



Tesar

company profile and portfolio

Special transformers and
References for a reliable energy supply



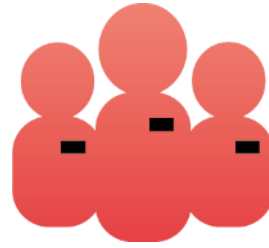
A company of R&S

History from the foundations

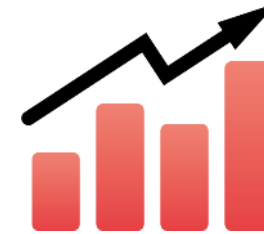
The essential facts of the R&S Group



Headquarters in
Sissach, Switzerland



Global workforce with
700+ employees



CHF 200 million in sales with
strong growth



120+ distribution
partners worldwide



Export in 75+ countries

Companies of the R&S Group



- Founded in 1919 in Switzerland
- Focus on distribution transformers
- 2012 part of R&S
- 100+ employees



- Founded in 1993 in Czech Republic
- Focus on high and medium voltage switches
- 2014 part of R&S
- 150+ employees



- Tesar Italy founded in 1979
- Tesar Gulf in 2012
- Tesar Polska in 2013
- Focus on cast resin transformers
- 2016 part of R&S
- 250+ employees



- Founded in 1956 in Poland
- Focus on power transformers
- 2015 part of R&S
- 200+ employees

Our locations worldwide

Switzerland (Sissach)

Distribution transformers, Railway switches,
Overhead line switches, Industrial electrical
connectors, Distribution boards, Switchboards

Czech Republic (Plzeň)

High voltage switches, Medium voltage switches

Italy (Arezzo - Subbiano)

Cast resin transformers, Instrument transformers

Poland (Łódź and Niepołomice)

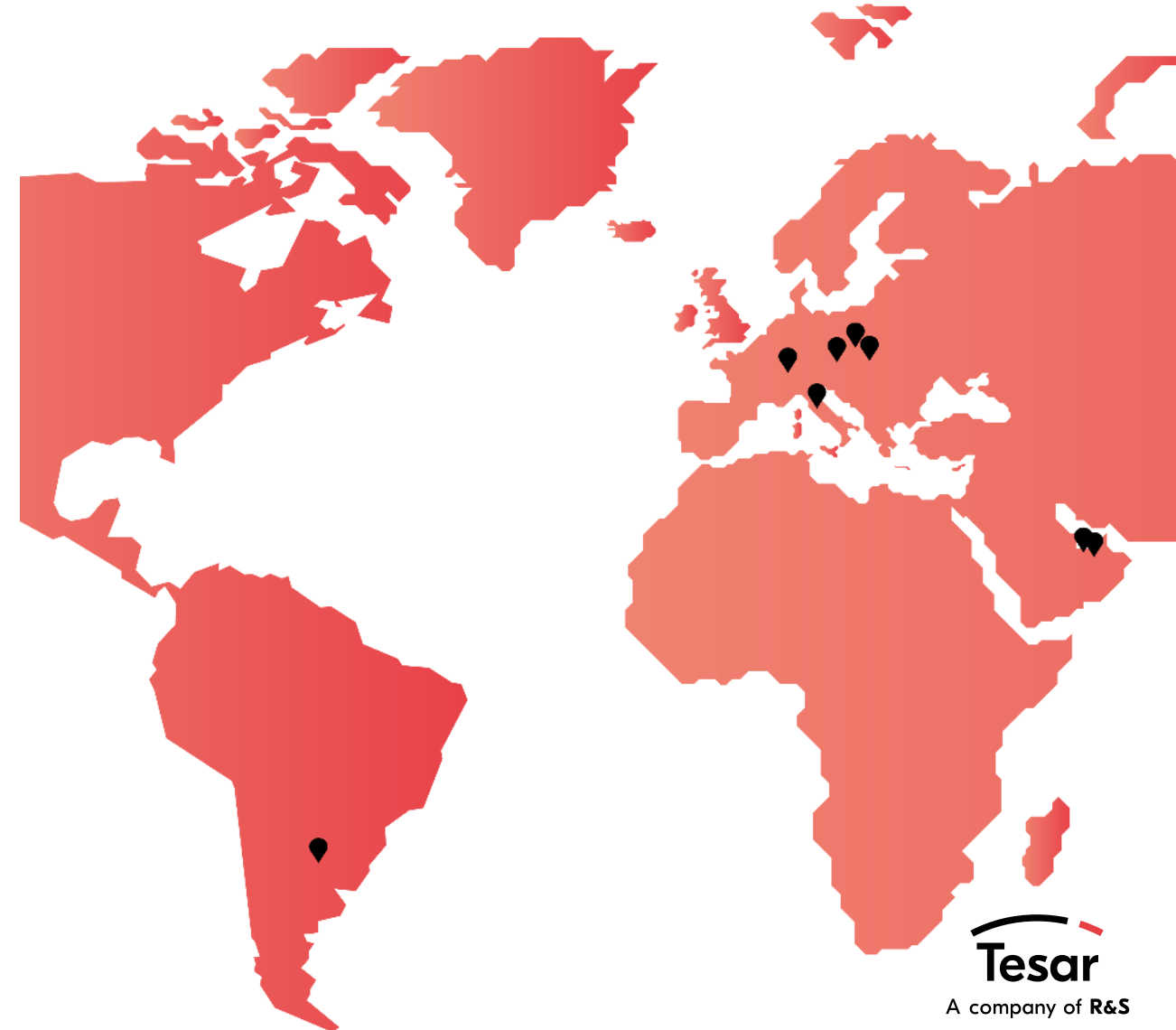
Power transformers, Cast resin transformers,
Instrument transformers

