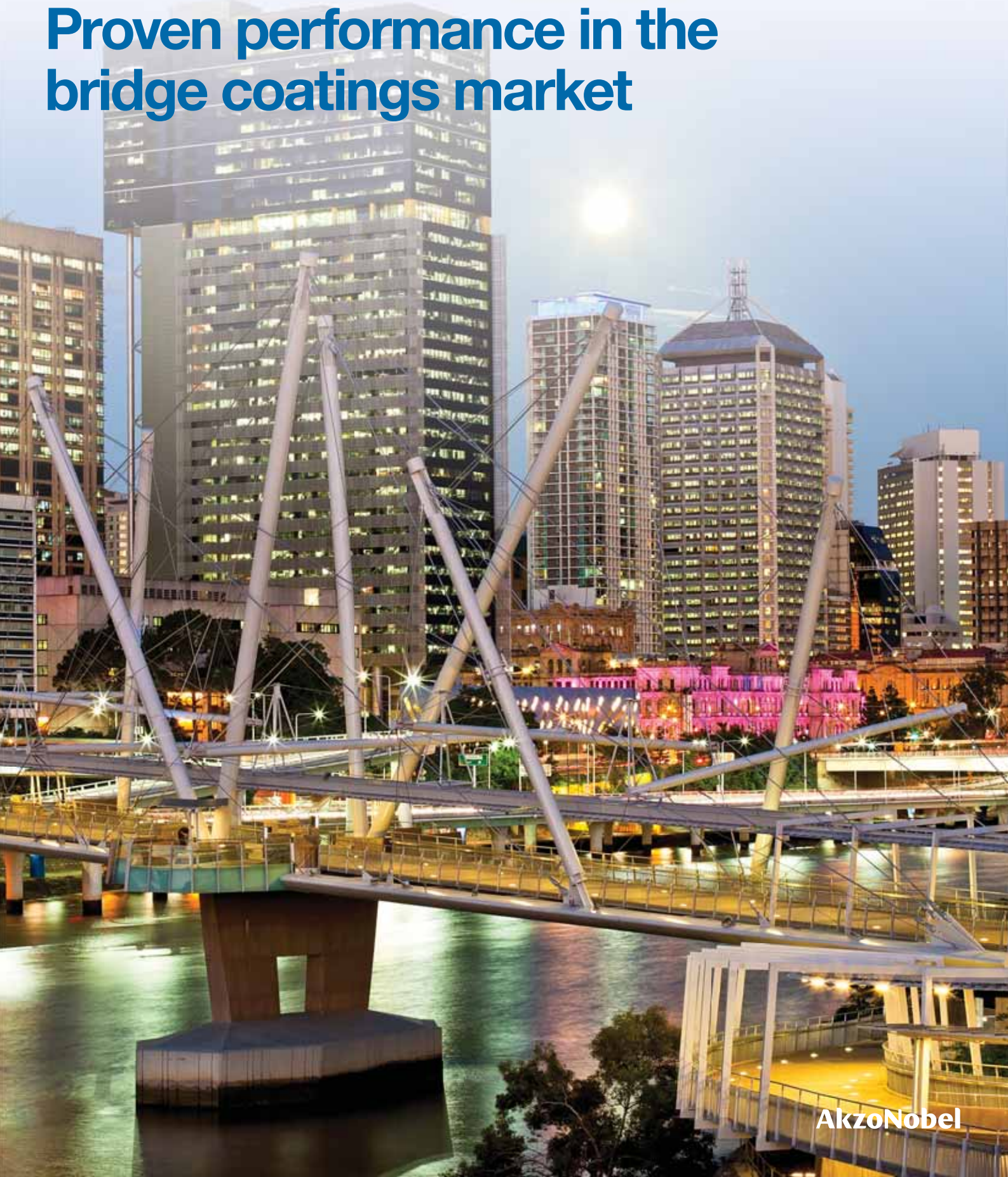


Bridges Track Record

Proven performance in the
bridge coatings market



Demonstrating global experience through an extensive track record

In a market where the planned service life of a bridge can exceed 100 years, it is vital that all involved in the project can have confidence in the coatings supplier to provide proven corrosion protection

You can take confidence from:

- Over 20 years of experience supplying protective coatings to the bridge market and the expertise this brings
- Our extensive International® range of coatings products and systems continue to benefit from investment in research and development and testing to ensure we provide the best quality performance possible
- Our global network of highly trained people situated around the world provide a dedicated service to you and your project ensuring the best results are achieved every time

Selecting the correct coating system is vital - whether at the construction phase, major refurbishment or as part of routine maintenance

AkzoNobel's International® range of protective coatings products have been rigorously evaluated and benchmarked against a range of standards.

