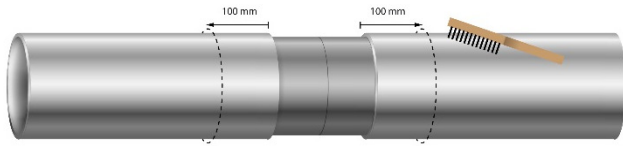


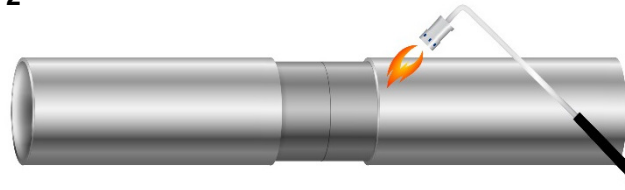
Installation Instructions for Denso Butyl Tape System

1



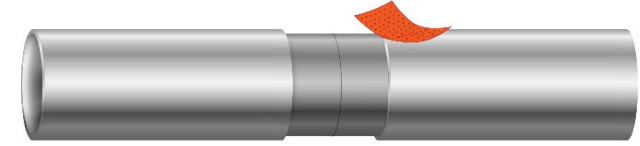
The surface to be wrapped and the adjacent factory coating must be thoroughly cleaned from rust, dirt, temporary end protection, oil, grease, coupling agent from the ultrasonic test, and welding residuals. Solvent such as naphtha may be used for cleaning. The cleaning may be executed ideally by sandblasting to purity standard Sa 2½, steel wire brush or emery cloth (grain 60). The surface roughness is 50 -100 µm. Hard adhesive and the epoxy-resin-layer on factory delivered steel pipes are not to be removed, but both are to be roughened.

2



In case of existing moisture on the area to be coated, remove the humidity with a propane flame or with a hot air blower. Do not overheat the factory coating. Operating conduits must be dried with a strongly absorbent cloth (without contamination).
Following temperatures are to be respected during application:
Surface temperature: Min. +3°C over the dew point and ≥ 0°C
Max. 70°C
Product temperature: Min.+3°C over the dew point and ≥10°C

3



Chamfer the junction to the PE-factory coating with a rasp semi-circular blade to an angle of ≤ 30°, if not already factory done. Roughen the cleaned adjacent factory coating to a width of minimum 100 mm in circumferential direction with emery cloth (grain 40). A grinding fleece may also be suitable. The surface roughness is 50-100 µm. Rest of dust and shavings are to be removed by blowing away or with a hand broom. **Attention:** Loosely sticking parts or parts of the factory coating that are affected by moisture and corrosion are to be removed up to the closely sticking factory coating.

4



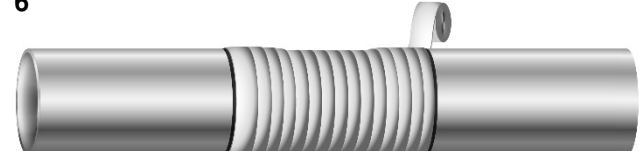
Apply Denso Butyl Primer to the dry and clean steel surface and approx. 100 mm of the adjacent factory coating on both sides. Stir the primer thoroughly in its original packaging. Drying time approx. 5-10 min, depending on the ambient temperature (test with finger). Consumption approx. 0.25 L/m² with a mean thickness of 40-50 µm. If the drying time comes to more than 6 h, or if contamination is found, the primer is to be reapplied. If welded seams stick out considerably (in longitudinal or lateral direction), or if the junctions to the factory coating are not sufficiently chamfered, these sections are to be padded with Denso Butyl Mastic in order to prevent voids.

5



Wrap the Denso S43 Butyl Tape (inner tape) of the system with slight tension without folds (tapering approx. 1%) with a 55% overlap (removing the release paper). The grey adhesive side of Denso S43 Butyl Tape is applied to the substrate. The top and the end of the coating is wrapped cylindrically in a width of minimum 50 mm on the factory coating. Follow the top of the wrap and wrap spirally. When commencing with a new roll, the first wrap is to be carried out cylindrically, incorporating the end piece of the preceding roll with overlap.

6



Wrap the Denso R23 Butyl Tape (outer tape) of the system with a 55% overlap using slight tension without folds. The black adhesive side of Denso R23 Butyl Tape is applied to the inner tape. The outer wrap must cover the inner wrap at the edges with minimum 25 mm, so that now minimum 75 mm of the factory coating, painted initially in a width of approx. 100 mm, are incorporated into the site applied coating. In case of complex parts, the outer layer is to be treated in the same way as described in point 5.

Apply the last 100 - 150 mm of the outer tape at the end of the wrapping in falling 3-o'clock-position without tension on itself and press it on firmly by hand.

Colours of the tapes are for illustration only.

The coating is to be tested with a holiday detector according to AS 3894.1.

