

# COMPLETION REPORT

Client : **XXXXXXXXXX Hospital NHS Trust**

Project Brief : **The Internal Preparation and Relining of 3 No. Cast Iron, Sectional, Potable Water Retaining Structures**

Site Address : **UK**

Site Contact : **XXXXXXXX**

System Spec : **3M Scotchkote™ 165PW**  
(Formerly Known as COPON Hycote 165PW)

Film Thickness : **1000 Microns**

Completion Date : **23<sup>rd</sup> January 2004**

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Covac Ref : **294**

## Summary of Works

### The Brief

3 No. cast iron, potable water retaining structures located within the Boiler House adjacent to the Estates Department. Each tank is sized as follows:-

Tank No.1	:	6m X 2m X 3m
Tank No.2	:	6m X 2m X 3m
Tank No.3	:	4.5m X 2m X 3m

The existing epoxy paint had approached the end of its useful life due to sub-film corrosion, low film build and general deterioration. We, therefore, recommended the following:-

### Mechanical Preparation

All internal surfaces of the tank shall be prepared in accordance with Swedish Standard SA 2.5 BS7079 Part A1 1989 utilizing dry abrasive blasting equipment in order to remove any existing coatings and / or contamination. The abrasive used shall be capable of producing a surface profile of 50 – 75 Microns corresponding to the 'medium' in accordance with BS7079 Part C4, to promote adhesion of the lining system. Any minor holes found due to corrosion shall be repaired utilizing COPON Metal-Tech SG Metal Epoxy Filler.

Immediately after blast cleaning all dust, residues and debris left on the surfaces shall be completely removed.

### Spray Application

**COPON Hycote 165 PW** shall be applied by plural component hot airless spray equipment.

As with all high build solvent free linings, **COPON Hycote 165 PW** requires heat to bring the material down to a sprayable viscosity. With two pack products the useable pot life reduces with increase in temperature, thus the most suitable method of application is by plural component hot airless spray equipment. A minimum spraying temperature (temperature of mixed base and activator at the gun) of 35-40°C, is required.

The spraying equipment works on the following principle:-

- a) The Base component and Activator are usually heated separately by either or a combination of the following:-

- i) Individual drum heaters for Base and Activator, each heater fitted with a variable thermostatic control.
  - ii) In line heaters, fitted onto the Base and Activator lines at the pump. 100 volt heaters for site work fitted with variable thermostats.
- b) The Base and Activator are pumped individually to the airless proportioning pump and recirculated either through the Base and Activator lines back to the heaters, through the lines, back into the Base and Activator containers or back into the heated tanks.

**Note** With **COPON Hycote 165 PW** only the Base shall be heated.

In practice, the heated Base and Activator are kept separate throughout the system until they meet at the mixer head of each individual coating feed line. To minimise temperature losses the feed lines are insulated and the spray gun is attached by a single whip end paint line to the mixer head. Because this line contains mixed coating at elevated temperature the length of the line is kept to a minimum. To also avoid heat loss the 'whip end' line can also be insulated.

During start up and when spraying stops, the Base and Activator are recirculated down the Base and Activator return lines and left on recirculation to ensure that the coating in the lines is maintained at a constant temperature.

To maintain the specified film thickness at welds, edges, bolt heads and other sharp protuberances, a stripe coat shall be applied to these areas prior to carrying out the overall application. The stripe coat may be applied by brush or dual feed hot airless spray.

The overall application, unless other methods are approved, shall be by plural component hot airless spray equipment.

During application all crevices and deeply pitted surfaces shall be completely penetrated and coated particularly edges, bolt heads, weld runs, etc.

During application our operatives shall carry out regular checks of wet thickness with a wet film thickness gauge to ensure the specified thickness is applied.

