**ΥΠΟΔΕΙΓΜΑ**

Παρ.2.4.3.3.Β.15 ΔΙΑΚΗΡΥΞΗΣ ΔΕΕΔ-50

**ΠΙΝΑΚΑΣ ΔΟΚΙΜΩΝ ΤΥΠΟΥ**

**ΠΕΡΙΕΧΟΜΕΝΑ**

1. GIS 170kV
2. Μ/Σ 150 kV / Μ.Τ. 40/50 MVA
3. ΜΕΤΑΛΛΟΕΝΔΕΔΥΜΕΝΟΙ ΠΙΝΑΚΕΣ 24kV
4. ΨΣΕ

**ΠΙΝΑΚΑΣ ΔΟΚΙΜΩΝ ΤΥΠΟΥ ΒΑΣΙΚΟΥ ΕΞΟΠΛΙΣΜΟΥ**

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| Διαγωνιζόμενος :  |
|  **1.GIS 170 kV** | **ΚΑΤΑΣΚΕΥΑΣΤΗΣ ΚΑΙ ΤΥΠΟΣ**: |
| **Α. The following type tests will be carried out in a complete single-pole or three pole functional unit of a switchgear bay (including at least the Circuit Breaker, the Disconnectors and the Earthing Switches).** |
|  | ΠΕΡΙΓΡΑΦΗ ΔΟΚΙΜΗΣ | ΕΡΓΑΣΤΗΡΙΟ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ (ΑΡΙΘΜΟΣ & ΗΜΕΡΟΜΗΝΙΑ) | ΑΠΟΤΕΛΕΣΜΑΤΑ ΤΗΣ ΔΟΚΙΜΗΣ |
| **1** | **Tests to verify the insulation level of the equipment and dielectric tests on auxiliary circuits** |  |  |  |
| **2** | **Tests to prove the radio interference voltage (RIV) lever (if applicable)** |  |  |  |
| **3** | **Tests to prove the temperature rise of any part of the equipment and measurement of the resistance of the main circuit** |  |  |  |
| **4** | **Tests to prove the ability of the main and earthing circuits to carry the rated peak and the rated short-time withstand current** |  |  |  |
| **5** | **Tests to verify the making and breaking capacity of the included switching devices** |  |  |  |
| **6** | **Tests to prove the satisfactory operation of the included switching devices** |  |  |  |
| **7** | **Tests to prove the strength of enclosures** |  |  |  |
| **8** | **Verification of the degree of the enclosure** |  |  |  |
| **9** | **Gas tightness tests** |  |  |  |
| **10** | **Electromagnetic compatibility tests (EMC) (If applicable)** |  |  |  |
| **11** | **Additional tests on auxiliary and control circuits** |  |  |  |
| **12** | **Tests on partitions** |  |  |  |
| **13** | **Tests to prove the satisfactory operation at limit temperatures** |  |  |  |
| **14** | **Tests to prove performance under thermal cycling and gas tightness on insulators** |  |  |  |
| **15** | **Corrosion test on earthing connections (if applicable)** |  |  |  |

**ΠΙΝΑΚΑΣ ΔΟΚΙΜΩΝ ΤΥΠΟΥ ΒΑΣΙΚΟΥ ΕΞΟΠΛΙΣΜΟΥ**

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| Διαγωνιζόμενος :  |
|  **GIS 170 kV** | **ΚΑΤΑΣΚΕΥΑΣΤΗΣ ΚΑΙ ΤΥΠΟΣ**: |
|  | ΠΕΡΙΓΡΑΦΗ ΔΟΚΙΜΗΣ | ΕΡΓΑΣΤΗΡΙΟ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ (ΑΡΙΘΜΟΣ & ΗΜΕΡΟΜΗΝΙΑ) | ΑΠΟΤΕΛΕΣΜΑΤΑ ΤΗΣ ΔΟΚΙΜΗΣ |
| **B. GIS VTs** |
| **1** | **Temperature rise test** |  |  |  |
| **2** | **Short-circuit withstand capability test** |  |  |  |
| **3** | **Radio interference voltage measurement** |  |  |  |
| **4** | **Determination of errors** |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| **Γ. GIS CTs** |
| **1** | **Short-time current tests** |  |  |  |
| **2** | **Temperature rise test** |  |  |  |
| **3** | **Determination of errors** |  |  |  |
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**ΠΙΝΑΚΑΣ ΔΟΚΙΜΩΝ ΤΥΠΟΥ ΒΑΣΙΚΟΥ ΕΞΟΠΛΙΣΜΟΥ**

