The Value of Type Testing
Cables and Accessories

Edwin Pultrum
KEMA High Voltage Laboratory
Complete Type Test

consists of:

- non-electrical type tests (cable only)
- electrical type tests (cable + accessories)
**Electrical Type Test comprises**

*(not complete)*

<table>
<thead>
<tr>
<th>Test Type</th>
<th>MV</th>
<th>HV</th>
</tr>
</thead>
<tbody>
<tr>
<td>PD measurement</td>
<td>✓</td>
<td>✓ hot/cold</td>
</tr>
<tr>
<td>tanδ measurement</td>
<td>✓</td>
<td>✓ cable only</td>
</tr>
<tr>
<td>Heating cycle voltage test</td>
<td>accessory</td>
<td>✓</td>
</tr>
<tr>
<td>Heating cycle test (no voltage)</td>
<td>cable</td>
<td></td>
</tr>
<tr>
<td>Impulse test</td>
<td>✓</td>
<td>✓ hot/cold</td>
</tr>
</tbody>
</table>
Setup for Type Test
16 years of Type Testing
(1993-2008)

cable 47%
termination 28%
straight joint 15%
crossbonding joint 8%
transition joint 2%
16 years of Type Testing
(1993-2008)

- IEC60502: More than 200 cable and accessory tests
- IEC60840: 150 cable and accessory tests
- IEC62067: Fewer than 100 tests
- HD620, HD629.1: 50 tests
- Other: Fewer than 50 tests

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16 years of Type Testing

![Graph showing the distribution of cable and termination types.]

IEC 60502, IEC 60840, IEC 62067, HD 620, HD 629, other

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16 years of Type Testing

- cable
- acc.
- Linear (cable)
- Linear (acc.)
Conclusions

• 20% - 50% failures testing accessories
• 15% failures testing cables
• interface problems: test the combination to be used
• no improvements in failure rate