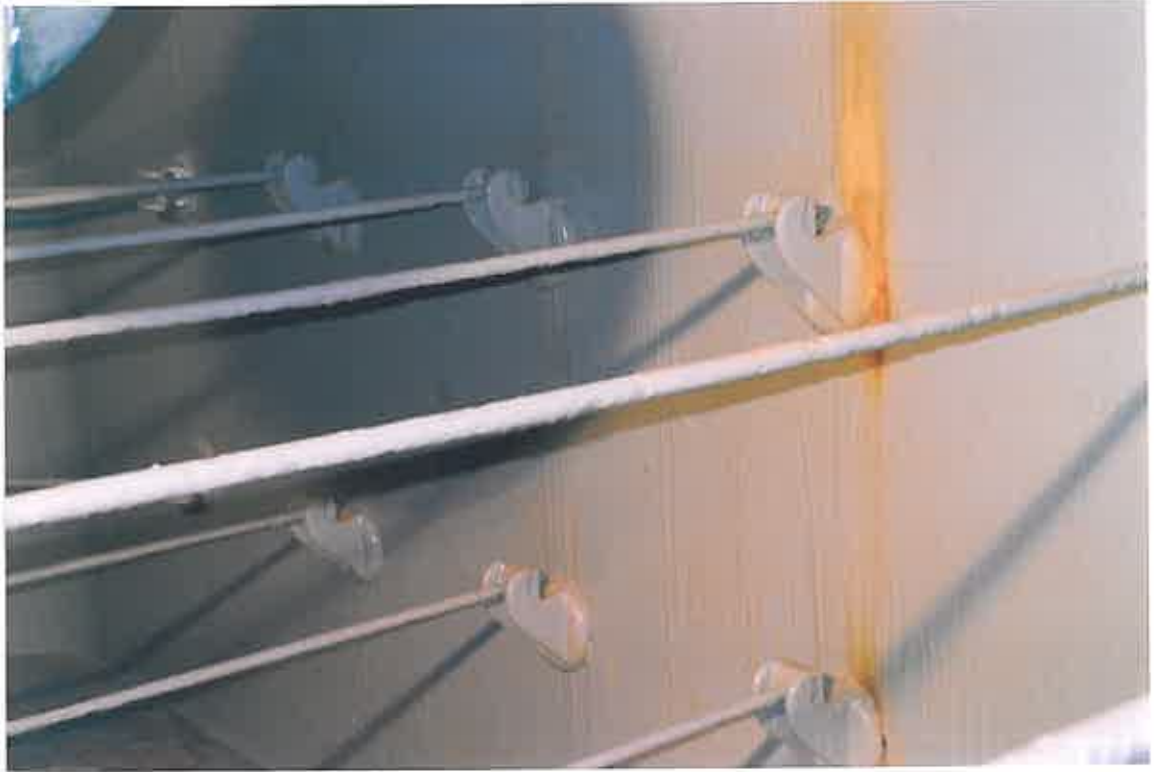
**COPON Hycote 165PW** shall be applied as evenly as possible to the specified thickness, excessive build up of coating shall be avoided. Each area coated should be visually checked for misses or holidays. Any area found shall be recoated prior to moving on to the next area.

The nominal dft for the system will be determined by client requirements but shall be a minimum of 750 microns. (nominal: 1000 Microns / 1mm)



