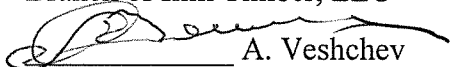


APPROVED  
Director of Ust-Ilimsk  
Branch of Ilim Timber, LLC

  
A. Veshchev  
June 27, 2018

## 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 June 29, 2016

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Introduced by: Order No. 103  
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## 1 Background Information

1.1 The present Standard establishes requirements for edged sawn timber, produced of softwood by Ust-Ilimsk Branch of Ilim Timber, LLC.

1.2 The present Standard is based on the requirements of State Standard (GOST) 26002-83 “Coniferous sawn timber of northern grading supplied for export. Specifications”. The present Standard is aimed to meet requirements of ISO 9001:2015.

1.3 The present Standard requirements are obligatory for Process Engineering Department, Quality Control Service, Production Planning Department and Sales Department.

1.4 “Ilim Timber”, LLC, follows the requirements of the present Standard when making contracts with buyers. The present Standard is published on the corporate website, <http://www.ilimtimber.com> for the buyers’ information.

## 2 References

The present Standard refers to the following Russian State standards:

- GOST 26002-83 Coniferous sawn timber of northern grading supplied for export. Specifications;
- ISO 9001:2015 Quality Management Systems – Requirements;
- GOST 24454-80 Coniferous sawn timber. Sizes;
- GOST 6782.1-75 Coniferous sawn timber. Shrinkage value;
- GOST 2140-81 Visible defects of wood. Classification, terms and definitions, methods of measurement;
- GOST 5306-83 Sawn timber blanks. Tables of volumes;
- GOST 19041-85 Transportation packages and multi-packages of sawn timber. Packaging, marking, transportation and storage.

## 3 Terms, Definitions and Abbreviations

The following abbreviations are applied in the present Standard:

GOST – Russian State Standard;

KD – kiln-dried;

MC – moisture content.

## 4 General Provisions

4.1 The present Standard is aimed to ensure sawn timber quality.

4.2 Technical requirements details are stated in the Appendices to the present Standard.

4.3 Sawn timber is stored in compliance with the company regulations.

4.4 Quality and dimension inspection of sawn timber shall be made in lots. A lot is a quantity of sawn timber in one bundle with one identification label. Quality and dimension inspection of a lot shall be made by random sampling method according to the GOST 6564-84.

## 5 Types and Dimensions of Sawn Timber

5.1 Sawn timber produced in compliance with the requirements of the present Standard is subdivided by thickness as follows:

- thin – up to 24 mm

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- medium – 25-45 mm,
- thick – 46 mm and thicker;

5.2 Sawn timber is subdivided by width as follows:

- narrow – up to 149 mm;
- wide – 150 mm and wider;

5.3 Produced sawn timber lengths are: from 2.7 m to 6.3 m with 0.3 m step. Sawn timber of 4.0 m can be produced optionally.

5.4 Sawn timber dimensions are according to GOST 24454-80.

5.5 Nominal dimensions of sawn timber shall be applied to the larch wood with MC 18% and to the pine, spruce, fir and Siberian pine wood with MC 20%. If MC differs from stated above the actual sawn timber width and thickness shall correspond to shrinkage value according to GOST 6782.1-75.

5.6 Maximum deviations from nominal dimensions of sawn timber shall not exceed:

- by length, mm +25/-12
- by thickness, mm:
  - for sawn timber up to 50 mm thick +2/-1
  - for sawn timber of 50 mm and thicker +3/-2
- by width, mm +3/-2

5.7 Maximum deviations stated above can be changed if agreed with the customer.

## 6 General Requirements for Sawn Timber

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

6.2 Sawn timber is subdivided by quality into 1, 2, 3, 4, 5 and 5.1 grades.

6.3 Sawn timber is sorted out by species, dimensions, grades or groups of grades. The following groups of grades can be produced:

- 1-3 grades (highest quality, “unsorted”)
- 1-4 grades
- 1-5 grades
- 4-5 grades

6.4 A bundle can be formed of sawn timber of two or three contiguous lengths.

6.5 Sawn timber produced in accordance with the present Standard is kiln-dried in continuous counterflow drying channels. Final MC of sawn timber shall not exceed:

- 22% for pine, spruce, fir tree, Siberian pine sawn timber;
- 20% for larch sawn timber.

