



The Right  Solution Provider



**Global Transformers
and Switchgears Fzco**
In Technical Collaboration with OCREV- Italy

An RMB Group Company

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Corporate Profile

Global Transformers & Switchgears (GTS) is an UAE based ISO 9001-2008 certified company. The company's main product line covers a wide range of oil cooled distribution and power transformers. The design capability and plant capacity of GTS is planned to produce transformers ranging from 100 KVA to 125 MVA with voltage class up to 230 KV. GTS has also full pledged facilities to manufacture dry type transformers and package substations.

GTS is part of RMB group of companies, which is a well known business conglomerate in U.A.E. The company is managed by professionals with several years of experience in the field of transformers and switchgear products.

GTS started its commercial production in the year 2005 and within five years of inception the company has emerged as the producer of largest capacity transformer in the Middle East. The Company has manufactured and supplied 63 MVA, 132 KV class transformers to one of its major customers. This is the largest capacity transformer ever made in the GCC region.

Type Test Records

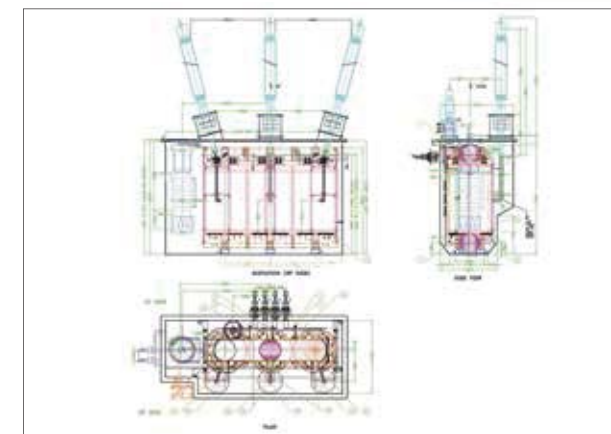
| | KVA | No. & Lab | Date | REMARKS |
|----|----------------------------|------------------|------------|------------|
| 01 | 100 KVA / 11 KV | IPH 41.0587/0592 | 27/08/2009 | No. 93588 |
| 02 | 250 KVA / 11 KV | IPH 42.0588/0593 | 27/08/2009 | No. 93589 |
| 03 | 500 KVA / 11 KV | CESI A6 031382 | 24/11/2006 | No. 60286 |
| 04 | 1000 KVA/11 KV | KEMA 3-06 | 24/10/2006 | No. 50052 |
| 05 | 1000 KVA/11 KV, (Silicon) | KEMA 113-09 | 15/07/2009 | No. 81920 |
| 06 | 1500 KVA / 11 KV | KEMA 117-05 | 03/11/2005 | No. 50053 |
| 07 | 1500 KVA / 6.6 KV | KEMA 118-05 | 03/11/2005 | No. 50053 |
| 08 | 1500KVA / 11 KV, (Silicon) | KEMA 4-06 (2) | 17/02/2006 | No. 50023 |
| 09 | 1500 KVA/11 KV, (Silicon) | KEMA 112-09 | 14/07/2009 | No. 81671 |
| 10 | 1500 KVA/22KV | KEMA 123-08 | 21/10/2008 | No. 82646 |
| 11 | 2000 KVA/ 11KV | IPH 43. 0589 | 26/08/2009 | No. 93590 |
| 12 | 2000KVA/22KV | KEMA 124-08 | 21/10/2008 | No. 82647 |
| 13 | 20 MVA/33KV | KEMA 188-09 | 20/01/2010 | No. 93564 |
| 14 | 22.5 MVA 132 KV | KEMA | 02/04/2010 | No. 103800 |
| 15 | 30 MVA / 33 KV | KEMA 2240-11 | 18/10/2012 | No. 114660 |



Enquiry and Ordering References

Please include relevant information related to your enquiry or order as, detailed below:

- Rated power in KVA.
- Voltage on primary side.
- Voltage on secondary side.
- Frequency of supply.
- Vector Group of the transformer.
- Tapping details in percentage.
- Specified losses and impedance.
- Insulation level for HV & LV.
- Cooling media (air, mineral or silicone oil).
- Type of application (indoor or outdoor).
- Standard in-force to comply with.
- Maximum ambient temperature of the region.
- Altitude above sea level if in excess of 1000 m.
- Conservator type, sealed or with welded cover.
- Protective and monitoring systems required.