At new construction the ISO 12944 standard provides engineers with best practice in corrosion mitigation of structural steel. We actively support this standard alongside regional testing protocols and approvals including NTPEP in the USA, and Highways Agency in the UK.

Sustainability and performance with no compromise

We have a lasting commitment to providing high performance durable coating solutions which minimize the environmental impact of your project, supporting your overall sustainable design credentials.

Our Interfine® group of polysiloxane finish coatings is a prime example as they offer:

- Significantly longer color and gloss retention than traditional topcoats
- Significantly reduced solvent or volatile organic compound (VOC) emissions when compared to systems based on polyurethane and fluoropolymer technologies
- No hazardous isocyanates

Global organization

As a global organization we supply coatings from a number of worldwide manufacturing locations via our local distribution networks, straight to your project location.

If your project requires materials to be sourced from overseas then we are equipped to supply to multiple locations across country, and even continental borders.

As well as our track record in worldwide projects, our global product range ensures that you can have confidence in receiving a consistent quality of product and service wherever and whenever it is required, regardless of location.

Furthermore, our experienced local sales teams and technical service representatives can offer valuable insight into the approvals and testing required to bring your project in on schedule without untimely delays.

Building for the future

As demand on transport infrastructure increases, so too does the need to build longer, wider and more elaborate bridge structures.

This generates unique challenges which require innovative engineering solutions, pushing the boundaries of bridge construction to the limits.

On top of this, harsh operating environments, and the need to squeeze maintenance

schedules to avoid costly disruption, means that the coating requirements of the bridge industry, for both new construction and maintenance, continue to increase in complexity.

In order to meet these growing demands we remain committed to continual investment in our three state of the art research and development facilities in the UK, USA and China to provide creative solutions for the evolving needs of the market.

New construction

Track record Kurilpa Bridge | Brisbane, Australia



Project year: 2009
Owner: Queensland Government
Architect: Cox Rayner Architects
Fabricator: Beenleigh Steel
Applicator: Tranzblast

Following its opening in 2009, the Kurilpa Bridge became the world's largest 'tensegrity' structure in existence. Tensegrity being a structural principal based on the various component parts of the structure either being in a state of pure tension or pure compression

At 470 meters (1,542ft) in length, the Kurilpa Bridge, which spans the Brisbane River connects South Brisbane, the major cultural precinct, to the city's central business district.

The pedestrian and cycle bridge was voted World Transport Building of the Year 2012 at the World Architectural Festival (WAF). The balance of the tension and compression within Kurilpa Bridge allowed the architects to create a structure which was incredibly strong and yet comparatively light, a key requirement of the project.



The project team on the Kurilpa Bridge required a high performance coatings system from a supplier they could rely on. They chose a three coat system from AkzoNobel's International® range which comprised of; Interzinc® 52 zinc rich epoxy primer, Intergard® 475HS high solids epoxy intermediate and a finish coat of Interfine® 878. With its high performance, patented acrylic polysiloxane technology and extensive track record in bridge new construction, Interfine® 878 was best suited to provide the long term aesthetic performance this iconic landmark required.

Oakland Bay Bridge | USA



Year: 2013
Owner: California Department of Transportation
Architect: T.Y.Lin International
Contractor: ABF

Sheikh Zayed Bridge | United Arab Emirates



Year: 2010
Owner: Abu Dhabi Municipality
Architect: Zaha Hadid
Contractor: Archirodon Construction

Hangzhou Bay Bridge | China



Year: 2007
Owner: Ningbo Hangzhou Bay Bridge Development Co. Ltd.
Architect: CCCC Highway Consultants Co. Ltd.
Contractor: CCCC Second Harbour Engineering Co. Ltd.
Applicator: Zhenjiang Lanbo Engineering Technology Co. Ltd.

Gateshead Millennium Bridge | UK



Year: 2000
Owner: Gateshead Metropolitan Council
Architect: Wilkinson Eyre
Contractor: Harbour & General, Volker Stevin
Applicator: Watson Steel Ltd.

