

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
BELGAUM, KARNATAKA



A PROJECT ON

**“Design, Modeling & Analysis of Thyristor Controlled
Impedance type FACTS Controller”**

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in

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ABSTRACT

The demand of power in India is enormous and is growing steadily. To match the growing demand, transmission system expansion with 765kV AC line, high capacity long distance HVDC and HVAC system, application of FACTS devices on 400kV and 220kV are being planned. Flexible AC Transmission System (FACTS) controller can balance the power flow and there by using the existing power system network most efficiently. TCSC is used as series compensator in transmission system, it can be designed to control the power flow in order to increase the power transfer limits or to improve the transient stability.

The present work is mainly focused on the modeling, analysis & implementation of TCSC. The modeling of TCSC, analysis & transient simulation are carried out using MATLAB-SIMULINK. The prototype of TCSC is developed. The simulation and practical results are compared.