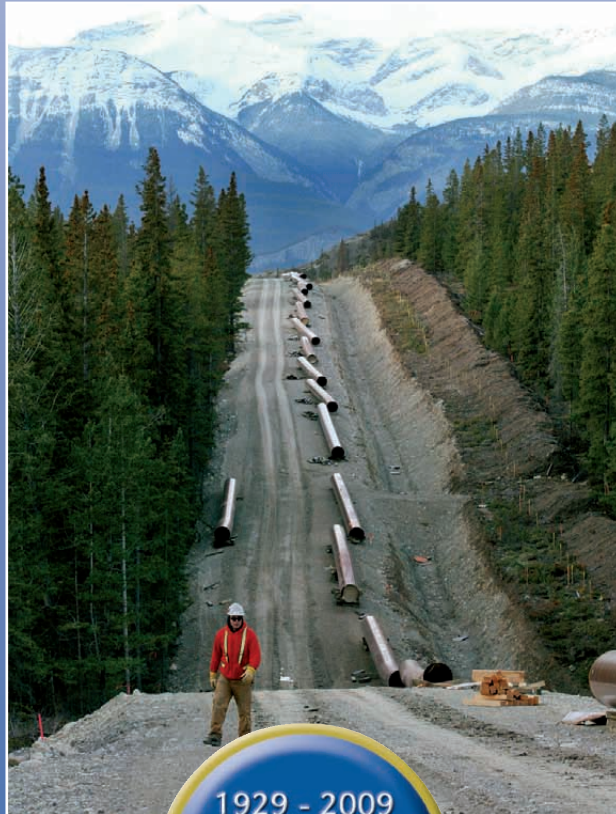


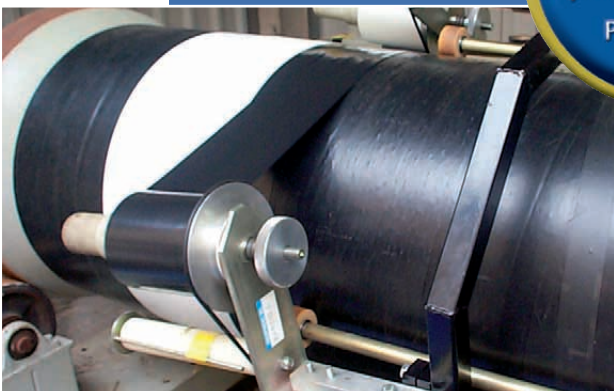


Denso Petrolatum, Bitumen & Butyl Tapes & Protal Liquid Coatings

Long-term
Corrosion Protection for
Buried Steel Pipelines,
Fittings & Specials



1929 - 2009
80 Years of
Pipeline & Steelwork
Protection



Denso Tape Wrapping Systems

Introduction

Denso's world-wide reputation as a leading manufacturer and supplier of totally effective pipeline protection systems has been earned by more than 80 years of successful case history performance.

A range of products is offered for selection to suit specific project needs involving different soil and backfill conditions, varying surface cleaning standards as well as sub-zero and high temperature application and pipe operating temperatures.

For all buried pipeline projects steel surface preparation standards are normally divided into two main categories:

Low Quality - Low quality surface preparation by hand power tools that will require surface tolerant coating systems.

High Quality - Dry abrasive blast cleaning to a high quality near white finish standard.



Customer Peace of Mind

Free advice for correct material selection, surface preparation and coating application criteria, is provided by qualified professionals at either Denso or their appointed agents.

Main Advantages of the Denso Tape Coating Systems

Dry abrasive blast cleaning to a high quality standard is not essential. Densoclad, Densopol and Denso Butyl tape systems as well as Denso Tape petrolatum systems are surface tolerant and are suitable for application despite a low quality surface preparation standard.

- Minimum controlled coating thickness as all tapes are factory regulated.
- No delays. Immediate mechanical and corrosion protection is obtained
- Excellent cathodic disbonding resistance
- Tapes can all be applied by hand, hand machine or rolling rig methods.

