



APPLICATION INSTRUCTIONS

Steelcoat 100 System

80 YEARS OF PIPELINE PROTECTION

USE:

For the protection of structural steel, pipes, welded joints, bends, fittings and similar structures from corrosion, above ground. To protect the substrate from corrosion the system completely encases and segregates its surface from the surrounding environment by making intimate contact with the entire exposed substrate. Suitable for use in badly pitted or corroded surfaces where it may not be possible to obtain a power tool St2 cleaning standard.

EQUIPMENT LIST:

These items may be required

Power wire brush and spare brushes
 Scraper
 Blast cleaning equipment (optional)
 Paint brush
 Brush cleaning solvent.
 Utility knife,
 Tape measure.
 Overalls, gloves, safety glasses, safety boots, cleaning cloth, hand cleaner, barrier cream
 If necessary hard hats, scaffolding / safety belt.

SURFACE PREPARATION:

Surfaces must be dry and free from dirt. Solvent wipe with a clean cloth to remove any grease deposits.
 Power wire brush to remove all scale, loose rust and old flaking coatings.

SYSTEM COMPONENTS:

- Denso Hi Tack Primer
- Denso Superlight Profiling Mastic
- Denso Hi Tack Tape
- Elastomeric Membrane

APPLICATION:

1. PRIMING and PROFILING

Brush or hand apply (with the use of gloves) an even coat of Hi-Tack Primer over the entire area to be protected (**Fig 1-2**). Use the primer to fill any shallow or pitted imperfections in the substrate.
 Coverage rate of primer: 5 m²/L.

For large voids or irregular shapes Denso Superlight Profiling Mastic is then used to prepare a profile suitable for tape wrapping (**Fig 3**).

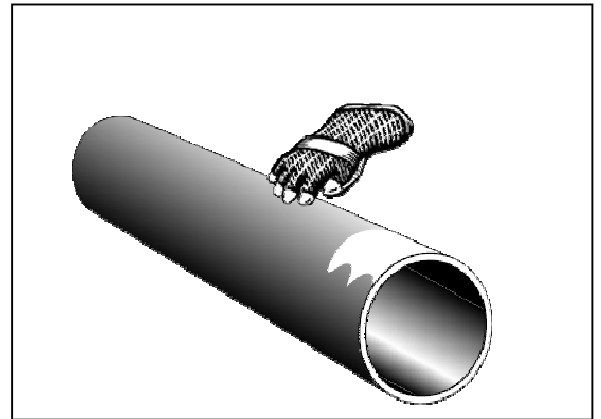


Fig 1 ▲. Priming pipes, rods and cables: Apply Primer to entire area to be wrapped with tape.

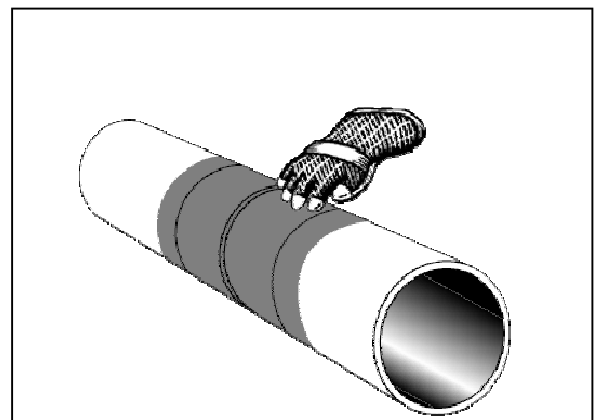


Fig 2 ▲. Priming butt welded joints: Apply Denso Primer to entire area to be wrapped with tape.

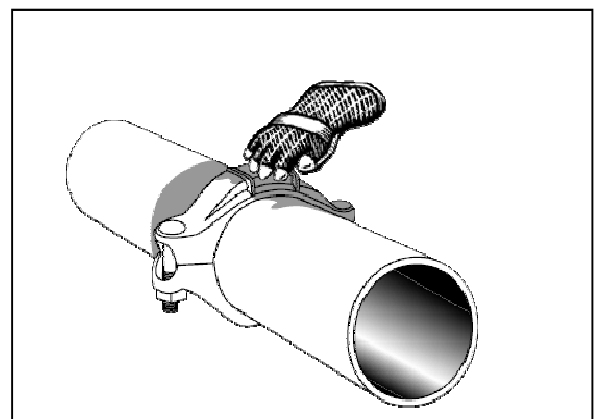


Fig 3 ▲. Priming flanges and couplings: Apply Primer then profile irregular surfaces with Denso Superlight Profiling Mastic to enable the area to be wrapped with tape.

