This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.

Designation: D3737 – 18ε1

Standard Practice for Establishing Allowable Properties for Structural Glued Laminated Timber (Glulam)[1]

This standard is issued under the fixed designation D3737; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

ε1 NOTE—Corrected editorially in September 2018.

1. Scope

1.1 This practice covers the procedures for establishing allowable properties for structural glued laminated timber. Included are the allowable stresses for bending, tension and compression parallel to the grain, horizontal shear, compression perpendicular to the grain, and radial tension and compression in curved members. Also included are modulus of elasticity and modulus of rigidity.

1.2 This practice is limited to the calculation of allowable properties subject to the given procedures for the selection and arrangement of grades of lumber of the species considered.

1.3 Requirements for production, inspection and certification are not included, but in order to justify the allowable properties developed using procedures in this practice, manufacturers must conform to recognized manufacturing standards. Refer to ANSI A190.1 and CSA O122.

1.4 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

D9 Terminology Relating to Wood and Wood-Based Products

D143 Test Methods for Small Clear Specimens of Timber

D198 Test Methods of Static Tests of Lumber in Structural Sizes

D245 Practice for Establishing Structural Grades and Related Allowable Properties for Visually Graded Lumber

D2395 Test Methods for Density and Specific Gravity (Relative Density) of Wood and Wood-Based Materials

D2555 Practice for Establishing Clear Wood Strength Values

D2915 Practice for Sampling and Data-Analysis for Structural Wood and Wood-Based Products

D4761 Test Methods for Mechanical Properties of Lumber and Wood-Base Structural Material

D5456 Specification for Evaluation of Structural Composite Lumber Products

D6570 Practice for Assigning Allowable Properties for Mechanically Graded Lumber

E105 Practice for Probability Sampling of Materials

2.2 *Other Standards:*

ANSI A190.1 Structural Glued Laminated Timber[3]

ANSI/AWC National Design Specification for Wood Construction[4]

CSA O122 Structural Glued Laminated Timber[5]

3. Terminology

3.1 *Definitions:*

3.1.1 *alternative lumber*—laminated veneer lumber (LVL), laminated strand lumber (LSL), oriented strand lumber (OSL),

[1] This practice is under the jurisdiction of ASTM Committee D07 on Wood and is the direct responsibility of Subcommittee D07.02 on Lumber and Engineered Wood Products.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

[3] Available from APA – The Engineered Wood Association, Tacoma, WA 98466, http://www.apawood.org.

[4] Available from American Wood Council (AWC), 222 Catoctin Circle, SE, Suite 201, Leesburg, VA 20175, http://www.awc.org.

[5] Available from Canadian Standards Association (CSA), 5060 Spectrum Way, Mississauga, ON L4W 5N6, Canada, http://www.csa.ca.

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