



**PFS Corporation**

*Assurance you can build on™*

*An Employee-Owned Company*

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April 13, 2010

To Whom It May Concern:

This letter is to certify that the MLT LVL manufacturing plant located in Tver Region, Torzhok, Staritskaya Str., 96-a, Russia conforms to PFS Corporation's Prefabricated Component Program for Engineered Wood Products. The 1-3/4" thick 2.0E & 1.8E grades of LVL were tested in accordance with ASTM D5456 Standard Specification for Evaluation of Structural Composite Lumber Products.

The production of the test samples were witnessed by PFS and the testing was conducted by TTS Inc. in Edmonton, AB, Canada. TTS Inc. is an IAS Accredited laboratory and the test results are presented in their report dated February 19, 2009.

The PFS program consists of a certification audit, monthly unannounced inspections by a PFS representative and an in-depth audit once a year by a PFS engineer. During the inspections, the daily quality control testing required in the approved Quality Control Manual is witnessed. The results of the QC testing are forwarded to me on a monthly basis.

The Table 1 Allowable Design Stresses and Table 2 Fastener Details are attached. If you have any questions or require any additional information, please let me know.

Sincerely,

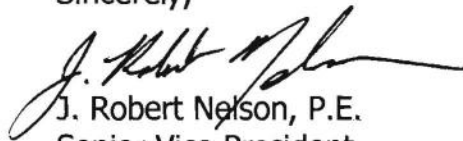
  
J. Robert Nelson, P.E.  
Senior Vice President



TABLE 1: ALLOWABLE DESIGN STRESS FOR Ultralam™ LVL (psi)<sup>1,2</sup>

PROPERTY		2.0E	1.8E
Modulus of Elasticity (MOE)	Joist	2,000,000	1,800,000
	Plank	2,000,000	1,800,000
Flexural stress-MOR ( $F_b$ ) <sup>3,5</sup>	Joist	2,650	2,200
	Plank	3,300	2,400
Tensile strength ( $F_t$ ) <sup>4</sup>		2,450	1,550
Longitudinal Shear ( $F_v$ )	Joist	200	200
	Plank	150	150
Compression Parallel ( $F_c$ )		2,600	2,350
Compression Perpendicular ( $F_c$ )	Joist	850	850

For SI: 1 inch=25.4 mm, 1 psi = 6.89 kPa

- 1) The allowable design stress provided in Table 1 apply to protected, dry service conditions
- 2) The tabulated allowable design stresses above are permitted to be adjusted for duration of load as provided in the appropriate code sections
- 3) The tabulated flexural stresses above are permitted to be increased by 4 percent for repetitive member stresses as provided in the applicable code for solid sawn lumber
- 4) The tabulated tensile stress is based on gage length ( $L$ ) of 2 feet. For other gage lengths, the tabulated tensile stress is adjusted by multiplying  $F_t$  by  $(2/L)^{0.08}$  where  $L$  is measured in feet. For lengths less than 2 feet use the tabulated tensile stress unadjusted.
- 5) The tabulated flexural stresses are based on load of normal duration and a reference depth of 12 inches. For other depths, the tabulated flexural stresses are adjusted by a depth size factor adjustment of  $(12/d)^{1/7}$  as shown in the table below.

DEPTH (in)	3.5	5.5	7.25	9.5	12	14	16	18	24
1.8E	1.20	1.12	1.08	1.04	1.00	0.98	0.96	0.94	0.90
2.0E	1.20	1.12	1.08	1.04	1.00	0.98	0.96	0.94	0.90

TABLE 2: Ultralam™ LVL FASTNER DETAILS

TEST		NEAREST SPP COMBINATION RECOMMENDED
WITHDRAWAL-8d NAIL INSTALLED IN Y DIR. (FACE)	Withdrawal	Red Maple (0.58)
WITHDRAWAL-8d NAIL INSTALLED IN X DIR. (EDGE)	Withdrawal	
BEARING-10d NAIL INSTALLED IN Y-DIRECTION	Loaded in L-Dir.	Western White Pine(0.40)
	Loaded in X-Dir.	
BEARING-10d NAIL INSTALLED IN X-DIRECTION	Loaded in L-Dir.	
	Loaded in Y-Dir.	
BEARING-Loaded in L-Dir. (Parallel)	1/2" BOLT	Red Maple (0.58)
	3/4" BOLT	
BEARING-Loaded in X-Dir. (Perpendicular)	1/2" BOLT	Red Pine (0.44)
	3/4" BOLT	

Allowable values for nails noted in the applicable code are applicable to the Ultralam™ LVL for conditions and species noted in the table.