

WÄRTSILÄ

Electrical & Automation Services



# RESPONSIVE, THOROUGH, MULTI-TASKING

AUTOMATION HAS BEEN TERMED THE  
“BRAIN” OF A SHIP, A POWER PLANT OR  
AN INDUSTRIAL INSTALLATION.

Staying with the analogy of the human anatomy, systems related to the operation of any such installations may very well be compared to the “nervous system”, the “sinews, muscles and bones” and when it comes to power generation even the “heart”.

Electrical and Automation Services is concerned with the well being of the “nervous system”, comprising the wide range of electrical and electronic systems and the “sinews, muscles and bones and the heart”

consisting of mechanical, hydraulic and pneumatic systems and power generation and distribution equipment.

Wärtsilä Electrical and Automation Services offers maintenance and repair, upgrades, midlife refits, systems integration, installation and commissioning of system components such as system controls, alarms, monitors, associated end devices and all connections in-between.



## MARKETS:

- Oil and petrochemical transport and storage
- Gas transport and storage (LNG, LPG)
- Power utilities and processing industries
- Offshore (Rigs, FPSO, support & supply vessels)
- Merchant marine & harbours
- Cruise & Ferry
- Navy
- Special vessels
- Fishing vessels

Principal references include FPSO conversions,

drill ships, offshore vessels, LNG tanker upgrades, salvage repairs, power plants and land-based utilities.

## SERVICE CENTERS WORLDWIDE:

- USA
- United Kingdom
- France
- Netherlands
- Norway
- United Arab Emirates
- China

- Singapore
  - Germany
  - Korea
  - Dubai
  - India
- ... and continuously developing





## **WORLD-CLASS ELECTRICAL AND AUTOMATION SERVICES**

Our aim is to be highly responsive, flexible and versatile in providing world-class electrical and automation services

- By delivering technological leadership and engineering excellence
- By creating value and enhancing performance of customer operations
- By providing total solutions and world-class systems integration capability
- By maintaining and continuously developing a well-trained workforce
- By advancing with the leading edge of technology.



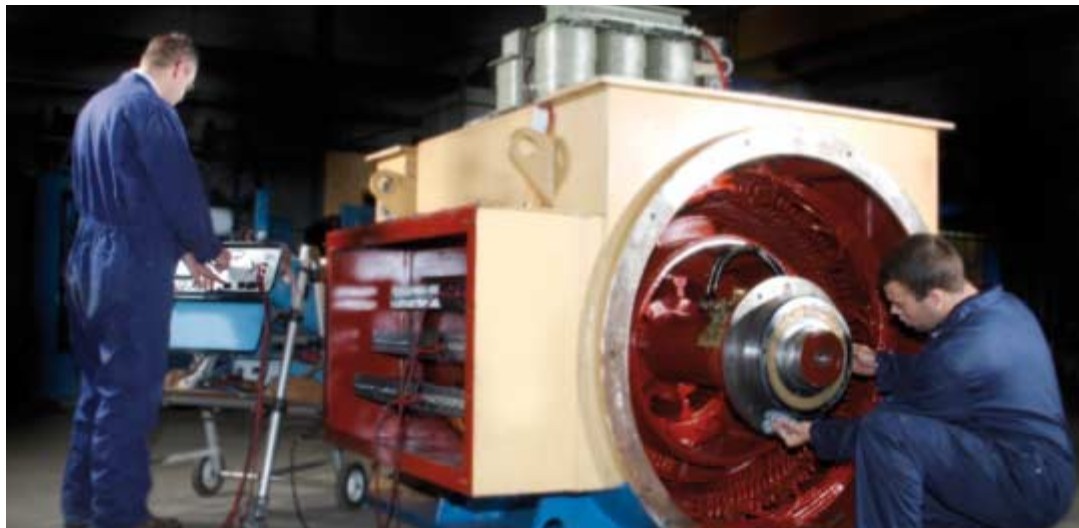
All entities subscribe to the ISO 9001 Quality Management Systems.

## SCOPE OF ELECTRICAL AND AUTOMATION SERVICES

The scope of our services includes:

- Technical surveys & consultation
- Engineering & programming
- Systems integration
- Manufacturing
- Installation & commissioning
- Maintenance & repair
- Spare parts





Electrical and Automation Services deals equally with brand and non-brand applications.

### **STRENGTHS OF ELECTRICAL AND AUTOMATION SERVICES**

Wärtsilä Electrical & Automation Services today comprises internationally established entities with a strong presence in their respective markets and a proven capability to contribute technical leadership to the service portfolio.

