# **Liquid Filled Transformers**

ISO 9001-2008 Certified

application.



# **Powering Utility, Industrial and Commercial Operations**

Our expert sales team helps you specify your individual transformer requirements. Our engineering and manufacturing staff transforms your requirements into a unique, top quality, efficient, long-life solution for your

VTC-GTC will customize units for special requirements. Common options and accessories are available for system protection, reliability and

hassle-free maintenance.



Virginia Transformer brings more than 45 years of transformer engineering experience to each new assignment. We have amassed an archive of more than 15,000 designs and test data, serving as an exclusive resource for the development of new solutions...perhaps yours.



#### TYPICAL APPLICATIONS

- Utilities & Renewables
  - Generator step-up
  - Generator station
  - Autotransformers
  - Substation
  - Unit and station auxiliary transformer
- Data Centers
- Chemical Plants
- Mining operations
- Paper & steel mills
- Oil & gas
- Office & shopping complexes
- Water treatment plants
- Research facilities
- Furnace
- Traction

#### **BENEFITS**

- High overload capacities
- Economic Operation
- · High level of dielectric reliability
- Low corona levels
- Sealed unit requiring low maintenance
- Versatility of terminating options using throats, flanges or air terminal chambers
- Special Designs low sound level, voltage regulators, renwable pads, shunt reactors

### **Full Range of Liquid Filled Transformers**

VTC-GTC manufactures a full range of liquid filled transformers up to 1400 MVA 500 kV class.

## **Automatic load Tap Changing (LTC) Transformers**

Tap Changer Types: Virginia Transformer offers resistive-type LTC or reactive vacuum type systems. We will custom engineer your transformer with the LTC switch connected on the low voltage winding or on the high voltage winding.

## Three Phase Voltage Regulators

Our voltage regulators are used in distribution applications throughout North America to maintain voltage over transmission lines.

Designs are made in accordance with the design manual and verified to meet all requirements of the customer. The ISO quality system is strictly observed in the engineering and design implementation checking all aspects to assure reliability and customer specification.



#### Virginia Transformer Corp

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#### **Georgia Transformer**

2789 Highway 21 South Rincon, GA 31326 Phone: 912.754.5300 www.GaTransformer.com VTC - GTC Liquid Filled Transformers are integral to industrial, commercial, utility and renewable operations, but don't let that limit your thinking. We build custom units for specialty segments such as mining, transit, oil & gas, marine, government, data centers, storage facilities and export markets to name a few.

### **Circular Coil Windings for Better Stability**

Virginia Transformer uses disc and/or helical winding types for both HV or LV windings, using either copper or aluminum conductors, as specified or required. Windings are made in temperature and pressure controlled environments. We typically provide circular coils which are more stable than rectangular coils and offer greater short circuit withstand strength.

Circular coils are more stable than rectangular coils. Rectangular coils, under strong short circuit conditions tend to become circular, the natural shape to withstand maximal radial forces, a possible source of internal damage.



# Core Stacking Configurations to Optimize Cost, Losses and Sound Levels

Virginia Transformer engineers select from a variety of core lamination materials made from high grade, grain oriented silicon steel to optimize cost, losses and sound levels.

We use mitered-joint and/or step-lap core construction.



## **Choice of Oil Preservation Systems**

Virginia Transformer offers three types of oil preservation systems for liquid filled transformers. One of these systems will fit your needs best...Sealed Tanks, Conservators and Automatic (nitrogen) positive-pressure systems.

Conservator Tanks are custom designed primarily for environments with extreme variations in ambient temperatures, most often in severe cold winter climates.

# VCM (Virginia Control Module) Transforms Control & Management

Monitor your transformer's performance remotely with wired or wireless connection available VCM from Virginia Transformer. VCM is a PLC based monitoring and diagnostic module to track and record Top Oil Temperature, WTI (Winding Temp. Indicator), Gas Pressure, Rate of Rise Pressure, Liquid Level\*. The device sends real time solid state contact outputs and data to SCADA system, PC's or mobile devices in full compliance with NERC-CIP. VCM analyzes and detects abnormal conditions and provides data for trend analysis and historical review. VCM can also have an added capability to integrate data from other Transformer Protection IED's to be transmitted to a SCADA system.

\*VCM connects through the internet remotely for a real time view of transformer conditions. Modbuss, DNP3, Fiber









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