

RIGIDPLY RAFTERS DF GLULAM BEAM SPECIFICATIONS

Part I - General

1.1 System Description

- A. Beams shall be timbers of glue laminated Douglas Fir (DF) as manufactured by Rigidply Rafters, Inc., Richland, PA 17087.
- B. Beams shall be stamped with the American Institute for Timber Construction (AITC) product quality mark.

Quality Assurance

- A. Manufacturer Qualifications:
 - 1. Minimum of 10 years experience in manufacturing glued laminated timbers.
 - 2. Quality control system in compliance with ANSI/AITC A190.1-2007, *American National Standard for Wood Products - Structural Glued Laminated Timber*. ANSI is the American National Standard Institute.
- B. Installer Qualifications:
 - 1. Minimum of 3 years experience in building construction.

References

- A. ANSI/AITC A190.1-2007, *American National Standard for Wood Products - Structural Glued Laminated Timber*.
- B. AITC 200-2009 *Inspection Manual for Structural Glued Laminated Timber*.
- C. AITC 117-2010 - *Manufacturing*
- D. Grading Rules, West Coast Lumber Inspection Bureau 2004.
- E. American Society for Testing and Materials (ASTM) "*Standard D 2559*". Standard Specification for Adhesives for Structural Laminated Wood Products.
- F. American Wood Protection Association Standards: 2011.

Handling, Storage, and Installation

- A. Handle only with web belting type slings. Use cleats or blocking to protect corners at pickup points.
- B. Store all beams properly and adequately to protect from damage on jobsite.
- C. Protect beams from adverse conditions prior to installation. (i.e. moisture damage.)¹
- D. Where appearance is important, coat beams with waterproof sealer.
- E. Proper installation of beams is the responsibility of the installer. See Rigidply Rafters Inc "Glue-Laminated Wood Timber Handling and Storage Instructions" and relevant AITC Publication for additional information.

Part II - Materials

2.1 Lumber - Lumber shall be of untreated Douglas Fir as specified by the designer

- A. Untreated DF shall be kiln dried to 15% with maximum moisture content of 16% prior to manufacturing.

2.2 Adhesives

- A. The face joint adhesive shall be wet-use phenol-resorcinol adhesive conforming to "ASTM D 2559."
- B. The end joint (finger joint) adhesive shall be a wet-use melamine adhesive conforming to "ASTM 2559."

Part III - Manufacturing

3.1 Process

- A. All lumber shall be regarded and checked for moisture content by the manufacturer.
- B. The laminations shall be made to length by finger jointing the individual pieces together. These structural finger joints shall be radio frequency cured.
- C. The laminations shall be surfaced, glued, and then clamped. The clamp-up shall be maintained at room temperature at a minimum pressure of 100 PSI.
- D. The beams shall be surfaced after gluing on the narrow faces of the laminations.²
- E. The corners exposed to view shall be eased.²

3.2 Quality Control

- A. Each lot shall be qualified by the following tests as described in *AITC 200-2009*:
 - 1. "AITC Test T107 Shear Test."
 - 2. "AITC Test T110 Cyclic Delamination Test."
 - 3. "AITC Test T119 End Joint Tension Test."
- B. Each order shall be inspected to verify that beams comply with the shop order.

¹ Rigidply Rafters Glulam Beams are supplied with waterproof sealer applied to the ends. Additional sealing or staining is available.

² This is architectural appearance grade. Additional surfacing is included with premium grade.