

KEIM



KEIM MINERAL PAINTS CASE STUDY: BATTERSEA POWER STATION

KEIM SOLDALIT®-ME ONTO CONCRETE



Before 



 After

BATTERSEA POWER STATION CHIMNEYS

The four chimneys of Battersea Power Station were built in the early 1900's and are a defining feature of London's skyline. 500 tonnes of CO₂ per hour, over the course of half a century was discharged from the chimneys as a result of heavy industrial use. The composition of the concrete became a risk to the iconic Grade II* listed building as the internal steel reinforcements had been under attack from corrosion from CO₂ and salt. After thorough inspection by architects, contractors and English Heritage, it was agreed that the safest and best option was to deconstruct the chimneys and rebuild them. Approximately 600 tonnes of concrete were removed and a similar volume was used to rebuild each chimney. The rebuilt stacks are visibly identical, however the composition of the concrete and the pattern of the internal steel reinforcement was improved to ensure the new chimneys were less exposed to corrosion.

KEIM Mineral Paints were approached in 2015 by the material consultants on Battersea Power Station who were charged with specifying a suitable, durable paint coating for the four new chimneys. The technical representative, James Best, of KEIM Mineral Paints visited the project and recommended the KEIM Soldalit-ME paint system by reason of withstanding the heavy pollution of the London skyline with added benefit of a long-expected lifespan.

KEIM Soldalit-ME is a high quality, exterior sol-silicate paint system (DIN 18.363, 2.4.1). KEIM Mineral Paints differ from conventional paints in that they chemically bond to the concrete surface rather than being a mere film; this provides breathability, durability and unparalleled longevity. They are also completely UV stable and light reflective without being glossy or shiny. KEIM Soldalit-ME is a photocatalytic paint which in addition to the above contains a catalyst which will help to remove air pollutants, such as Nitrogen Oxides, from the air and help degrade dirt and algae spores on the concrete surface. During the initial inspection, sample paint flakes were removed for colour matching purposes. After analysing the paint flakes in a spectrometer at KEIM Mineral Paints, it was identified that the original chimneys were painted in RAL 1015 - Light Ivory. Regular supportive site visits were carried out by KEIM throughout the decoration of the chimneys. The beautiful finish is now admired across London.

WHAT IS KEIM SOLDALIT®-ME?

KEIM Soldalit®-ME is an exterior sol-silicate photocatalytic mineral paint. It is a variation of KEIM Soldalit® which offers sustainable protection for buildings with a additional environmental benefit that helps to degrade nitrogen oxide pollutants from the atmosphere.

The photocatalytic reaction helps to breakdown organic material and contaminants, keeping surfaces cleaner.

Key features & benefits:

- Breathable
- Economical and easy to apply
- Extreme long life/durable
- Environmentally friendly ISO14001
- Increases light reflectivity
- UV stable
- Advanced weathering protection
- Inherently incombustible
- Fire classification: A2s1 d0



CREDITS

Location: Battersea Power Station, 188
Kirtling Street, Nine Elms, London, SW8 5BN

Applicator: Beroa Bierrum

Project Photographs: KEIM Mineral
Paints Limited

Completed: 2017





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