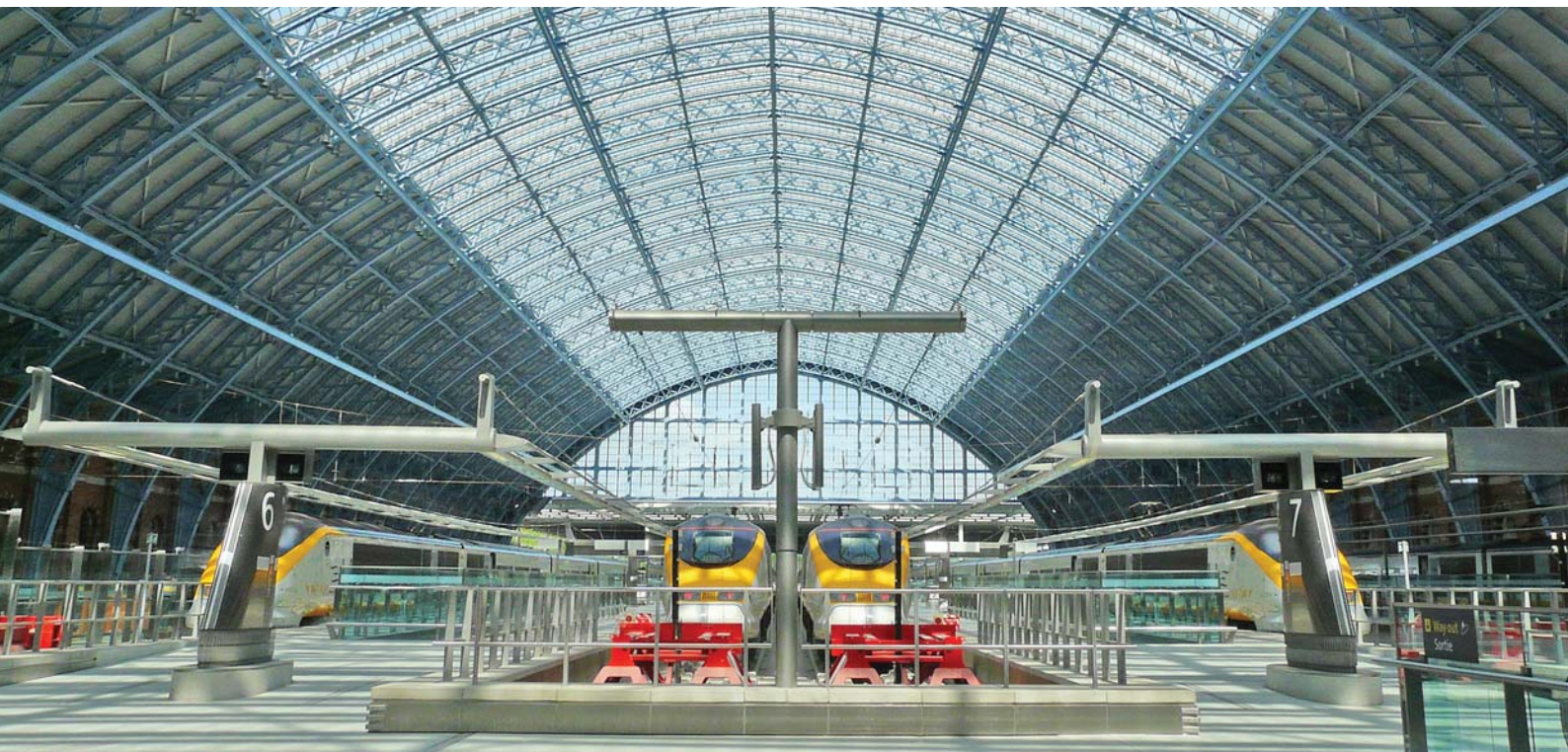


Case Study

St Pancras International Station



LONG LASTING ANTI-CORROSION – WE'VE GOT IT COVERED



Substrates: Steel, cast and wrought iron.

Requirements: To provide anti-corrosion protection and decoration as well as 60 minutes fire protection to the Undercroft area.

Specifications: **Undercroft:** Wet abrasive blast-clean followed by Epigrip M902 at 100µM dft, FIRETEX FX1000 or FX7000 to required dft and Resistex C237 at 50µM dft.

Main train shed: UHP Water blast to remove all unsound paint, Epigrip M902 & M905 at 100µM dft and Resistex C237 at 50µM dft.

New train shed extension: Blast clean to Sa2 ½ (BS EN ISO 8501-1), Epigrip J984 at 50µM dft, Epigrip C401 at 125µM dft, Resistex C237 in two coats.

Area coated: Total area approximately 150,000 square metres.

Client: London and Continental Railways.

Main contractor: CORBER (Costain, Laing O'Rourke, Bachy and Emcor Rail).

Consultant engineer: ARUP.

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Case Study

St Pancras International Station



THE PROJECT

Serving over 6.5M passengers each year the undercroft area at St Pancras International Station includes 680 cast iron columns, cross members and buckle plates that require 60 minutes fire protection. These cast iron columns support the rail deck and platforms for the Eurostar trains and house a number of shop units and cafés. As well as offering 60 minutes fire protection the paint system has to provide anti-corrosion protection and an acceptable finish.

With St Pancras replacing Waterloo Station as the London end of the Eurostar, the decision was taken to refurbish the Main Train Shed. The paint had to protect and decorate the 140 year old structure, matching the English Heritages' original colours.

The new 'train shed' was constructed to replace the existing one whilst the maintenance work was carried out. Now complete, the new train shed will become the terminal set to serve trains from the North. The new train shed required a coating specification to give at least 25 years anti-corrosion protection.

THE SYSTEM

The system selected for the undercroft comprised: Epigrip M902 applied at 100 μ for anti-corrosive properties, followed by FX1000 or FX7000 to give 60 minutes fire protection and Resistex C237 which has excellent colour and gloss retention properties. All the iron was prepared with a wet abrasive blast-clean.

The paint system for the main train shed was selected due to its Network Rail certification and approval. Ultra high pressure water blasting was used to prepare the surface, the coating system consisted of Epigrip M902 followed by Epigrip M905 (both at 100 μ) and then covered with the Resistex C237 topcoat at 50 μ .

The steel in the new train shed extension was blast cleaned to Sa2.5 and then a four coat system was used. The system chosen is not a standard specification but was selected after discussions with Rail Link Engineering and Watson's Steel for a practical and cost effective system whilst maintaining performance levels for the project. The zinc rich primer Epigrip J984 was applied at 50 μ , followed by the MIO C401 at 125 μ . The new train shed was finished with 2 coats of C237 at 50 μ .