

Bundamba Water Treatment Plant Pipeline

Track record 2007

Location of project

Brisbane, Australia

Products/system used

Treated water pipe line
(internal lining/external surfaces buried)
Polibrid® 705E

External lining above ground
Interzinc® 52, Intergard® 475

Project owner

Queensland State Government

Applicator

RI-CO (2004) Engineering

ISO12944 environment

Immersed conditions (tank lining)

Total area

4,000m² (43,000ft²)



Wembley Sewer Main

Case history 2001

Focus product: Interzone® 396

Year of project: 1989

Location: Perth, Australia

Project owner: WA Water Corporation

ISO12944 environment: C5 Immersion

Project size: 2,500 litres (660 gals)

Area inspected

The sewer main trial area was approximately 300m (984ft) long and 1.5m (5ft) in diameter. 2,500 litres of Interzone 396 was applied at 2,000µm (79 mils).

The major issue in sewers is the H₂S (hydrogen sulphide gas) in the atmospheric zone. The H₂S collects in the top of the pipe and the manholes and attacks the concrete.

The result of this trial was the Interzone 396 provided a solution for resisting the atmospheric attack. Thus eliminating the need for ongoing maintenance in this unpleasant environment.



Typical breakdown after the same period with alternative trial product



Interzone 396 in good condition after the same time period

“The customer was very pleased with the short and long term performance of the Interzone 396, particularly in the aggressive atmospheric zones of the sewer where H₂S attacks the concrete.”

Jabatan Air Sabah Water Pipelines

Track record 2011

Location of project

Malaysia

Project owner

Jabatan Air Sabah

ISO12944 environment

C3

Products/system used

Interseal® 670HS (Grey)

Interthane® 990 (Blue)

Applicator

MK Coating & Maintenance Contractor



Ladysmith Wisconsin Dam

Track record 2008

Location of project

Ladysmith, Wisconsin, USA

Products/system used

Area 1 - Dam gates - Contact side
Interzone[®] 954

Area 2 - Dam gates - Non contact side
Intercure[®] 200HS, Interzone 954,
Interfine[®] 979

Area 3 - Support steel, stairwells and stairs
Intercure 200HS, Interzone 954,
Interfine 979

Project owner

Dairyland Power

Applicator

C&L Contracting

ISO12944 environment

C3 and Immersion

Surface preparation

SP 10

Total area

18,581 m² (200,000ft²)



Hogenakkal Water Supply Internal Pipe Coating

Track record 2010

Location of project

India

Products/system used

Interline® 925

Project owner

Tamil Nadu Water Supply and Drainage Board

Applicator

Iccorpro

Fabricator

PSL

ISO12944 environment

IM-1 (Immersed)

Applied by

Airless spray

Applied by

22,000 litres (5,811 gals)

Total area

29,500m² (317,535ft²)



Bhavnagar Municipal Corporation Pipeline Project

Track record 2010

Location of project

India

Products/system used

Interline® 925

Project owner

Bhavnagar Municipal Corporation

Fabricator

Essar Steel

ISO12944 environment

IM-1 (Immersed)

Total volume

26,000 litres (6,868 gals)



Jal Board Project

Track record 2010

Location of project

Delhi, India

Products/system used

Interline® 925

Project owner

Delhi Jal Board Project

Applicator

Pratibha Pipes and Structures

Total volume

11,000 litres (2,905 gals)

Total area

242,000m² (2,604,866ft²)



Cowies Hill Reservoir Tank

Track record 2011

Location of project

Australia

Products/system used

Area 1 - Floor
Polibrid®, Geotextile, Polibrid

Area 2 - Internal wall
Interline® 982, Interline 975

Area 3 - External wall
Interzinc® 52, Interplus® 1180,
Interthane® 870

Project owner

Melbourne Water

Applicator

McElligott Partners

ISO12944 environment

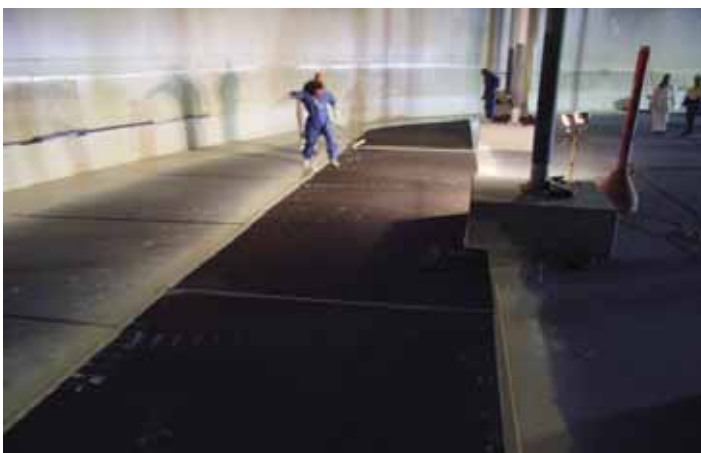
External - C5-I Heavy industrial
(High durability)
Floor and internal -
CIm2 Immersed conditions