6.6 No chemical treatment is performed during sawn timber production.

6.7 Quality and mechanical treatment requirements are stated in Appendix 1 to the present Standard. Sawn timber defects classification and measurements except for mentioned in clause 6.11, 6.12 below are in accordance with the requirements of GOST 2140-81.

6.8 A board quality is estimated by its worst face.

6.9 All types of intergrown and black face knots are admitted in pieces on 1.0 m of sawn timber length. Edge and arris intergrown and black knots are admitted on each edge in pieces on the entire sawn timber length.

6.10 Knots with dimension smaller than the ones indicated in Appendix 1 shall not be taken into account.

6.11 Dimensions of round, oval, spike or branched knots not appearing on the arris shall be determined with reference to the smallest diameter. Measurement of round, oval, spike,

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branched knots appearing on the arris, as well as traversing and arris knots shall be made on the basis of the extent of knot section on the sawn timber arris. Allowable dimensions for those kinds of knots are the same as for allowable edge knots. The distance between the arris and the knot tangent line drawn parallel to it is considered to be the depth of occurrence of the knot in the edge.

6.12 Canker on a face or an edge shall be measured by its biggest length, canker on an arris shall be measured by its length on the arris.

6.13 Spring values for various lengths are specified in Appendix 2.

6.14 One kind of defects is allowed exceeding the specified limits by 20 % if other standardized defects are not found, except for blue stain and checks.

6.15 A bundle 100% consisting of sawn timber with wane in accordance with 5 grade limits shall be marked as “5.1”. Knots, checks, biological defects, fungus, defects caused by insects and mechanical treatment in this kind of sawn timber are admitted in accordance with 5 grade limits.

## 7 Measurements, Packaging and Marking

7.1 Sawn timber shall be measured in cubic meters by nominal dimensions as per GOST 5306-83. In order to calculate a bundle volume one board volume shall be calculated in accordance with GOST 5306-83 and multiplied to the number of boards in a bundle. The result shall be rounded to the nearest thousandth.

7.2 Bundles of sawn timber shall be formed as per requirements of GOST 19041-85.

7.3 Sawn timber bundles shall be 5-sided wrapped. Additional layer of wrapping material can be put under the upper layer of a bundle. Polyethylene film, polypropylene laminated cloth or other material of that kind can be used as wrapping material. Wrapping is performed in compliance with the company regulations.

7.4 Numeric and alphabetic characters are used for marking.

7.5 Under the wrapping a stamp containing species denomination (“P” for pine, “L” for larch, “S” for spruce, “F” for fir tree, “SP” for Siberian pine) and a bundle number shall be applied onto the upper surface of the bundle. The side surface of the bundle shall be stamped “Made in Russia”. Both ends of the bundle shall be labelled; the label shall contain the following information:

- the bundle number;
- stamp “KD”;
- net weight;
- gross weight;
- bundle overall length;
- sawn timber grade;
- volume;
- boards’ lengths with number of pieces and their volume;
- total quantity of the boards in the bundle;
- Standard reference;
- species denomination (“P” for pine, “L” for larch, “S” for spruce, “F” for fir tree, “SP” for Siberian pine);
- board end dimensions;
- date of the bundle production;
- name of the shift foreman.

7.6 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:

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

## 8 Responsibility

8.1 Chief Process Engineer is responsible for:

- the information contained in the present Standard to be true, reasonable and sufficient;
- developing company technical documentation according to the present Standard.