UAE (Dubai and Al Ain)

Cast resin transformers

Argentina (Gálvez - Santa Fe)

Cast resin transformers



Our locations worldwide

Italy (Arezzo - Subbiano)

Cast resin transformers, Instrument transformers

- Tesar was founded in **1979**
- Headquarter is in **Arezzo, IT**
- Since 2016 member of the R&S Group
- A total of **200** highly trained and motivated **employees**
- **Two** state of the art **manufacturing plants** including test laboratories



Our locations worldwide

Italy (Arezzo - Subbiano)

Cast resin transformers, Instrument transformers

Relevant figures:

Total surface: 46.400 sqm

Covered surface: 32.000 sqm



Our locations worldwide

Italy (Arezzo - Subbiano)

Cast resin transformers, Instrument transformers

Relevant figures:

Total surface: 19.200 sqm

Covered surface: 9.620 sqm



Our locations worldwide

Poland (Łódź and Niepołomice)

Power transformers, Cast resin transformers,
Instrument transformers

UAE (Dubai and Al Ain)

Cast resin transformers

Argentina (Gálvez - Santa Fe)

Cast resin transformers



In February 2013 a production plant for cast resin transformers was built.

Tesar Polska was thus founded.



Tesar opened in 2007 its own **sales office in Dubai**.

With this office the local presence in the Gulf countries has been settled.



