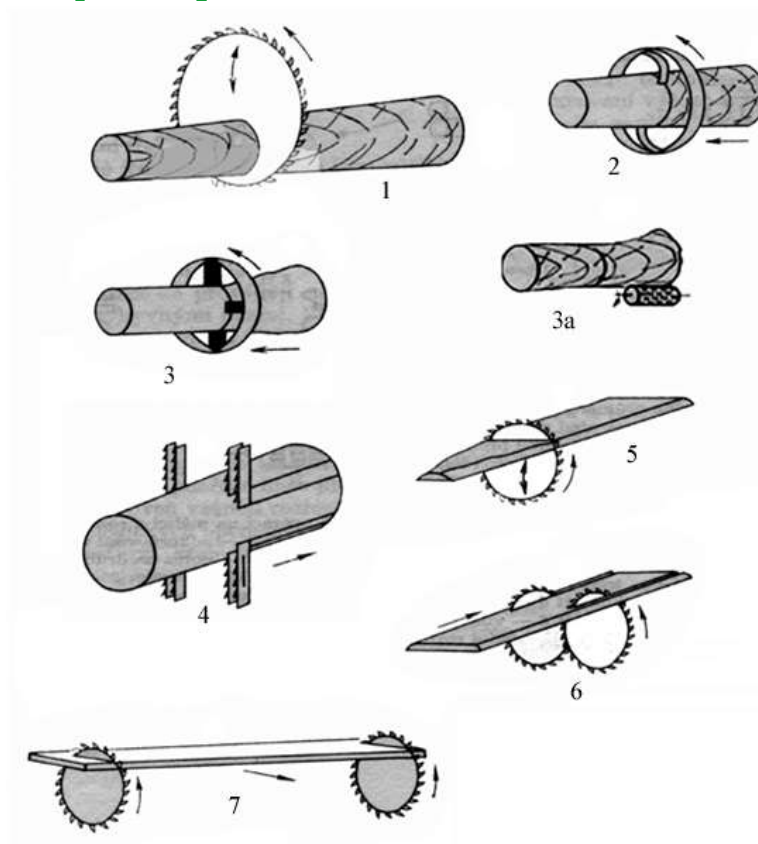
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## Production unit - sawmill company

### Major sawmill operations

- 1 – shortening the log for cutouts
- 2 – debarking
- 3 – equalization of the cutout
- 4 – longitudinal division of the cutout
- 5 – shortening of lumber
- 6 – planing of lumber
- 7 – transverse cutting lumber





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## Production unit - sawmill company

### Stock of logs and cutouts

- Acceptance of logs - bulk (by volume, weight)
  - piece (random, complete)
- Record of matter - input
  - interoperational
  - output
- Handling – transverse division of logs, sorting, delivery to landfills of cuttings, equalization, debarking, storage
- Protection of raw material
- Creating a cutting batch - according to the order
  - according to the same cut
- Feed to the file



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## Production unit - sawmill company

### SAWMILL - preparatory operations

- Supply to the stock dump of cutouts
- Separation of cutouts and transfer to the file
- (Debarking)
- (search for metals and foreign objects)
- Cleaning the cutouts
- Modifications of the cut-out faces
- Removal of root spikes and shaping
- Measurement and registration
- Clamping of cut-outs and alignment according to the longitudinal axis



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# Production unit - sawmill company

## lumber yard

- Transport of lumber
- Lumber sorting (manual, mechanized, automated)
- Impregnation
- Capping
- Marking (signing), possibly coloring the fronts
- Measurement and registration (consignment)
- Creation of storage and transport units
- Packing and strapping
- Storage
- Expedition



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## Production unit - sawmill company

### Determination of the sawmill

- In the case of log sources, it is often a matter of historical connection
- At the customer – in general
  - within the cooperating unit
- Mobile units – previously mainly during calamities





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## Production unit - sawmill company

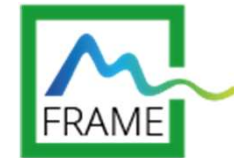
- Operations with one main machine - other workplaces are not connected to the line
- Single-line operations - non-mechanized
  - mechanized
  - automated
- Multi-line operations







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## Production unit - sawmill company

### SIZE OF SAWMILL

What does "size of sawmill" mean?

- Spatial or areal extent?
- Dimensions of operational buildings?
- Production size?
- Local importance of the company?

When assessing technology, it is useful to understand this term as production capacity.



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## Production unit - sawmill company

### FACTORS AFFECTING THE SIZE OF SAWMILL

- The size and availability of the raw material base
- Achieved development of technology
- Spatial layout of the area
- Production-economic orientation of operation
- Market opportunities and capital strength of the owner



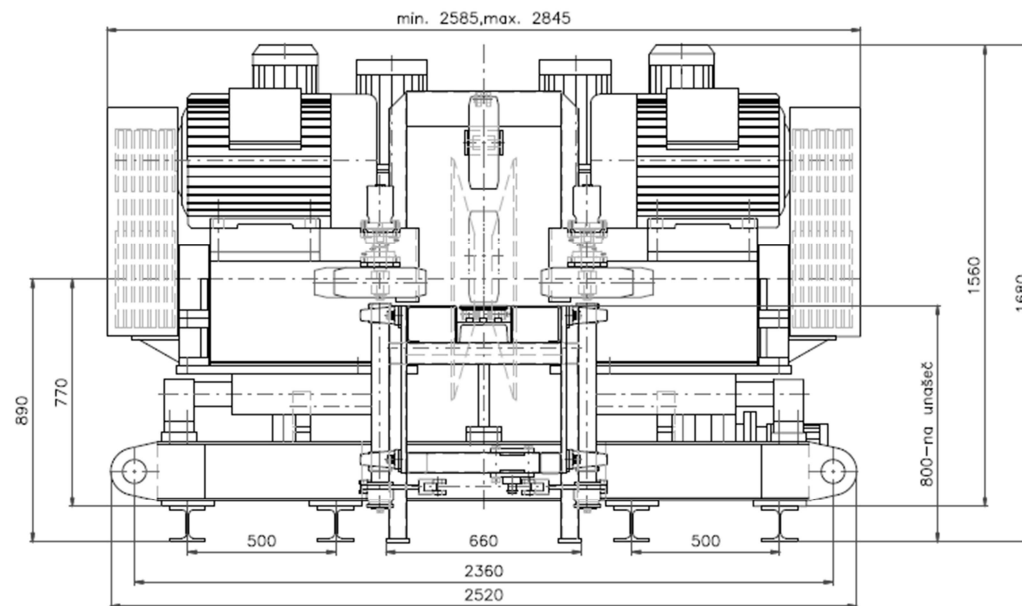
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## Production unit - sawmill company

### Division by main machine

- Frame saw
- Log band saw
- Circular saw
- Aggregate





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THANKS FOR YOUR ATTENTION