Design & Technology

Global Transformers & Switchgears FZCO is established with the technical collaboration of Italy's OCREV s. r. l a well-known European company with 90 years experience in the design and manufacture of large power transformers. The collaboration offers GTS full technical support related to transformer design and manufacturing technology.

GTS's inhouse design department has engineering experts with more than 20 years experience in design and preparation of drawings. Advanced design & drawing softwares are used by the department for preparation of optimized and best design out puts.

Mission & Vision

Mission: To manufacture world-class transformers through stringent quality control and testing. Continuous quality management enforced in daily activities and in the entire value chain

Vision: To become a leading partner in the regional development of energy infrastructure and industrial projects by providing excellent quality products to the energy sector world wide.

Products & Services

Power Transformers

Range: Up to 125 MVA, 33KV to 230 KV class.
Application: Generation Plants, Transmission Networks, Large & Mobile Substations.

Features:

- Designed & built as per customer specification.
- Built in Multi-wound or Auto-wound designs.
- Designed with tertiary windings as per system requirements.
- Compact design, low noise, low losses & low operational cost.
- High short circuit strength & impulse with stand capacity.
- Short delivery time to meet project requirements.



30MVA, 66/20KV



Power transformer tank



Distribution transformer

Gallery



Test control desk



31.5 MVA, 33KV/11.5KV



63 MVA, 33KV/6.3-6KV



Medium power transformers



20 MVA, 33/11KV



63 MVA, 132KV

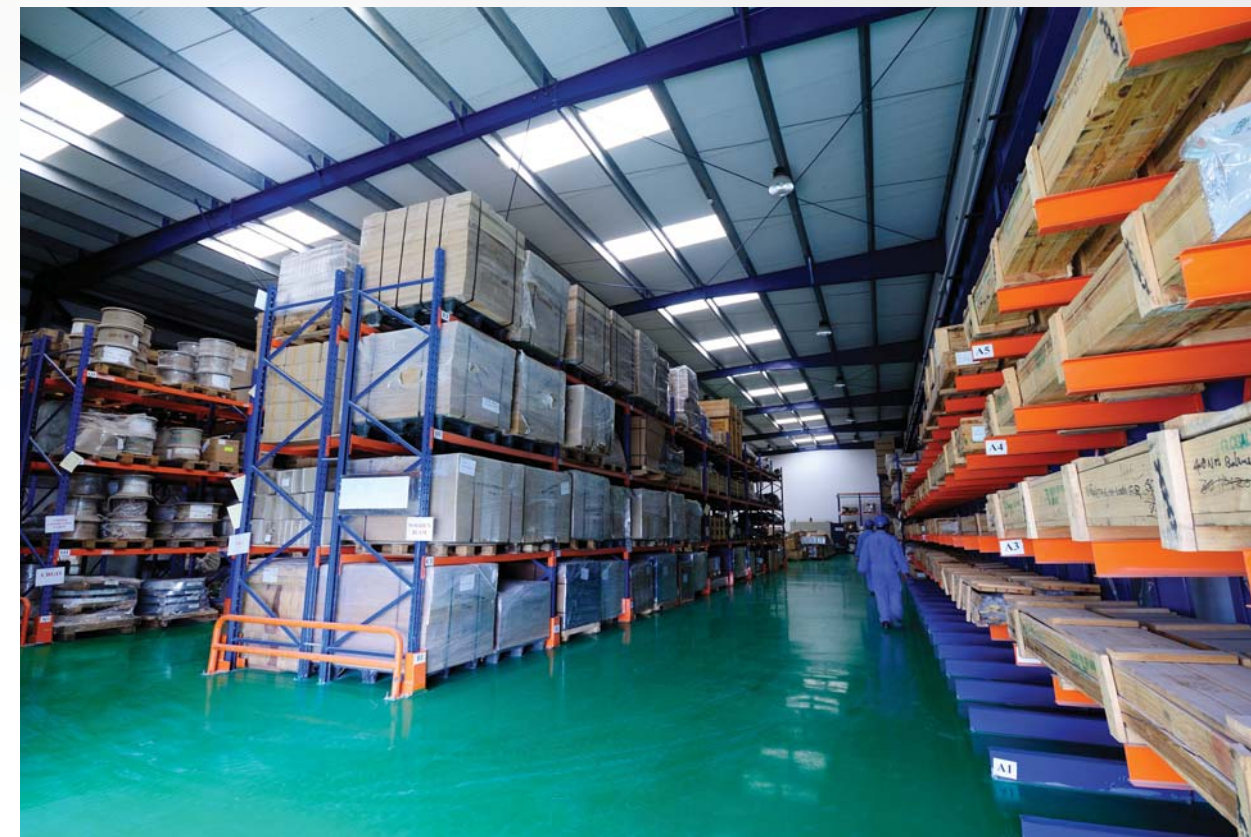


Distribution Transformers

Range: 100 KVA to 5000 KVA, Voltage class up to 33 KV.
Application: Power Distribution Systems in rural & urban utilities, Medium & Large-scale Industries, Solar Energy Generating Systems, Oil Fields, etc.

Features:

- Compact & low loss, hence economical with low operation cost.
- High short circuit & impulse withstand strength.



Inside view of the store

Multi Tap Transformers

Range: Up to 3000 KVA & 3.3 to 33 KV Class.
Application: For use in distribution of power in places, particularly oil fields, where high reliability and safety are prime requirements.

Features:

- Designed for wide range of output voltages.
- Transformers comply as per clients requirement.
- Robust exterior design suitable to use in any adverse environmental conditions.



Inside view of the plant (assembly section)

Gallery



Inside view of the plant (test area)



Inside view of the plant (winding section)

Pad Mounted Transformers

Range: Up to 3000 KVA & 33 KV Class.

Application: For use in distribution of power in places, particularly oil fields where high reliability and safety are prime requirement.

Features:

- Designed with LV & HV compartments on the same side.
- Customized design with inbuilt protection system.
- Complies to ANSI standard.



Package Substations

