



40 YEARS OF MARINE PROTECTION

APPLICATION INSTRUCTIONS

Seashield Series 250 System for Timber Pile Protection

1. SYSTEM:

System consists of a Denso durable heavy duty jacket incorporating foam sealant linings, supporting rods for fastening into position with strapping and an optional heat shrink protective sleeve.

2. USES:

The system is designed to encapsulate and deprive the Toredo worm of oxygen thus suffocating it in the splash or tidal zone. It also protects timber piles in marine environments from deterioration due to tidal flows, marine growth, and sea conditions.

Used on marinas, jetties, mooring berths and on piers. By port authorities on loading wharfs, jetties, dolphins and piers. By shipyards on loading wharfs.

3. EQUIPMENT LIST:

Hand tool scrapers, pneumatic powered wire brushes, hammer and chisel, water blasting equipment (UHPWJ optional).
Brush cleaning solvent, utility knife, cleaning cloth, hand cleaner, barrier cream.

Diving gear and equipment or overalls, gloves and any other personal protection equipment deemed necessary by the materials Safety Data Sheets and Job Safety Analysis conducted prior to the commencement of any work undertaken.

4. MATERIALS LIST:

- Seashield Series 250 Timber Pile Jackets designed and custom made for each pile.
- Fibreglass rods, Smartband strapping and fitting tool to secure and hold jackets in place.
- Denso heat shrink sleeve and patch, gas torch and roller (optional).

5. PILE PROTECTION:

a) Surface Preparation:

Surfaces to be protected must free from all marine growth, loose rust, original coatings, dirt etc. The surface can be prepared by scraping, chipping, abrasive blast cleaning, high pressure water jetting, pneumatically or hydraulically driven tools such as scabblers, hull scrubbers, wire brushes, rotary scrapers and needle guns. Also hand tools such as wire brushes, scrapers and chipping hammers etc.

The choice of method will depend on a number of factors and will need to take into account the most practical with regard to site conditions and any environmental constraints imposed due to site location.

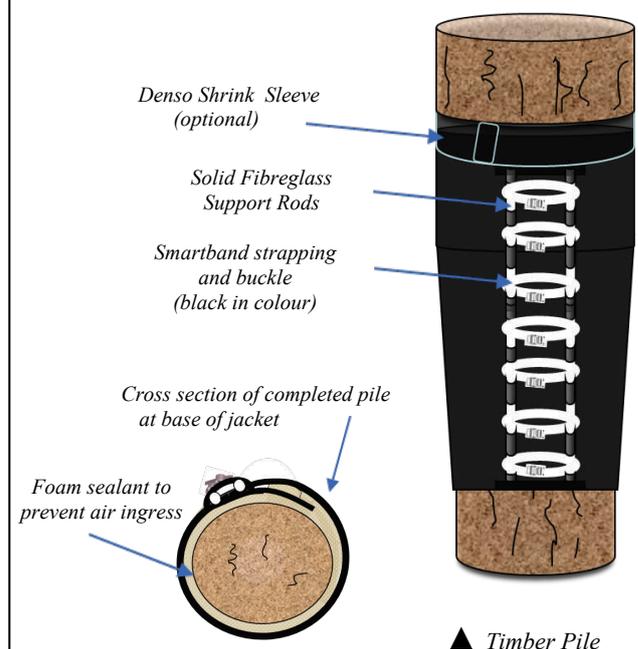
- Remove from the area to be protected all marine growth.
- Areas of firmly adhering scale must be removed with chipping hammers and/or hand power tools.
- Remove deposits from the bottom of any deep pitting deeper than 2mm.
- Protrusions that may puncture or put undue stress on the jacket must be cut away and the surfaces sanded smooth to remove sharp edges and sudden changes of profile.
- Wire brush and remove any loose and flaking paint. Wash off surface with seawater.

Precautions may need to be taken due to environmental concerns. During removal of any pre-existing coating measures should be taken to reduce the amount of debris, paint flakes or old coating etc. from being deposited into the

First Inspection:

When preparation has been completed a close examination of the protection zone must be made to ensure the pile has a thoroughly clean surface free of growth or sharp and protruding areas.

Figure 1. Illustrated example of the Series 250 Timber Pile System



5. PILE PROTECTION (continued):**b) Jacket Installation:****Preparations:**

Prepare a jacket with the rods and a full set of Smartband strapping lengths and buckles to fit the jacket (supplied with the jacket) in a dry calm area before taking the jacket to the pile for fitting. It may also be handy to have lashing which can be used to hold the jacket in place before installing and tightening the strapping.

Fitting and Tensioning:

Place the jacket around the pile in position ensuring the foam linings at either end overlap to encapsulate the pile. It need be temporarily lash the jacket in place with rope for ease of handling. Insert the top and bottom strap and buckles and hand tighten until the jacket is held in place. Repeat this with the central strap sets then install the remaining strap sets in the same way. Remove any lashing that may have been used to initially hold the jacket in place.

Check that the jacket is vertically aligned and in the correct position before completely tightening all the strapping using the fitting tool.

Should jacket slippage be envisaged the installation of a Stopper Band (bottom fixing strap) should be considered as part of the system. Denso supplied Smartband strapping and multiple buckles are used to create a ledge for each jacket to sit on to prevent any slippage.

Where large lengths of piles are to be protected it may be necessary to apply multiple jackets in a stacker formation. In such instances a skirt is incorporated into the jacket design at the top of each jacket of at least 100mm high which acts as a sealing overlap between the jackets. The jackets are installed in order from the bottom first.

Final Inspection:

Check that all jacket surfaces are smooth and flat around the pile, all strapping is tight and that the jacket is securely fixed to the pile and is not able to be moved in any direction.

7. SAFETY DATA:

Storage:	Denso Seashield Series 250 Timber Pile Jackets shall be stored the way they arrive, out of direct sunlight until they are required.
Transport:	Avoid prolonged exposure to high temperatures during transit, preferably in an enclosed vehicle.
Handling:	Seashield Series 250 Timber Pile Jackets shall be kept rolled and taped to prevent damage for transportation to the installation site. Care shall be taken to avoid sudden impact that may tear or damage the jacket. The Smartband strapping lengths and buckles should be bagged in packs ready for each jacket to ensure no contamination with dust and dirt.
Action in case of fire:	Extinguish with water fog, dry powder, carbon dioxide or chemical foam. Self-contained breathing apparatus may be required.
Skin Contact:	No precautions required.
Swallowing:	If feeling unwell, seek medical advice.
Inhalation:	In a fire situation avoid inhaling fumes.
Spillage:	No materials classified as hazardous. Pick up and collect material by hand.
Disposal:	Landfill in accordance with local regulations.
Other:	For more information please refer to Denso safety data and technical data sheets. Available for all system components.



Approved Quality Management System
AS/NZS ISO 9001:2008
Lloyds Register – Certificate N^o Mel 0927759



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