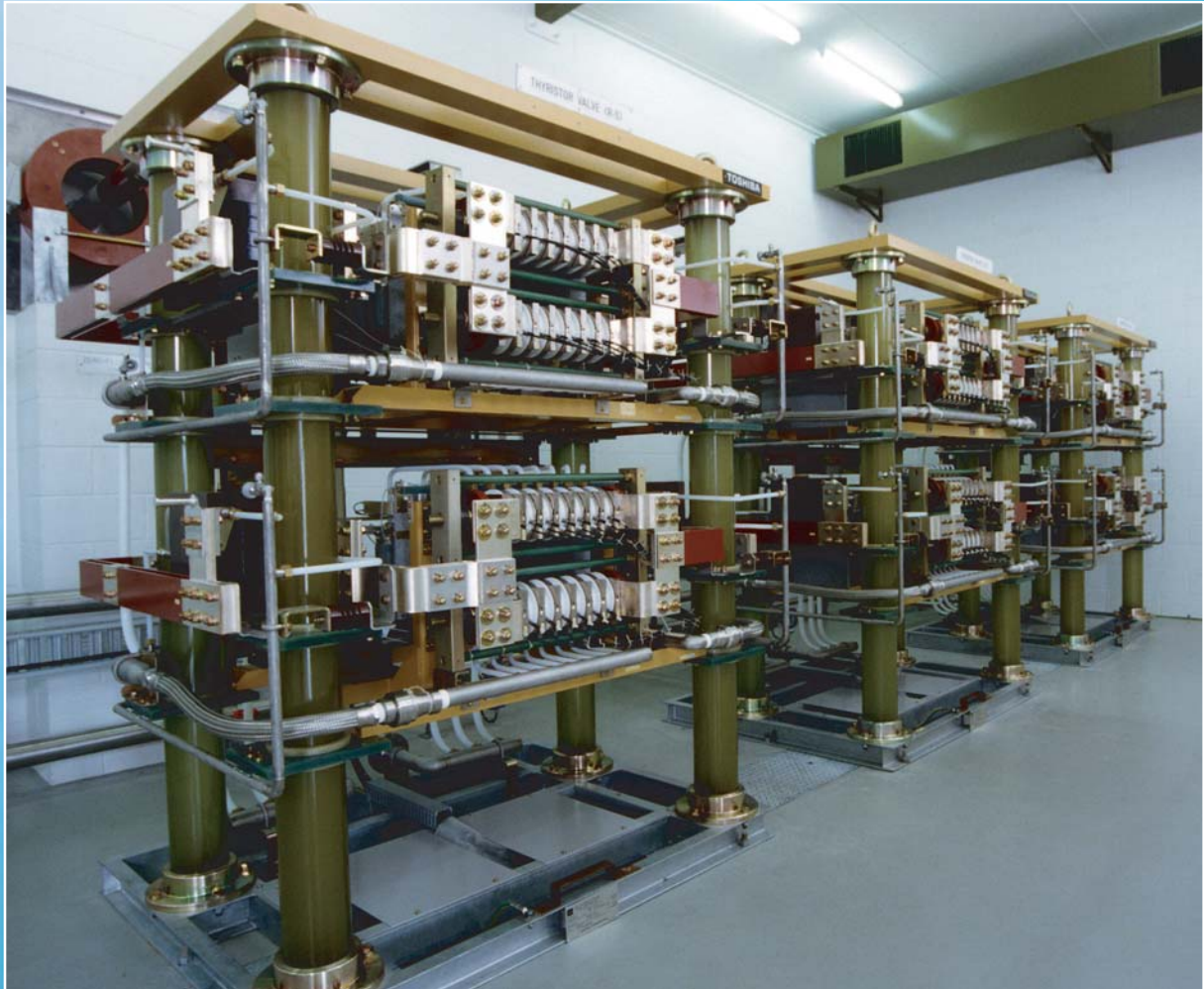
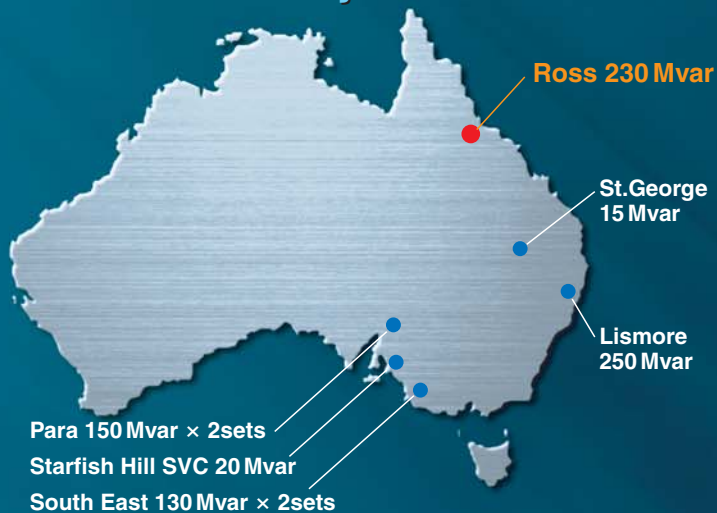