2. TAPE APPLICATION

a) Pipes and Rods:

Select as wide a width of Hi-Tack Tape as practical, e.g. 100 mm wide for 100 mm diameter pipe. When applying tape ensure that the coated side of the tape is applied to the substrate (**Fig 5**). Maintain sufficient tension, without stretching the tape, to ensure that the tape conforms to the surface without gaps. Repeat this step, overlapping each turn by minimum 55% to give double thickness (**Fig 6**). Start new roll by overlapping the ends by one tape width (**Fig 7**). Smooth down overlaps and mould into adjacent tape surface.

Note: Where longitudinal welds are included in the area to be wrapped, apply a 100 mm wide strip of Hi-Tack Tape longitudinally over the weld and press into the contours before wrapping (**Fig 8**).

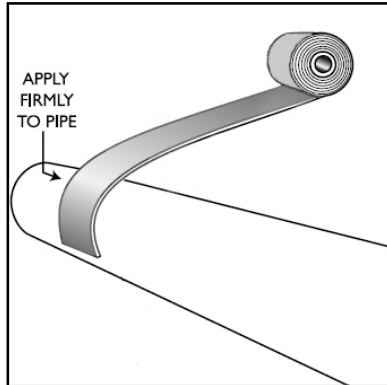


Fig 4▲. Start at the 9 o'clock position.

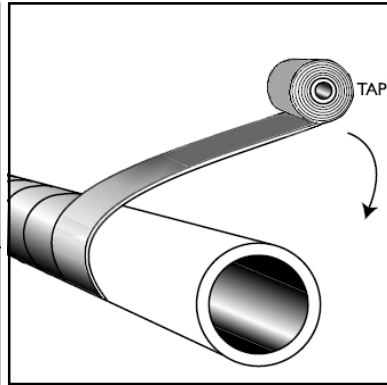


Fig 5▲. Ensure that the outer compound side of tape is to the substrate.

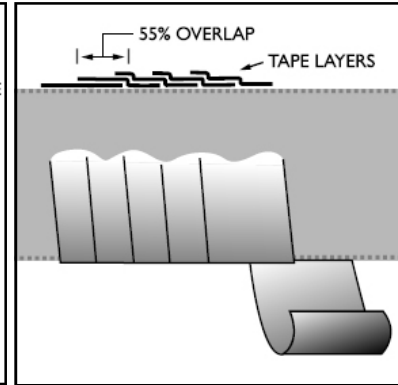


Fig 6▲. Overlapping each turn by 55% gives a double thickness.

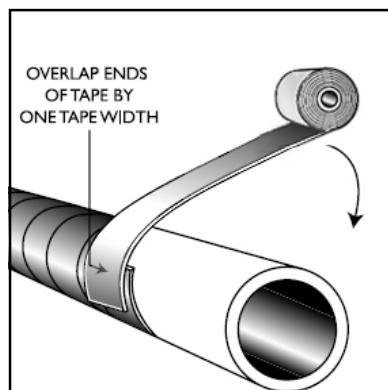


Fig 7▲. Starting a new roll of tape.

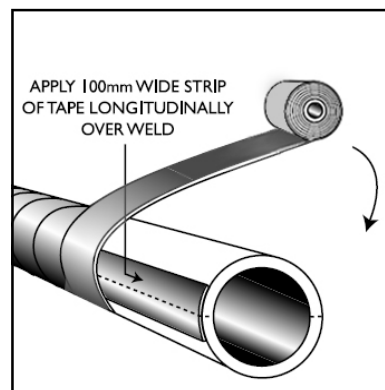


Fig 8▲. Wrapping a longitudinal weld.

b) Butt Welded Joints:

Proceed as **Section 2a** but start and finish wrapping with a minimum of 75 mm overlap with the Hi-Tack Tape on to the existing pipe coating either side of the joint area (**Fig 9-10**).

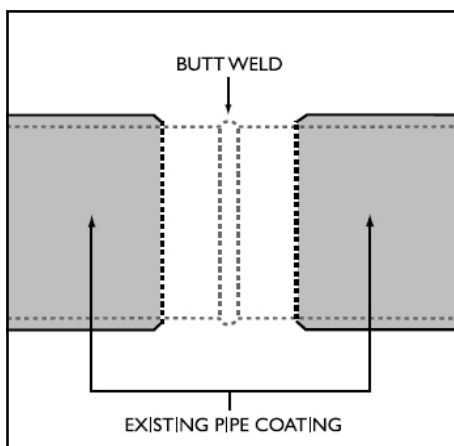
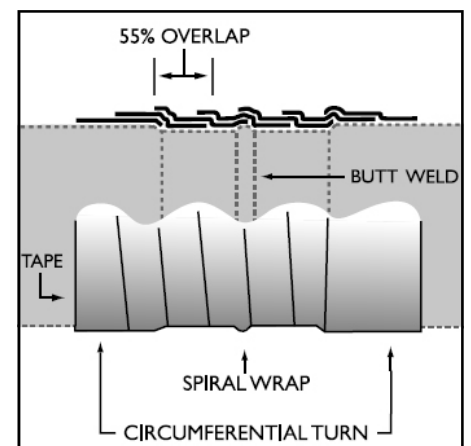