Based on their technical expertise and - equally important - their readiness to respond to customer needs fast and in a result oriented

manner they have built excellent customer relations and have been honoured for their true 24/7 service attitude.

Within the Wärtsilä Electrical and Automation Services all entities share their engineering and manpower resources if and when required to offer improved service to a customer. On the basis of this unique approach we can offer a consistently superior standard of technical expertise and responsiveness to local, regional and global clients.

# OUR PRODUCTS

The service portfolio is focused on the full range of control, automation, instrumentation and power distribution systems onboard of ships and offshore structure and land-based installations.

Wärtsilä Electrical and Automation Services features proficiency in the disciplines of electrical (low, medium and high voltage), electronic, pneumatic, mechanical and hydraulic systems and cryogenic gauges and controls.

Our scope includes design, engineering, system integration, boiler control systems, switchboards and consoles, maintenance and repair, installation, commissioning, manpower supply, turnkey capability and spare part supply.



## AUTOMATION

- Safety integrated systems (SIS)
- Integrated Automation Systems (IAS) (vessel management system)
- Alarm & Monitoring Systems (AMS)
- Power plant automation systems
- LNG terminal automation (Whessoe)

## HYDRAULIC

- Local control
- Remote control
- Power pack

## CONTROLS SYSTEMS

- Power management systems
- Engine control systems
- Steam turbine control systems
- Propulsion control systems
- Boiler control systems
- Ballast control systems
- Control systems for variable speed drives

## ROTATING ELECTRICAL EQUIPMENT

- Electrical motor & generators LV
- Electrical motor & generators HV

## POWER DRIVES (FREQUENCY CONVERTERS)

- For electrical motors
  - For propulsion
  - For thrusters
  - For drilling
  - For pumps
- ... and several other applications

## POWER DISTRIBUTION (SWITCHBOARD)

- Low voltage
- Medium voltage
- High voltage

## SYSTEM COMPONENTS FROM WÄRTSILÄ

- Gauges
- Steam turbine over speed test device (WOSTD)
- Suction Tube Monitoring System (STMS)

- Backhoe Monitoring System (BMS)
- Wärtsilä transducers
- Universal control system

## FIELD SERVICES

- Audit
- Maintenance
- Problem solving

## WORKSHOP

- Repair
- Overhaul

## ENGINEERING

- Software
- Hardware

## MANPOWER SUPPLY

## TURNKEY PROJECTS





## FROM SERVICE TO SERVICES

Key customers have recognized us as their preferred service supplier – ensuring the availability and cost-efficient operation of their installations.

They benefit from having their entire power system and a full range of services provided by one global supplier.

We provide full service throughout the product lifecycle for both marine and power plant customers, and we are constantly developing our network and services worldwide. We are continually broadening our range of services and adding valuable products and specialist services to our portfolio. In this way we also support equipment onboard your vessel or at your installation, either by becoming the OEM or by providing non-OEM services in key ports.

Our lifecycle efficiency solutions are provided within the following services:

- Engine Services
- Electrical & Automation Services
- Propulsion Services
- Boiler Services
- Operations & Management
- Training Services
- Environmental Services

