

**DEVELOPMENT OF A REACTIVE
POWER GENERATION SYSTEM
(A NEW CONCEPT)**

by

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SUMMARY

Electric loads are known to operate at lagging power factor. Generally there are the power a.c motors both single phase and three phase.

The purpose of this project is to construct a system that could be used in industry for power factor correction and generally for generation of reactive power.

The constructed reactive power generator is based on the rather novel switched-capacitor technique. This new technique was developed at Brunel University where a whole family of switched capacitor circuits had evolved. The circuit presented is one of many (ref.8) where one solid state switch is operating at twice the power frequency at a variable duty cycle. The fact that only one solid switch and a single capacitor is used makes this system to differ from existing ones used in industry. They use a series of capacitor banks that are connected in parallel to the load according to the demand for reactive power.

Of course a lot of work must be done until we can say that the constructed reactive power generator is ready for application. Some parts of the project can be modified or improved and also other solutions may be given.

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