Fig 9◀. Butt weld and existing coating ready for over wrapping with tape. Note cutback of coating can be 75 mm - 150 mm either side of the weld except on FBE coated pipe.

- Fig 10▶.** Note method of wrapping.
1. Start with one circumferential turn onto factory coating.
 2. Then change to spiral wrap with 55% overlap over weld area.
 3. Finish with one circumferential turn over factory coating the opposite side of the weld. Overlap tape at least 75 mm onto existing coating.



c). Flanges, couplings:

Apply Hi-Tack Primer over entire surface to be wrapped. Profile the pipe joint with Denso Profiling Mastic so that there will be no air gaps under the subsequent tape wrapping (**Fig 11**). Push the mastic firmly into all cavities and around all bolt heads building it up to form a profile suitable for wrapping without forming bridges or voids (**Fig 12**).

The Hi-Tack Tape is then applied by dividing the joint into two halves. Start the tape, with the outside facing the pipe surface, on the centre of the crown of the joint and wrap away from the centre, towards the adjoining pipe, overlapping each turn by 55% to give a double wrap. Finish with at least one circumferential wrap onto the pipe to conclude the first half of the application. Start again on the crown of the joint overlapping initial wrap. Wrap towards the pipe on the opposite side of the joint overlapping tape as per first wrapping. Smooth finished wrap down well, particularly at the tape edges (**Fig 13**).

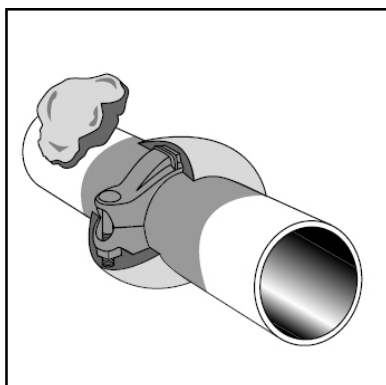


Fig 11 ▲. Profiling the joint with Denso Superlight mastic.

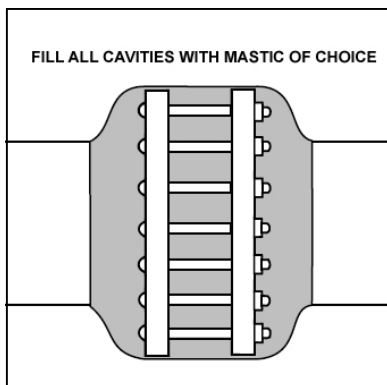


Fig 12 ▲. Make sure the mastic is pushed into all crevices and that it forms a smooth profile for wrapping.

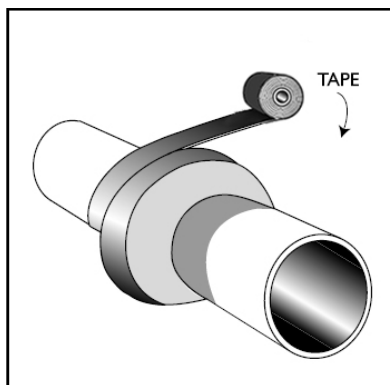


Fig 13 ▲. Wrap joint in two halves. Start on crown and work towards pipe then repeat from crown working towards pipe on opposite side of joint.

d) Damaged Coatings:

Cut away and remove loose coating from damaged area and smooth or chamfer edges. Clean area thoroughly then prime the exposed substrate or surface extending 50 mm either side of the damage. Repair the damaged area with a patch of tape or mastic. Wrap the section of pipe as per **Section 2b**.

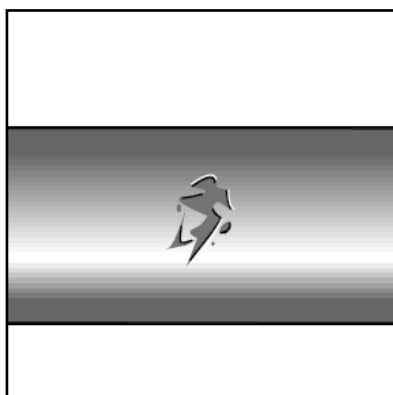


Fig 14 ▲. Damaged pipe coating.