Total area

8,200m² (88,264ft²)

Total volume

14,300 litres (3,777 gals)



Sydenham Tank Refurbishment

Track record 2011

Location of project

Australia

Products/system used

Area 1 - Floor

Polibrid[®], Geotextile, Polibrid (4,500 m²)

Area 2 - External wall

Interzinc[®] 52, Interplus[®] 1180,

Interthane[®] 870 (2,500 m²)

Area 3 - Internal wall

Interline[®] 982, Interline 975 (2,500 m²)

Project owner

Melbourne Water

Applicator

McElligott Partners

ISO12944 environment

External - C5-I Heavy industrial
(High durability)

Floor and internal -
CIm2 Immersed conditions

Total area

9,500m² (102,257ft²)



St Albans water storage tank

Track record 2007

Location of project

Melbourne, Australia

Products/system used

Area 1 - Internal
Interline[®] 975

Area 2 - External
Interzinc[®] 52, Interseal[®] 670,
Interthane[®] 990

Project owner
Melbourne Water

Applicator

McElligott Partners Pty Ltd

ISO12944 environment

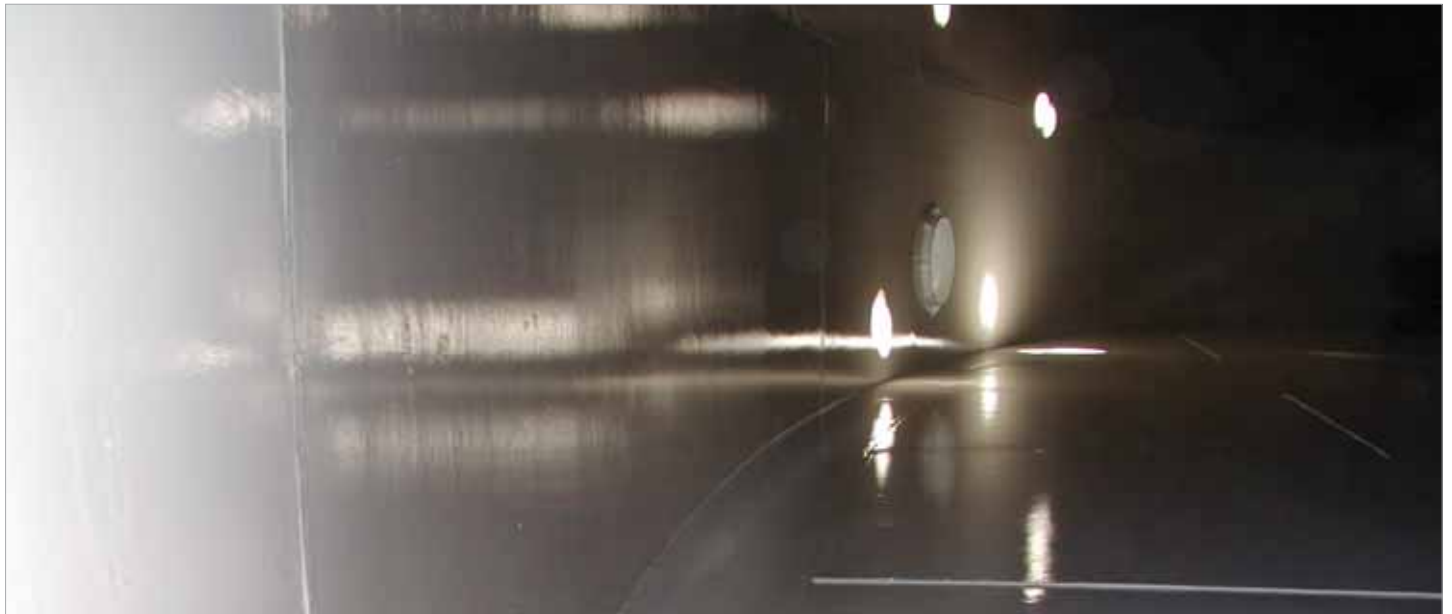
C5-I

Total volume

2,600 litres (600 gals)