Ross 230 Mvar SVC



TMT&D SVC Projects in Australia



LTT thyristor valve for
230 Mvar TCR
(Thyristor Controlled Reactor)

■ Ratings

230 Mvar (-80 to +150 Mvar)

■ Commissioned

October 1998

Ross 230 Mvar SVC



Due to the increasing load and need for greater power security in the North Queensland area of Australia, Powerlink required a Static Var Compensator (SVC) to be installed at the Ross 275 kV substation near Townsville, North Queensland.

The main purpose of the SVC is to :

- Regulate and control the 275 kV ac system voltage
- Provide dynamic, fast response reactive power following system contingencies
- Control power oscillations in the 275 kV transmission system, thereby enhancing system damping
- Enhance first swing stability by maintaining system voltages during large disturbances

The SVC is required to have a high availability (not less than 98 %) and high reliability.

The 230 Mvar SVC (-80/+150 Mvar) was commissioned by Toshiba and Powerlink in 1998 and uses one of the world's largest TCR reactors.

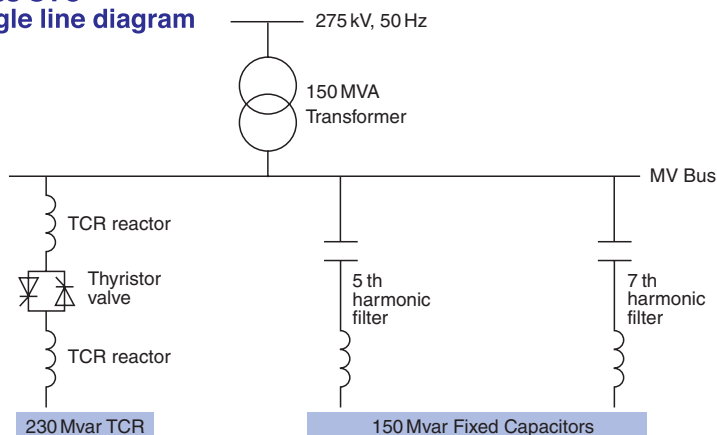
Photos:

Front page; LTT thyristor valve for 230 Mvar TCR

Left top; Toshiba provides a 230 Mvar SVC (80 Mvar inductive to 150 Mvar capacitive) at Power Link's Ross Substation

Left mid; Compact TCR valve (6kV - 2400A LTT)

Ross SVC single line diagram



Project Name	Ross 230 Mvar SVC
Commissioned	October 1998
Location	Ross substation Powerlink Queensland Australia
Rating	150 Mvar fixed capacitor and 230 Mvar TCR
AC System Voltage	275 kVac
Converter Valve	Water Cooled, Air Insulated anti-parallel valve
Valve Configuration	14s2ap/valve 6 arms s: series, ap: anti-parallel
Triggering	Direct light triggering
Ratings of Thyristor	6 kV-2500 A LTT (4 inches)
Number of Thyristors	84
Controller	32-bit digital controller Power system damping control, Gain supervision control

TMT&D

TMT&D Corporation

TMT&D Corporation
12-1 Toranomom 3-Chome, Minato-ku,
Tokyo 105-0001 Japan
Homepage: www.tmt-d.com

MITSUBISHI ELECTRIC POWER PRODUCTS, INC.
530 Keystone Drive -HQ Building
Warrendale, PA 15086 USA
Telephone: 724-778-5111
Homepage: www.meppi.com

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