



Volume 29 - Number 4

A Northumbrian water aqueduct protected with three Denso Steelcoat Systems - see story page 4.

QUALITY & INNOVATION FROM 1883 INTO THE 21ST CENTURY



OVER 125 YEARS SERVICE TO INDUSTRY

WINN & COALES INTERNATIONAL LTD

For further information on our products and their suitability for your particular project, please contact any of the Denso companies listed below:

WINN & COALES (DENSO) LTD

Denso House, Chapel Road, London SE27 OTR, England
✓ Anti-corrosion and sealing systems

Tel: +44 (0) 20 8670 7511
Fax: +44 (0) 20 8761 2456
Email: mail@denso.net
Website: www.denso.net



ARCHCO-RIGIDON

Denso House, Chapel Road, London SE27 OTR, England
✓ Corrosion resistant linings

Tel: +44 (0) 20 8761 6244
Fax: +44 (0) 20 8761 2456
Email: mail@denso.net
Website: www.denso.net



DARTFORD COMPOSITES LTD

Unit 1, Ness Road, Erith, Kent DA8 2LD
✓ Manufacture and repair of FRP panels for cars and trains

Tel: +44 (0) 1322 350097
Fax: +44 (0) 1322 359438
Website: www.dartfordcomposites.co.uk



DENSO NORTH AMERICA INC - CANADA

90 Ironside Crescent, Unit 12, Toronto, Ontario, M1X 1M3
Canada
✓ Anti-corrosion and sealing systems

Tel: +1 416 291 3435
Fax: +1 416 291 0898
Email: sales@densona.com
Web site: www.densona.com



DENSO USA - LP

9747 Whithorn Drive, Houston, Texas 77095
United States of America
✓ Anti-corrosion and sealing systems

Tel: +1 281 821 3355
Fax: +1 281 821 0304
Email: houston@densona.com
Web site: www.densona.com



DENSO SOUTH AFRICA (PTY) LTD

120 Malacca Road, Redhill Industrial Area, Durban North 4051,
Republic of South Africa
✓ Anti-corrosion and sealing systems

Tel: +27 31 569 4319
Fax: +27 31 569 4328
Email: bid@denso.co.za
Web site: www.denso.co.za



DENSO (AUSTRALIA) PTY LTD

411-413 Victoria Street, Brunswick, Victoria 3056,
Australia
✓ Anti-corrosion and sealing systems

Tel: +61 1300 658 590
Fax: +61 39387 6973
Email: denso@densoaustralia.com.au
Website: www.densoaustralia.com.au



DENSO (NEW ZEALAND) LTD

PO Box 76167, Manakau City, Auckland,
New Zealand
✓ Anti-corrosion and sealing systems

Tel: +64 9274 1255
Fax: +64 9274 1258
Email: enquiries@denso.co.nz
Website: www.densoaustralia.com.au



SEASHIELD INTERNATIONAL

Denso House, Chapel Road, London SE27 OTR, England
✓ Marine corrosion protection systems

Tel: +44 (0) 20 8670 7511
Fax: +44 (0) 20 8761 2456
Email: mail@denso.net
Website: www.denso.net



SEASHIELD INTERNATIONAL

9747 Whithorn Drive, Houston, Texas 77095
United States of America
✓ Marine corrosion protection systems

Tel: +1 281 821 3355
Fax: +1 281 821 0304
Email: houston@densona.com
Web site: www.densona.com



SEASHIELD INTERNATIONAL

411-413 Victoria Street, Brunswick, Victoria 3056,
Australia
✓ Marine corrosion protection systems

Tel: +61 1300 658 590
Fax: +61 1300 655 064
Email: denso@densoaustralia.com.au
Website: www.densoaustralia.com.au



SEASHIELD INTERNATIONAL

PO Box 76167, Manakau City, Auckland,
New Zealand
✓ Marine corrosion protection systems

Tel: +64 9274 1255
Fax: +64 9274 1258
Email: enquiries@denso.co.nz
Website: www.densoaustralia.com.au