Description - Densoclad, Densopol and Denso Butyl Systems

Densoclad and Densopol Systems

Thick pvc backed Densoclad and Densopol bitumen tapes are used in conjunction with a primer and can be applied with a 55% overlap to achieve double thickness in one operation. Temperate and Tropical grades are available to suit all site conditions.

Denso Butyl Systems

Thinner polyethylene backed Denso Butyl Tapes are also used in conjunction with a primer and are particularly suited for long-line projects for very fast automatic machine application alongside or over the ditch. A separate outerwrap is normally applied at the same time. Standard temperature and high temperature grades are also available.



Cost-effective Corrosion Protection

Denso Tape Wrapping Systems

Denso Tape Petrolatum Systems

Based on petrolatum, Denso Tape is suited for all types of pipe and is normally used in conjunction with Denso Priming Paste. For profiling flanges, couplings, valves and spigot joints there is a choice of either a standard Densyl Mastic or a light weight, low density Denso Profiling Mastic. To complete the system, Denso Self-Adhesive PVC Tape or a Denso bitumen tape provides an ideal outer protective armouring.

Denso Tape is also available in a low temperature (L.T.) grade and a marine grade for the protection of jetty piles.



Denso Profiling Mastic

- Quick and easy to apply
- Comforms, fills and seals all awkward shapes and void areas
- Non drying
- Non shrinking

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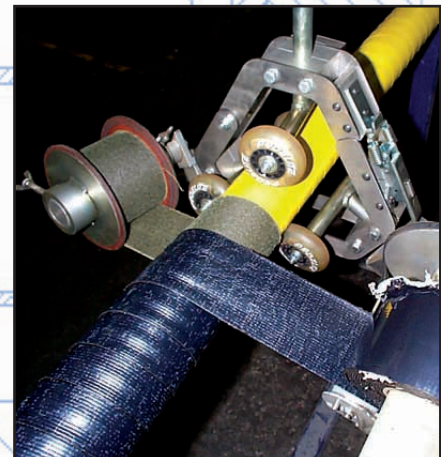
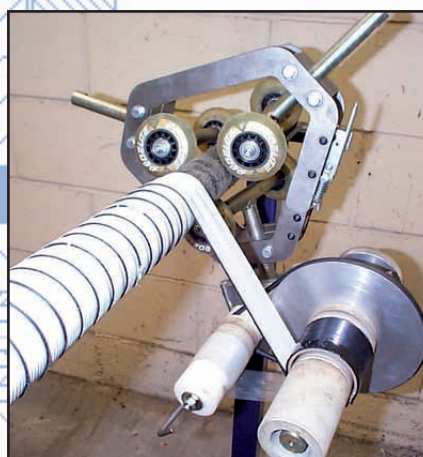
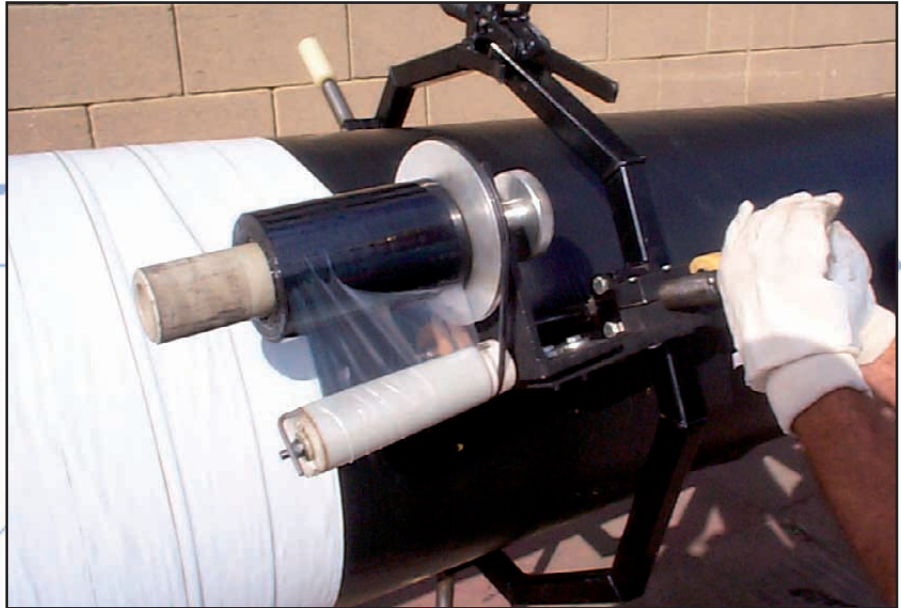
Optimum Surface Tolerant Systems

