

ISO 9001



**FABRYKA TRANSFORMATORÓW
w Zychlinie Sp. z o.o.**

85 years of tradition and experiences in production of transformers

POLSKIE ZAKŁADY ELEKTRYCZNE
BROWN BOVERI
SPÓŁKA AKCYJNA
FABRYKA w ZYCHLINIE

• 1921 - 1931

ROHN-ZIELIŃSKI
B R O W N B O V E R I

• 1933 - 1939



• 1945 - 1967



• 1967 - 2001



• 2001 - 2006



• 2006 - ...



Oil Transformer 16 MVA

year 1942

Production programme

NEW!

Transformer Stations

Power transformers

Distributive transformers

Dry transformers

Earthing transformers

Arc-suppression coil

Furnace transformers and coil

Special Transformers

Services

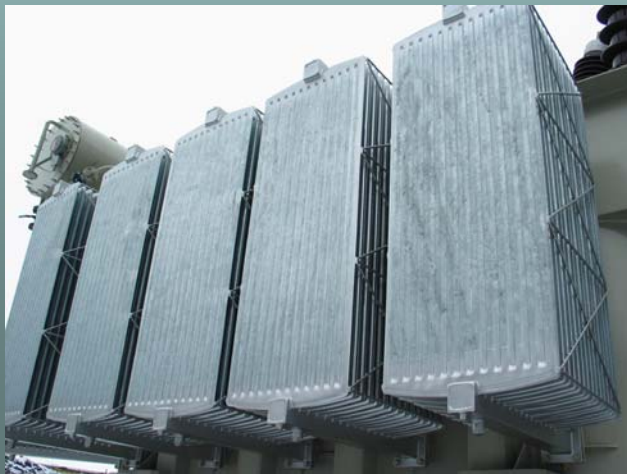
Repairs and entertainment



Productive possibilities

Three-phase oil immersed transformers with On-Load Tap Changers and No-Voltage Tap Changers

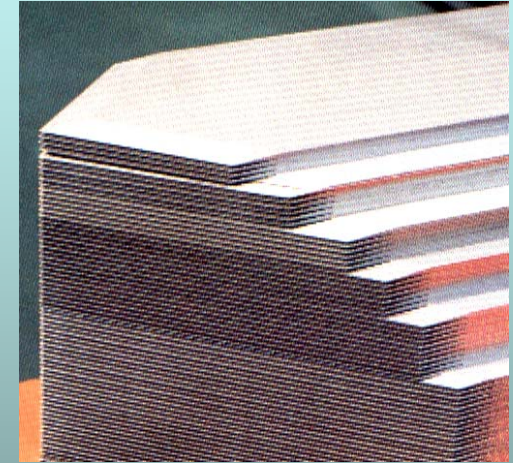
- Power 2500-90000 kVA*
- Rated voltage 6-132 kV*
- windings made of electrocopper*



Production technology

- *STEP-LAP* mitred low loss cores of cold-rolled transformer sheet coated with inorganic insulation

- tank provided with galvanized radiators for ONAN
- cooling radiators with fans and control cubicle for ONAF cooling



Tap changers

On-Load Tap Changers or No-Voltage Tap Changers – the voltage regulation range to be agreed with the Customer

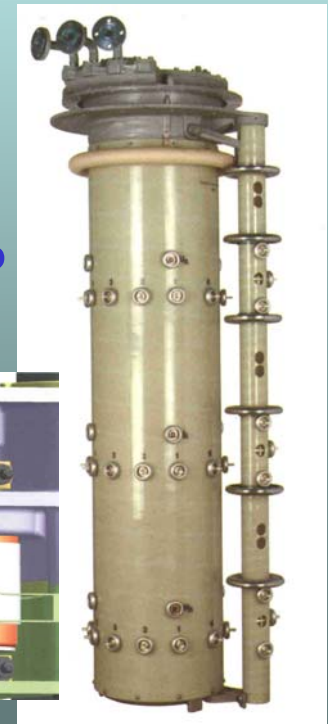
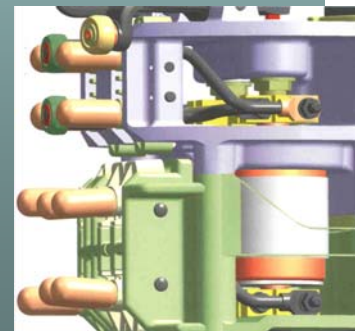
HYUNDAI HEAVY
INDUSTRIES CO.



