The market for **High Voltage Power Capacitors** is continually growing due to new investments in power grids driven by the increasing world power demand.

**High Voltage Power Capacitors** play a key role in the transmission of electrical energy and are present in High Voltage Direct Current (HVDC) systems as well as Flexible Alternating Current Transmission Systems (FACTS).

**High Voltage Power Capacitors** improve the performance, quality and efficiency of electrical systems, minimizing the power losses, thus reducing the environmental load and making them more cost effective.

Siemens, a worldwide key player in the energy sector, extends now its product portfolio and introduces **High Voltage Power Capacitors**, designed to fulfill the highest electrical and mechanical requirements.

Siemens enters the market of power capacitors with a product fit for the most diversified applications, compliant with the most stringent technical and environmental requirement.

Costumers profit not only from Siemens more than three decades of experience in specifying capacitors and capacitor banks for FACTS and HVDC systems but also from a brand new state-of-the-art capacitor plant in Jundiaí, Brazil, with experts selected amongst the most renowned professionals in the market.

The technology acquired by Siemens, from a renowned Brazilian manufacturer, is present in the Capacitor Banks of the Itaipú HVDC system, which is in operation for several years already, demonstrating robustness and reliability.
With permanent focus on quality and performance, Siemens will use in its new factory in Brazil only raw materials from the most acknowledged suppliers worldwide.

Siemens Power Capacitors Key Features:

- Reliable and robust technology;
- Fulfill the highest electrical and mechanical requirements;
- Flexibility to fit customers needs;
- State-of-the art manufacturing process;
- Internationally renowned, high quality raw material suppliers;
- Highly qualified and internationally recognized experts.

Fields of Application:

Siemens HV Power Capacitor units are designed for a very high degree of reliability and long life lasting in shunt and series compensation systems, harmonic filtering and HVDC applications.

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Table 1: Siemens High Voltage Power Capacitors Field of Application
Examples of Application of Power Capacitors According to its Location in the Electrical Systems:

- **Transmission and Distribution Substations**: reactive power support;
- **Close to the load**: reactive power support and voltage control;
- **End of the line**: voltage control;
- **In series with a distribution feeder**: flicker mitigation and voltage control;
- **In series with a transmission line**: voltage control, power flow control and improvement of system stability.

International Standards:

Siemens High Voltage Power Capacitors are designed, manufactured and tested to meet or exceed the requirements of international standards like the **NBR 5282 / IEC 60871** and **IEC 60143**. Please consult us for other standards or needs.

Integrated management systems:

Siemens quality management system is based on the following international standards:

- **ISO 9001:2008** - Quality management systems
- **ISO 14001:2004** - Environmental management systems
- **OHSAS 18001:2007** - Occupational health and safety management systems
TESTS:

Siemens performs Routine tests on every unit manufactured in accordance with the required standard and Types Tests on request.

A. Routine Tests

a) Capacitance measurement
b) Measurement of the tangent of the loss angle (tan δ) of the capacitor
c) Voltage test between terminals
d) AC voltage test between terminals and container
e) Test of internal discharge device
f) Sealing test
g) Discharge test on internal fuses

B. Type Tests

a) Terminal to case tests
b) Thermal Stability Test
c) Measurement of the tangent of the loss angle (tan δ) of the capacitor at elevated
d) Short Circuit Discharge Test
e) Impulse Withstand Test
f) Radio Interference Voltage Test (RIV)
g) Voltage Decay.
h) Cold duty test
i) Endurance Test

Contact Information:

For more information, please contact:
SIEMENS Ltda., E T PS
13213-080 Jundiaí - SP – Brazil
Tel : +55 11 4585-5914 / 2273
Fax : +55 11 4585-2338
wilfredo.guevara@siemens.com