

Joint Stock Company “Ust-Ilimsk Sawmill”

APPROVED  
Chief Executive Officer of  
JSC “Ust-Ilimsk Sawmill”

  
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31 March, 2016

## **STANDARD**

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Quality Management System

### **EXPORT SOFTWOOD SAWN TIMBER** **STO PE 53 3111-017-05805104-12**

Introduced in lieu of  
Standard dated 01 March 2016

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# 1 Background Information

- 1.1 The present Standard establishes requirements for softwood edged sawn timber production.
- 1.2 The present Standard is aimed to ensure sawn timber quality.
- 1.3 Quality requirements are stated in Appendix 1 to the present Standard.
- 1.4 Sawn timber is stored and shipped according to the requirements of sawmill regulations.

# 2 Terms, Definitions and Abbreviations

The following abbreviations are applied in the present Standard:

MC – moisture content;

pc(s) – piece(s).

# 3 Types and Sizes of the Sawn Timber

5.1 Sawn timber is subdivided

- by thickness: thin – up to 24 mm,  
medium – 25-45 mm,  
thick – 46 mm and thicker;
- by width: narrow – up to 149 mm,  
wide – 150 mm and wider;
- by length: short – 0.45-2.40 m,  
long – 2.70-6.30 m.

3.1 Sawn timber produced in accordance with the requirements of the present Standard is subdivided by thickness, width and length.

3.2 Sawn timber nominal lengths are: from 0.9 m to 6.3 m with 0.3 m step; 4.0 m.

3.3 Nominal dimensions of sawn timber shall be applied to the wood of MC 20%. With MC of more or less than 20% actual sawn timber width and thickness shall correspond to shrinkage value according to State Standard 6782.1-75.

3.4 Deviations from nominal dimensions of sawn timber shall not exceed:

- by length (+25) mm (-12) mm
- by width (+3) mm (-2) mm
- by thickness:
  - thickness less than 50 mm (+2) mm (-1) mm
  - thickness 50 mm and up (+3) mm (-2) mm

# 4 General Requirements for the Sawn Timber

4.1 Sawn timber shall be produced in accordance with the requirements of the present Standard, using sawmill technology regulations, from coniferous wood – pine, larch, spruce, fir tree, cedar.

4.2 Sawn timber is subdivided by quality into 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> grades. Sawn timber is arranged by species, dimensions, grades or groups of grades. The following groups of grades can be arranged:

- 1-3 grades (highest quality)
- 1-4 grades
- 1-5 grades
- 4-5 grades

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4.4 Sawn timber produced in accordance with the present Standard are kiln-dried in continuous counterflow drying channels. Final MC of pine sawn timber shall be 20 $\pm$ 2%, final MC of larch sawn timber shall be 18 $\pm$ 2%.

4.5 No chemical treatment is performed.

4.6 Sawn timber defects classification and measurements except for mentioned in clause 4.7 below shall be in accordance with the requirements of State Standard (GOST) 2140-81.

4.7 Size of a round, oval, spike or branched knot not coming out on the arris shall be measured by its minimum diameter. Size of a round, oval, spike, branched or traversing arris knot shall be measured by its extension on the arris. Allowable sizes for that kind of knots are the same as for allowable edge knots.

4.8 Number of admitted face knots is counted per 1 m of sawn timber length, number of admitted edge and arris knots and other defects is counted per the entire sawn timber length.

## 5 Packaging and Marking

5.1 Sawn timber bundles shall be 5-sided wrapped. Polyethylene film and polypropylene laminated cloth are used as wrapping material. The bundles shall be wrapped according to the requirements of sawmill regulations.

5.2 A bundle marking is applied onto the upper surface of the bundle. Numeric and alphabetic characters are used for marking. There can be no marking as well (if agreed with the customer).

