



EPTEC

Asset Preservation
& Rehabilitation

When Risk Matters!

CAPABILITY STATEMENT

Linings and Waterproofing

Introduction

EPTEC is a specialist industrial contractor in Asset Preservation and Rehabilitation. Our expertise is engineered solutions using resin technology to provide concrete rehabilitation, corrosion protection, glass reinforced plastics, waterproofing & linings and thermal insulation.

With offices across Australia, Eptec is positioned to deliver projects in all States and Territories. With a core workforce of over 250 people, Eptec can rapidly mobilise and deploy resources to anywhere in Australia.

The workforce comprises qualified managers and engineers supported by experienced supervisors and permanent employees. One of Eptec's strengths is the use of our own permanent workforce rather than reliance on subcontractors. With skills developed over many years, Eptec guarantees highly responsive, flexible and committed teams ready to undertake projects in even the most remote areas.

Typically Eptec's solutions use the latest resins technology for coatings, cement grouts, epoxy grouts, waterproof membranes, high tech reinforcement such as carbon-fibre and many other innovative and specialised products. Eptec does not manufacture products and can call on the expertise and knowledge bank of all the major worldwide suppliers to assist in providing engineered solutions. We will often participate with manufacturers in the development and application of new products, always with a vision for improving industry techniques and safety and environmental awareness.

Our specialised services are applicable across a broad spectrum of industries including Defence, Water & Wastewater, Infrastructure and Energy & Resources.

Linings and Waterproofing

Eptec is able to provide a large range of services where structures require protection and maintenance from the effects of water and liquids, whether from groundwater, rainwater, wastewater or process streams.

The importance of preserving and maintaining infrastructure in a world of ever decreasing water resources and stretched maintenance budgets, requires the application of the best products and services. Eptec understands client needs when it comes to delivering value, and the need to address water based problems with effective long term solutions for both new and existing assets.

With the capability to provide assessment and site inspection services, we can determine and advise the most appropriate waterproofing and protection solution to complex water problems and deliver it with the our own specialist workforce.

Our services and capabilities include:

- Asset condition assessment and site survey
- Product evaluation, site trialing, testing and selection of materials and application procedures
- Pressure injection of urethane, acrylic and cement based grouts to provide sealing and waterproofing of structures and excavations in underground situations
- Pressure injection of structural resins for repair and rectification of buildings and civil structures
- All forms of liquid applied coatings to provide chemical and abrasion resistance (internal applications) or as waterproofing systems (external or internal applications).
- Thermally welded sheet membrane linings for the waterproofing and lining of structures, utilising HDPE, LDPE, PVC and TPO materials
- Cast-in HDPE sheet lining for the protection of concrete structures from chemical attack in wastewater, mining and industrial applications

Industries and Sectors Serviced:

- Civil Infrastructure
- Water and Wastewater
- Mining and Process
- Desalination
- Energy

Structures and Applications:

- Tunnels – Road and Rail
- Potable and Recycled Water Treatment Plants
- Municipal and Industrial Wastewater Treatment Plants
- Sewerage Infrastructure – Pipelines and Manholes
- Desalination Plants
- Mining, Process and Chemical Plants
- Thermal Power Stations, Wind Farms
- Large Concrete and Steel Pipelines
- Bridges
- Water Storages – Dams, Tanks, Reservoirs, Lagoons

Technical and Management experience in Thermoplastics

Eptec has a team of experienced managers, supervisors and tradespersons with substantial experience in the handling, installation and testing of projects involving thermoplastic membranes such as HDPE (high density polyethylene), PP (polypropylene) and PVC (Polyvinyl Chloride).

The depth of knowledge within the Company provides a solid foundation for the provision of technical expertise and installation services that can be made available anywhere in all Australian States and Territories.

This experience can be summarised as follows:

- Knowledge of the Australasian market, key international material manufacturers and local suppliers and fabricators;
- Experienced staff and supervisors in technical and construction aspects;
- Personnel trained and certified in thermoplastic welding processes
- Established quality assurance procedures
- Third party accredited company in Quality and Safety



With a depth of specialist personnel, Eptec is able to undertake a range of repair and refurbishment technologies for structures constructed from steel, concrete or plastics.

Our key services include:

- Supply, installation and welding of bonded or unbonded thermoplastic liners fabricated from sheet membranes of PVC, PP, TPO, LDPE
- Dry abrasive blasting for surface preparation and corrosion protection
- High and ultra-high water blasting and vacuum equipment for surface preparation and industrial cleaning
- Experienced applicators and equipment for the application of specialised coatings including polyurethanes, epoxies, cementitious and many others
- Remedial concrete repair in accordance with ACRA Guidelines
- Repair of expansion, contraction and construction joints
- Development and testing of repair methodologies and systems
- NACE International certified inspection personnel
- PCCP Certified Company Class 1-4, Class 5A & 5B and Class 6
- Eptec is a third party QUALITY certified company to ISO AS/ NZS 9001:2008 Quality Management Systems
- Eptec is a third party SAFETY certified company to AS/NZS 4801:2001 Occupational Health & Safety Management System

Unbonded Membranes

Eptec Pty Ltd is an experienced contractor for the site installation of thermoplastic sheet membranes, with a specialisation in the civil engineering sector.