Range: 250 KVA to 5000 KVA with RMU, or HV breaker and LV distribution panel or standard feeder pillars.

Application: To receive and distribute power in systems located in populated areas, e.g. residential projects, factories and high-rise buildings.

Features:

- Inbuilt overload & earth protection ensures safety of equipment & persons.
- Customized substations with metal or GRP enclosures.
- Comply with protection criteria as per IEC 60529.



Transformers with RMU, LVDB & Grounding Resister

Range: Up to 5000 KVA, 33 KV class.

Application: Distribution of power in remote areas & use with captive power generators as total power supply system.

Features:

- Highly reliable and robust design.
- Designed with suitable skid base for easy transportation.
- Can be used in highly adverse climatic conditions.
- Built with suitably rated RMU or HV breaker with protection.
- Feeder Pillars provided with fuses for protection.
- Easy to transport, install and maintain.



Special Purpose Transformers (SPT)

Range:

- Unit Earthing Transformers of all ratings.
- Furnace Transformers up to 20 MVA.
- Rectifier Transformers.
- Transformers for VSD and VFD applications.

Application: For all types of Special Applications such as steel furnace supply, industrial drives etc. Variable speed drives etc, & use in Power net works for System grounding etc..

Features:

- Designed and built to precise client requirements.
- Technical advice on equipment selection is offered before finalizing order.
- Robust design suitable for use in all kinds of environments, e.g. steel mills, chemical industries, etc.



400kVA Earthing Transformer



Dry Type Transformers (H-class)

Range: up to 4000 KVA, 22 KV class.

Application: For use in Large Industry, Marine Applications in Ships & Offshore Sites.

Features:

- Compact design and highly reliable performance.
- With Class H insulation, can operate in high temperature zones without decreasing working life.

Low Voltage Switch Gears

Range: Low voltage distribution panels with MCCB, Remote tap control Cubicle (RTCC), Marshalling Boxes and cooling fan control panel (MB-FCC), etc.

Features:

- Robust design with superior interior and exterior finish.
- Only high quality brands and approved components used in manufacture.
- Degree of protection is designed based on client requirements.



Reports & Certificates



Quality Control

Testing & Quality Control

GTS is an ISO 9001:2008 certified company with a quality system based on international best practices. The ISO 9001:2008 is only offered to companies with stringent systems of quality control and continuous improvement. GTS has adopted a well-defined quality checking system at all stages of manufacturing starting from the receipt of raw material till the delivery stage.

Every product manufactured is tested in-house as per IEC standards or as per customer specification. GTS has the highly sophisticated testing set up which includes 1800 KV 180 kJ Impulse Generator. GTS transformers upto rating 30 MVA and Voltage class 132 KV are type tested for SC test at internationally renowned testing centers such as KEMA Netherlands, CESI Italy and IPH Germany.