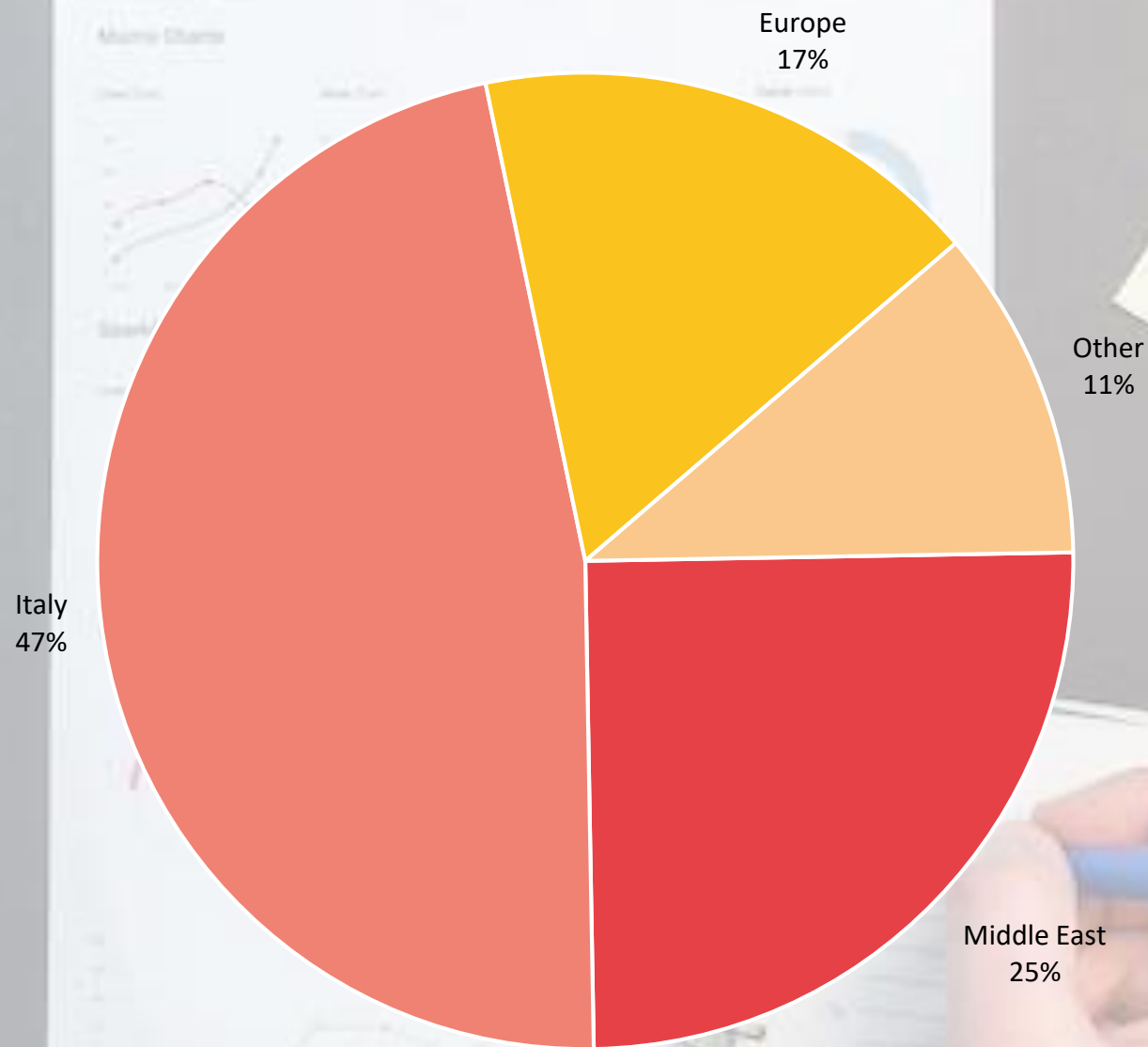
In September 2012 Tesar started a new **production site** in Al Ain to supply **Abu Dhabi** local market.



In 2000 Tesar established a joint venture with Tadeo in **Argentina** to supply transformers to South American

Turnover shares

Impact by regions – Tesar



Cast resin Transformers

Cast resin transformers



Up to 52kV and 25MVA for different applications

- Energy distribution
- Industrial applications
- Buildings
- Metro and railway applications
- Renewables: solar, wind, hydro etc..
- Data Centers
- BESS: Battery Electrical Storage System

Designed according to latest standards

- Eco regulation EU2014/548 – EU2019/1783
- IEC 60076-11

Aimed to minimize environmental contamination and fire hazard

- Tested according E4– C3 – F1

Maximum operating temperature 55°C and transport and storage down to -50°C

Manufactured in 1986 and
still running.