8.2 Sales manager is responsible for providing customs authorities with the present Standard.

Worked out by  
Chief Process Engineer



A. Argat

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# Appendix 1

**Table of quality requirements for pine, spruce, fir tree, Siberian pine and larch sawn timber grading**

Defects as per GOST 2140-81	Defect limits																														
	1-3 grades					4 grade					5 grade																				
	Type of sawn timber	Dimension	Pieces	Type of sawn timber	Dimension	Pieces	Type of sawn timber	Dimension	Pieces	Type of sawn timber	Dimension	Pieces																			
1 Knots	1.1 Face 1.1.1 Intergrown, sound, round, oval, spike, branched, traversing	In thick wide:	38 mm	1	In thick wide: In thick narrow: In medium wide: In medium narrow:	63 mm	1	Admitted without limits	Admitted without limits	Admitted without limits	Admitted without limits	1																			
		In thick narrow:	38 mm	2		50 mm	1																								
		In medium wide:	38 mm	1		50 mm	1																								
		In medium narrow:	32 mm	1		50 mm	1																								
	1.1.2 Black sound	In thick wide:	19 mm	1	In thick wide: In thick narrow: In medium wide: In medium narrow:	50 mm	1						Admitted without limits	Admitted without limits	Admitted without limits	Admitted without limits	1														
		In thick narrow:	19 mm	1		38 mm	1																								
		In medium wide:	19 mm	1		38 mm	1																								
		In medium narrow:	13 mm	1		38 mm	1																								
	1.1.3 Black decayed, dead and tobacco- colored (not going through)	In thick wide:	25 mm	1	In thick wide: In thick narrow: In medium wide: In medium narrow:	63 mm	1											Admitted without limits	Admitted without limits	Admitted without limits	Admitted without limits	1									
		In thick narrow:	19 mm	1		50 mm	1																								
		In medium wide:	19 mm	1		50 mm	1																								
		In medium narrow:	13 mm	1		38 mm	1																								
	1.1.4 Black decayed, dead and tobacco- coloured (going through)	Not admitted			In thick wide and narrow: In medium wide and narrow:	25 mm	1																Admitted without limits	Admitted without limits	Admitted without limits	Admitted without limits	1				
		Not admitted				19 mm	1																								
	1.1.5 Knot holes	Not admitted			Not admitted	19 mm	1																					Admitted without limits	Admitted without limits	Admitted without limits	Admitted without limits
Not admitted			19 mm	1																											
1.2 Edge and arris	In thick: In medium:	32 mm	3	In thick: if not deeper than 1/2 of a board thickness In medium wide and narrow:	60 mm	2	Admitted without limits	Admitted without limits	Admitted without limits	Admitted without limits	1																				
		not deeper than 3/4 of a board thickness	4		32 mm	4																									

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## Appendix 1 Continuation Sheet

Defects as per GOST 2140-81	Defect limits						
	1-3 grades			4 grade			5 grade
	Type of sawn timber	Dimension	Pieces	Type of sawn timber	Dimension	Pieces	
1.2.2 Intergrown, sound, round, spike, traversing	Not deeper than 1/3 of a board thickness In thick: 32 mm In medium: 3/4 of a board thickness		3 4	In thick: if not deeper than 1/2 of a board thickness In medium wide and narrow: 32 mm	60 mm	2	Admitted without limits
1.2.3 Black sound, decayed, dead and tobacco-coloured	In thick: 13 mm In medium: 10 mm only sound		2 2	In thick wide: 30 mm In thick narrow: 30 mm In medium: 25 mm		4 4 3 3	Admitted without limits
1.3 Knot holes on edges	Admitted if not deeper than: in thick: 1/4 of a board thickness in medium 1/3 of a board thickness			Admitted if depth is not over a board thickness, appearing on the outside face – not over 2 mm			Admitted without limits
1.4 End face Intergrown sound, black sound, decayed, dead and tobacco-coloured			Admitted without limits	Admitted without limits			Admitted without limits
2 Checks 2.1 Face blind	Admitted if length is not over 2/3 of a board length, appearing on one end, not deeper than 1/3 of a board thickness, without exiting from end to edges			Admitted by conditions of integrity of a board			Admitted by conditions of integrity of a board
2.2 Splits not appearing on the end	Admitted without exiting on edges from inside and outside faced with maximum extension not more than: in thick: 1/3 of a board length in medium 1/5 of a board length			Admitted by conditions of integrity of a board			Admitted by conditions of integrity of a board