MR REINHAUSEN
GERMANY



VACUTAP

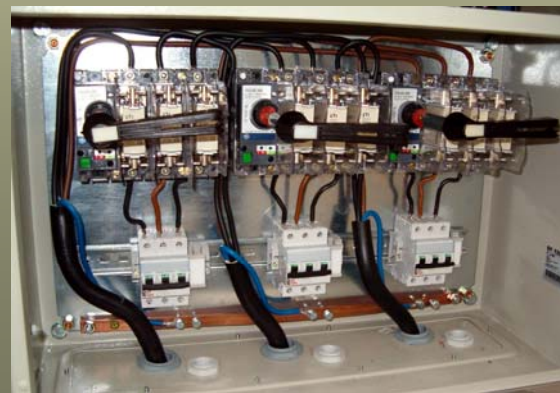


Transformer Stations



TRANSFORMER STATIONS OF THE SBS 63...160 SERIES

- with 63, 100 or 160 kVA oil immersed transformers
- transformers with an integrated low voltage switchgear
- fuses installed in the transformer's main tank as a medium voltage protection system (no opening of the sealed enclosure required to replace fuses)
- primary voltages as per standard : 6, 10, 15 and 20 kV
- secondary voltage : 400 and 420 V



SIBA



Transformer Stations

Pole-type, oil immersed, hermetically sealed transformer stations

- with 63, 100, 160 or 250 kVA oil immersed transformers
- fuses installed in the transformer's main tank as a medium voltage protection system (no opening of the sealed enclosure required to replace fuses)
- silicone encapsulated surge voltage suppressors at the medium voltage side



TRIDELTA

Distribution Transformers

Three-phase off voltage controllable oil immersed distributive transformers. Rated power 25-2500 kVA. Rated voltage 6-30 kV.

- power range of transformers: 25-2500 kVA
- primary voltages: 6, 10, 15, 20, 30 and 36 kV
- either hermetically sealed (25-1000 kVA) or with an oil conservator (1000-2500 kVA)
- corrugated steel tank for ONAN cooling



Distribution Transformers

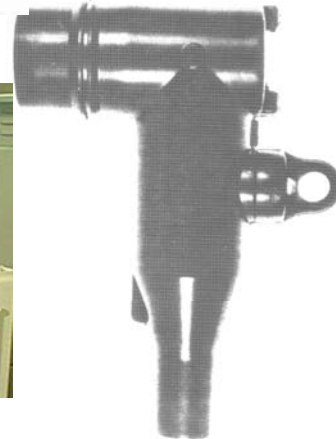
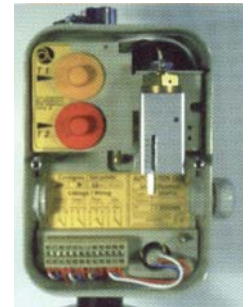
Low voltage coils witch copper foil



Distribution Transformers

Hermetically sealed transformers equipped with: oil level indicator and overpressure valve

either ELASTIMOLD, PFISTERER etc. connectors for cable terminals or other bushings at the low voltage side



EUROMOLD

ALCATEL

CABLE

PFISTERER

Resin Transformers

**Three-phase off voltage controllable dry resinous transformers,
Rated power 40-10000 kVA. Rated voltage max 37 kV.**

- primary voltages as per standard: 6, 10, 15, 20, 30, and 36 kV
- secondary voltages : 400 and 420 V or 6300, 10500, 15750 V (1000-10 000 kVA)
- windings made of electrocopper, low-tension winding in most cases of copper strip
- F or H insulation class



