

# RIGIDPLY RAFTERS SYP GLULAM BEAM SPECIFICATIONS

## Part I - General

### 1.1 System Description

- A. Beams shall be timbers of glue laminated Southern Yellow Pine (SYP) 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, Southern Pine Inspection Bureau 2002.
- 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.)<sup>1</sup>
- 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 treated or untreated Southern Yellow Pine as specified by the designer
  - A. Untreated SYP shall be kiln dried to 19% and further dried to 16% or less.
  - B. Preservative treated SYP shall be kiln dried to 19% and further dried to 14% or less after treatment.
    1. Preservative treatment shall be with CCA to 0.6 pcf retention according to *American Wood Protection Standards, 2011*: UC 3B, UC 4A, UC 4B, UC 4C as described in the AWPA Standards.
- 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.<sup>2</sup>
- 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.

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

<sup>2</sup> This is industrial appearance grade. Additional surfacing is included with architectural and premium grade.