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| Διαγωνιζόμενος :  |
| **2.Μ/Σ 40/50 ΜVA** | **ΚΑΤΑΣΚΕΥΑΣΤΗΣ ΚΑΙ ΤΥΠΟΣ**: |
|  | ΠΕΡΙΓΡΑΦΗ ΔΟΚΙΜΗΣ | ΕΡΓΑΣΤΗΡΙΟ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ (ΑΡΙΘΜΟΣ & ΗΜΕΡΟΜΗΝΙΑ) | ΑΠΟΤΕΛΕΣΜΑΤΑ ΤΗΣ ΔΟΚΙΜΗΣ |
| **1** | **Temperature rise test** |  |  |  |
| **2** | **Noise Level Test** |  |  |  |
| **3** | **Measurement of the power taken by the fans** |  |  |  |
|  | **Special Tests** |  |  |  |
| **1** | **Chopped wave lightning impulse test (LIC)** |  |  |  |
| **2** | **Switching impulse test (SI)** |  |  |  |
| **3** | **Line terminal AC withstand test (LTAC)** |  |  |  |
| **4** | **Measurements of the harmonics of the no-load current** |  |  |  |
| **5** | **Measurement of Zero Sequence Impedance** |  |  |  |
| **6** | **Winding hot-spot temperature-rise measurements** |  |  |  |
| **7** | **Sweep Frequency Response Analysis** |  |  |  |
| **Μηχανισμός αλλαγής λήψεως υπό φορτίο(OLTC)** |  |  |  |
| **1** | **Temperature rise of contacts** |  |  |  |
| **2** | **Switching tests** |  |  |  |
| **3** | **Short – circuit test** |  |  |  |
| **4** | **Transition resistor test** |  |  |  |
| **5** | **Mechanical tests** |  |  |  |
| **6** | **Dielectric tests** |  |  |  |
| **Μονωτήρες(Bushings) ΥΤ**  |  |  |  |
| **1** | **Power – frequency voltage withstand test** |  |  |  |
| **2** | **Lightning impulse voltage withstand test from environmental overvoltage** |  |  |  |
| **3** | **Electromagnetic compatibility test** |  |  |  |
| **4** | **Thermal stability test** |  |  |  |
| **5** | **Temperature rise test** |  |  |  |
| **6** | **Verification of thermal short – time current withstand** |  |  |  |
| **7** | **Cantilever load withstand test** |  |  |  |
| **8** | **Tightness test** |  |  |  |
| **9** | **Verification of dimensions** |  |  |  |

\*Όσον αφορά στους Μονωτήρες, οι δοκιμές αφορούν στους Μονωτήρες Υψηλής, όπου αυτές εφαρμόζονται

**ΠΙΝΑΚΑΣ ΔΟΚΙΜΩΝ ΤΥΠΟΥ ΒΑΣΙΚΟΥ ΕΞΟΠΛΙΣΜΟΥ**

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| Διαγωνιζόμενος :  |
| **3.ΜΕΤΑΛ/ΝΟΙ ΠΙΝΑΚΕΣ Μ.Τ.** | **ΚΑΤΑΣΚΕΥΑΣΤΗΣ ΚΑΙ ΤΥΠΟΣ**: |
|  | ΠΕΡΙΓΡΑΦΗ ΔΟΚΙΜΗΣ | ΕΡΓΑΣΤΗΡΙΟ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ (ΑΡΙΘΜΟΣ & ΗΜΕΡΟΜΗΝΙΑ) | ΑΠΟΤΕΛΕΣΜΑΤΑ ΤΗΣ ΔΟΚΙΜΗΣ |
| **1** | **Impulse Voltage dry test, 125KV peak** |  |  |  |
| **2** | **Power Frequency Voltage dry test, 50KV 1min** |  |  |  |
| **3** | **Temperature rise test, at the nominal current of the main circuit of the panel.** |  |  |  |
| **4** | **Short time current test on main circuits, 16kA 3sec, 40kA peak** |  |  |  |
| **5** | **Short time current test on earthing circuits****Grounding switch: 16kA, 3sec, 40kA peak** |  |  |  |
| **6** | **Verification of making and breaking capacity of the circuit breaker** |  |  |  |
| **7** | **Mechanical operation and robustness test** |  |  |  |
| **8** | **Verification of the degrees of protection of persons against hazardous approach to live and moving parts, IP31D.** |  |  |  |
| **9** | **Arcing due to internal fault** |  |  |  |
| **10** | **Measuring of the resistances of the main circuit** |  |  |  |
| **11** | **Tests for breaking and making of capacitive currents of BC2 test cycles for the circuit breakers of TM and CM panels** |  |  |  |
| **12** | **Dielectric tests of the auxiliary and control circuits** |  |  |  |
| **13** | **Verification of the protection code of the panel, according to IP** |  |  |  |

**ΠΙΝΑΚΑΣ ΔΟΚΙΜΩΝ ΤΥΠΟΥ ΒΑΣΙΚΟΥ ΕΞΟΠΛΙΣΜΟΥ**

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| Διαγωνιζόμενος : |
|  **4.ΨΣΕ** | ΚΑΤΑΣΚΕΥΑΣΤΗΣ ΚΑΙ ΤΥΠΟΣ: |
|  | ΠΕΡΙΓΡΑΦΗ ΔΟΚΙΜΗΣ | ΕΡΓΑΣΤΗΡΙΟ | ΠΙΣΤΟΠΟΙΗΤΙΚΟ (ΑΡΙΘΜΟΣ &ΗΜΕΡΟΜΗΝΙΑ) | ΑΠΟΤΕΛΕΣΜΑΤΑ ΤΗΣ ΔΟΚΙΜΗΣ |
| **1** | **Impulse voltage test according to IEC- 60255-27, all the circuits, class III** |  |  |  |
| **2** | **High frequency test according to IEC-****60255-26, class III** |  |  |  |
| **3** | **Electrostatic discharge test according to IEC-60255-26, κλάση III** |  |  |  |
| **4** | **Electrical fast transient test according to IEC-60255-26, class III** |  |  |  |
| **5** | **Vibration test according to IEC-60068-2-6** |  |  |  |
| **6** | **Disturbance test of radiated****electromagnetic field according to IEC- 60255-26 class III** |  |  |  |
| **7** | **Field immunity radio influence test****according to IEC-CISPR 22** |  |  |  |