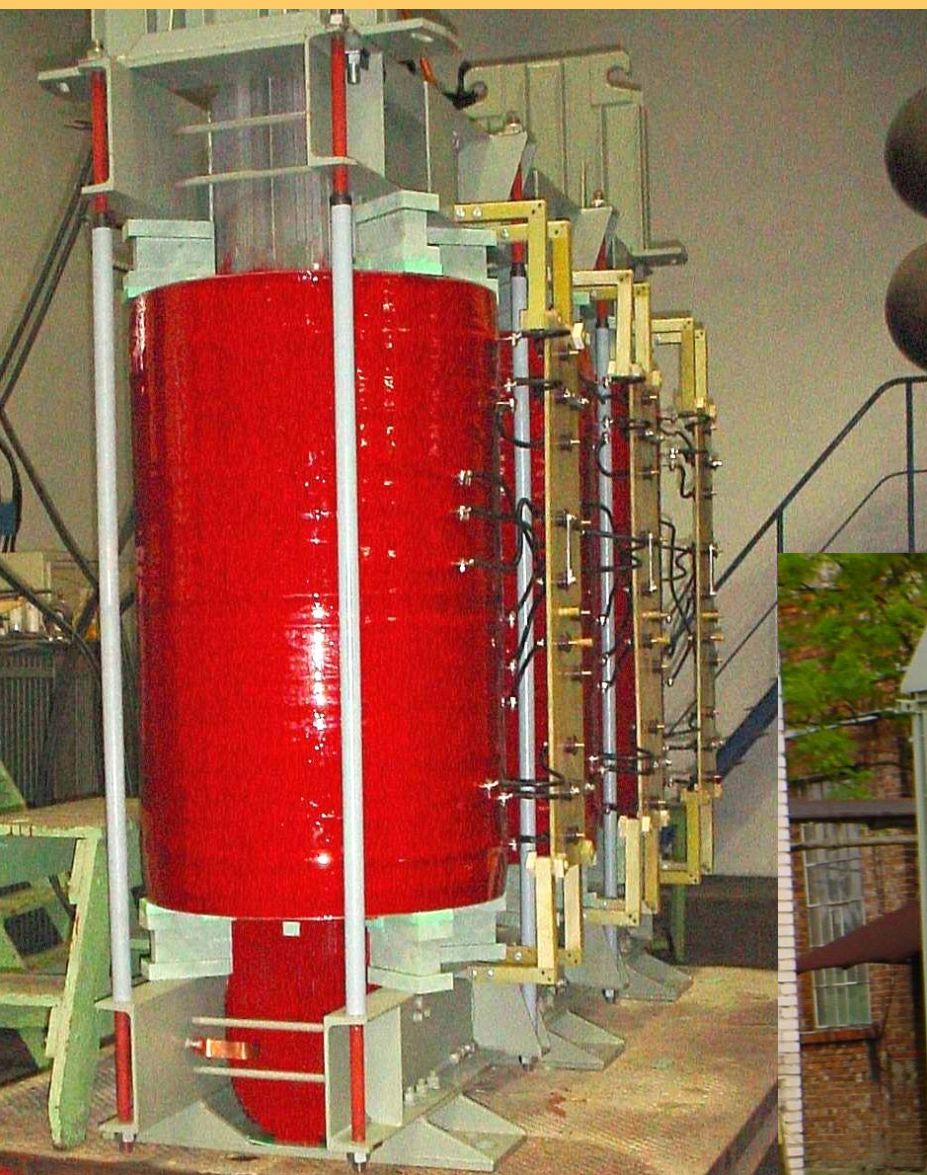
Resin Transformers

Resin transformers equipped with: two-stage thermal protection system with sensors, one for each transformer phase

AN cooling system for transformers without enclosure conforming to IP 00 or with enclosure conforming to: IP 20 to IP 54



Resin transformers 6300 kVA,
primary voltage 37,5 kV,
secondary voltage 6,3 kV,
with enclosure conforming



Earthing Transformers

*Three-phase, oil immersed transformers, with no-voltage tap changers,
power range of transformers: 100 up to 3000 kVA,
power for operation: 100 or 300 kVA,
primary voltages: 6, 10, 15, 20, 30 and 35 kV, secondary voltage: 400 V,
vector group ZNyn11*



Arc-suppressing Reactors

Power range: 100 to 3000 kVA, primary voltages: 6, 10, 15 and 20 kV, voltage at auxiliary windings: 500 V \pm 10%



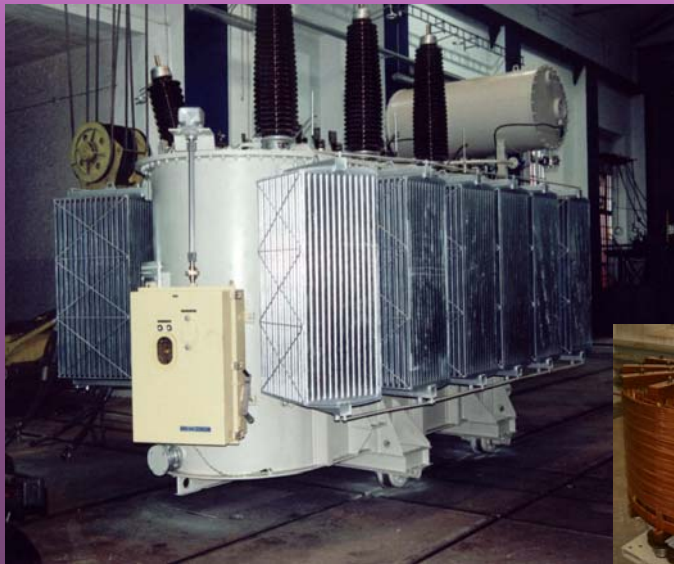
Arc suppressing reactors are applied in power networks for compensating earthing current and are connected between neutral point of a star connected power transformer or neutral point of delta connected earthing transformer and earth.

