

# Health and Safety Executive OC 483/8

Field Operations Division

To

FCG Specialist Inspectors (Electrical)

## GEC TYPE AAK 11KV SWITCHGEAR

### Introduction

1 This OC informs inspectors of a failure in 1989 of switchgear of the above type which had been installed in 1955.

### Background

2 The failure occurred at a male/female isolating contact assembly on an oil-filled circuit breaker. The resulting explosion caused serious damage to the busbar chamber and spout. The switchboard enclosure contained the explosion.

3 The contact assembly consists of 2 parallel male contacts per phase, mounted side by side, on the bushings of the circuit breaker. These male contacts engage in rose contacts fixed within the spout enclosures in the fixed housing. After the fault one rose contact assembly was found welded to the male contacts and showed signs of severe arc damage.

4 The failure was attributed to poor contact at the isolating contacts giving rise to overheating, contact arcing and subsequent flashover to earth or to an adjacent phase.

5 It had been standard practice within the organisation not to examine in detail the isolating contact assemblies during maintenance. The examination was confined to inspection of the cleanliness of the contacts.

6 In this case the occupier chose to replace the switchgear with new equipment. The local electricity supply company was informed of the failure.

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## **ASI headings**

Circuit breakers: GEC: switchgear and switches.