5.3 Each board end shall be marked. There can be no marking as well (if agreed with the customer). The following identification is used for marking:

Grades or group of grades	Symbols
1-3 grades	У ★ ★ И
4 grade	У ★ И
5 grade	У — И
1-4 grades	У ● ● И
1-5 grades	У ● И
4-5 grades	У   И

## 6 Storage and Shipment

6.1 Sawn timber bundles shall be stored in the sawmill warehouse, protected from atmospheric precipitations.

6.2 Sawn timber is stored and shipped according to the requirements of sawmill regulations.

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## Appendix 1

In the table below there are differences between the requirements of State Standard 26002-83 and of the sawn timber of “Taiga” trademark.

Defects	Defect limits as per State Standard 26002-83			Defect limits of "Taiga" sawn timber
	1-3 grades	4 grade	5 grade	
<b>1 Knots</b> 1.1 Intergrown, sound 1.1.1 Face	In thick wide sawn timber: up to 50 mm – 1 pc In thick narrow sawn timber: up to 38 mm – 2 pcs In medium wide sawn timber: up to 38 mm – 1 pc In medium narrow sawn timber: up to 32 mm – 1 pc	Admitted without limits	Admitted without limits	1-3 grades – in thick wide sawn timber: up to 38 mm – 1 pc. 4 grade – in thick wide sawn timber: up to до 63 mm – 1 pc; in thick narrow sawn timber: 38-50 mm – 1 pc; in medium wide sawn timber: 38-50 mm – 1 pc; in medium narrow sawn timber: 38-50 mm – 1 pc.
1.1.2 Edge and arris	In thick sawn timber: up to 32 mm – 3 pcs In medium sawn timber: not deeper than 3/4 of sawn timber thickness – 4 pcs	Admitted without limits	Admitted without limits	4 grade – in thick sawn timber: up to 60 mm – 2 pcs, not deeper than 1/2 of timber thickness; in medium wide and narrow sawn timber (32 mm, 25 mm): up to 32 mm – 4 pcs; in sawn timber 38x100 mm and thicker: up to 42 mm – 2 pcs.
1.2 Dead, sound, unsound, tobacco- colored 1.2.1 Face	In thick wide sawn timber: up to 25 mm - 1 pc In thick narrow sawn timber: up to 19 mm - 1 pc In medium wide sawn timber: up to 19 mm - 1 pc	In thick wide sawn timber: up to 63 mm – 1 pc, unsound and tobacco-colored up to 25 mm – 1 pc In thick narrow sawn timber: up to 50 mm – 1 pc, unsound and tobacco-colored up to 25 mm – 1 pc	Admitted without limits  Knot holes: in thick sawn timber: up to 38 mm, in thin sawn timber: up to 32 mm	Sound knots: 1-3 grades – in thick wide sawn timber: up to 19 mm – 1 pc; 4 grade – in thick wide sawn timber: up to 50 mm – 1 pc; in thick narrow and medium sawn timber: up to 38 mm – 3 pcs.

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Defects	Defect limits as per State Standard 26002-83			Defect limits of "Taiga" sawn timber
	1-3 grades	4 grade	5 grade	
	In medium narrow sawn timber: up to 13 mm - 1 pc  Unsound and tobacco-colored through knots are not allowed	In medium wide sawn timber: up to 50 mm – 1 pc, unsound and tobacco-colored up to 19 mm – 1 pc In medium narrow sawn timber: up to 38 mm – 1, unsound and tobacco-colored up to 19 mm – 1 pc  <u>Note:</u> dead knots on the edge (intergrown on the face) shall be considered as intergrown.		<u>Note:</u> in 4 grade – dead knots on the edge (intergrown on the face) shall be considered as intergrown; if a dead knot size is longer than its extension on the arris, it shall be measured by the smallest diameter.
1.2.2 Edge and arris, including knot holes on an edge	In thick sawn timber: up to 13 mm – 2 pcs In narrow sawn timber: up to 10 mm – 2 pcs	In thick sawn timber: up to 38 mm – 4 pcs In narrow sawn timber: up to 32 mm – 4 pcs	Admitted without limits	4 grade – in thick wide sawn timber: up to 30 mm – 4 pcs; in thick narrow sawn timber: up to 30 mm – 3 pcs; in medium sawn timber: up to 25 mm – 3 pcs.
	Knot holes on edge			
	Not deeper than: in thick sawn timber: 1/4 of sawn timber thickness In medium sawn timber: 1/3 of sawn timber thickness	Appearing on the external face not more than 2 mm	Admitted without limits	
<b>2 Biological defects</b> 2.1 Resin pockets	On faces: in thick sawn timber: 6 x 200 mm – 8 pcs; in medium, thin sawn timber: 6 x 125 mm – 5 pcs; on edges: 3x100 mm – 4 pcs	Admitted without limits	Admitted without limits	As per State Standard 26002-83

