SPEED CONTROL & CONTROL SYSTEMS
Industrial Engines and Turbines
As the representative of the Woodward brand, AWF offers its expertise in control systems and speed control through a range of specific products and services.

AWF provides solutions and services for your turbomachines:

- new equipment and spare parts, guaranteed by the manufacturer,
- modernization services for industrial engines and turbines,
- maintenance services on site or in a Woodward authorized workshop,
- audits, on-site interventions and training in speed control and Woodward products.

AWF has received several Woodward certifications, including the RTR (Recognized Turbine Retrofitter) certification, which guarantees the quality of service and AWF’s experience in industrial turbine modernization around the world.

In this context, AWF is subject to the regular audit of Woodward. On the occasion of its 20th anniversary, AWF received a special partnership certification recognizing its expertise and its outstanding performance.

Equipment and spare parts

Our team is at your disposal for all your requests for supplies of equipment and spare parts.

Our strengths

- Woodward Network
- 24h Assistance
- Expert advice
Engine & turbine modernization

Through its design department, AWF meets all your existing systems optimization needs and provides you with a global result-driven offer.

Example of a modernized application with the 505 control system

“Congratulations on a successful installation of the new controls.

A beautiful demonstration of professionalism and competence.”

(NAVAL GROUP - SPEED CONTROL MODERNIZATION ON DIESEL ENGINES OF FRIGATES)

Why modernize

- Protection from obsolescence risk
- Improved performance
- Reduction in number and duration of technical shutdowns
- Upgrade to safety standards
- Automation
- Integration of a centralized control
Maintenance of your systems

Our team of specialized technicians is trained by Woodward to carry out maintenance operations in the strict compliance with the manufacturer’s procedures and recommendations.

- Your equipment benefits from technological advances arising from Woodward’s experience.
- The AWF workshop is equipped with Woodward test benches for all repair, overhaul and adjustment services.
- All interventions, whether on site or in our workshop, are guaranteed.
- AWF has portable measuring equipment to test different sensors on a turbine.

On-site maintenance

- Interventions in compliance with your security procedures, and with the security (N2, ATEX, ...) and nuclear (CSQ, SCN2, ...) authorizations.
- Troubleshooting interventions worldwide.
- Maintenance contracts with technical stand-by.

Maintenance in our workshop

- AISF workshop (approved workshop and equipped with Woodward test benches) in Le Havre for the repair of governors, actuators, etc..
- Original manufacturer spare parts only.

Intervention for the marine sector and on oil platforms

- Recovery of your equipment for repair in case of spare parts on board. Then, shipping your equipment to the home port of your convenience.
- In case of damage, intervention in a very short time with recovery of your equipment to be repaired in our workshop and re-installation at the dock depending on your port of call.
Training in speed control systems

AWF offers training on its premises or on your site to help your staff master the use of your equipment.

Operating simulators

AWF has developed specific educational tools and has a complete simulator that can simulate all operating situations for steam turbines.

This dynamic tool allows:
- the simulation of all the dynamics,
- the process optimization.

This dynamic tool allows the simulation of:
- speed up,
- circuit breakers,
- networks,
- coupling and paralleling,
- power management,
- connection with the human machine interface.

A training to master speed control

Our training department is at your disposal to offer you training sessions on the whole range of Woodward products (505, CPC, mechanical governors, actuators, etc.).

The objectives:
- Better understand the smooth running of speed control (basic principles, settings, setpoints, programming, ...) and the role of the auxiliaries.
- Know how to detect a breakdown and learn troubleshooting skills.
- Make technicians more autonomous in their equipment maintenance tasks.
- Increase your equipment efficiency by achieving optimal control and reducing maintenance operations.
Technologies for gas turbines

Water Injection
- Liquid Shutoff Valve LSOV25
- Electric Liquid Metering Valve
- Atlas II

Fuel Control
- Liquid
  - Liquid Shutoff Valve LSOV25
  - Electric Liquid Metering Valve
- Gas
  - Gas Shutoff Valve GSOV25
  - Gas Metering Valve 3103/EM35

Turbine Actuation
- Governor / Actuator TG
- Electro-hydraulic Actuator TM25
- Electro-hydraulic Actuator EML100
- Current to Pressure Converter CPC II
- Actuator TM-25LP
- Actuator TM-200LP
- Linear Actuator Varistroke I
- Linear Actuator Varistroke II

