

FIBREGLASS LINING SEWERAGE TREATMENT PLANT



Remedy Job #: 120 GWF MBR Cell No. 2

Asset Owner: Gippsland Water Factory.

Structure: Sewerage Treatment Plant.

Location: Morwell, Victoria.

Client: CH2M Hill

Contractor: Valicote Pty Ltd

Substrate: Concrete



Specification: Custom built TS215

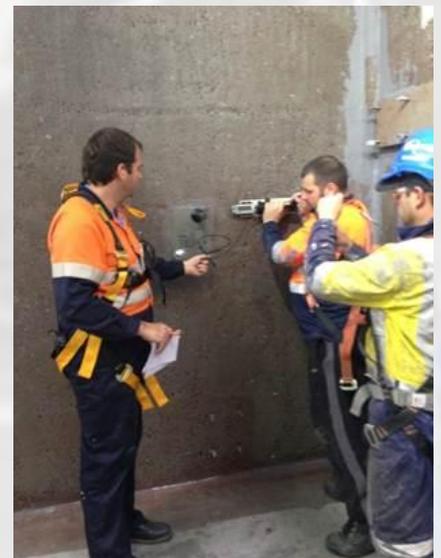
System: Denso Archo-Rigidon 623D Vinyl Ester Resin & laminate system. (Chemically resistant fibreglass)

Guarantee: 15 Years



Condition

This sewerage treatment plant (STP) uses a unique system of membranes to filter Class B water from liquor. Previously the cells were coated in a coating that failed and resulted in flaking paint particles that would shear the tiny membranes of the STP that would then reduce the capacity of the STP.



This Project

In order to prevent a future coating failure the Asset Owner went back to the drawing board and engaged a specialist engineering firm CH2M Hill to;

- They provided materials science principles in evaluating the range of coatings available.
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 - They designed a detailed project specification.
 - They supplied project management in selecting contractors and overseeing the works.
- Engaged Remedy Asset Protection to provide site based consultancy and coating inspection duties.

Challenges

Difficult geometry

- There was more to this cell than 4 walls & a floor. It had a semi encased header pipe with 15 feed pipes. The header pipe had 2 flanges that were only semi accessible.
- It contained approximately 80 protruding bolts.
- A temporary containment lid needed to be installed to prevent engulfment from nearby cells. This resulted in the project taking two stages.
 - 1) Being inside the cell.
 - 2) Finishing off the top of the cell walls once the containment lid was removed.



Tasks

Consultancy

To assist in developing specific work methodologies & coating specification when dealing with the difficult geometry.

Coating inspection

To provide detailed site diary, inspection, testing and reporting.

Risks

Confined space entry

Outcomes

- 1) Detailed work procedures were developed to deal with site specific issues.
- 2) A well-documented site diary & inspection report has been completed to enforce contractor & manufacturer warranties.

The Asset Owner has captured the learnings from this project to apply onto the other 11 cells.

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