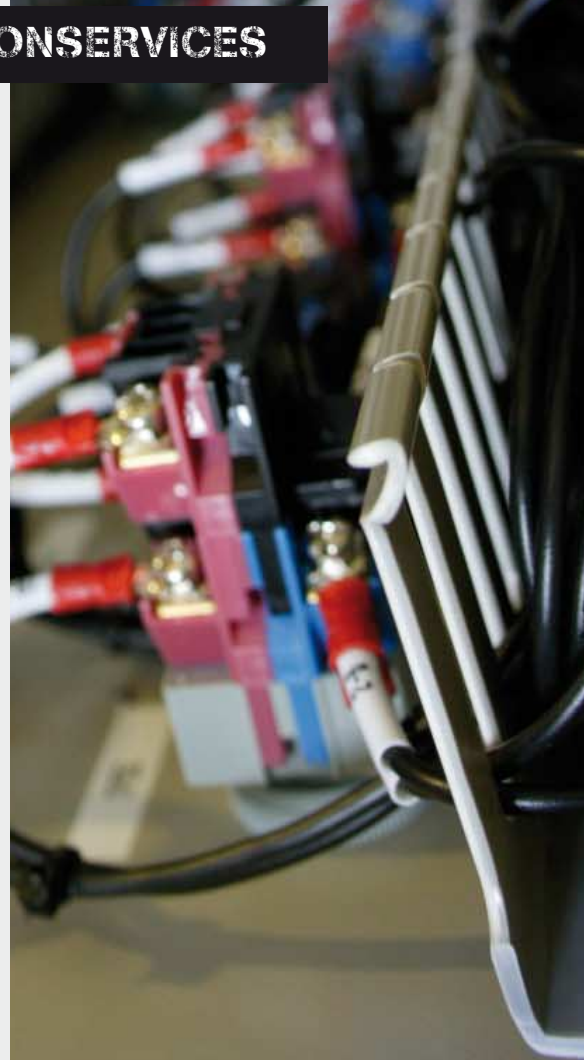
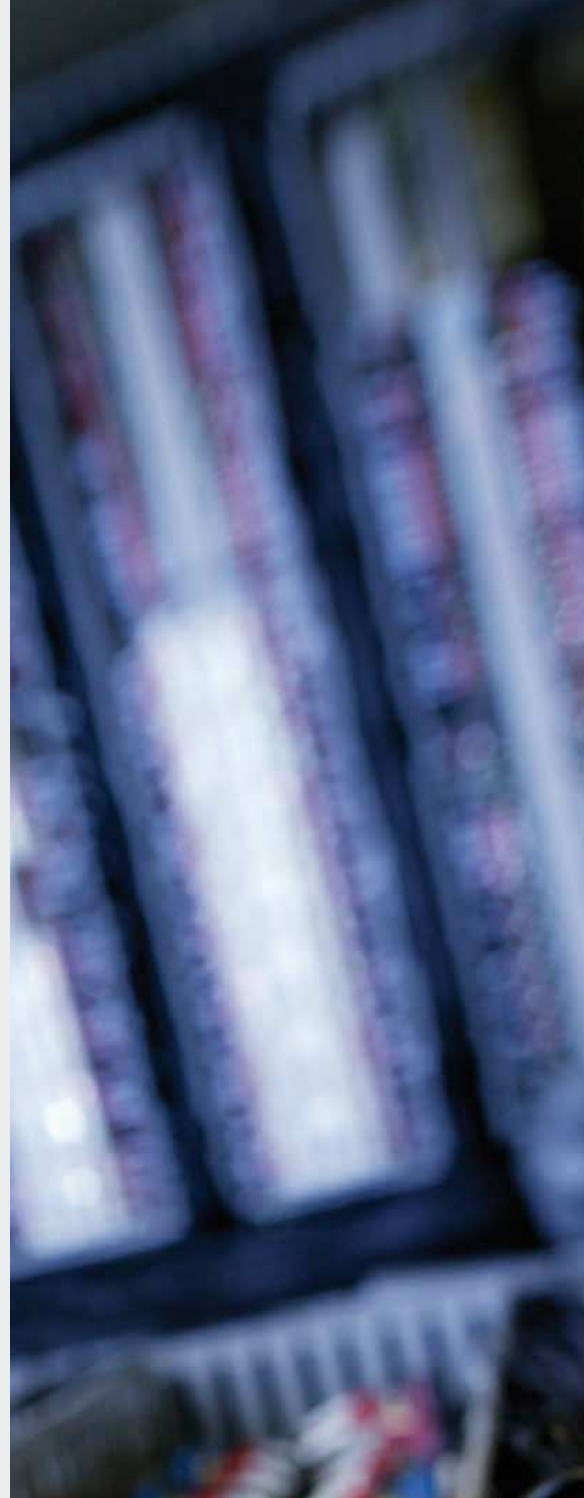
These services cover everything from basic support with parts, field service and technical support to service agreements and condition based maintenance; from installation and commissioning, performance optimization, including upgrades and conversions, to environmental solutions, technical information and online support.

The choice available to you extends from parts and maintenance services to a variety of comprehensive, customized long-term service agreements, including performance and operations & management agreements.

Our organization currently features over 11,000 dedicated services professionals in close to 70 countries.

Wärtsilä adds value to your business at every stage of the lifecycle of your installations. With us as your service partner, you receive consistently many measurable benefits such as availability, performance, productivity gains, and cost benefits. Above all, peace of mind in the knowledge that your installation is being serviced by the most experienced partner you could have – Wärtsilä.

**VISIT US AT [WWW.WARTSILA.COM/AUTOMATIONSERVICES](http://WWW.WARTSILA.COM/AUTOMATIONSERVICES)**



Wärtsilä is a global leader in complete lifecycle power solutions for the marine and energy markets. By emphasising technological innovation and total efficiency, Wärtsilä maximises the environmental and economic performance of the vessels and power plants of its customers. In 2009, Wärtsilä's net sales totalled EUR 5.3 billion with more than 18,000 employees. The company has operations in 160 locations in 70 countries around the world. Wärtsilä is listed on the NASDAQ OMX Helsinki, Finland.

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ENVIRONMENT  
ECONOMY

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