CASE STUDY

CCS Network (ME) Ltd

Hinkley Point 275 kV — cable sealing ends

SITE	CUSTOMEI	DATE OF APPLICATION
Hinkley Point 275 kV, Somers	National Grid	September 2010

POLLUTIO TYPE	EQUIPMEN	DURATION
Saline pollutio from the Bristol Channel	3 cable sealing ends, 275 kV (original coating 1999)	2 days

The challenge

Hinkley Point faces the Bristol Channel, and salt is the pollution that drives leakage current on the cable sealing ends. RTV silicone HVIC had been applied in 1999. A June 2010 inspection found most of that original film still hydrophobic after 7 to 11 years, especially on the south-east faces. The north-east faces of the same sheds were less hydrophobic. Thickness and adhesion were still good enough to overcoat, which is a different decision from stripping a failed grease.

The solution

Two days in September 2010, from a mobile elevating work platform. The surfaces were cleaned with water and isopropyl alcohol, and a minimum extra 250 microns of RTV silicone HVIC was sprayed over the original coating. Because the old film could stay, the outage did not include a full removal.

The result

Adhesion and thickness of the new film were checked and recorded as sufficient. After 7 to 11 years in salt, most of the original coating was still hydrophobic and still sound enough to build on.



Finished coating



Finished coating

Long-term performance

SURVEY DATE	CUSTOMER	POLLUTION TYPE
17 and 18 September 2021	National Grid	Saline

EQUIPMENT

275 kV and 400 kV insulators

CCS surveyed the 400 kV substation on 17 September 2021 and the 275 kV substation on 18 September 2021. Both face saline air from the Bristol Channel. Protection on site is a mix of water wash, RTV silicone HVIC and hydrocarbon grease. Several coated circuits have had reliable maintenance-free service. On the 400 kV substation the survey recorded existing coatings dated from October 2011 to February 2017, with overcoats recommended after about 10 years.

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