**These photographs show the tanks internals drained of water and prior to any preparation.**







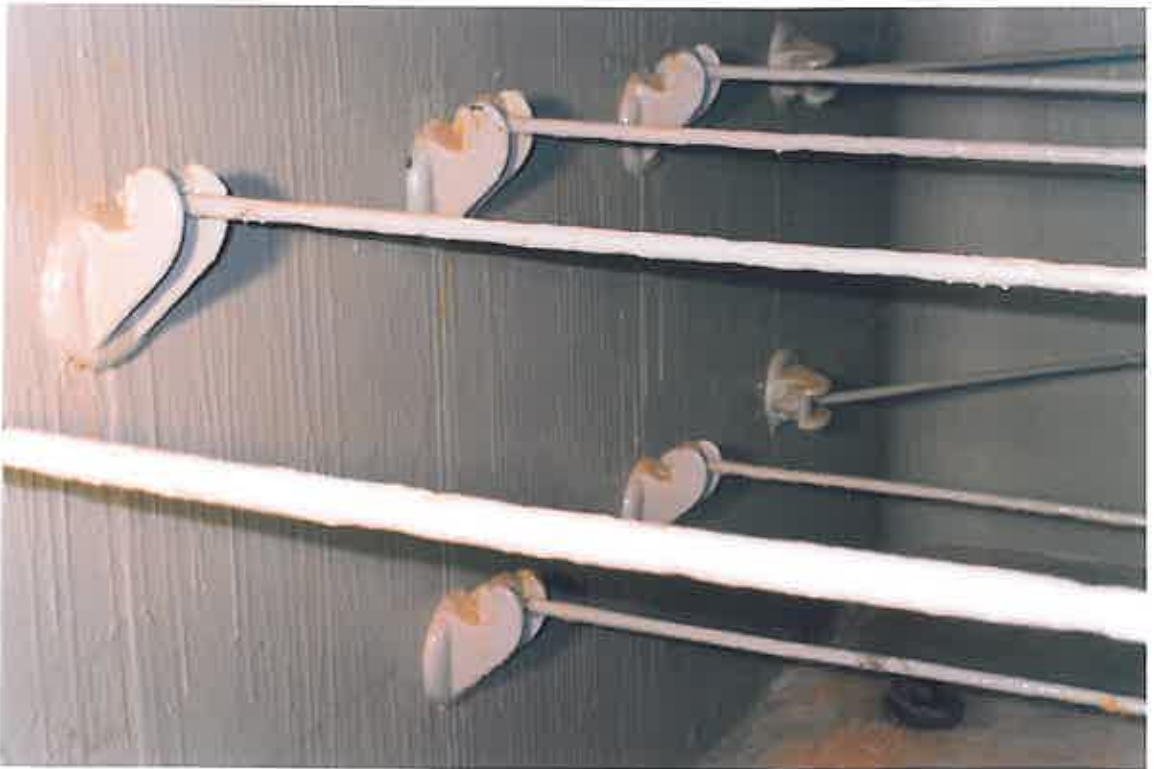














These photographs show a comparison between the previously failed coating and the standard of preparation achieved by means of dry abrasive blasting.



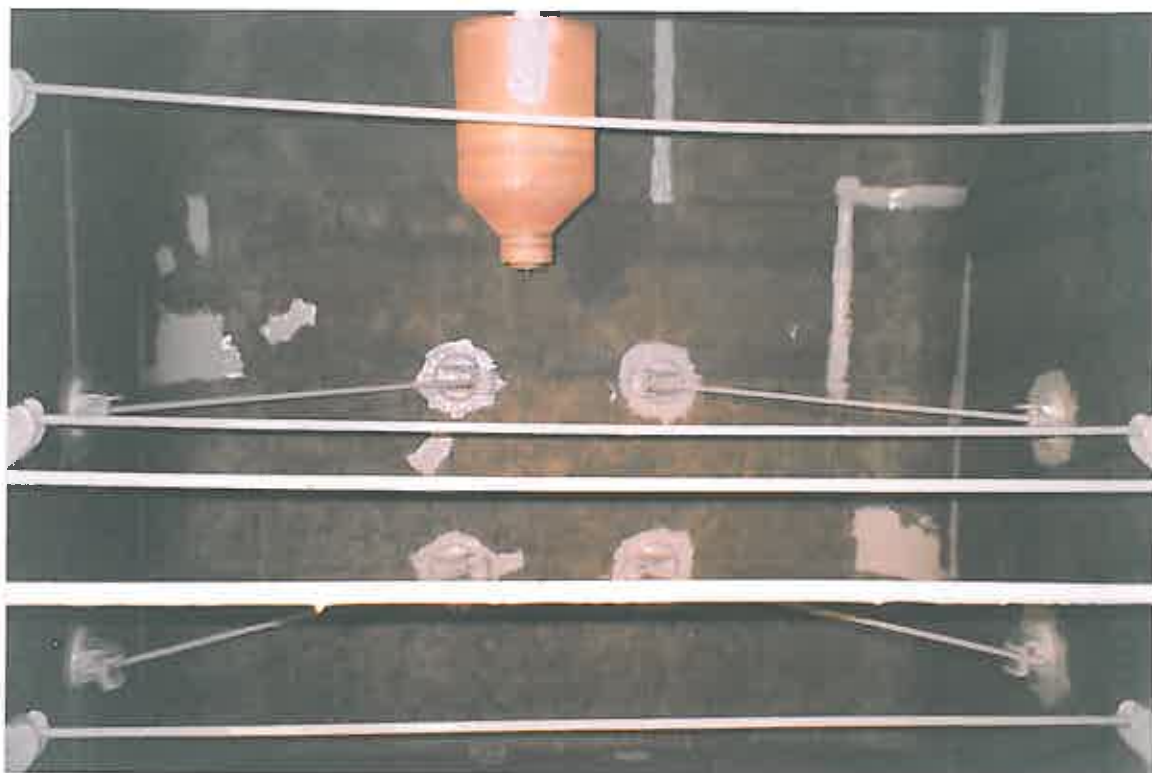
**These photographs show the tank internals having been prepared to the required standard by means of dry abrasive blasting.**