Testing Laboratory



Testing Area



1800 KV/180kj Impulse testing system



Commissioned at Site (Yemen)

Other services offered by GTS

Other services offered by the company include:

1. Repair & Refurbishment of transformers.
2. Transformer Oil Filtration onsite.
3. Site Testing of transformers.
4. Commissioning & Supervision onsite.
5. Onsite Repair operations.



63MVA, 33KV/6.3-6KV Commissioned at Site (Turkey)



Transformer being erected at site (Iraq)

Manufacturing Facilities



Fabrication & Shot Blasting

The tank design and drawings are prepared strictly considering the clients specification. GTS has end-to-end in-house facilities for high quality fabrication, where most tanks are manufactured. The steel and radiators required are sourced from selected vendors. The fabricated tanks are checked and leak-tested before cleared for blasting and painting. Each tank is subject to thorough cleaning and rust removal by shot blasting before being painted with primer paint of specified grade. Quality checks are done at all stages of fabrication by qualified engineers.



Finwall Manufacturing Facility

The Cooling Finwalls required for the various applications are produced inhouse using a technologically advanced corrugated Finwall manufacturing machine. This facility largely helps company to commit faster deliveries as there is no dependence on out side source.

Core Cutting & Core Assembly

We have in house facility for core cutting. Very sophisticated, CNC core cutting machine is available for this application. The cores are cut in step lap design to minimize the NO load loss. The cut cores are assembled over fabricated steel frames or machined wooden frames. The selection of frame material is decided by the size and design of the transformers. The core material used is of high grade and origin from globally known CRGO producers. For large Power transformers, the cut cores are outsourced from quality approved vendors in Europe.





Computer Controlled Vacuum Drying Plant

All active parts are dried under Vacuum using a computer controlled, preprogrammed Vacuum drying machine. The process ensures total removal of moisture content. The Drying Process is made highly effective by a heating and vacuum cycle combination.



Tanking and Final Assembly

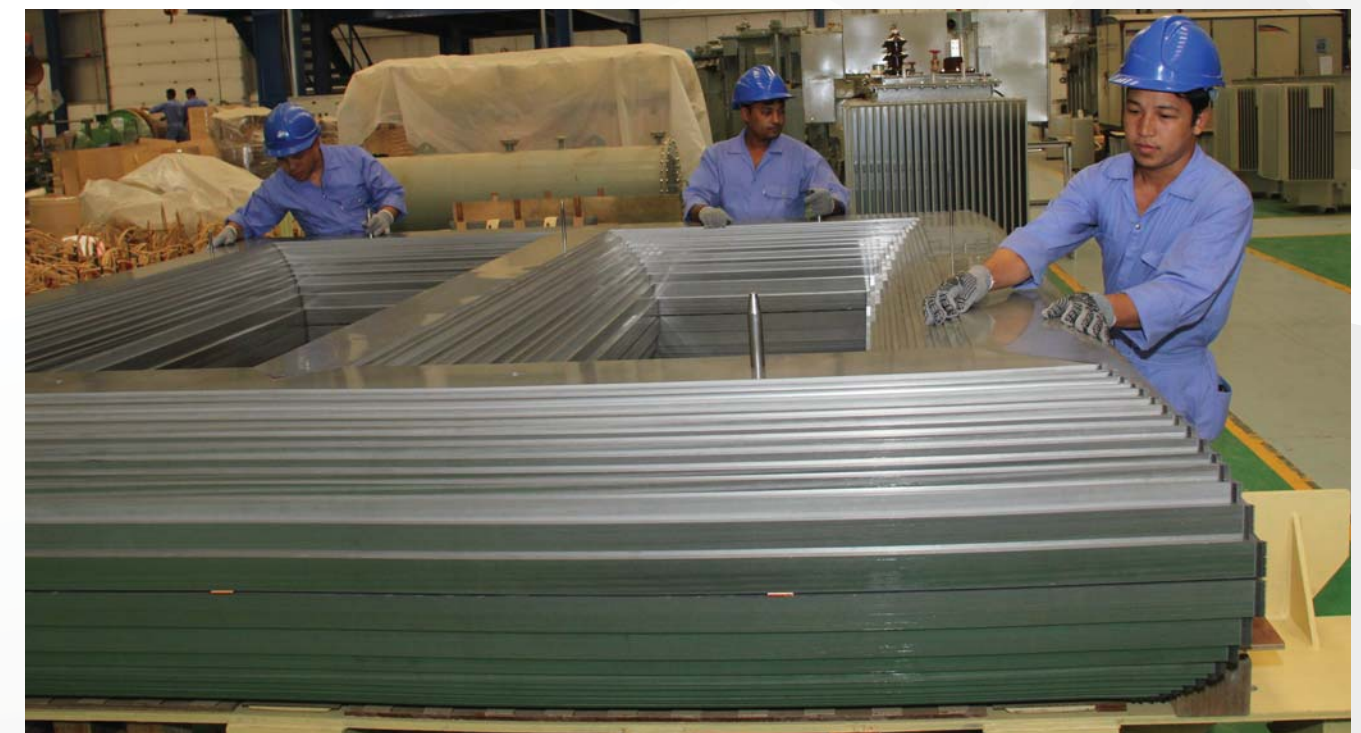
Fully dried active part is lowered inside suitably designed & fabricated mild steel tanks. Fresh filtered superior quality transformer oil is filled to the tank. The connections to LV, MV & HV terminals are made as per design & drawing and all relevant fittings are attached before the transformer is sent for testing.