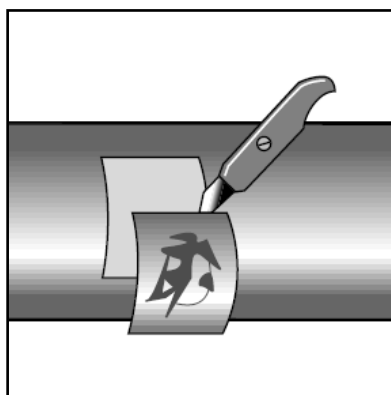


Fig 15 ▲. Remove loose or damaged area

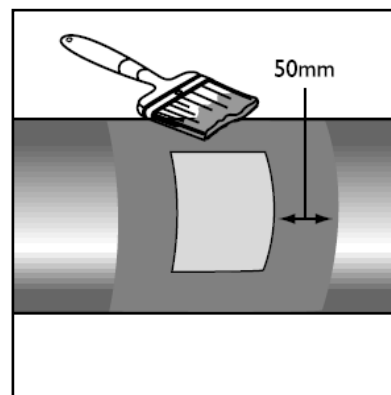


Fig 16 ▲. Smooth edges and prime area at least 50 mm onto sound coating.

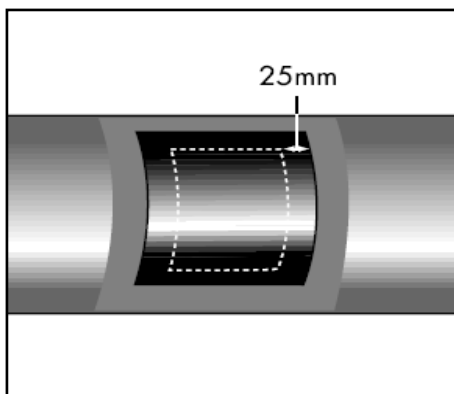
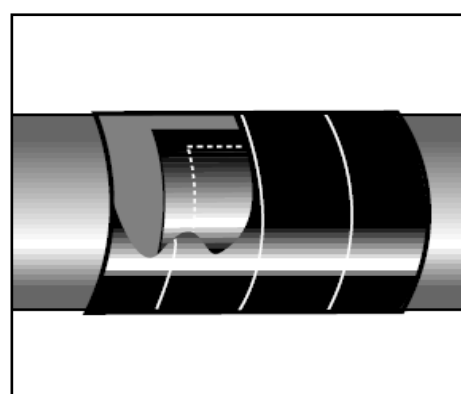


Fig 17. Repair damaged area with a patch of tape overlapping at least 25 mm onto primed sound coating area before wrapping with tape as per Section 2b.

Fig 18. Overwrap repair as per Section 2b. ▶



3. ELASTOMERIC MEMBRANE APPLICATION

Denso Elastomeric Membrane is a two component urethane elastomer system which can be applied with brush or roller. It is advised to coat any tape to be protected while it is moisture free. The coating surface should be kept moisture free for 24 hours after application.

Use the Base (Part A) container as mixing vessel. Open Part A container and mix the contents with a flat spatula. Add Cure (Part B) contents to the Part A container. Mix the two components well for about 1 minute.

Elastomer layers applied at short intervals on top of each other should bond well unless exposed to dust and or other foreign materials which can interfere in inter-laminar adhesion. In the event of long intervals between coatings (greater than 3 hours) or when renovating old linings, allow the elastomer to reach an advanced state of cure, roughen the surface, clean and prime with a suitable bonding agent.

4. SAFETY DATA:

Storage:	Store right way up in original packaging. Store away from heat, direct sunlight and open flames.
Transport:	Avoid prolonged exposure to high temperatures during transit, preferably in an enclosed vehicle.
Handling:	Grease resistant gloves may be worn to reduce skin contact. Butyl rubber or nitrile gloves recommended when handling Elastomeric Membrane. Avoid contact with eyes.
Action in case of fire:	Extinguish with water fog, dry powder, carbon dioxide or chemical foam. Self-contained breathing apparatus may be needed for large fires.
Skin Contact:	Wash with warm water and mild soap. Pumiced heavy duty hand cleaner for stubborn stains.
Swallowing:	If feeling unwell, seek medical advice
Inhalation:	Move person to fresh air, give artificial respiration
Spillage:	Refer to individual Safety Data Sheets.
Disposal:	Incineration or 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.

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