Denso Tape Wrapping Machinery

A comprehensive range of tape wrapping machines are available to enable fast and consistent high quality application. Use of the machines ensures consistent tension and accurate overlap of the tape at all times.

Main Features:

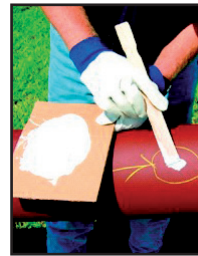
- Hand powered as well as powered rolling rig versions available
- Consistent tape tension always achieved
- Accurate tape overlap always achieved
- Automatic removal and gathering of tape interleaving
- Fast application



80 Years of Proven Performance

Denso Protal Pipeline Coatings

A range of epoxy coatings designed for application to abrasive blast cleaned steel pipe, welds, tie-ins, fittings etc.



Main Features:

- High build achieved in only one coating operation
- Very fast curing liquid applied coatings
- Designed for the external protection of all line-pipe, fittings, specials and storage vessels
- Excellent cathodic disbonding resistance
- Standard high quality abrasive blast cleaning surface preparation
- Can be applied by either brush, roller or spray methods
- Protal Repair Cartridge Kits with a dispensing gun are available in all Protal grades. Economical with minimal wastage - very quick and easy to apply

Description - Denso Protal Liquid Coating Systems

Protal 300 System

A patented 'weld-joint' epoxy coating system that bonds exceptionally well to polyethylene shop coated pipe.

Protal 7200 is used in conjunction with Denso Superbond Adhesive to provide a very fast curing, protective system for three layer PE coated pipe joints.

Service temperature -34°C to +85°C
(-29°F to +185°F)



Durable Epoxy Pipeline Coatings

Denso Protal Pipeline Coatings

Protal 7000

High build, pipeline coating.

A solvent free two-pack epoxy coating that can be hand or spray applied to the exterior surfaces of grit blasted steel pipe, pipe welds, coastal installations valves and industrial equipment.

Exhibits excellent cathodic disbondment properties.

● Approved by Transco in the UK



Protal 7000 Airless Spray

High performance epoxy coating.

Solvent free, two pack, high build, high performance epoxy coating which is applied with conventional airless spray equipment.



Protal 7000 X

A lower cost alternative.

Protal 7000 X is an extremely durable glass flake reinforced polyester coating that can be easily applied in one coat by airless spray method, at a minimum thickness of 1mm in normal ambient temperature conditions.

This heavy duty coating also cures very quickly to form a very tough cost-effective solution for long-term protection.



Standard Abrasive Blast Cleaning

Denso Protal Pipeline Coatings



Protal 7125

Fast cure, low temperature pipeline coating - winter grade.

A low temperature coating that can cure at -20°C (-4°F). The coating can be backfilled in 30 minutes at 10°C (50°F).

Used for girth welds, tie-ins, rehabilitation, repairs to FBE and sacrificial coating to FBE.



Protal 7200

High build, fast cure pipeline coating.

A fast cure one coat epoxy coating that can be hand or spray applied to girth welds, tie-ins, fittings and rehabilitation of existing pipelines.

Exhibits excellent cathodic disbondment properties at 80°C (175°F).



Protal 7900

High temperature pipeline coating.

A high build epoxy coating that can be hand applied to girth welds, tie-ins, fittings and rehabilitation of existing pipelines.

Maximum operating temperature up to 120°C (250°F).



Only One Coating Operation

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