Converter transformer for Industrial and Railway Applications.



Thermoelectric power plant cast resin transformer 19 MVA





Interconnecting Cast Resin Transformer 16 MVA

Single-Phase Cast Resin Transformer for High Speed Train Line application



Robust housing for a safe protection



Protection

- IP 21
- IP 31
- IP 23 up to IP54
 - Suitable for Indoor or outdoor application

Assembly

- Fully assembled
- Assembly on site

Delivery

- Erected on the transformers
- Self supporting

HV&LV cable boxes

- located on the short or long sides of the enclosure
- as per British Standard (principally supplied in Qatar)

Metal housing customized for your needs

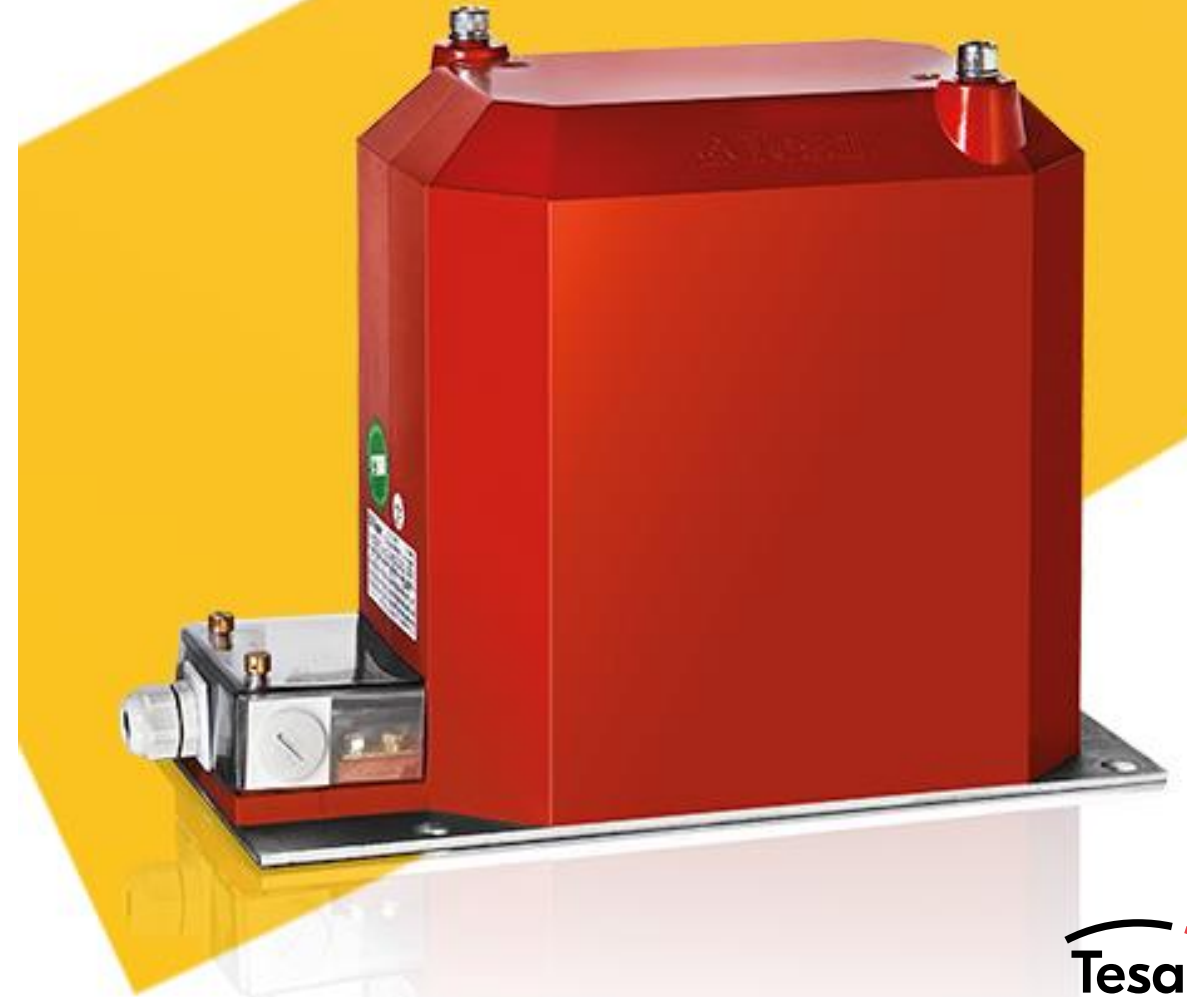


Instrument Transformers

Instrument transformers

Current and voltage transformers **up to 36 kV**

- Used in switchgear/-board assemblies, motor controllers, power transformer bushings and circuit breaker bushings
- Standardized in cast resin embedded
- Available in block construction as well as cable current transformers
- Designed and tested according to the customers' specifications
- Measurement accuracy class from 0.5 to 0.2 s
- Protection accuracy class from 3P to 6P (VT) and 5P10 to 5P30 (CT)



Reference projects and applications

Well over 100'000 installations
worldwide.

