

Case Study:- 400NB Pipeline. In-Situ Internal field joint lining.

INTERNAL LINING AND EXTERNAL COATING ON POTABLE WATER PIPELINE.

CLIENT

Major metropolitan water authority and large engineering and project management house.

APPLICATION DATE

2013 – 2014.

SCOPE OF WORK

The scope of the project was to perform corrosion protection on the internals of a pipeline that was too small for man access.

The stock allocated to this project was 400NB cold rolled, welded 6mm wall thickness steel pipe. The connecting joint layout was bell & socket type welded overlap joints. The pipe was pre-lined and coated in a factory and required internal and external corrosion protection of the welded field joints.

The project team approached Corrocoat as a specialist contractor to recommend new ways of applying lining to field welded joints, after part of the pipe was already buried and backfilled.

Limited access to the pipeline was the primary motivation for exploring a new pipe spraying technique using custom built pipe lining equipment. Safety regulations state that man access is not permissible in pipes below 600mm internal diameter, and man access to a pipeline with an internal diameter of 400mm is not practically possible.

PRODUCTS

CORROCOAT ZIP-E. High volume solid glass flake cold cured epoxy. (Potable water certified)

“POSITIVE’S”

- Internal field joint coating was successful and road crossings lengths of up to 72m could be lined.
- Welding and lining video surveillance proved to be highly beneficial.
- Alignment gap and pipe end crevices could be covered in relation to the lining film thickness.
- Corrocoat developed temporary inflatable seal plugs, which is a cost effective way of keeping groundwater or rainwater from flooding into the pipeline and damage newly lined pipe joints.
- Pipe cleaning and pumping techniques to remove water, mud, debris and abrasives were developed and refined.

PHOTOGRAPHS

- 1: Pipe sprayer in operation.
- 2: Ventilating 168m length while blast cleaning.
- 3: Access to buried pipe – 96m Either side.
- 4: Coated flange.



CORROCOAT