Speed Sensing
- Speed Sensor MPU (Magnetic Pickups)

Auxiliary Devices
- ProTech TPS Total Protection System
- ProTech SX

Technologies for steam turbines

Customized Turbine Controls
- GAP Software (Graphical Application Programmer)
- Dual Redundant Control MicroNet Plus

Standard Configurable Controls
- Digital Control Peak 200
- Digital Control S05XT
- Compressor Surge Control Vertex
AWF offers a range of Amot solutions for engines, turbines and compressors: thermostatic control valves, air start / shutoff valves, sensors (temperature, pressure, vibration, etc.) and control systems.

Technologies for Engine control

Liquid Temperature Control
self-contained / actuated

Bearing Condition Monitoring
XTS-W System
for diesel engines
in the marine sector

Electro-pneumatic Valves Controllers

Sensors & Switches
temperature / pression / vibration / speed

Air Start & Fuel Shutoff Valves

Oil Condition Monitoring
Metal particle detector
MPD2
Amot solutions are available in a wide variety of sizes, options, materials. Contact us for a precise estimate and the exact reference matching your needs.

Technologies for Turbine control

Thermostatic Control Valves

Valve B  Valve E  Valve H  Valve G  Valve J  Valve R  Valve D

Sensors & Switches

temperature / pressure / vibration / speed

4121  8060  4140  IP1  4109

Fuel Gas Control & Shut-off Valves

Valve 8402

Pneumatic Panel Components

4057 / 4457

Electro-pneumatic Valves Controllers

SG80  8072D  8071D  8064C
Instrumentation & Control (I&C)

AWF’s expertise in I&C provides through technical audits not only product solutions but also in-depth knowledge of digital control systems to better adapt to the specific needs of each installation.

I&C systems are the complete instrumentation and control loop of your turbogenerator set, monitoring all parameters, making adjustments and making more information available to maintenance staff to identify problems associated with a specific component.

Compared to analog I&C systems, these digital systems automate and optimize monitoring activities. They help increase availability, safety, reliability, efficiency while reducing costs.

Example of an aeroderivative gas turbine control system

We carry out on-site services for the technical audit of aeroderivative gas turbines.
Expertise and major projects

In 2018, AWF achieved for a customer the first Woodward Steam Turbine test bench in Europe, including the complete 505 control system, ProTech TPS protection system, VariStroke, QuickTrip and CPC-II.

1. The design of a tachometer system for a steam turbine
2. The design of a mechanical support for the integration of a new actuator on a steam turbine

Images of the Woodward Steam Turbine test bench, control panels, and team members.
A complete offer for speed control and control systems

- On-site maintenance or in our workshop
- Registered training
- Supply of new equipment and manufacturer warranty parts
- Modernization of industrial engines and turbines
- Contract for inspection and/or maintenance of Instrumentation and Control (I&C) systems for gas turbines
- Woodward and Amot brands

Our response to Technical Directions

Your project commits us: our Engineering Team brings you Woodward solutions’ innovation and reliability.

Continuous adaptation to the specific requirements of your installations.

International mobility: with Woodward’s Recognized Turbine Retrofitter (RTR) certification, our teams can provide services wherever you need them.

The Woodward network guarantee covers your equipment worldwide.

Our response to Site Managers

Our expert service available H24 offers you a maintenance solution adapted to your operating constraints.

A strong partnership with all engine and turbine manufacturers ensures the safety and the performance of your facilities.

The project management, if necessary, allows you to benefit from a «turnkey» service.

Our response to Purchasers

We distribute all speed control equipment and control systems: Governors, Actuators, Converters, Valves, Pumps, Control Platforms (drivers)...

We provide repackaging, repairs and warranties.

Our Customer Service answers you in French and in English; they provide you with technical and commercial documentation.

Our transit partner manages the customs duties withholding procedures for equipment repairs from abroad.

They trust us

Siemens | Alstom | Dresser Rand | Fives Cail | Wartsila | Mitsubishi | Cegeléc | EDF | GDF-Suez | Veolia | Total | Groupe Chimique Tunisien | Tereos | Saint Louis Sucre | Clairefontaine | Tembec | Sonatrach | Fertial | British Gaz | Tunisie | Senelec | STX | Naval Group | CMA CGM ...