



**Tests on Prefabricated Substation**

Short circuit test was successfully conducted for the first time in Short Circuit Laboratory, CPRI, Bangalore on 11kV, 990kVA Prefabricated substation of M/s. Schneider Electric India, New Delhi. Prefabricated substation comprises of high voltage switchgears, transformer, low voltage switchgear, HT and LT interconnections with earthing circuit. Test was conducted as per International standard IEC 62271-202: 2006-06



**Testing of Power Equipments at High Power Laboratory**

The short circuit test needs of Indian and International clients are well catered by both laboratories at Bangalore and Bhopal. In CPRI Bangalore, High Power Lab, the major testing activity comprised of power transformers testing, ranging from 66 kV class upto 220 kV class, with capacities from 20MVA to 50 MVA. DMRC, Delhi, NTPC, Delhi, PGCIL were the major utilities who availed testing facilities. Significantly 132/27.5 kV and 66/27.5 kV single phase traction power transformers were tested in HPL for DMRC, New Delhi. As far as testing of Switchgear equipments are concerned 220 kV, 132



kV Isolators, 12 kV, 36 kV Circuit Breakers and panels were tested for short time current test, short Circuit duties and internal arc test, RDSO, Lucknow utilized laboratory facilities for carrying out repeated power arc test on 9 sets of 27.5kV insulator string.

High Power Laboratory CPRI,

Bangalore performed tests on 20 MVA to 50 MVA transformers upto 220kV class for various users such as DMRC Delhi, NTPC and PGCIL.

**Short Circuit Testing Station tested 420 kV Disconnectors and Earth Switches**

STDS, CPRI Bhopal has tested 420 kV Double Break, Central Break Disconnecter, Earth switches and Pantographs Isolator at 40 kArms for 1 Sec. and 3 Sec. as per IEC -62271-102 (2003) Ed 1.0. using the Motor-less Generator, new technology adopted by CPRI Bhopal.

The test set-up for the Short time withstand current and peak withstand current tests are two Flexible Conductors having diameter of 32mm shall be used having central line distance of 70mm ( 30mm without spacers and also maintaining the recommended static mechanical terminal loads as per IEC 62271-102 (2003) Ed -1.0.



420kV Horizontal Central Break Isolator with Flexible Conductor

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