Know-How*in Action*

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90 YEAR OLD CAST IRON LAKE DISCHARGE SYSTEM

CUSTOMER
Ft. Worth Texas

APPLICATION DATE
November 2019

APPLICATION SITUATION
Cast iron discharge valves, bonnets and pipe were built in the 1930's. System is located 100ft underground, has temperatures swinging from low 50 °F to 65 °F, confined space and continuous running water from the lake discharging into the pipe and valve system during application.

PROBLEM
There was no way to replace the old bonnets, valves and pipe without bringing in a crane to take the old bonnets up 100ft to the top. The customer would have had to build a special way to bring them through the vertical tunnel without damaging the 90yr old concrete which could have weakened the structure. Customer needed a solution to keep the existing valves, bonnets and pipes in place for several years to come. The age of the cast iron and the environment had created heavy corrosion in the area.

PRODUCTS
Belzona 5831LT
Belzona 5811

SUBSTRATE
Cast Iron

APPLICATION METHOD
Application was carried out by abrasive blasting the cast iron to SSPC SP10, whilst keeping a heater running in the area to keep the temperatures in the mid 60's °F (>15 °C), raising the temp of the material to between 68-70 °F (20 °C to 21 °C) for the Belzona 5811. The first coat was applied, a second coat was applied within 24hrs to ensure proper coverage on the valve bodies. On the bonnets and pipe, Belzona 5831LT was applied whilst controlling the running water in the pipe with a makeshift dam. On the bonnets that were sweating, the surface was grit blasted and dried before applying Belzona 5831LT immediately.

BELZONA FACTS
Customers alternative was to replace the system at a cost of well over $1M. The Belzona solution with surface preparation and coating application was under $100k saving the customer money and time. Application was completed in under 12 days. The customer chose Belzona because of the products performance, and ease of application. The customer also chose Belzona because of their history of success in stopping corrosion long term.

PICTURES
1. Bonnets, valve bodies and pipe prior to Blasting
2. Bonnets prior to blasting
3. Bonnets coated
4. Valve bodies and pipe coated.

1.


2.


3.


4.


ISO 9001:2008
Q 09335
ISO 14001:2004
EMS 509612

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