

Noja Power Switchgear, Brisbane, Australia	Detailed Design of a MV Switches Testing Facility based on Synthetic method	2014
Testing Facilities and maximum ratings of equipment to be tested		
<p>The Testing Facility is addressed to perform single phase mainly active load current switching tests at 100% of the rated current on MV Switches with rated voltage from 15.5 kV up to 38 kV and rated mainly active switching current from 100 A up to 800 A at 50 Hz and 60 Hz frequency.</p> <p>The test supply consists of a pre-charged capacitor bank. The discharge of capacitor bank on the reactor bank determines the test current that is broken by the Switch under test: a parallel branch allows to obtain the Transient Recovery Voltage in agreement with test duty TD_{load2} of IEC Standard 62271-103 - Table 4.</p>		
Tasks performed:		
<ul style="list-style-type: none"> ● Test circuit conceptual design and operating principle ● Testing Facility configuration and Basic Design ● Multi-line diagram of the synthetic est circuit ● Circuit parameters calculation ● Testing Facility Preliminary Layout ● Control systems Specification including Test sequencer and Data Acquisition system ● Capital expenditure budget <ul style="list-style-type: none"> ● Technical Specification of the following testing equipment: <ul style="list-style-type: none"> ○ Capacitor banks ○ Dc generator for the pre-charging of the Capacitor bank ○ Reactors banks ○ Resistor banks for TRV control ○ Making switch and Discharge disconnectors ○ Busbar system ○ Voltage dividers and Current shunt 		