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Defects	Defect limits as per State Standard 26002-83			Defect limits of "Taiga" sawn timber
	1-3 grades	4 grade	5 grade	
2.2 Bark pockets	Non through: 25 mm wide, 75 mm long – 1 pc; 25 mm wide, 50 mm long – 3 pcs; On edges: 2 mm wide, 15 mm long – 2 pcs.	Up to 50 mm wide: in thick sawn timber - without length limits; in medium and thin sawn timber – up to 175 mm long	Admitted without limits	4 grade – in thick wide sawn timber: up to 50 mm wide, up to 200 mm long
2.3 Checks 2.3.1 Face non through	Up to 2/3 of sawn timber length, up to 1/3 of sawn timber thickness	Admitted providing that integrity of sawn timber is preserved	Admitted providing that integrity of sawn timber is preserved	As per State Standard 26002-83
2.3.2 Splits appearing on the end	With extension from each end of not more than 50 mm	With extension from each end of not more than sawn timber width	With extension from each end of not more than 600 mm	As per State Standard 26002-83
2.3.3 Heart shakes	In thick lumber on one end with length extent not more than 1/2 of sawn timber width	Admitted without limits	Admitted without limits	As per State Standard 26002-83
2.3.4 Ring shakes	With diameter of not more than, mm: In sawn timber with width 25-44 mm – 10 mm 45-63 mm – 19 mm above 63 mm – 25 mm	Admitted providing that integrity of sawn timber is preserved	Admitted providing that integrity of sawn timber is preserved	As per State Standard 26002-83
2.4 Pitch & pitch streaks	In shape of spots and streaks on faces and edges	Admitted without limits	Admitted without limits	As per State Standard 26002-83
<b>3 Fungal defects</b> 3.1 Blue stain 3.1.1 Surface	In shape of spots and streaks up to 2 mm deep, with total area of covering of not more than 15% of one face area	In shape of spots and streaks on faces and edges with covering of not more than 10% of an end area	Admitted without limits	1-3 grades – in shape of spots and streaks covering of not more than 5% of one face area 4 grade – in shape of spots and streaks covering of not more than 15% of one face and one edge area, with appearing on an end in shape of a dot (15x15 mm) – not more than 6 boards of that kind in one bundle. 5 grade – in shape of spots and streaks with total area of covering of not more than 50% of a board, covering of not more than 20% of an end area