Protecting landmark structures

Coventry's Glass Bridge was built as part of the Phoenix Project, a regeneration scheme to restore a neglected area of the city.

The innovative bridge features a large pre-bent steel tube with irregularly positioned supporting columns to avoid features beneath the bridge.

To maintain the impressive aesthetics of the bridge the project team relied upon the Interfine® range of polysiloxane finishes.



Reinstatement of concrete cover

During construction of this state of the art footbridge for visitors of Wembley Stadium, it was found that the abutments supporting the main arch had insufficient concrete cover to the steel reinforcement.

Chosen because of its thixotropic nature and proven performance in reinstating concrete cover, Intercrete™ 4840, a two component cementitious coating, was brush applied to a 2mm (80 mils) thickness to give in excess of an additional 100mm (4") of effective cover.

Bridge name	Location	Owner	Applicator	Year
Webb Bridge	Australia	Mirvac Corporation/ VicUrban	Geelong Fabrications	2003
Springfield Pedestrian Bridge	Australia	The Horizon Alliance	The Horizon Alliance	2007
Mabel Park School Western Arterial Bikeway	Australia	Main Roads Department	Main Roads Department	2008
Falcon Street Cycle Bridge	Australia	Roads and Traffic Authority	R.E.D Abrasive Blasting & Protective Coatings	2008
Toowong Cyclist and Pedestrian Crossing	Australia	Main Roads Department	Main Roads Department	2008
Yarra Bridge	Australia	Melbourne City Council	Fitzgerald Constructions	2008
Falcon St Footbridge	Australia	Roads and Traffic Authority of NSW	Reed Constructions Australia	2010
Monk Bridge	Canada	Government (Local)	Inter Ocean Services	2002
FuJian QingZhou MingJiang Bridge	China	China Everbright International Limited	Railway Bridge Bureau Group Co., Ltd.	1999
XiaMen HaiCang Bridge	China	Xiamen Road & Bridge Construction Group Co., Ltd.	Fujian Chengxin Engineering Co., Ltd.	1999
GuangZhou YaJiSha Bridge	China	Guangzhou Communication Investment Group Co., Ltd.	Guangzhou Haiwei Corrosion Protection Co., Ltd.	2000
WuHan BaiShaZhou ChangJiang Bridge	China	Wuhan Chengcheng Street Bridge Development Co., Ltd.	CCCC The Second Harbor Engineering Co., Ltd.	2000
Yichang Yangtze Highway Bridge	China	Yichang Yangtze Highway Bridge Construction and Development Company	Yichang Yangtze Highway Bridge Development Company	2001
WuHan JunShan ChangJiang Highway Bridge	China	Beijing-Zuhai Expressway Management Office of Hubei Province	JiangSu CUMT Dazheng Surface Engineering Technology Co., Ltd.	2001
TaoYaoMen Bridge	China	Zhoushan Islands Linking Engineering Head Office	JiangSu CUMT Dazheng Surface Engineering Technology Co., Ltd.	2003
Changsha HongShan Bridge	China	Changsha City Construction Investment and Development Co., Ltd.	JiangSu CUMT Dazheng Surface Engineering Technology Co., Ltd.	2005
GuangDong Province ZhongShan City ChangJiang Bridge	China	Zhongshan ChangJiang Bridge Headquarter	CSSC GuangZhou HuangPu Shipbuilding Co., Ltd.	2006
Hunan SanChaJi Bridge	China	Changsha City Construction Investment and Development Co., Ltd.	The 5th Eng. Co. of China Railway Bridge Bureau Engineering Group	2006
HuNan Mao Cao Jie Bridge	China	Yiyang Maocao Street Bridge Construction and Development Co., Ltd.	JiangSu CUMT Dazheng Surface Engineering Technology Co., Ltd.	2006
HangZhou Bay Bridge	China	Ningbo Hangzhou Bay Bridge Development Co., Ltd.	Zhenjiang Lanbo Engineering Technology Co., Ltd.	2007
CaiYuanBa Bridge	China	ChongQing City Construction Investment Corporation	Jiangsu CUMT Dazheng Surface Engineering Technology Co., Ltd.	2007
ZhanJiang Bridge	China	Zhanjiang Hai Wan Bridge Co., Ltd.	GD Provincial Changda Highway Engineering Co., Ltd.	2007
GuiZhou BeiPangJiang Bridge	China	Guizhou Expressway Develop Co.	Guizhou Road and Bridge Goup	2008