Unbonded smooth sheet membranes have particular advantages over other systems for their installation time and consistency in material thickness and quality.

We offer:

- Staff and workers experienced in the welding techniques, equipment, materials and testing systems for the installation of thermoplastic sheet membranes including PVC, PP, TPO, HDPE, LDPE
- A company that understands and is conversant with international standards applicable to the thermoplastics industry including DVS and ASTM publications
- Established processes and procedures for quality and safety applicable to the water industry



Bonded Membranes

Cast-in or bonded thermoplastic liners are gaining wide popularity as an alternative to traditional liquid applied coatings for their effective sealing and protection properties.

Eptec Pty Ltd is an experienced contractor in the offsite fabrication and onsite installation of cast-in type thermoplastic sheet membranes, typically HDPE (High Density Polyethylene).

We offer:

- Staff and workers experienced in the welding techniques, equipment, materials and testing systems for the installation of HDPE sheet membranes.
- A company that understands and is conversant with international standards applicable to the thermoplastic industry including DVS, ASTM and GRI publications.
- Personnel trained and certified in thermoplastic welding processes
- Established processes and procedures for quality and safety applicable to the water industry



The “AKS” System

An established bonded membrane system is in the form of a mechanically bonded thermoplastic membrane liner known as Anchor Knob Sheet or ‘AKS’. This lining system offers particular benefits over other systems when a corrosion protection lining is required.

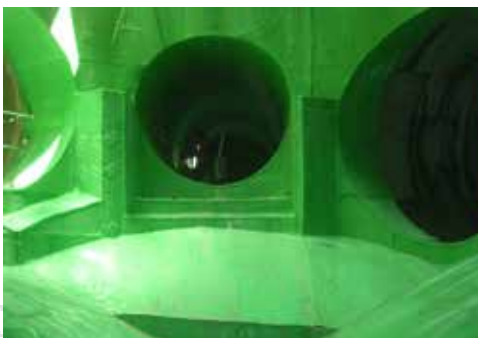
Bonded thermoplastic lining systems such as AKS rely on the mechanical bond between the anchor and the cast in-place concrete or grout. AKS can be used for both new and refurbishment projects.

AKS is typically manufactured from either HDPE (High Density Polyethylene), LLDPE (Linear Low Density Polyethylene) or PP (Polypropylene) in thickness 1.5mm to 5.0mm. Typical material for most sewer or chemical applications is HDPE 2.5mm. AKS can be bonded to the substrate with a variety of cementitious grouts or concrete depending on the application. The system is suitable for both steel and concrete substrates. Corrosion protection of in-ground or above-ground reinforced concrete structures has typically involved traditional methods such as epoxy and other liquid applied protective coatings.

Advantages of AKS – Thermoplastic Lining System

AKS offers certain advantages over other lining systems, including:

- Can be used for both new and refurbishment projects.
- Provided the structure is structurally sound, AKS can be installed over defective or leaking areas without significant rectification being required
- Bonded sheet membranes such as AKS ensure a constant lining thickness and are not variable at corners, edges or at other changes of direction, as can be the case with sprayed coatings
- AKS is flexible and will not be affected by movement or creep and is not affected by defects in the base concrete
- AKS can be installed to suit awkward or unusual shapes, such as pipe stubs, square to round, compound angles or where other systems cannot guarantee a leakproof barrier to gas or liquid penetration.
- Joints and terminations in AKS can be positively tested to standards which are internationally recognised being either DVS (European) or ASTM (American Society of Testing Materials)
- Less hazardous and more environmentally acceptable installation methods as compared to sprayed coatings or fibreglass (FRP) installation



Liquid Applied Coatings

With substantial experience in the application of liquid protective coatings by high pressure spray, roller or hand, EPTEC Pty Ltd is able to apply a wide of specialist coatings.

We can provide:

- Staff and workers highly experienced in the application of liquid coatings by various application techniques and equipment types
- Experienced and trained workers in high pressure airless spray systems and equipment
- Large inventory of company owned dry abrasive blasting and coating application equipment
- Established processes and procedures for quality and safety applicable to liquid applied coatings



Grouting

Eptec Pty Ltd undertakes a wide range of grouting work using both cement based and chemical grouts for various applications including:

- High pressure injection grouting with ultra-fine and micro-cements for waterproofing and sealing applications
- High pressure injection chemical grouting with polyurethanes and acrylates for waterproofing and sealing applications
- Low pressure injection grouting for void filling, rock and soil stabilisation, water stopping
- Foundation and machine base grouting
- Established processes and procedures for quality and safety applicable to the construction and maintenance industries



Significant Projects

Central Light Rail Station Refurbishment

Location : Sydney, NSW

Client : Railcorp, NSW

Scope of Works : Membrane installation (waterproofing), excavation, concreting/asphalting & civil associated works.