Total area

4,500m² (48,400ft²)



Guangzhou Datansha Wastewater Treatment Plant

Case study 2011

Background

Guangzhou Datansha wastewater treatment plant is one of the largest in Guangzhou. Located on Datansha Island and capable of treating over 550 thousand tons of wastewater per day. This plant was completed in three phases with phase I in 1989, phase II in 1996 and phase III in 2008. Most of the assets in this plant were subjected to severe corrosion and comprehensive maintenance was planned. The aeration basins of the phase III plant were under maintenance in 2011 with a total area for lining protection of over 8,000 m². AkzoNobel worked closely with all project personnel to ensure the timely delivery of quality products formulated to match the performance expectations of the facility owner.

The solution

Technical seminars were organized with the owners to specify Interseal 670HS as the lining to protect aeration basins. The company offered technical service to assure the quality of the project and give the confidence to the owners for massive future maintenance projects. AkzoNobel also recommended Intercrete products to the owner and conducted a trial project in a screening tank with a lining scheme of Intercrete 4801, Intercrete 4820 and Intercrete 4840. Over 3,000L of Interseal 670HS was supplied to these projects for the lining of aeration basins and 60 kg of Intercrete for the trial project in screening basin. This project has created very positive endorsements which enable us enter the huge potential of maintenance business for the wastewater market in China.

Focus products: Aeration Basin Internal - Interseal® 670HS; 3# Screening Basin: Intercrete™ 4801, Intercrete 4820, Intercrete 4840

Location: China

Applicator/fabricator: Maoming building and construction company

ISO12944 environment: Im2

Project size: 8,500 m² / 4,000 L



Shenzhen Houhai Waste Water Channel

Focus products: Intercrete™ 4850,
Intercrete 4840

Location: Shenzhen Houhai, China

Project owner: Shenzhen Houhai Pump Station

Project size: 600-700m² (10,000kg)

Case study 2012

Background

A vital water channel attached to the Shenzhen Houhai Pump Station collapsed due to chemical attack on the supporting concrete. The owner required a fast and long term solution to return the asset to service. A new concrete channel was constructed and this time **Intercrete** was used to provide lasting protection in a challenging environment.

The solution

Fast return to service was required to minimise costs and disruption for the owner. The **Intercrete** system offered a simple and cost effective solution due to its ability to be applied to damp and concrete that is not fully cured.

A new concrete channel was constructed 2.5m height x 3m width and a total length of 60m. After removal of all surface laitance and other contamination **Intercrete 4850, easy apply water based acrylic primer**, was used on the floors to minimise the effects of out-gassing. Following that, two 1mm coats of **Intercrete 4840, an advanced epoxy and polymer modified cementitious coating** were applied.

Intercrete 4840 was ideal for the application due to its enhanced chemical resistance, waterproofing properties (can resist up to 10 bars +/- pressure) and ease of application.



Potable Water Pipeline Internal Coating

Case study 2012

Focus product: Interline® 925

Location: India

Project owner: Gujarat Water Infrastructure Ltd (GWIL)

Pipe suppliers: Welspun & Essar Steel

Applicator/fabricator: SPML, IVRCL, Larson & Toubro, Pratibha Industries

ISO12944 environment: Im-1 (Immersed)

Project size: 440 km of piping

Background

Essar Steel Pipes Division operates one of India's first coatings plants capable of producing pipes up to 100" (2.54m) in diameter. In early 2012, Essar Steel won orders to supply steel pipes for a project promoted by Gujarat Water Infrastructure Limited (GWIL). Internally, they were to be coated with a solvent-free liquid epoxy approved for use in contact with potable water by an international certifying agency. Externally they were to be protected by 3LPE wrapping. The project is a part of the ambitious Bulk Water Transmission System Project and is being implemented by the Gujarat government. It involves 8 packages aimed at supplying water to the 7 districts of the State of Gujarat, requiring approximately 440 km of piping with a potential for nearly 1.4 million litres of paint.

Out of this Essar Steel is scheduled to supply approx 100 km of pipes. Fast-tracked as part of the high profile Sardar Sarovar Narmada Canal-based drinking water supply project this meant there was tremendous pressure on the pipe fabricators for timely deliveries of coated pipes. Hence, the coatings provider's manufacturing and supply chain efficiency was of the utmost importance in this project.

