Product description
ELK-MEB03 is a retrofit solution for arcing chamber of Gas insulated-Switchgear (GIS) type ELK-03. As the circuit breaker is the most important part of a GIS, ABB developed the new product solution „ELK-MEB03“ to ensure safe and reliable operation and to increase lifetime of the GIS up to another 25-30 years.

The existing arcing chamber and operating mechanism will be upgraded with state-of-the-art components while keeping encapsulation of the existing circuit breaker. This ensures an immediate and reliable spare part supply for a sustainable switchgear performance and is an easy and cost-efficient solution for retrofitting your substation.

Customer benefit
Depending on the exact GIS – layout, we are able to execute a step by step on-site retrofit work, which enables a modernization of complete substation with a low shutdown time. Additionally the mechanical and electrical lifetime is fully restored to the originally guaranteed figures.

Your benefits at a glance:
- Extension of maintenance intervals
- Significant reduction of maintenance costs
- The breaker interrupting chamber and operating mechanism are state-of-the-art technology
- Considerably reduced energy for arc extinguishing
- Immediate, cost-efficient and reliable spare parts supply from ABB’s series production
- No change of layout necessary
- Know-how availability ensured
- Type-tested according to latest IEC & ANSI standards *)
- Circuit breaker mechanical and electrical life is restored

Retrofit improves the availability and reliability of your installations in the most cost-effective way.
**Technical details**

<table>
<thead>
<tr>
<th></th>
<th>Existing SF arcing chamber</th>
<th>New MEB03 arcing chamber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>145 kV</td>
<td>145 kV</td>
</tr>
<tr>
<td>Operating current</td>
<td>Up to 3150 A</td>
<td>3150 A</td>
</tr>
<tr>
<td>Short circuit current</td>
<td>31.5 / 40 kA</td>
<td>40 kA</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 / 60 Hz</td>
<td>50 / 60 Hz</td>
</tr>
<tr>
<td>Operating principle</td>
<td>AHMA-1/AHMA-4</td>
<td>HMB-2 operating mechanism</td>
</tr>
<tr>
<td>Charging time after O-CO switching</td>
<td>19 s / 46 s</td>
<td>28 s</td>
</tr>
<tr>
<td>Oil amount</td>
<td>3 litres / 2 litres</td>
<td>1,75 litres</td>
</tr>
</tbody>
</table>

*) Type tests for 50 Hz frequency has not been performed yet. Due to the successful results from 60 Hz tests, ABB is confident to pass the 50 Hz tests also.

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