Shenyang Sanhao Bridge	China	Shenyang City Construction Administration Bureau	CCCC Fourth Highway Engineering Co., Ltd.	2008
HuMen Bridge	China	Guandong Humen Bridge Co., Ltd.	JiangSu CUMT Dazheng Surface Engineering Technology Co., Ltd.	2010
Fuyang Lushan Bridge	China	Fuyang Communication Construction & Investment Co., Ltd.	China Petroleum and Chemical Construction Corporation	2011
Donghua Bridge	China	Jiangmen City Construction Investment Management Center	Jiangmen Zexing Steel Structure Co., Ltd.	2011
Mirna Viaduct	Croatia	Government (National)	Costruzioni Cimolai Armando S.p.A	2005
Øresund Bridge	Denmark, Sweden	Government (National)	Skanska International Civil Engineering AB & Alucrom AB (Midroc)	1999
Samuel Beckett Bridge	Ireland	Dublin City Council	Hollandia / Gelders-Staalstraat en Schilderbedrijf (GSB).	2009
Second Thai–Lao Friendship Bridge	Laos - Thailand	Government (National)	EMCO Ltd.	2004
Henderson Bridge	Malaysia	Singapore's Urban Redevelopment Authority	MTTJ (M) SDN BHD	2006
Tampico Bridge	Mexico	Secretaría de Comunicaciones y Transportes (SCT)	Obras y Proyectos S.A. de C.V.	1988
Jan Schaeferbrug	Netherlands	Government (Local)	Hollandia BV	2001
The Ring Bridge	Netherlands	Smallerland Opsterland	Milcon Technology b.v.	2002
Bridge Vlaardingse Vaart	Netherlands	City of Vlaardingse	Milcon Technology b.v.	2008
Jacobs Ladder Pedestrian Bridge	New Zealand	New Zealand Transport Authority (NZTA)	Cake Commercial	2012
Point Resolution Bridge	New Zealand	Auckland Council	Counties Industrial Coatings	2013
Kaituna Bridge	New Zealand	New Zealand Transport Authority (NZTA)	Napier Sandblasting	2013
Ngaruawahia New Bypass Bridge	New Zealand	New Zealand Transport Authority (NZTA)	Napier Sandblasting	2013
Skorogoszcz Bridge	Poland	Government (Local)	Budimex Dromex S.A.	2006
Gorzow Wielkopolski Bridge	Poland	General Directorate for National Roads and Motorways	Strabag	2007
Puente del Tercer Milenio	Spain	Zaragoza City Council	Dragados	2008
Pabellon Puente	Spain	Expoagua Zaragoza	Tecoin	2008
Oka River Bridge	Russia	KalgaTransMost, JSC	NPO Mostovik, LLC	2008
Ob River Bridge	Russia	Federal Highway Agency 'Siberia'	Sibmost, JSC, Mobil Stroy XXI, LLC	2008
Khabarovsk Railway Bridge	Russia	JSC Russian Railways	Columbus, LLC	2009
Partizanskaya River Bridge	Russia	Federal Highway Agency of Ministry of Transport	Columbus, LLC	2009
Western Speed Diameter	Russia	Western Speed Diameter, JSC	Mostootryad 19, LLC	2010
Svinesund Bridge	Sweden and Norway	Swedish and Norwegian Road Authorities JV	Plauen Stahl Technologie GmbH	2003
DU13 Series Steel Bridge Structures	Taiwan	TAIWAN High Speed Railway Corporation	Kawada Industries, Inc.	2005
West India Quay Footbridge	UK	London Docklands Development Corporation	Littlehampton Welding Ltd.	1996
The Millennium Bridge	UK	Gateshead Metropolitan Council	Watson Steel Ltd.	2000
London Millennium Footbridge	UK	Government (Local)	Ove Arup & Partners	2000
Whittle Arch and Glass Bridge	UK	Government (Local)	Rowecord Engineering Ltd.	2000
Wynyard Cycle Bridge	UK	Durham Council	Nusteel Structures	2001
Second Severn Crossing	UK	Severn Crossing PLC	Cimolai Costruzioni Metalliche	2003
Port Tawe Sail Bridge	UK	Welsh Development Agency	Rowecord Engineering Ltd.	2004
Riverside Foot and Cycle Bridge	UK	Cambridgeshire County Council	Watson Steel Ltd.	2007
River Suir Bridge	UK	Waterford City Council	Cleveland Bridge UK Ltd.	2008
Tradeston Footbridge	UK	Glasgow City Council	RBG Ltd.	2009
IQ Winnersh Footbridge	UK	SEGRO	Littlehampton Welding	2009
Woodrow Wilson Bridge	USA	Maryland State Highway Administration	King Fabrication	2007
San Francisco Oakland Bay Bridge	USA	Caltrans (California Department of Transportation)	Shanghai Zhenhua Heavy Industry Co., Ltd.	2013