PREMIER COATINGS LTD

Headcord Road, Smarden, near Ashford,
Kent TN27 8PJ, England
✓ Membranes and corrosion protection systems

Tel: +44 (0) 1233 770663
Fax: +44 (0) 1233 770633
Email: enquiries@premiercoatings.com
Website: www.premiercoatings.com





LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Half Shell Protection for Chapelcross Effluent Pipe

When the Chapelcross Magnox nuclear power station was constructed nearly fifty years ago, a 6km effluent pipe discharged up to a million gallons of cooling water daily into the Solway Firth.

Although the 15" diameter pipe was originally only designed to last 25 years, several years ago it was given additional protection with Denso Ultraseal Tape. Its life has now been further extended with Denso protective materials again being specified, in order to meet the decommissioning and de-fuelling needs of the Magnox North site and to minimise the risk of discharging contaminated limescale which has built up inside the effluent pipe.

This latest £2.2m life extension project, carried out by main contractor Radius systems Ltd, has involved sliplining with a polyethylene inner pipe.

This involved breaching the pipe at eight points along its length and inserting the 180mm dia. inner polyethylene pipe.

The areas where the inner sleeve was inserted were then re-installed with a bolted half-shell arrangement. To protect the new steelwork for the extended life span of the pipe, civils sub-contractor RH Irving Construction Ltd applied the Steelcoat 400 System comprising Denso Hi-Tack Primer, Densyl Mastic (creating a profile over the bolts), Denso Hi-Tack Tape, Denso Ultraseal Tape and Denso Acrylic Topcoat.

For quick identification of the relevant product type used in each story we have used the following colour codes:

Protective coatings for.....

- BURIED PIPELINES & LPG VESSELS
- EXPOSED STEEL & PIPEWORK
- SUB SEA PIPELINES & JETTY PILES

Protective linings for.....

- STORAGE TANKS, PUMPS ETC

Sealing & waterproofing.....

- SEALING MASTICS
- MEMBRANES & FLASHINGS
- INDUSTRIAL TAPES



Above: Densyl Mastic being applied to profile the half shell bolts prior to wrapping with tape.

Below: The completed Steelcoat 400 System.



Project Summary

Product type:
Exposed Steel Coating

Country: United Kingdom
Location: Chapelcross
Object: Effluent pipe
Problem: Corrosion prevention
Product solution: Steelcoat 400 System



LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Denso Steelcoat Systems Protect Rural Aqueduct

Denso Steelcoat 100/400 and 700 Systems were all specified for the updated protection of a Northumbrian water aqueduct in a remote rural area. The work was carried out by Northumbrian Water's approved contractors, UTS Ltd of South Shields.

The aqueduct spans 45m over a river and carries three 25" diameter potable water pipes on the underside. It was built in 1898 and is a listed structure. This meant that part of the contract called for the new Denso coating to be closely matched to the original colours agreed by the local authority.

The water pipes and the underside of the aqueduct were protected with Denso Steelcoat 100 and 400 tape wrap systems.

The Denso Steelcoat 400 System applied by UTS (following wire brushing to remove previous coatings) consisted of: Hi-Tack Primer, Denso Profiling Mastic, Hi-Tack Tape, Ultraseal Tape followed by a final two coats of Denso Acrylic Topcoat. The steelwork

on the main structure was protected using Denso Steelcoat 700 System which consists of Denso ST Epoxy followed by a top coat of Denso Weathershield. This Denso top coat was supplied in the special colours agreed to by the local authority in compliance with the listed structure regulations.



Above and below the Denso Steelcoat System protected aqueduct, matching the original colours as specified by the local authority to comply with the listed structure regulations.



Project Summary

Product type:
Exposed Steel Coating

Country: United Kingdom
Location: Northumbria
Object: Aqueduct
Problem: Corrosion prevention
Product solution: Denso Steelcoat 100/400 & 700



LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Archco-Rigidon Protects British Sugar Conveyor

Archco-Rigidon corrosion resistant and anti-abrasion linings have been used to protect a conveyor system for British Sugar.