Transformer Oil Filtration

The oil before filling to tank is properly filtered. The oil filtering processes is done using a PLC controlled Oil filtration machine. The process consists of heating and vacuum cycles to remove the moisture content. Degassing of oil also done to remove the dissolved gas before the oil is filled to the tanks.



Core Cutting



Core assembling



Power transformer winding



Active part of power transformer 230KV class



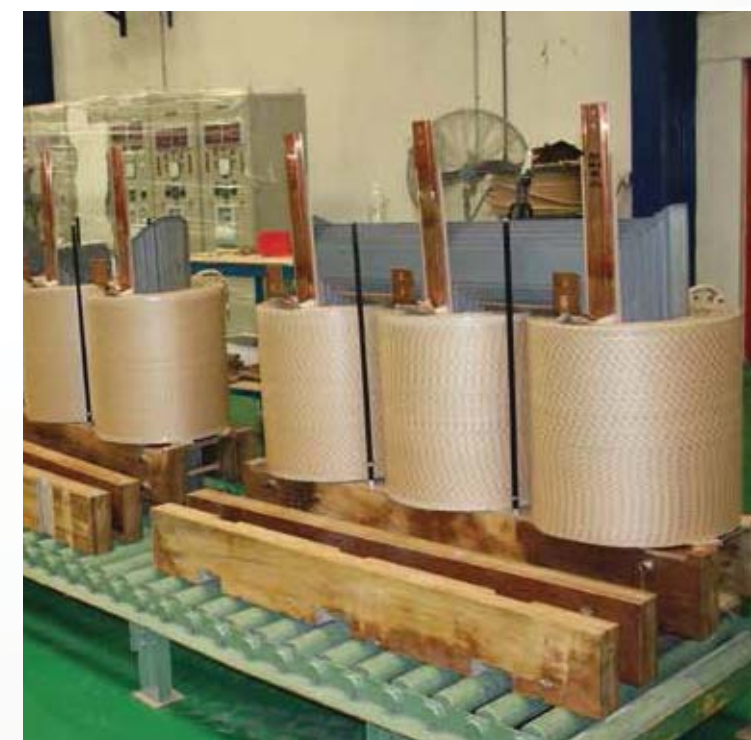
Distribution transformer layer winding



Foil winding machine

Coil winding

HV & LV Windings are manufactured in-house using highly sophisticated PLC controlled Winding Machines. The winding conductor and foil are sourced from internationally reputed suppliers and are wound as per design specification in a dust-free environment. The insulation paper and boards used in the winding are sourced from reputed vendors like ABB, Kremphel, Weidmann etc.



Active part assembly for dist. transformers

Active Part Assembly

The wound coils are assembled with the core as per design and drawings. Stringent quality checks are conducted at all stages and quality records are maintained. Before making the final connections to tapping switch or OLTC, ratio tests and other preliminary tests are conducted to ensure the accuracy of all electrical parameters. The fully assembled active part with all connections made is thoroughly checked and then loaded to the Vacuum Drying plant for drying.