DuPont™ Abcite® Case Study

CABLE LADDER PROTECTION WITH ABCITE® 545 FOR ELECTRABEL / SUEZ POWER PLANT WILHELMSHAVEN, GERMANY

Reliable surface protection without maintenance - a cost effective alternative to stainless steel

The Project

- "Ecological, modern and highly efficient": these are the 3 words used by the power company SUEZ to describe its new giant power plant of Wilhelmshaven, Germany. This description suits DuPont Abcite® perfectly too!
- Construction started in 2007, and this powerful coal fired power plant will produce approx 5,5 bn kWh per year as of 2012, the equivalent of 1% of Germany's total energy consumption !
- Covering 33 hectares, the power plant requires kilometres of cables.
- Cable ladders play an important role: they have to protect the cables for a long time despite the aggressive industrial and maritime environment at the site. Sulphur fumes, for instance, is a typical chemical found at coal fired power plants.
- Electrabel / Suez specified DuPont Abcite® 545 for the protection of the 5 km metallic cable ladders, which translated into 4'000 sqm surface to be coated
- After surface preparation with a layer of zinc phosphate, 6 m long sections were dipped in a fluidised bed of **Abcite® 545 RAL 7037**, resulting in a coating with a thickness of 500 µm. The dipping process was the most effective and reliable way to fully coat all parts of the ladder. Due to its low processing temperature, Abcite® 545 was also the ideal solution to get a perfect adhesion on the galvanized surface. Overall, this was a real challenge for the job coater, the company Van Os-Duracoat, who originally proposed this solution.

Why Abcite® ?

- **DuPont Abcite® provides the most competitive and most effective long term protection compared to other solutions, including stainless steel. It prevents the substrate from corrosion in highly aggressive environments without any maintenance, resulting in the lowest overall life cycle cost.**

DuPont Abcite® 545
for cable ladder protection

Abcite® - a long list of success stories …

Durability and longevity are key to the success of Abcite®

Hereunder are some examples from a long list of references who have built the reputation of Abcite® and convince new customers to rely on DuPont's quality:

- **Hong Kong Electric** specifies Abcite® at its Lamma Island power plant since 2004. Abcite® fulfils the requirements of the power company for chemical and corrosion resistance, and withstands the subtropical climate with temperatures ranging from 5°C to 35°C, high UV, humidity and salinity.
- **Antwerp metro**
- **Degussa-Evonik** (since 1995)

ABCITE® Powder Coatings

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The Benefits of Abcite®

- Excellent abrasion and impact resistance
- Chemical resistance (against most acids and alkalis)
- Excellent salt spray resistance (> 2000 hours)
- Fire Resistance : VO according to UL94 and Class O according to BS 476 Part6 (for specific information regarding tested grades please contact us)
- Long term weathering and UV resistance
- Flexible application (spraying or dipping)
- Easy application : good coverage in edges, corners and difficult areas
- Noise reduction (dampening)
- Repairable in situ
- Efficient and economic : no need for primer, high film build (300 – 600 µm)
- Environmentally friendly: no solvent, VOC or halogen
- Based on DuPont proprietary polymer technology

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