Project Summary

Product type:
Industrial Lining

Country:	United Kingdom
Location:	Wissington
Object:	Screw conveyor
Problem:	Corrosion prevention
Product solution:	Archco-Rigidon 423D and 523D

Designed and manufactured by George Robson of Sheffield, the Archimedes type screw conveyor mechanism feeds sugar beet slurry from wet pumps to press stations at British Sugar's Wissington plant, near King's Lynn.

The Archco-Rigidon 423D and 523D linings used are based on glass flake vinyl ester. They were applied by Broadblast of Sheffield who first shotblasted the surfaces to ensure a good mechanical key for the linings.

Long-Life Protection for Electricity Pylon Leg Bases

Northern Divers Engineers Ltd of Hull have recently completed a contract for protecting the legs bases of electricity pylons in a Midlands Area of Special Scientific Interest (SSI). The consultants for the project, Intertek Ltd, recommended a Denso Tape system.



Denso Tape had been applied 25 years ago to protect the pylon leg and when it was removed by Northern Divers, using hand tools the surfaces were found to be still free from corrosion.

The new Denso Tape system was applied partially immersed from the concrete base to up to 2 metres of the pylon legs. It comprised application of Denso paste and Denso Profiling Mastic to give smooth contours for the following two tapes. These were Denso Marine Piling Tape followed by Denso Glass Outerwrap. This system is expected to give full maintenance free protection for another 25 years.

Project Summary

Product type:
Exposed Steel Coating

Country:	United Kingdom
Location:	The Midlands
Object:	Pylon leg bases
Problem:	Corrosion prevention
Product solution:	Denso Tape System





LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Denso Protects Sasol Gas Pipeline

Denso South Africa was recently chosen to supply their Denso Butyl S43/R23 system for the protection of the 520m, 24" diameter Sasol Gas pipeline.

The contractor WK Construction was appointed to apply the corrosion prevention coating.

A total of 3,505 sq.m of Denso Butyl tape and 220 litres of Denso Butyl Primer was

used on the project.

Contractor WK Construction used Densoman Wrapping Machines to speed up the Denso Butyl Tape System application.



Project Summary

Product type:
Buried Steel Coating

Country: South Africa
Location: Gauteng (Elsparck)
Object: Pipeline
Problem: Corrosion prevention
Product solution: Denso Butyl S43/R23



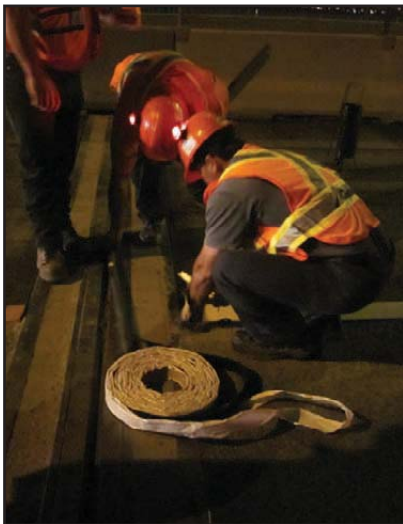


LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Densoband Seals Up the Champlain Bridge

The Champlain Bridge in Montreal, Quebec is a steel cantilever bridge constructed of pre-stressed concrete beams and concrete deck under an asphalt road surface.

The bridge crosses the Saint Lawrence River and the Saint Lawrence Seaway. In a single shipping season it will see hundreds of freighter ships as they pass under the bridge on



Applying 45mm x 8mm Densoband to the bridge's steel expansion joints during the night.

their way into and out of the Great Lakes.

The bridge is the busiest in Canada with 160,000 vehicle crossings daily. It is approximately 6 kilometers in length across the Saint Lawrence River and was named after a French explorer, Samuel de Champlain, who founded Quebec City in 1608.