Maintenance

Track record Sydney Harbour Bridge | Australia



Project year:	2003
Owner:	Roads and Traffic Authority, New South Wales
Contractor/ Applicator:	Sydney Harbour Bridge Maintenance

Opened in March 1932 Sydney Harbour Bridge is one of the world's most recognizable landmarks and currently the sixth longest arch bridge in the world with a span of 503 meters (1,650ft)

The bridge took eight and a half years to construct, in which time 52,800 tons of steel were used, including 39,000 tons in the supporting arch, making it the largest steel arch bridge in the world.

In the year 2000, shortly after the spectacular millennium fireworks display around the bridge, the organization charged with the care of the bridge, RTA (Roads and Traffic Authority, New South Wales) decided that the bridge's coating system needed upgrading for the new century.

Up until then the coating system used was based on aged technology – two coats of alkyd primer followed by two coats of MIO metallic chlorinated rubber. While the aesthetic finish this gave was adequate, corrosion resistance of the coating was not, creating a need for regular and sustained maintenance.

Subsequently RTA identified the need for a new system which could maximize the time interval between recoats and provide long term aesthetic durability whilst remaining cost effective in the long term.



The system from AkzoNobel's International® range that was chosen was Interzinc®, a zinc rich epoxy primer, Intergard®, a high build, high solids intermediate coat and Interthane®, a polyurethane topcoat. Not only is this system more durable and corrosion resistant than the previous coatings, it is more aesthetically pleasing and far more environmentally friendly with only 25% of the level of VOC emissions.

RTA works manager Jacques Callaud explains, "when assessing the tenders from coatings manufacturers we took into consideration cost per litre, technical service and assistance, reliability and quality. International® was not the cheapest per litre, but were judged the most economical on all counts, and have proved themselves since winning the contract."

Brooklyn Bridge | USA



Year: 2011
Owner: New York City Department of Transport
**Contractor/
Applicator:** Ahern Contractors

Westgate Bridge | Australia



Year: 2010
Owner: Vic Roads
**Contractor/
Applicator:** JT Corrosion, Belkblast, Action Alliance, Allblast, A-AA Blastmasters, McElligotts.

Plock Bridge | Poland



Year: 2007
Owner: Municipality of Plock and Polish Railway Lines Authority
**Contractor/
Applicator:** Heko Wloclawek

Bosphorus Bridge | Turkey



Year: 2002
Owner: Government (National)
**Contractor/
Applicator:** Metel and Sabit C. Hedbe

Common corrosion issues

The increasing use of de-icing salts during the winter months to improve road surfaces has led to increased levels of corrosion in both steel and reinforced concrete.

Thros Neck Bridge is one of many bridge structures which saw the effects of this and turned to our International® coatings range for surface tolerant maintenance coatings to protect the deteriorating steel substrate and prolong the life of the structure.



Road, rail and pedestrian

Over the years, we have provided protective coatings for bridges of all shapes and sizes regardless of its purpose.

The Queen Elizabeth II rail bridge in Newcastle Upon Tyne supports a metro line which completes around 40 million passenger journeys each year.

In 2007 we provided maintenance coatings to prolong the life of this vital transport link.

