A. GENERAL CHARACTERISTICS

Design standards : IEC 76  
Transformer type : Hermetically Sealed Totally Oil Filled  
Service Condition : Indoor  
Type of oil : Mineral Oil Class 1 acc. to IEC 296  
Number of phase : 3 Phase  
Frequency : 50 Hz

B. TECHNICAL SPECIFICATION

Capacity : 1000 kVA  
Primary Voltage : 20 kV  
Secondary Voltage : 0.4 kV  
Vector Group : Dyn5  
Cooling : ONAN  
Temperature Rise - Oil : 60 °C  
- Winding : 65 °C  
No load losses at nominal voltage : 1600 Watts  
On load losses at principal tapping : 13000 Watts  
Impedance voltage : 5 %  
Off load current at nominal voltage : 1.8 %  
Temperature Insulation Class : A  
Noise : 58 dB  
Off Circuit Tapping value : +/-2.5%; +/-5%

C. INSULATION CLASS OF THE WINDINGS

Primary Secondary

Highest system voltage (kV) : 24 1.1  
Impulse test voltage (kV) : 125 0  
Applied test voltage (kV) : 50 3

D. EFFICIENCY AND VOLTAGE REGULATION

<table>
<thead>
<tr>
<th>Efficieny ( % )</th>
<th>4/4 load</th>
<th>3/4 load</th>
<th>2/4 load</th>
<th>1/4 load</th>
<th>Voltage Regulation in Volt</th>
<th>in %</th>
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</thead>
<tbody>
<tr>
<td>Pf 0.8</td>
<td>98.21</td>
<td>98.54</td>
<td>98.80</td>
<td>98.81</td>
<td>384</td>
<td>3.98</td>
</tr>
<tr>
<td>Pf 1.0</td>
<td>98.56</td>
<td>98.83</td>
<td>99.04</td>
<td>99.04</td>
<td>394</td>
<td>1.42</td>
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</table>

E. APPROXIMATE WEIGHTS AND DIMENSION

Total length : 1,800 mm  
Total width : 1,070 mm  
Total height : 1,730 mm  
Weight of oil : 715 kg  
Weight of core and winding : 1,200 kg  
Total weight : 2,860 kg  
Approximate Drawing No. :  
Painting Colour : Light Grey RAL 7032

The above dimensions and masses are approximate and provided to give a general description of our proposed transformer.
F. ACCESSORIES
- Name Plate and Rating Plate
- HV Plug in Bushings and LV Porcelain Bushings
- Off Circuit Tap Changer
- Oil Filling Valve
- Oil Draining Valve
- Lifting Lugs
- Grounding Terminal
- Bidirectional Rollers
- Pressure Relief Device Without Contact
- Protection Relay RIS

G. DEVIATIONS / EXCEPTIONS
- None

H. NOTES
- None

I. LIST OF TEST
Routine Test:
- Measurement of the resistance value and checking of polarities
- Measurement of the ratio on all taps
- No load test for measurement of the no load loss and no load current
- Short circuit test for determination of the on load loss and impedance
- Applied voltage test
- Induced voltage test

Type test:
- Temperature rise test
- Full wave impuls test (1.2 / 50 us)

Tests other than the above mentioned list needs further confirmation

<table>
<thead>
<tr>
<th>Revision</th>
<th>Original</th>
<th>Client / Project:</th>
<th>No: D 0239</th>
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<td>Date</td>
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<tr>
<td>Est.</td>
<td>DEL</td>
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<tr>
<td>Chk</td>
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<td></td>
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<tr>
<td>App.</td>
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STANDARD PRIVATE 1000 KVA (Indoor)