



Engineering Specifications for **SeaShield™ Series 90** Timber Pile Protection System

1.0 Scope

- 1.1 This specification may be used for the materials and application of Denso SeaShield Series 90 for Timber Pile Protection.
- 1.2 The Engineer shall select appropriate sections of the specification to insure that the specification is comprehensive for specified work.

2.0 General Requirements

- 2.1 Contractor shall comply with all written recommendations of the manufacturer regarding application of the specified system.
- 2.2 The manufacturer of specified materials shall be Denso North America, 9710 Telge Road, Houston, TX 77095, Tel: 281-821-3355 or 90 Ironside Crescent, Unit 12, Toronto, Ontario, Canada M1X1M3 Tel: 416-291-3435. E-mail: info@densona.com

3.0 Materials

- 3.1 Denso Marine Piling Tape
 - 3.1.1 The Denso Marine Piling Tape shall be comprised of a non-woven synthetic fabric carrier fully impregnated and coated with a neutral petrolatum based compound with water displacing agents and wide spectrum biocides and backed with a thin layer of HDPE.
 - 3.1.2 The Denso Marine Piling Tape shall have a character stable in composition and plasticity over a wide temperature range. The tape shall be non-hardening and non-cracking. The tape shall accommodate vibration and extreme movement of substrate. Highly resistant to mineral acids and alkalis.
 - 3.1.3 The Denso Marine Piling Tape shall meet the physical specifications values listed on the specification sheet.

3.4 SeaShield Outercover

3.4.1 The SeaShield Outercover shall be comprised of High Density Polyethylene (HDPE). It shall be new, seamless virgin material. Use of reprocessed resin is prohibited. The sheet shall be uniform throughout, free from dirt, oil and other foreign matter and free from cracks, creases, wrinkles, bubbles, pin holes and any other defects that may affect its service.

3.4.2 The Outercover shall be of a thickness necessary to prevent damage to underlying tape coating. It shall be custom sized according to length of desired protection and width of circumference of pile.

3.4.3 Physical properties of the outercover shall meet or exceed the minimum requirements listed on the product data sheet for the SeaShield Outercover.

3.3 Nails

Nails shall be 316 stainless steel 2½ inches (62 mm) ring shank diameter with neoprene washer.

3.4 Strapping

The nails may be substituted with a Denso select strapping system.

4.0 Surface Preparation

- 4.1 Identify piles to be protected with the outercover between elevations indicated in the drawings.
- 4.2 Remove marine growth, and foreign matter for the entire length which is to be protected with the barrier wrap.
- 4.3 All surface projections such as nails, bolts, large splinters, fouling organisms and other surface conditions that would penetrate the outercover shall be removed.

4.4 Mud Line Seal

Excavate the soil around the base of the piles so that the outercover extends to a minimum of 2 feet (0.6 m) below the mud line. After installation of the outercover, back fill all excavated areas to the original mud line.

(250 mm) on center from top to bottom. The top and bottom straps shall be placed 1" (25 mm) from the top and bottom of the outercover.

5.0 Application of Denso Marine Piling Tape

- 5.1 The Denso Marine Piling Tape shall be spirally wrapped onto the timber pile using a minimum 1" (25 mm) overlap. Application shall begin at the designated low point indicated in the specifications and drawings and proceed upward to the high point creating a weather board effect.
- 5.2 Hold end of the tape firmly against the starting point and firmly press onto the surface. Unroll the tape, keeping the roll close to the pile. Do not get a long lead of tape as it will tend to fold and gap on the surface being wrapped.
- 5.3 Apply sufficient tension to provide continuous adhesion, but do not stretch the tape. As application proceeds, press out all folds and air pockets that may occur.
- 5.4 Maintain a minimum 6" (150 mm) overlap when overlapping one roll with the end of a new roll.
- 5.5 At the completion of each roll, smooth the overlaps by hand in the direction of the spiral to insure sealing of the overlap.