Opened in 1962, it has 6 lanes of traffic and sees a variety of both vehicular and truck traffic on a daily basis.

Due to the success of our Densoband product in road repairs in the City of Montreal over the years, the Canadian

Federal Government included Densoband into the specification for joint repairs to the Champlain Bridge to take place in the summer of 2010.

Late in August 2010, during night-time installation due to bridge closures, a total of 8,000 metres of 45mm x 8mm material was installed over a 4-day period both longitudinally and transversely as a joint seal between existing asphalt and new asphalt as well as existing steel expansion joints and new asphalt.

The work was completed most satisfactorily in order for traffic to flow without undue delays and looking forward to 2011, the process will be

repeated again for approximately the same volume of product.

Denso Road Products, including Densoband and Reinstatement tape continue to gain in popularity and recognition as a long term, high quality joint sealant for asphalt surfaces in both new and existing road projects, with installations for roads, bridges, airport runways, parking garages and rail crossings.

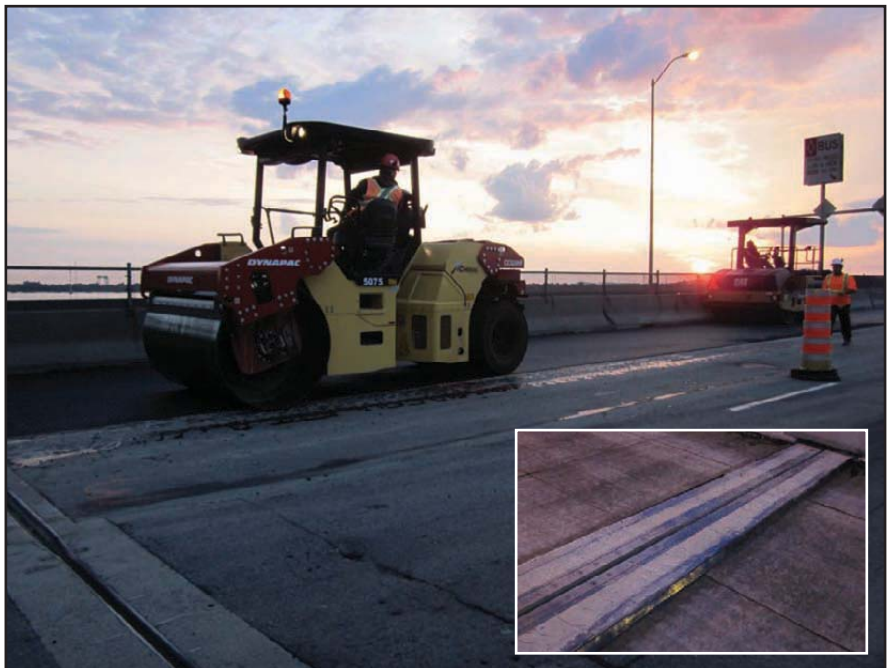
Denso Road Products - keeping Canada's infrastructure in top shape, now and into the future!!!

Project Summary

Product type:
Sealing Mastic

Country: Canada
Location: Montreal, Quebec
Object: Bridge
Problem: Jointing Road Surface
Product solution: Densoband

Below: laying the new asphalt road surface - heat from the asphalt fuses with the Densoband creating an excellent flexible seal over the entire vertical joint face. Inset - Densoband applied to the expansion joints.





LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY



Tampa Port Authority - Berth 26.



Pile protected with Denso's SeaShield Series 2000HD.

Pile Rehabilitation with the SeaShield Series 2000HD System

The Tampa Port Authority completed an inspection on one of their docks and found a premature coating failure on the steel piles within the first year. They selected the SeaShield Series 2000HD due to its excellent history of providing corrosion protection for in-situ piles.

Severe corrosion of pile prior to cleaning.