Special Transformers



Transformers to supply railway, tram and underground railway traction systems, transformers to operate in underground mine locations, starting autotransformers (to start electric motors), transformers to supply tubular rudder systems on ships, limiting reactors and shunt reactors

**Oil transformer to supply railway,
primary voltage: 115 kV**



**Resin transformers 8000 kVA,
primary voltage 15,75 kV,
secondary voltage 6,3 kV,
with enclosure conforming**



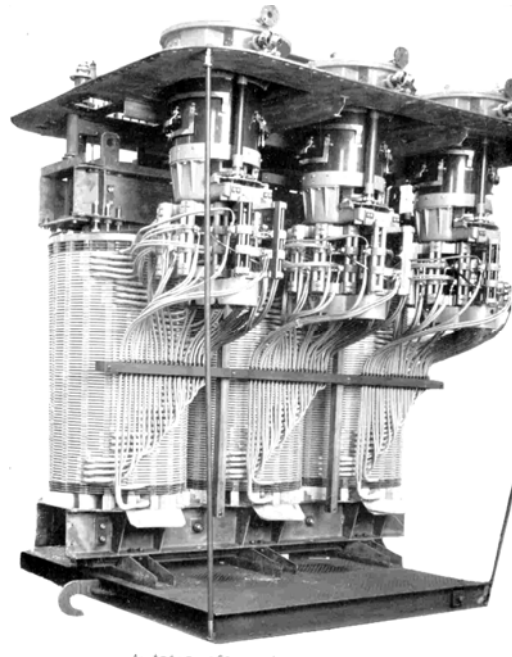
Furnace Transformers and coils

The furnace transformers find application in power supply to electric arc furnaces and carbide furnaces and are suitable for operation in rooms protected against precipitation.

- power range of transformers: 200-50 000 kVA
- primary voltages up to 115 kV

Part of transformers has arc furnace reactors matched in function of the power involved – the reactors are either installed inside the transformer's main tank or are self-standing units.

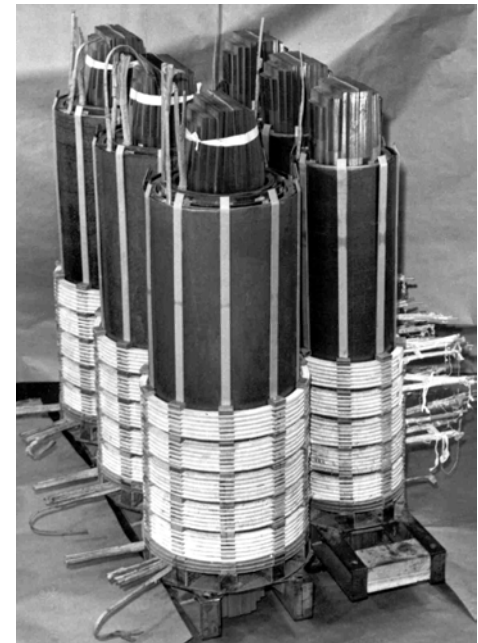
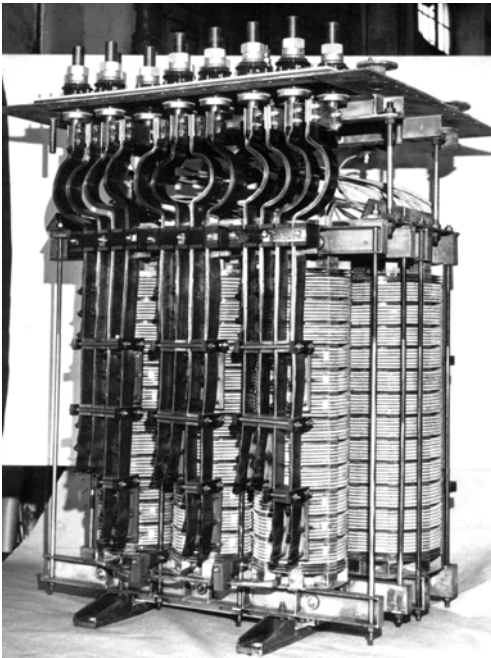
Low power transformers are provided with ONAN cooling systems as the tank fitted with plate radiators; In higher power transformers, water & oil cooling systems are employed with suitable pumps and oil-water coolers.



Furnace Transformers and colis

On-Load Tap Changers or No-Voltage Tap Changers – the voltage regulation range to be agreed with the Customer.

Two motor-operated drives: if the transformer has incorporated its reactor, one drive is provided to drive the voltage regulation switch and other to disconnect the reactor. There is also a selector switch to adjust manually operated reactors. Transformers designed to operate with separate reactors have one motorized drive for the tap changer.



Repairs and entertainment

Modernizations of power transformers

1000 up to 90 000 kVA

Modernizations of dry transformers

100 up to 8000 kVA





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