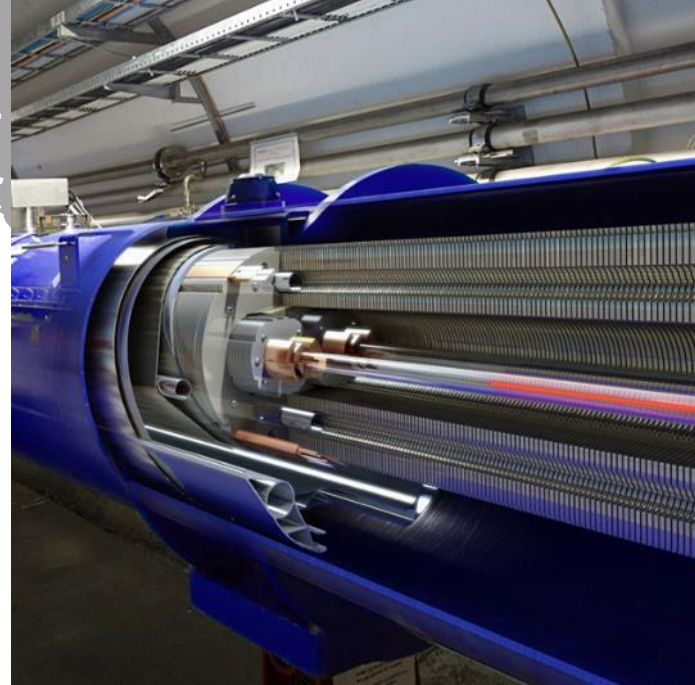


The products of Tesar in use



Burj Khalifa, UAE

- Multiple cast resin transformers



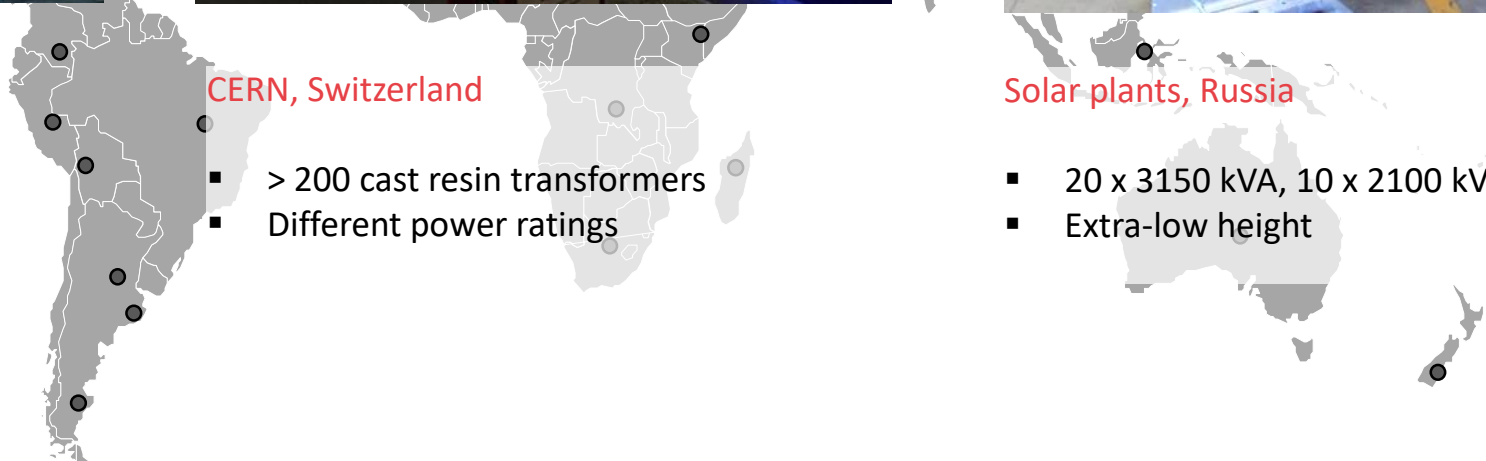
CERN, Switzerland

- > 200 cast resin transformers
- Different power ratings



Solar plants, Russia

- 20 x 3150 kVA, 10 x 2100 kVA
- Extra-low height



Metro, Tramway and Railways

Europe:

Czech Republic
Denmark
Estonia
Finland
France
Germany
Ireland
Italy
Netherlands
Norway
Poland
Romania
Spain

Sweden
Switzerland
United Kingdom

Middle East:

Dubai
Saudi Arabia
Qatar

Rest of the World (RoW):

Algeria
Argentina
Georgia
Hong Kong
Indonesia
Iran
Malaysia
Morocco
Taiwan
Tunisia
Turkey

Airports

Europe:

France
Germany
Italy
Poland
Spain

Middle East:

Abu Dhabi,
UAE,
Qatar,
Israel,
Oman,
Bahrain

Rest of the World (RoW):

Singapore,
Turkey,
Turkmenistan,
Republic of Egypt,

- Wind mill plants
- Solar plants
- Hydroelectric power plants
- Steam power plants
- Cogeneration power plants
- Gas turbine power plants



- ENEL(Italy)
- EDF (France)
- EDP (Portugal)
- DEWA (Dubai – UAE)
- ADWEA (Abu Dhabi – UAE)
- KAHARAMAA (Qatar)
- MEW (Kuwait)



Reference projects and applications



- White Mosque, Abu Dhabi



- Canary Wharf , London



- Emirates Towers, Dubai



- San Pietro and Vatican Museums



- Burj Khalifa and Down Town Dubai

Reference projects and applications

- Congo
- Lybia
- Norway
- Venezuela
- Italy
- Nigeria



- Tunnel of Frejus



- Tunnel of St. Gotthard



Reference projects and applications

Ferrari



- Factory in Maranello, Italy
- Factory in, Sant'Agata Bolognese, Italy
- Factories in Italy and Argentina