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## Appendix 1 Continuation Sheet

Defects as per GOST 2140-81	Defect limits					
	1-3 grades			4 grade		
	Type of sawn timber	Dimension	Pieces	Type of sawn timber	Dimension	Pieces
2.3 Splits appearing on the end	Admitted if extension from the end of the board not more than 50 mm			Admitted if extension from the end of the board not more than board width		
2.4 Edge checks	Admitted if they do not intersect arris edges			Admitted without limits		
2.5 End checks	Admitted in thick sawn timber on one face not longer than 1/2 of a board width			Admitted without limits		
2.5.1 Heart shakes	Admitted if diameter is not more than: in 25-44 mm thick boards 10 mm in 45-63 mm thick boards 19 mm in over 63 mm thick boards 25 mm			Admitted by conditions of integrity of a board		
2.5.2 Burst checks	Admitted in thick sawn timber on one face not longer than 1/2 of a board width			Admitted without limits		
3 Biological defects				Admitted without limits		
3.1 Resin pockets	On both faces: in thick: 6 mm wide, 200 mm long 8 in medium: 6 mm wide 125 mm long 5 on both edges: 3 mm wide 100 mm long 4 On the ends admitted without limits			Admitted without limits		
3.2 Inbark	On faces, blind: 25 mm wide, 75 mm long 1 25 mm wide 50 mm long 3 On edges: 2 mm wide 15 mm long 2 On the ends admitted without limits			On face and edges, blind: in thick wide: up to 50 mm wide, 200 mm long 1 in thick narrow: up to 50 mm wide length without limits 1 in medium: up to 50 mm wide up to 175 mm long 1		

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## Appendix 1 Continuation Sheet

Defects as per GOST 2140-81	Defect limits			
	1-3 grades	4 grade	5 grade	
3.3 Fiber inclination	Admitted without limits	Admitted without limits	Admitted without limits	
3.4 Abnormal wood	Admitted without limits	Admitted without limits	Admitted without limits	
3.5 Pith	Admitted without limits	Admitted without limits	Admitted without limits	
3.6 Gum spot	In shape of spots and streaks on faces and edges	Admitted without limits	Admitted without limits	
<b>4 Fungal defects</b> 4.1 Fungus heart spots (stripes)	Admitted in thick sawn timber on face or edge without appearing on ends up to 1/5 of a board width and length. Not admitted in medium sawn timber.	Admitted on faces and edges up to 1/2 of a board width, appearing on end of not more than 10 % of the end's area	Admitted without limits	
4.2 Light sap-wood fungus colors and mould 4.2.1 Surface	Admitted on face in shape of spots and streaks up to 2 mm deep, with total area of covering of not more than 5% of one face area	Admitted on faces and edges in shape of spots and streaks with total area of covering of not more than 15% of one face and two edges area, with appearing on end. Admitted on ends in shape of spots with dimensions 15mmx15mm, but more than 6 boards of that kind in one bundle.	Admitted on faces and edges in shape of spots and streaks with total area of covering of not more than 50% of one face and two edges area, covering of not more than 20% of an end area	
4.2.2 Deep	Not admitted	Admitted on faces and edges in shape of spots and streaks with total area of covering of not more than 5% of one face and two edges area, with appearing on end. Admitted on ends in shape of spots with dimensions 15mmx15mm, but more than 6 boards of that kind in one bundle.	Admitted on faces and edges in shape of spots and streaks with total area of covering of not more than 50% of one face and two edges area, covering of not more than 20% of an end area	

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## Appendix 1 Continuation Sheet

