

# UltraTEV<sup>®</sup> family prevents catastrophic failure during routine testing at Port of Felixstowe

## The Customer

The Port of Felixstowe is the busiest container shipping port in the UK dealing with 44% of Britain's containerised trade. The Port of Felixstowe has 10 UltraTEV Plus<sup>®</sup> units which it uses for substation entry and routine inspection.

## Background

During routine testing Port of Felixstowe identified two instances of Partial Discharge (PD) using the UltraTEV<sup>®</sup> handheld.

### Area 1 detection

During routine testing PD activity was identified on an 11kV RMU that had been in services since 2005.

### Area 2 detection

After a planned upgrade of an 11kV substation, PD testing was carried out and revealed activity on one of the RMU Fault Making Switches.



Evidence of PD at site brought to light by UltraTEV Survey

## Investigation

### Area 1 detection

Investigation revealed the one phase termination had considerable PD activity damage and required re-termination. There was also interaction between cores. The cause was poor connections and the cable core spacing being insufficient.

### Area 2 detection

Investigation revealed the air gap between two phases was insufficient causing interaction between them. This was identified using the UltraTEV<sup>®</sup>'s ultrasonic mode with headphones.

## Impact on business

### Area 1 detection

If this had been left to the point of failure there would have been disruption to the ports core operation.

### Area 2 detection

If this had been left to the point of failure it would have resulted in a delay to the future development of this operational area.

Port of Felixstowe has been involved in the development of the new UltraTEV<sup>®</sup> Plus<sup>2</sup> and their valued feedback has been incorporated into the new instrument. EA Technology is grateful for their suggestions and would like to acknowledge their contribution.

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# Global Footprint

At EA Technology we specialise in asset management solutions for owners and operators of power network assets.



Founded in 1966 we have over 50 years' experience in the industry and 6 regional offices around the world to support our global customer base.

We work with a lot of our clients on a long-term basis to help them safeguard their power networks.

We advise our clients on strategy and implementation of a range of technology solutions to manage power assets, delivering maximum life and minimise cost.



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