

OVERVIEW - RETROFIT VACUUM CIRCUIT BREAKERS (RVCB's)

SPE Energy Ltd (SPEE) is at the forefront of Retrofit Vacuum Circuit Breaker's (RVCB's) design and manufacture with their latest "roll in - roll out" Circuit Breakers which can replace the old life expired oil or SF6 Circuit Breakers with minimum system down time.

AEI: - BVRP4, BVRP3

Brush: - VSI, VTD, R4, R8

English Electric: - OLX, OLX3

Ferguson Pailin: - VSBP3, VSBP17

GEC: - BVP17, BVP22

Reyrolle: - LMT, LMT", LM23T

Staffer: - ACo1

SWS: - C4, D4, DXD, DXE, HG12

Switchgear and Cowans:- A4,FA4,UA4,UAE4,UA6

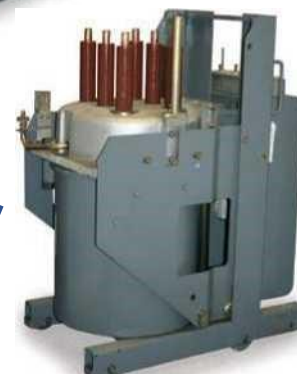
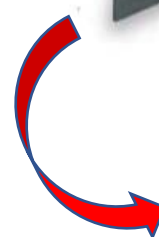
Operation of the RVCB Remains Unchanged:

1. Push into housing.
2. Set the interlocks.
3. Raise circuit breaker into selected position.



Benefits of RVCB Installations

- a. Significant reduction in time and resource requirements during the planning stage when compared with complete switchboard replacement.
- b. Considerable savings in capital cost when compared with switchboards replacement.
- c. Enables phased replacement with costs budgeted over a longer period.
- d. Disruption at Site reduced.
- e. No Civil Work involved.
- f. Removal of oil from Substation reduces risk of fire and explosion leading to lower insurance premiums.
- g. Increased operational reliability, reduced maintenance, and costs.
- h. Original HV Cables can be used.
- i. RVCB's are provided with motor wound spring mechanisms that allow remote operation.
- j. Suitable for frequent switching duties.



Technical Compliance Data

| Description | Ratings |
|--|------------------|
| Rated Maximum Voltage (Ur), (kV rms) | 12 |
| Power frequency insulation level withstand (kV), 1 min dry | 28 |
| Rated lightning impulse withstand voltage (BIL), (kVp) | 75 |
| Rated power frequency (fr), (Hz) | 50/60 |
| Rated continuous current (Ir), (A rms) | 400/630/800/1250 |
| Rated short-time withstand current (Ik), 3 secs, (kA rms) | 25 * |
| Rated peak withstand current (Ip), (kA) | 62.5 * |
| Rated control voltage, DC volts | 77-121 |
| Rated symmetrical interrupting current (Isc), (kA rms) | 25 |
| Rated dc component (%) | 50 |
| Rated operating sequence | 0-0.3s-C0-15s-C0 |
| Mechanical operating sequences, Class M2 | 10000 |
| Operating temperature range, °C | -5 to +40 |
| Relative humidity (%) | 0-100 |
| Maximum altitude above sea level, m | 1000 |

The 25kA RVCB complies to the following IEC standards: -

- IEC 62771-100 High Voltage Switchgear and control gear - Alternating current earthing devices
- IEC 62271-1 High Voltage Switchgear and control gear – Common specifications
- IEC 62271-102 High Voltage Switchgear & Control Gear – Alternating current disconnectors & earthing switches



BVP17



SWS-Lo



SWS-Hi



VBA



VSI



LMT