The solution

AkzoNobels 15 million litre capacity Bangalore plant along with its global procurement capabilities were ideally placed to meet the challenge of maintaining product quality and timely supplies to an unprecedented scale. Our NACE qualified technical service personnel were instrumental in ensuring smooth progress during application of the coating at the customer yard. Our ability to provide customized SKUs, ranging from 1.5 litre packs to 800 litre packs, was an added benefit to the customer in enabling higher productivity and lower application costs.

GWIL and their consultants decided on the use of newer technologies for the lining of the pipelines. Our solvent-free epoxy coating **Interline 925** met and exceeded all of their specified criteria and potable water approval requirements.

The GWIL is a landmark project in terms of technology adoption, as it is the first major project which has specified potable water approved, solvent-free epoxy for the internal surfaces of all mild steel transmission pipelines. **Interline 925** not only enhances the life of the pipelines, but it also provides significant power savings to the owner by reducing friction in the pipe by providing a smooth surface for the flow of water.



“The challenge at the start of the project was to select a supplier who has good commitment on delivery and the overall capability to service such a large project in a defined timeframe. From the point of view of quality and product performance, we felt the commitment to quality and on-time delivery was the key element and we had confidence that AkzoNobel was the right choice for this project.” Jai Purohit, Plant Head, Essar Steel



Coffs Harbour Council Sewer Stormwater Overflow Pipes

Track record 2012

Location of project

Australia

Products/system used

Interseal® 1036 @ 20µm (1 mil)
Interzone® 954 @ 500µm (20 mils)

Project owner

Coffs Harbour City Council

ISO12944 environment

Intermittent submerged duty

Total area

700m² (7,535ft²)



Quick Manhole Refurbishment

Focus product: Enviroline® 222

Location: USA

Type of project: Wastewater works

Case history 2003

Exposed reinforcement bars

A suitable abrasion and chemical resistant lining was required to refurbish the man hole



Priming the concrete

The speed of application of Enviroline 222 saved the customer money in terms of downtime costs



Checking the cured coating

Inspection after one year in service showed the Enviroline 222 to be in good condition



Fast return to service

The man hole was refurbished and back in service in less than a week using Enviroline 222



The quick return to service saved the customer money and the long-term performance will allow the customer to continue saving

Delhi Jal Board Water Pipeline

Track record 2010

Location of project

New Delhi, India

Products/system used

Pipeline internal -
max. temperature: 50°C (122°F)
Interline[®] 925 @ 500µm (20 mils)

Project owner

Delhi Jal Board

Applicator

Pratibha Industries Ltd

Total volume

17,200 litres (4,500 gallons)

Total area

24,200m² (260,400ft²)



Mt Melville Water Tank

Track record 2004

Location of project

Albany, Australia

Products/system used

Internal lining -

max. temperature: 50°C (122°F)

Interline[®] 925 @ 250µm (10 mils)

Interline[®] 925 @ 250µm (10 mils)

Project owner

Water Corporation of WA

Applicator

SDR Construction

Total volume

2,200 litres (600 gallons)

Total area

4,500m² (48,900ft²)



Lining and Repair of Industrial Water Tank

Track record 2014

Location of project

Republic of Kazakhstan, Atyrau region, Tengiz field

Products/system used

Internal - Interzone® 1000
External - Intertherm® 228

Project owner/Specifier

TCO TengizChevrOil

Applicator

NSS (NEFTESTROYSERVICE)

ISO12944 environment

C5I industrial areas with high humidity and aggressive atmospheres

Total volume

Internal - 2,250lt (594 gals)
External - 1,125lt (297 gals)

Total area

2,000m² (21,528ft²)



Tylersville Potable Water Tower

Track record 1996

Location of project

Ohio, USA

Products/system used

Polibrid® 705E @ 30mils (760µm)

Project owner

Butler County, Ohio

Applicator

Suncraft Construction Company

Project size

2,800m² (30,000ft²)



Wistrong Wastewater Pipe

Track record 2003

Location of project

Shanghai, China

Products/system used

Polibrid® 705E @ 60mils (1,500µm)

Applicator

Shanghai Wistrong Retrofit

Total area coated

3,150m² (34,000 ft²)



Kulsary Technical Water Line

Track record 2013

Location of project

Republic of Kazakhstan, Atyrau region, Tengiz field

Products/system used

Underground pipeline - Interzone[®] 954

Project owner

TCO TengizChevrOil

Specifier

TengizChevrOil

Applicator

Senimdi Kurylys LLP

ISO12944 environment

C5I

Project size

66 repair areas -
3,000 litres (792 gals)