Reference projects and applications

New Amazon logistics center in Rovigo, Italy,

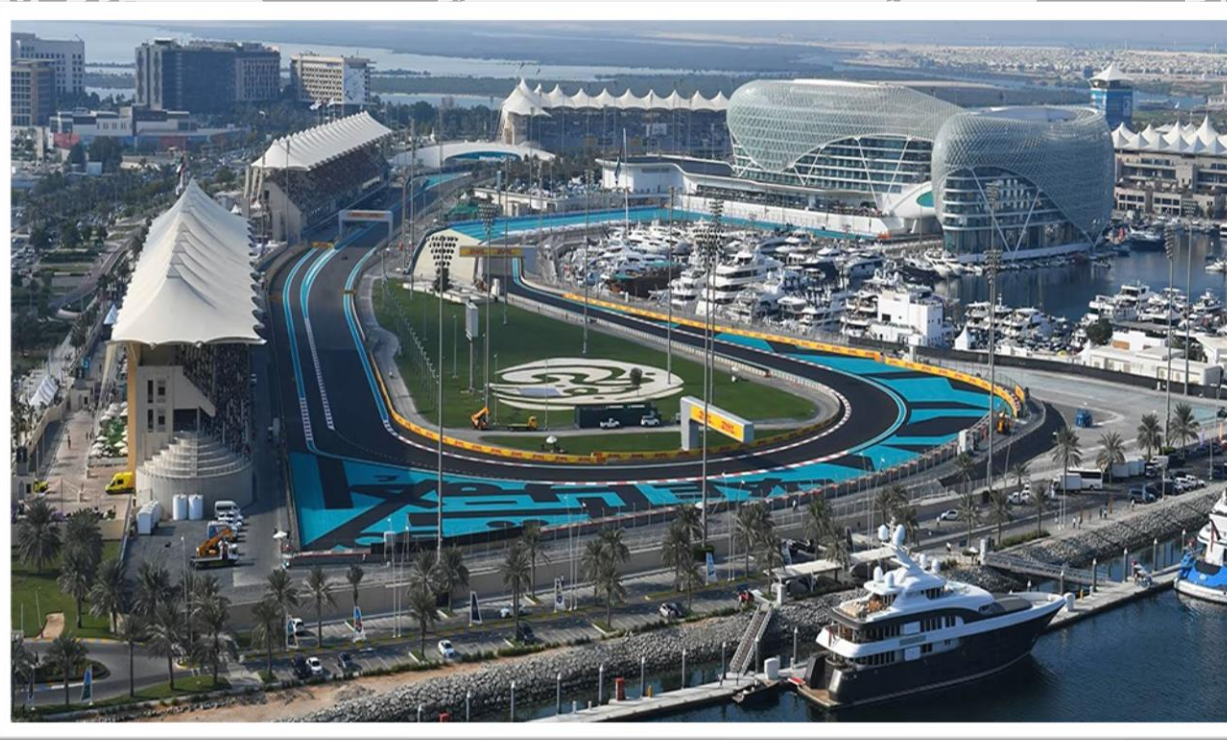
- 8 cast resin transformers (500kVA – 2000kVA)
- work is expected to be completed by the end of 2019
- 137.000 square meters destined for logistics
- 5.500 square meters destined for offices
- Over a hundred truck places
- Robotized storage of goods

Reference projects and applications

Tesar Transformers for TIM Datacenter in Italy

- 17 high efficiency cast resin dry type transformers
- Power ratings from 400 kVA up to 2500 kVA
- Voltage Ratio 23/0,4kV
- Supply completed within December 2020

Reference projects and applications



- Yas Island F1 circuit, Abu Dhabi

Reference projects and applications



- Qatar 2022 World Cup - Over 180 CRT for Khalifa Stadium, Khalifa Stadium Energy Center, Al Bayt Stadium, Al Bayt Stadium Energy Center, Al Wakhra Stadium, Al Wakhra Stadium Energy Center, Al Rayyan Stadium Energy Center, Lussayil Stadium, Lussayil Stadium Energy Center, Ras Abou About Stadium, Thumama Stadium Energy Center, Qatar Foundation Stadium Energy Center, Qatar Foundation Stadium

Reference projects and applications



- Uffizi Museum, Florence – Italy

More reference projects with
filtering options at
www.the-rsgroup.com/reference-projects



Tesar

A company of R&S

We guarantee energy