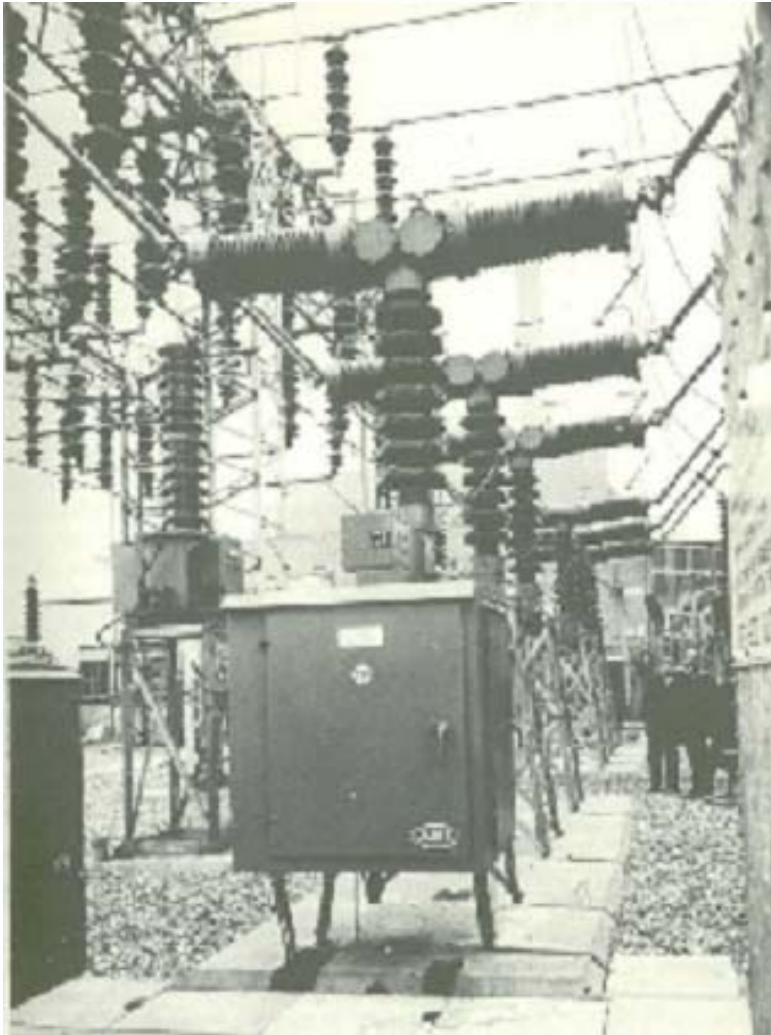


The Use of Vacuum Interruption at Transmission Voltages

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History: Origins



Serious development of Power Vacuum Interrupters started in England in the 1950's. At the same time GE in the USA also commenced work.

One of the first applications was for transmission circuit breakers!

The photo shows an AEI 132 kV vacuum circuit breaker in service with the CEGB at West Ham in 1967. It remained in service into the 1990's.

Introduction

The Paper covers the following topics:

- 1. Vacuum Interrupter & Switchgear Technology**
- 2. What was the problem with the 1960's Technology?**
- 3. The Situation Today**
- 4. Difficulties Facing Vacuum Interruption at Higher Voltages**
- 5. Modern Vacuum High Voltage Circuit Breakers**
- 6. The Future**



Manufacturing



The Manufacture of vacuum interrupters is performed in special facilities using state of the art technology such as clean rooms and high vacuum furnaces.

Main horizontal laminar flow clean room at VIL, Finchley, 1978.



Manufacturing -One Shot Seal Off



Vacuum interrupter manufacture is a Hi-Tech industrial process.

After assembly a number of interrupters are loaded into a vacuum furnace and brazed and sealed at the same time.

Manufacture of Vacuum Interrupters in South Africa
c1990



Vacuum Interrupter Technology

There are three key areas of technology in the design of Vacuum Interrupters:

- 1. Overall Electrical and Vacuum Design.**
- 2. Arc Control System**
- 3. Contact Materials.**



Questions?

