CASE STUDY

MAJOR UK AIRPORT PRE-AIRFIELD JET FUEL INFRASTRUCTURE REFURBISHMENT WORKS

T7748 and T7749 were new build tanks that had been lined incorrectly by another painting contractor. Ferrous Protection was brought in to remove the failed lining and reinstate the lining correctly per the specification so that the tanks could be put into service.

Ferrous Protection worked meticulously to ensure the project was planned and delivered smoothly. The work was completed ahead of schedule, on budget, with 0 safety or environmental incidents, and with glowing commendations from the client.

Tank lining is one of the most technically complex applications within the protective coatings field because the margin for error is so small due to the lining being permanently submerged in the product or chemical it is storing. For complex tank linings such as the work carried out in T7748 and T7749, with significant temporary works such as bird cage scaffolding, it is imperative to use a specialist company like Ferrous Protection with a proven track record in delivering these types of projects.

The external works on T7750, T7751, T7752, T7758, T8497 were carefully planned to ensure the access systems proposed were suitable for the job. The existing coating showed signs or poor adhesion, therefore Ferrous Protection carried out adhesion pull-off tests and cross-cut tests to assess the condition of the existing coating to ensure the correct scope of work was carried out. The works were carried out as planned with the tanks looking brand new on completion.

CLIENT

Trant Engineering

PROJECT BRIEF

Tank 7748 and Tank 7749 (27m dia x 12m Height – vertical fixed roof Jet A-1 tanks)

INTERNALS

- Removal of internal lining by abrasive blast-cleaning using garnet blast media.
- Preparation of the steel to achieve correct standard of cleanliness and profile.
- Erection of internal birdcage scaffold with dancefloor.
- Dressing of all weld defects.
- Application of two-component, epoxy holding primer by airless spray.
- Application of two-component, solvent free novolac epoxy phenolic stripe coat to all welds, edges and intricate areas.
- Application of two-component, solvent free novolac epoxy phenolic to the full tank internals by airless spray.
- Application of elastomeric sealant around contact points in roof structure.
- Holiday detection, electromagnetic DFT testing, visual inspection, MEK rub testing of internal lining per specification by ICorr III Paint Inspector.
- Provision of 10 year applicator and manufacturer warranty and fully comprehensive QAQC pack.

EXTERNALS

- Prepare and reinstate elastomeric polysulphide sealant around tank annular joint and application of modified epoxy band to chime.
- Pressure washing of tank roof externals to remove poorly adhering coating.
- Mechanical preparation of localised areas of corrosion and mechanical breakdown using power-/hand- tools. Feather edging of repair areas.
- Application of two-component, surface tolerant epoxy aluminium primer to bare steel areas, allowing min 2” overlap onto sound existing coating.
- Mechanically abrading sound existing coating to provide an adhesive key for overcoats.
- Application of two-component, surface tolerant epoxy undercoat to the full tank roofs.
- Application of non-skid bauxite aggregate to anti-slip walkways.
- Application of two-component, UV-resistant aliphatic polyurethane finish.
- Electromagnetic DFT testing, visual inspection of protective coating per specification by ICorr III Paint Inspector.
- Submittal of fully comprehensive QAQC pack.


BEFORE


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BEFORE


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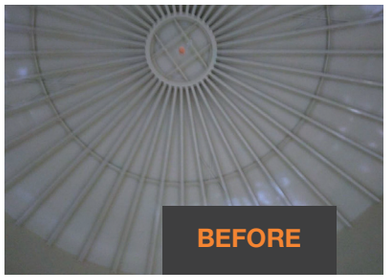
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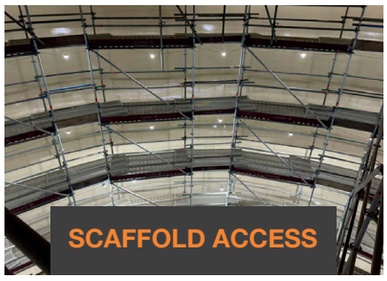
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FINAL INSPECTION


EXTERNAL


EXTERNAL

PROJECT BRIEF CONTINUED

Pipework
(ranging from small bore to 30” dia)

EXTERNALS

- Pressure washing to remove poorly adhering coating, surface contaminants and soluble salts.
- Mechanical preparation of localised areas of corrosion and mechanical breakdown using power-/hand- tools. Feather edging of repair areas.
- Application of two-component, surface tolerant epoxy aluminium primer to bare steel areas, allowing min 2” overlap onto sound existing coating.
- Mechanically abrading sound existing coating to provide an adhesive key for overcoats.
- Application of two-component, surface tolerant epoxy undercoat.
- Application of two-component, UV-resistant aliphatic polyurethane finish.
- Electromagnetic DFT testing, visual inspection of protective coating per specification by ICorr III Paint Inspector.
- Submittal of fully comprehensive QAQC pack.

“5 stars for Ferrous Protection’s technical capability, quality of finished work, follow up service and value for money.

The Management Team displayed a high level of knowledge, experience and dependability throughout the contract. The workforce should be congratulated for their overall performance and for observing the safe systems of work.

We would recommend Ferrous Protection for any future coating or lining works and have already issued positive feedback to Trant for future reference.”

MARK BLACKLER
TRANT PROJECT MANAGER