

SECTION 955
TIMBER TREATMENT
(INCLUDING TREATING MATERIALS)

955-1 General.

The work specified in this Section is the treating of structural timber, timber piling and timber posts. The method of treatment for all such timber materials shall be in accordance with AASHTO M 133, or American Wood Protection Association (AWPA) Use Category Standard (USC) - U1, with the exceptions and additions as specified herein.

955-2 Preservative.

955-2.1 Salt or Brackish Water Use: The treating of Southern Yellow Pine (SYP) lumber or timber for use in salt or brackish water environments shall be done with Chromated Copper Arsenate (CCA).

955-2.2 Above Ground or Ground Contact and Fresh Water Immersion Use: The treating of SYP lumber and timber for above ground or ground contact and fresh water immersion applications, shall be done with, Copper Azole-Type C (CA-C), Alkaline Copper Quat-Type D (ACQ-D), or CCA, with the following exceptions:

Treatment of the wood products of the pedestrian bridges, wood rails at buildings or rest areas, and fence posts shall be done either with, Copper Azole-Type C (CA-C), or Alkaline Copper Quat-Type D (ACQ-D).

955-3 Process.

All timber and lumber items shall be treated in accordance with Standard T1 of the AWPAs manual.

955-4 Requirements for Preservative Materials.

Alkaline Copper Quat-Type D (ACQ-D), Chromated Copper Arsenate (CCA), Copper Azole-Type C (CA-C), Ammoniacal Copper Zinc Arsenate (ACZA) shall be in accordance with AWPAs P5.

955-5 Requirements for Retainment.

955-5.1 Piling: A minimum of 2.50 lb/ft³ of CCA oxides shall be retained in zone 1, outer 0.50 inch, and 1.5 lb/ft³ in zone 2, outer 0.50 inches to 2 inches.

If ACZA is used, a minimum of 2.50 lb/ft³ shall be retained in zone 1, outer 0.50 inch, and 1.5 lb/ft³ in zone 2, outer 0.50 inches to 2 inches.

955-5.2 Structural Timber and Sheet Piles: When installation is not in a salt (or brackish) water environment, the minimum retention shall be 0.60 lb/ft³ of CCA or ACQ-D or 0.31 lb/ft³ of CA-C, as determined by cores from the outer 0.60 inch. When installation is in a salt (or brackish) water environment, a minimum of 2.50 lb/ft³ of CCA oxides shall be retained in the outer 0.60 inch.

All guardrail material (timber posts, blocks, wedges, etc.) shall retain a minimum of 0.40 lb/ft³ of CCA or ACQ-D; or 0.15 lb/ft³ of CA-C in the outer 1 inch zone.

955-5.3 Posts: Round/sawn timber fence posts shall retain a minimum of 0.40 lb/ft³ of ACQ-D or 0.15 lb/ft³ of CA-C in the outer 1 inch zone.

955-5.4 Determination of Retention: Retention shall be determined by assay performed and certified by the treating company in accordance with the applicable AWPAs standards.

955-6 Penetration Requirements.

955-6.1 For Structural Timber: The penetration of the treatment shall be in accordance with the applicable AWP standards, with the exceptions as specified herein.

955-6.2 For Round Piles and Fence Posts: Any round pile or post, which does not show complete sapwood penetration will be rejected or shall be retreated to meet such penetration requirement.

955-6.3 Retreatment: The necessity for retreatment of structural timber, piling and posts shall be avoided as far as practicable and if it becomes apparent that due measures are not being taken to prevent such necessity, the acceptance of retreated materials may be withdrawn.

When retreatment is necessary the maximum limits for temperature of steam or preservative, and for preservative pressure, which apply to the original treatment shall not be exceeded during the retreatment.

955-6.4 Determination of Penetration: Sapwood penetration shall be determined by taking at least one increment boring core from each pile and cap, and other pieces of similar dimensions and, for other sizes of material, at least one boring from the charge for each 1,000 FBM in the charge. All bored holes shall be immediately plugged, with tight fitting treated plugs.

955-7 Handling Salt Treated Piling.

In handling of piles that have been treated with chromated copper arsenate or ammoniacal copper arsenate, cable slings shall be used. Mechanical grabbers or pointed tools shall not be permitted. Rough or careless handling shall be avoided at all times.

955-8 Identification of Treating Plants for Round Piling.

The treating plant shall brand, or place a distinctive permanent mark, on each round pile, approximately 6 feet from the butt end, such that the plant responsible for the treatment can be readily determined at any time during the service life of the piling.