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Defects	Defect limits as per State Standard 26002-83			Defect limits of "Taiga" sawn timber
	1-3 grades	4 grade	5 grade	
3.1.2 Deep	In shape of spots and streaks with total area of covering of not more than 5% of one face area	In shape of spots and streaks with total area of covering of not more than 50% of one face and one edges area, with covering of not more than 10% of the an end area	Admitted without limits	1-3 grades – not admitted 4 grade – in shape of spots and streaks covering of not more than 5% of one face and one edge area, with appearing on an end in shape of a dot (15x15 mm) – not more than 6 boards of that kind in one bundle. 5 grade – in shape of spots and streaks with total area of covering of not more than 50% of a board, covering of not more than 20% of an end area
3.2 Sapwood rot 3.2.1 Hard	In thick sawn timber: on a face or an edge up to 1/5 of sawn timber width and length without appearing on ends In medium and thin sawn timber: not admitted	On faces and edges up to 1/2 of sawn timber width and length without appearing on ends	Admitted without limits	5 grade – mottled rot is admitted covering of not more than 50% of a board, covering of not more than 20% of an end area
3.2.2 Soft	Not admitted	Not admitted	Not admitted	As per State Standard 26002-83
3.3 Heartwood rot	Not admitted	Not admitted	Mottled rot is admitted appearing on all sides in shape of streaks covering not more than 50% of one face area. Decay shall not cover more than 20% of an end area.	As per State Standard 26002-83
3.4 External	Not admitted	Not admitted	Not admitted	As per State Standard 26002-83
3.5 Canker	Not admitted	Not admitted	Not admitted	1-3 grades, 4 grade: as per State Standard 26002-83; 5 grade – 50 mm
<b>4 Insect damages</b> 4.1 Wormholes	Not admitted	Not admitted	Not admitted	As per State Standard 26002-83

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Defects	Defect limits as per State Standard 26002-83			Defect limits of "Taiga" sawn timber
	1-3 grades	4 grade	5 grade	
<b>5 Manufacturing defects</b> 5.1 Wane 5.1.1 Obtuse	On one edge: extended not more than 1/3 of sawn timber length On both edges: extended not more than 1/4 of sawn timber length Width of wane: in sawn timber up to 25 mm thick – 1/2 of sawn timber thickness in sawn timber thicker than 25 mm – 1/3 of sawn timber thickness	On both edges: extended not more than 2/3 of sawn timber length Width of wane: up to 2/3 of sawn timber thickness Sawn part of an edge shall be not less than 1/2 of sawn timber thickness	Sawn part of a face shall be not less than 1/3 of sawn timber thickness Sawn part of an edge shall be not less than 1/3 of sawn timber thickness	5 grade – covering of total length of sawn timber, sawn part of a face shall be not less than 1/2 of sawn timber thickness In thick wide sawn timber sawn part of a face shall be not less than 2/3 of sawn timber thickness Sawn part of an edge less than 1/3 of sawn timber thickness (but not less than 5 mm) is admitted on one edge covering of not more than 1/10 of sawn timber length
5.1.2 Sharp	Not admitted	Not admitted	On one edge covering of not more than 1/10 of sawn timber length	No longer than 100 mm in the middle of sawn timber providing that integrity of nominal width of the internal face is preserved 5 grade – not admitted appearing on sides of a bundle
5.3 Saw marks	Not deeper than 0.75 mm	Not deeper than 0.75 mm	Not deeper than 0.75 mm	As per State Standard 26002-83
5.4 Fringe	Not admitted	Not admitted	Not admitted	As per State Standard 26002-83
5.5 Waving	Not higher than 0.75 mm	Not higher than 0.75 mm	Not higher than 0.75 mm	Up to 2 mm high
<b>6 Warp</b> 6.1 Spring & bow	With deflection of not more than 0.15% of sawn timber length	With deflection of not more than 0.2% of sawn timber length	Admitted without limits	As per State Standard 26002-83
6.2 Bow	6 mm on each 1500 mm of sawn timber length	13 mm on each 1500 mm of sawn timber length	Admitted without limits	As per State Standard 26002-83
6.3 Cup	Для узких п/м – 3 мм Для широких п/м – 6 мм	Для узких п/м – 6 мм Для широких п/м – 10 мм	Admitted without limits	As per State Standard 26002-83
3.8 Twist	Deviation from sawing surface not more than 13 mm for entire sawn timber length	Deviation from sawing surface not more than 13 mm for entire sawn timber length	Admitted without limits	As per State Standard 26002-83

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