Defects as per GOST 2140-81	Defect limits		
	1-3 grades	4 grade	5 grade
4.3 Rot			
4.3.1 Sapwood rot			
4.3.1.1 Hard	Admitted in thick sawn timber on a face or an edge up to 1/5 of a board width and length. Not admitted in medium sawn timber.	Admitted on faces and edges up to 1/2 of a board width and length without appearing on ends.	Mottled rot is admitted on faces and edges in shape of spots and streaks covering of not more than 50% of one face and two edges area, covering of not more than 20% of an end area.
4.3.1.2 Soft	Not admitted	Not admitted	Not admitted
4.3.2 Heartwood rot	Not admitted	Not admitted	Mottled rot is admitted on faces and edges in shape of spots and streaks covering of not more than 50% of one face and two edges area, covering of not more than 20% of an end area.
4.3.3 External moldering rot	Not admitted	Not admitted	Not admitted
4.4 Canker	Not admitted	Not admitted	Admitted on face, edge and arris up to 50 mm long – 1 piece per sawn timber length
5 Insect damages			
5.1 Wormholes	Not admitted	Not admitted	Admitted on the surface of faces and edges if not deeper than 3 mm, caused by bark beetles.
6 Manufacturing defects			
6.1 Wane			
6.1.1 Obtuse	On one edge: 1/3 of a board length On both edges: 1/4 of a board length Width of wane: in sawn timber up to 25 mm thick – 1/2 of a board thickness in sawn timber thicker than 25 mm – 1/3 of a board thickness	On both edges: up to 2/3 of a board length Width of wane: up to 2/3 of a board thickness Saw cut on an edge not less than 1/2 of a board thickness	Admitted on both edges through the entire length of a board. Saw cut of a face not less than 1/2 of a board thickness. Admitted on one edge up to 1/10 of a board length if saw cut on an edge less than 1/3 of a board thickness (but not less than 5 mm)

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## Appendix 1 Continuation Sheet

Defects as per GOST 2140-81	Defect limits		
	1-3 grades	4 grade	5 grade
6.1.2 Sharp	Not admitted	Not admitted	Admitted in the central part of a board provided that the inner face nominal width is preserved. Not admitted appearing on sides of a bundle.
<u>Note:</u> wane shall be cleaned of bark.			
6.2 Saw marks	Admitted not deeper than 0.75 mm	Admitted not deeper than 0.75 mm	Admitted not deeper than 0.75 mm
6.3 Fringe	Not admitted	Not admitted	Not admitted
6.4 Skewed saw cut	Admitted deviation of perpendicularity of the end to the face and edge up to 3 % of a board width and thickness, respectively	Admitted deviation of perpendicularity of the end to the face and edge up to 3 % of a board width and thickness, respectively	Admitted deviation of perpendicularity of the end to the face and edge up to 3 % of a board width and thickness, respectively
6.5 Spalls, mechanical defects, kerfs, marks of debarking knives	Not admitted on arrises adjacent to inner face, admitted as per wane limits on arrises adjacent to the outer face.	Not admitted on arrises adjacent to inner face, admitted as per wane limits on arrises adjacent to the outer face.	Not admitted on arrises adjacent to inner face, admitted as per wane limits on arrises adjacent to the outer face.
6.6 Wawing	Not higher than 2 mm	Not higher than 2 mm	Not higher than 2 mm
6.7 Tear-outs	On faces: up to 0.75 mm deep – without limits On edges: up to 3 mm deep – without limits	On faces: up to 3 mm deep – without limits On edges: up to 5 mm deep – without limits	Admitted without limits
6.8 Inclusions (wire, metal fragments)	Not admitted	Not admitted	Not admitted
6.9 Warp	Admitted if not more than 6 mm	Admitted if not more than 13 mm	Admitted without limits
6.9.1 Bow	Admitted if not more than 0.15% of a board length	Admitted if not more than 0.20% of a board length	Admitted without limits
6.9.2 Spring	Admitted if not more than: in narrow sawn timber – 3 mm in wide sawn timber – 6 mm	Admitted if not more than: in narrow sawn timber – 6 mm in wide sawn timber – 10 mm	Admitted without limits
6.9.3 Cup	Admitted deviation from sawing surface not more than 13 mm for entire sawn timber length	Admitted deviation from sawing surface not more than 13 mm for entire sawn timber length	Admitted without limits
6.9.4 Twist			Admitted without limits

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