QAL Caustic Tanks

Location : Gladston, QLD

Client : Queensland Alumina

Scope of Works : Refurbishment of two (2) x 55m diameter tanks.

Taiwan High Speed Rail Project

Location : Taiwan

Client : Bilfinger Berger

Scope of Works : Waterproofing membrane installation, scaffolding design & fabrication.



Inner Northern Busways, Section 5 Project

Location : Brisbane, QLD

Client : Clough Seymour Whyte JV

Scope of Works : HDPE membrane supply, installation & termination.

Sydney Harbour Tunnel

Location : Sydney, NSW

Client : Sydney Harbour Tunnel Company

Scope of Works : Ultra fine cement injection, concrete patchings, coatings & maintenance waterproofing.



Darling Island

Location : Sydney, NSW

Client : Multiplex Construction

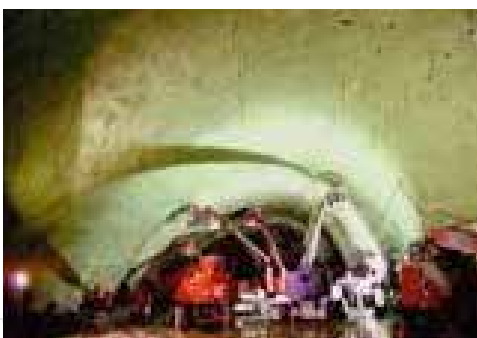
Scope of Works : Supply and installation of thermoplastic HDPE waterproof membrane lining, waterproof bandage & balcony membrane & jointing.

Burnley Tunnel

Location : Melbourne, VIC

Client : Transfield Obayashi Joint Venture

Scope of Works : Chemical grout injection, membrane repairs against major waste ground water inflows.



Parramatta Rail Link Project

Location : Sydney, NSW

Client : Thiess Hochtief

Scope of Works : Spray application of liquid waterproofing membrane to station caverns & chemical injection waterproofing in running tunnels / station caverns.

Walsh Bay Waterproofing

Location : Sydney, NSW

Client : Multiplex Construction

Scope of Works : Waterproofing of basement slab and chemical injection of pile penetrations



Penrith STP

Hornsby Bridge Upgrade Project

Location : Sydney, NSW

Client : Transfield Services / Sydney Water

Scope of Works : Reconstruction of concrete bridge deck, concrete decks & construction of new abutments, bridge deck asphalt resurfacing, access roads & bridge approaches, construction of storm water lines, subsoil drainages & manholes.

Balmain STP

Location : Sydney, NSW

Client : Sydney Water

Scope of Works : Rehabilitation of Wet Wells (Epoxy application to concrete surface).



Ultimo Street Carrier Rehabilitation Works

Location : Sydney, NSW

Client : Sydney Water

Scope of Works : Relining of FRP pipe to existing Ovi-form sewer.

Sydney Desalination Plant

Location : Sydney, NSW

Client : John Holland

Scope of Works : Ultra high pressure water blasting, concrete surface preparation and epoxy coating application.



Northern Sewerage Plant

Location : Melbourne, VIC

Client : John Holland

Scope of Works : AKS lining of NSP manhole shafts



Branxton WWTW

Location : Branxton, NSW

Client : Hunter Treatment Alliance

Scope of Works : AKS lining of chambers.



Aldinga WWTP

Location : Adelaide, SA

Client : Catcon

Scope of Works : AKS lining of inlet works.

**Clem 7 Tunnel
(North South Bypass)**

Location : Brisbane, QLD

Client : Leighton Bilfinger JV

Scope of Works : Waterproofing membrane to cross passages, chemical grout injection, cementitious grout injection, concrete repair.



Cross City Tunnel

Location : Sydney, NSW

Client : Baulderstone

Scope of Works : Waterproofing, maintenance works, polyurethane injection.

**Eastlink Motorway -
Embarkment Stabilisation**

Location : Melbourne, VIC

Client : Thiess John Hlland Joint Venture

Scope of Works : Ground stabilisation by chemical grout injection.



**Christies Beach
WWTP**

Location: Christies Beach, SA

Client : BMD

Scope of Works : AKS lining to chambers, FRP pipe jointing.

**East Queanbeyan Reservoir
Relining Project**

Location : Queanbeyan, NSW

Client : Queanbeyan City Council

Scope of Works : Concrete repairs & water-proofing of concrete potable water tank.



Paxton STP

Location : Paxton, NSW

Client : Hunter Alliance Treatment

Scope of Works : AKS lining of chambers .

Contact Details

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