6.0 Application of Outercover

- 6.1 Locate the outercover between the elevations indicated in the specifications and drawings.
- 6.2 Wrap the outercover around the pile to form a tight sheath with a minimum 3" (75 mm) overlap.
- 6.3 Temporary straps may be used to hold the jacket in place prior to nailing.
- 6.4 Where it is necessary to utilize more than one outercover to protect the entire length of a pile, the second outercover shall overlap a minimum of 12 inches (300 mm) (above and or below) the inner cover.

7.0 Nailing

- 7.1 The vertical seam shall be secured to the pile at a minimum of 10" (250 mm) or as needed. Nails shall be driven at a minimum of 6" (150 mm) or as needed around the circumference of the pile on the top and bottom of the jacket.

8.0 Strapping (Optional)

- 8.1 The strapping shall be placed a minimum 10 inches



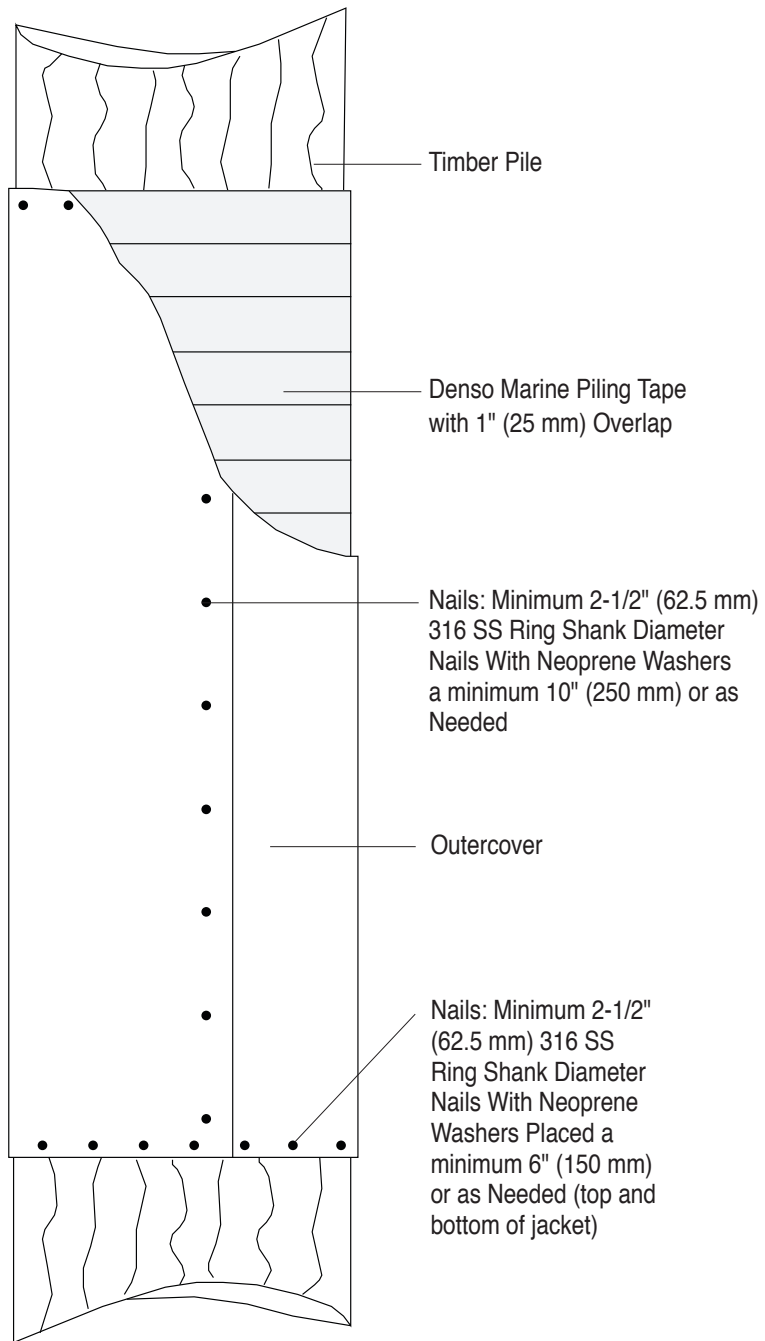
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Elevation View

Sheet 1
(Not to Scale)

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Timber Pile Protection System**