Bridge name	Location	Owner	Applicator	Year
Fremantle Rail Bridge	Australia	Westrail	Zedcon Scientific Services	2002
Sydney Harbour Bridge	Australia	Roads and Traffic Authority, New South Wales	Sydney Harbour Bridge Maintenance	2003
Harwood Bridge	Australia	Roads and Traffic Authority, New South Wales	Lothways - TBS Pty Ltd.	2004
Ephraim Island Bridge	Australia	Inter Ocean Services	Queensland Industrial Coating	2005
Mullet Creek Rail Bridge	Australia	Railcorp	Railcorp	2007
Old Beenleigh Bridge	Australia	Gold Coast City Council	Gold Coast City Council	2007
Oxley Avenue Footbridge	Australia	Main Roads Department	Sun Engineering Pty Ltd.	2007
Tom Uglys Bridge	Australia	Roads and Traffic Authority, New South Wales	Lothways - TBS Pty Ltd.	2007
Westgate Bridge	Australia	Vic Roads	JT Corrosion, Belkblast, Action Alliance, Allblast, A-AA Blastmasters, McElligotts	2010
Ponte Florentino Avidos	Brazil	DEPRAN Manutencao Industrial Ltda.	DEPRAN Manutencao Industrial Ltda.	2006
Pont Pierre Laporte	Canada	Ministere des Transports	Sablynx Inc.	2003
Pattullo Bridge	Canada	Trans Link	Trans Link	2004
Pont Jacques-Cartier	Canada	Excavations Theoret	Excavations Theoret	2006
Milos Sykora Bridge	Czech Republic	Government (Local)	Inter Ocean Services	2002
Ponulele Bridge	Indonesia	Government (Local)	Wagner Biro Indonesia,PT	2008
Batu Kitang Bridge	Malaysia	Sarawak Government	Toung AIK Kuching	2003
John Frost Bridge	Netherlands	Dutch Ministry of Waterworks and Public Works	GSB	2003
Boskoop Lift Bridge	Netherlands	Government (Local)	Iris N.V. Noordoost	2004
Galecopperbrug	Netherlands	RWS Ministry of Transport	de Koning	2007
Technological Bridge	Poland	Elektrociepownia Krakow	SANEL Sp. z o.o.	2005
Gdynia Bridge	Poland	Government	Polwar S.A.	2007
Plock Bridge	Poland	Municipality of Plock and Polish Railway Lines Authority	Heko Wloclawek	2007
Torun Bridge	Poland	Government	Intop Szczecin	2007
Wisla River Bridge	Poland	Government (Local)	Heko Wloclawek	2007
Slasko-Dabrowski Bridge	Poland	Government	Talkor S.A.	2009
Wloclawek City Bridge	Poland	Government (Local)	ZUSIM Szczecin	2009
25 de Abril Bridge	Portugal	Government (National)	Sociedade Lisbonense de Metalizacao	1998
Ponte Ferrovi-ria de Portimao	Portugal	National Rail Network	Salvador Caetano	2004
Bosphorus Bridge	Turkey	Government (National)	Metel and Sabit C. Hedbe	2002
Battersea Bridge	UK	Government (Local)		1994
Blackfriars Bridge	UK	Government (Local)		1995
Doncaster Viaduct	UK	Government (Local)	Watson Steel Ltd.	2001
Wearmouth Bridge	UK	Sunderland Council	Pyeroy Ltd.	2003
Trent Bridge	UK	Nottingham City Council	TI Protective Coatings	2003
Tyne Swing Bridge	UK	Newcastle City Council	Pyeroy Ltd.	2003
Clyde Bridge	UK	North Lanarkshire Council	TI Protective Coatings	2005
Ruswarp Bridge	UK	Government (Local)	Atlas Specialist Coatings	2006
Tower Bridge	UK	Government (Local)	F.M.Conway	2007
Queen Elizabeth II Bridge	UK	Nexus	Pyeroy Ltd.	2007
Balgay Bridge	UK	Dundee City Council	Tayblast Services Ltd.	2008
Runcorn Viaduct	UK	Network Rail	TI Coatings	2010
Chartiers Creek Bridge	USA	Allegheny County	John B. Conomos Painting	2006
Hi Carpenter Memorial Bridge	USA	West Virginia DOH	Panthera Painting	2006
South Hills Junction	USA	Port Authority Allegheny County	Advanced Painting Systems, Inc.	2007
Norman Wood Bridge	USA	Pennsylvania Department of Transport	Hercules Painting	2007
Bronx-Whitestone Bridge	USA	Metropolitan Transportation Authority (MTA)	Alpha Painting	2007
Roosevelt Island Bridge	USA	New York City DOT	Elite Contractors	2008
Throgs Neck Bridge	USA	Metropolitan Transportation Authority (MTA)	Corcon Inc.	2008
John Roebling Suspension Bridge	USA	Kentucky DOT	Vimas Painting/Bridges R' Us	2010
Brooklyn Bridge	USA	New York City DOT	Ahern Contractors	2011

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