Project Summary

Product type:
Sub Sea / Splash Zone Coating

Country: USA
Location: Tampa, Florida
Object: Jetty Piles
Problem: Corrosion prevention
Product solution: SeaShield Series 2000HD System



LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY



the underwater portion which took less than one hour, per pile, to wrap each 35' pile. The last step of the installation was to apply the heavy-duty HDPE outer covers, which were secured with 316 stainless steel bolts and nuts.

The SeaShield 2000HD System will add many more years to the life of the dock structure. Tampa Port Authority and Misener Marine were extremely satisfied as the project was completed on budget and ahead of schedule.



Photographs:

Top: Application of Denso Paste S105.

Centre: Wrapping the prepared pile with Denso Marine Piling Tape.

Bottom: Installation of the SeaShield Outercover and tightening of the 316 SS bolts.

The severe blistering and peeling was along the full length of the piles and consisted of 89 each 24" diameter x 35 feet. Misener Marine was selected as the dive contractor to install the Series 2000HD System. To clean the piles and install the system they utilized two dive stations from a flat bottom dive boat. The piles were cleaned to a SSPC SP 2-3. Next the Denso Paste S105 was applied over the entire surface to be coated. Then, the Denso Marine Piling Tape was applied with a 55% overlap. Misener Marine used 2 divers for





LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Protal Protection for Young to Wagga Wagga Pipeline

The Young to Wagga Wagga Pipeline involves the construction and operation of a gas pipeline and associated infrastructure that loops 61 kilometres (from Bomen to just north of Bethungra) of the existing 131 kilometre gas pipeline between Young to Wagga Wagga.

This comprises the first stage of the planned duplication (or looping) of the entire existing 131 kilometre pipeline between Young to Wagga Wagga. This new pipeline is a lateral that connects to APA Group's Moomba to Sydney Pipeline System.

Onsite training was completed 2 days prior to the commencement of the project.

The Contractor WDS prepared the surface by abrasive blasting to Sa2½ then WDS commenced their application of the Protal 7200 by hand to 3,500 Field Joints.

Upon completion inspection and testing of the Protal 7200 took place to ensure a DFT of 1000µ had been achieved.

Applying the Protal 7200 by hand roller.



Shot blasting the field joints to SA2½ prior to the Protal application.



The Young to Wagga Wagga Pipeline Stage 1.



Project Summary

Product type:
Buried Steel Coating

Country: Australia
Location: New South Wales
Object: Pipeline Joints
Problem: Corrosion prevention

Product solution: Denso Protal 7200



LEADERS IN CORROSION PREVENTION & SEALING TECHNOLOGY

Denso Void Filler Solves Library Moisture Problem

During refurbishment of the library building at Stirling University (constructed in the late 60s) Lewis and Hickey, the architects leading the design team encountered a problem resulting from rainwater seeping into the steel box sections supporting the air conditioning plant on the roof. The moisture was then finding its way into the library building causing general dampness on the top floor.

The project structural engineers, Wren & Bell, suggested that the architects should contact Denso who recommended their Denso Void-Filler (Steelcoat 50 System) to fill the voids in the box sections thereby preventing the ingress of moisture. Sir Robert McAlpine, the main contractor on the site, poured Denso-Void Filler into the box sections in three layers thus ensuring the void was completely filled.



Project Summary

Product type:
Exposed Steel Coating

Country: United Kingdom
Location: Stirling, Scotland
Object: Steel box sections
Problem: Sealing joints
Product solution: Denso Void-Filler

Archco-Rigidon Protection for Offshore Process Vessels

Contractors Blastpride Ltd of Cardiff are using Archco-Rigidon 423D lining to protect 'special design' large process vessels for



the offshore oil industry.

Archco-Rigidon 423D is based on glass flake vinylester and has been applied to a total of eight vessels measuring 4.9m in diameter and ranging from 15 to 18m in length. The vessels were all shotblasted to SA2½ before being coated.

Project Summary

Product type:
Industrial Lining

Country: United Kingdom
Location: Cardiff, Wales
Object: Oil process vessels
Problem: Corrosion prevention
Product solution: Archco-Rigidon 423D