CASE STUDY

CCS Network (ME) Ltd

Heysham SGT2 — current transformers

SITE	CUSTOMEI	DATE OF APPLICATION
Heyshar 400 kV substati SGT2	Nationa Grid	October 2010

POLLUTIO TYPE	EQUIPMEN	DURATION
Salt fog and saline pollutio	3 current transfor 400 kV	3 days

The challenge

Heysham 400 kV is close to the north-west coast. Salt fog drives leakage current and, left alone, flashover. The three SGT2 current transformers already carried RTV silicone HVIC about 12 years old. They had stayed in service for those 12 years without flashover. That service record is why the right job was an overcoat.

The solution

Three days in October 2010, from mobile elevating work platforms. Surfaces were cleaned with isopropyl alcohol and water. Where the old coating was damaged or poorly adhered it was cut out and the porcelain cleaned, and those areas were built back level. Three coats of RTV silicone HVIC were then applied over the sound film.

The result

Water beaded on the new coating in rainfall: the hydrophobic surface doing what it is there to do. The coating this work renewed had already given 12 years without flashover.



Finished coating



Before



Finished coating

Long-term performance

SURVEY DATE	CUSTOMER	POLLUTION TYPE
17 August 2021	National Grid	Saline

EQUIPMENT
400 kV and 132 kV current transformers

On 17 August 2021 CCS surveyed National Grid's Heysham substation. An automated water-wash system had been taken out of use more than 20 years earlier, and the insulators that needed it had been coated with RTV silicone HVIC or hydrocarbon grease. The 400 kV current transformers were coated between 2002 and 2005. Only SGT2 was overcoated, in 2011. CCS recommended an overcoat once a coated circuit had passed about 10 years, and a strip-back where the film had thinned after 16 to 19 years. Greased current transformers were recommended for full grease removal and RTV silicone HVIC.