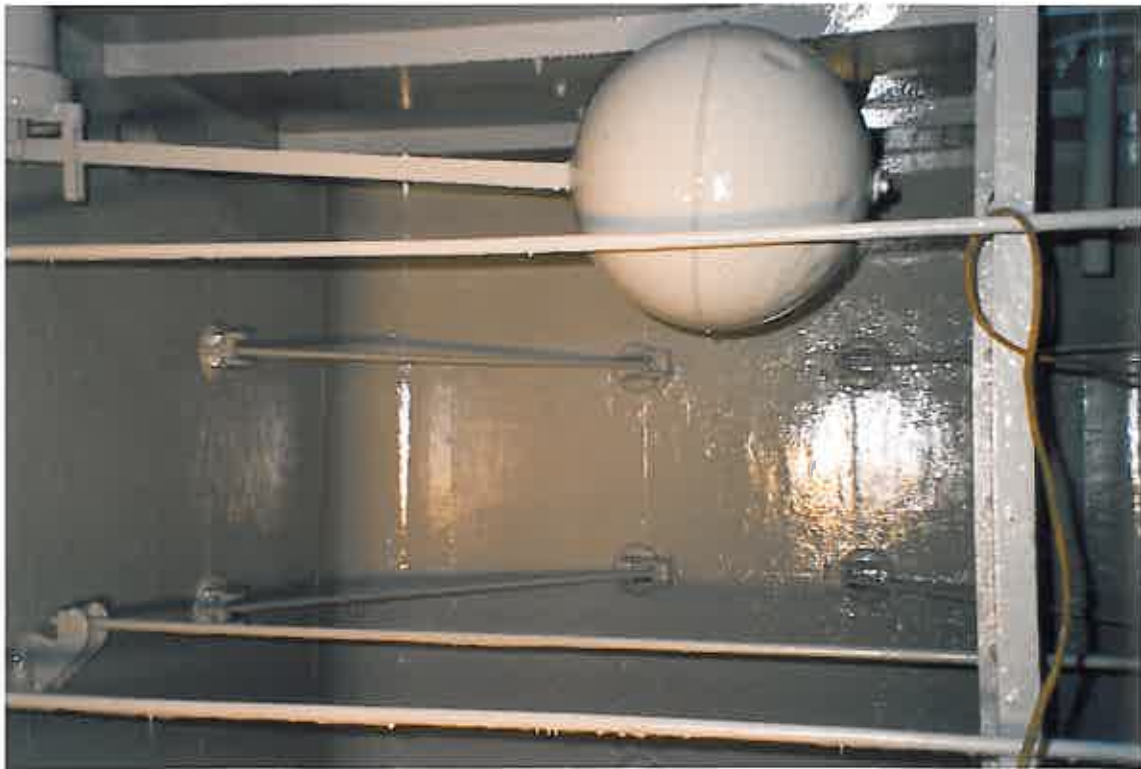


The photographs show areas such as bolt heads, struts, ladder etc, being stripe coated with 165PW by means of brush.





These photographs show COPON Hycote 165PW being spray applied by means of Hot Applied, Plural Component Spray Equipment.



These photographs show the tank internals fully coated with COPON Hycote 165PW to a nominal dry film thickness of 100 microns (1mm).

