



## Hawkgas 12 Operational Considerations

Recently there has been a disruptive failure of a Hawkgas 12 (HG12) CB at ICI Waterloo Road Substation in Widnes.

Initial investigation points toward environmental factors and partial discharge (PD) activity previously observed at the site as contributory factors.

Forensic investigation works are being carried out by a specialist 3<sup>rd</sup> party consultant to identify root cause of failure and advise measures required to prevent reoccurrence of the failure.

As a result of this incident all sites with HG12 CB's and with historical high PD measurements have been further investigated and no PD was detected.

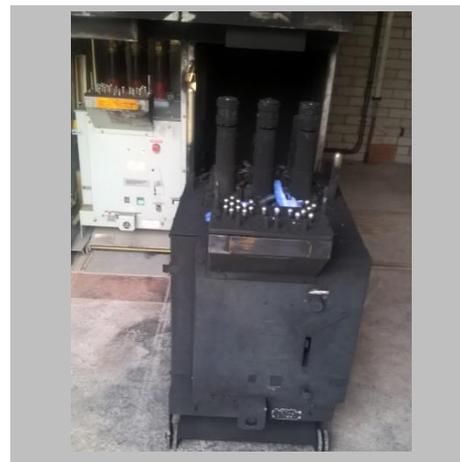
Special attention should be afforded to sites where environmental conditions are or have been previously known to be poor (e.g. damp or dusty environments).

## Recommendations

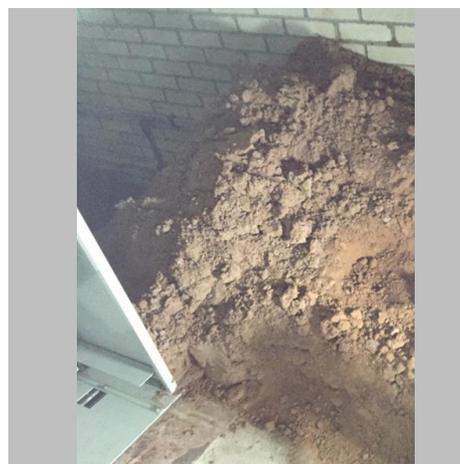
In sites with poor environmental conditions, further investigation is required to identify if conditions have had any detrimental affects on the switchgear.

All HG12 CBs withdrawn from the service position, shall be visually inspected and shall not be returned to service if there is visible deterioration on the bushings or contacts.

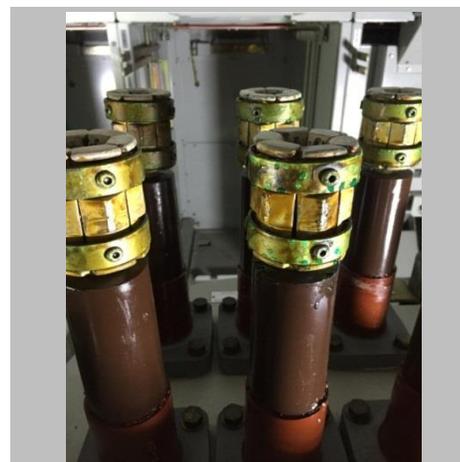
Such instances of deterioration shall be reported to the Engineering Services department



*ICI Waterloo Road - HG12 Disruptive Failure*



*ICI Waterloo Road – Previous Site Conditions*



*ICI Waterloo Road – Corrosion on the bushings of CB previously replaced on site*