



Global products & services

The solutions provider for gas turbine
auxiliary equipment repairs,
refurbishment, retrofit & upgrades



BETTER AIR IS OUR BUSINESS®



GAS TURBINE
DIVISION



“Striving to be a company that creates opportunities to take on challenges and effect change”

Darren Allsopp

Chief Operating Officer, AAF P&I





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AAF heritage

At AAF, our years of experience underpin our expertise.

Our mission is to provide best in class service and support throughout the lifecycle of your plant.

We strive to ensure your assets utilise the best available technology providing highest availability, superior efficiency, higher power output, greater reliability and easier maintenance.



AAF have continued to sit at the forefront of filtration and acoustics technology since Being established in 1921. Responding to our customers needs, we have been driven to deliver value through continually investing in experience, research and development, company know-how, committed staff and structured training.



Industry is perpetually advanced by technology; and none more so than that of Power Generation and Oil and Gas.

AAF have executed over twenty thousand projects delivering Gas Turbine auxiliary equipment to all of the major original equipment manufacturers for machines from 3 MW through the latest advanced class at 260 MW.





Our product portfolio has allowed us to succeed in executing projects in the most demanding environments from sub-zero Arctic, remote sandstorm deserts through offshore marine.

In all cases the measured evolution of our products has proven to ensure reliable performance for our thousands of operators.

We know how important it is to support the service and maintenance of our systems throughout the lifecycle.

To guarantee reliability of your assets we have positioned ourselves strategically to ensure a qualified engineer is always close at hand to respond to the ongoing service and maintenance requirements demanded.



Filtration

An extensive range of filtration solutions to protect critical machinery in all applications and environments.

AAF is recognised globally for its quality, expertise and innovation in air filtration. As a world leader in the design and application of machinery air filtration for over 40 years we offer a range of static and pulse filter solutions for gas turbine, diesel engine and compressor units in all operating environments.

Designed for your operational requirements

Machinery

- gas turbine
- diesel engine
- compressor

Applications

- power generation plant
- mobile generation unit
- oil & gas platform
- FPSO vessel

Environments

- desert
- rural
- coastal
- marine
- arctic
- tropical
- industrial
- urban

Filtration System

- static
- pulse

Filtration Products

- (G3 - H13)
- Prefilters
- Static filters
- Pulse filters

Inlet Treatment

- evaporative cooling
- mechanical chillers
- anti ice protection
- heating & cooling coils





(H)epa filtration

AAF HEPA/EPA filters help gas turbines realise greater power, enhanced efficiency and extended time between water washes, even in the harshest conditions on earth. Right now, more than 40,000 AAF HEPA/EPA filters are hard at work supplying clean air at reliable differential pressure to gas turbines around the globe, including over 50 advance F-class machines.

Recover lost power

With an initial filtration efficiency of 99.5% or greater at the smallest penetrating particle size, AAF HEPA/EPA filters help maintain gas compressor cleanliness by recovering 6% of the power output normally lost to engine fouling in none power loss megawatt hours (Mw/hrs).

Increase machine availability

The advanced filtration of AAF HEPA/EPA filters help engine cores remain in close to new condition during operation. As a result, cycles between on or offline cleaning can exceed 8000 hours. More time online means greater productivity.

Enhancing fuel efficiency

Today's modern gas turbines have incredibly tight tolerances and critical profiles for maximum efficiency. AAF's advanced filtration removes airborne pollution that can foul the engine compressor stator and rotor blades, helping gas turbines run with like-new efficiency even after extensive operation.

Longest engine life—setting world records

The protection offered by AAF HEPA/EPA technology keeps engines so clean, operators can enjoy substantially longer component life and engine reliability. In fact, a record 84,000 hours hot gas path section life has been logged on one engine using AAF protection from aggressive salt ingestion.

Operating Cost Benefits:

- Recover lost power
- Less fuel cost
- Easy retrofit
- Constant power output
- Increased turbine availability
- Less maintenance costs
- Avoid expensive core engine damage

Lower Operating Costs with Increased Turbine Reliability

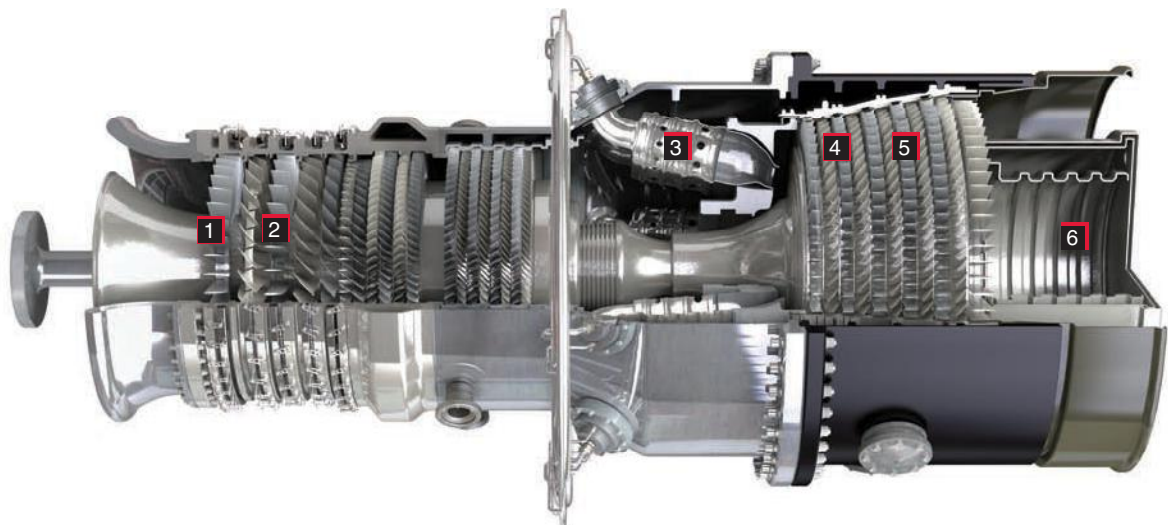
- 1 | Eliminates compressor fouling
- 2 | Eliminate or reduce the need for compressor washing
- 3 | Increased fuel efficiency
- 4 | Extended lifetime of engine components
- 5 | Cooling ports clear of blockage
- 6 | Constant power output



With AAF HEPA (8,000 hours)



Without AAF HEPA (2,000 hours)



Acoustics & noise control

The Acoustics division at AAF has a wide range of technologies with which to support power station, oil & gas transportation plant and other industrial applications.

AAF's work in Gas Turbine packaging has supported our development into one of the leaders in full-service noise control systems. Our flexible approach ensures we can handle entire plant or individual components for both new and existing plants.

A turnkey solution with guaranteed results derived from the application of cutting edge noise mitigation solutions. Our team design, manufacture and assemble all of AAF's equipment. Technical assistance for plant feasibility studies can be sought.

Our multi disciplined team of acoustic, mechanical and structural engineers combine to refine the optimum plant solution. Application and contracts engineers benefit from AAF's in house solution testing carried out at the AAF Product Development Centre in the United Kingdom. This program of testing supports our in-house acoustic modelling and mapping software.



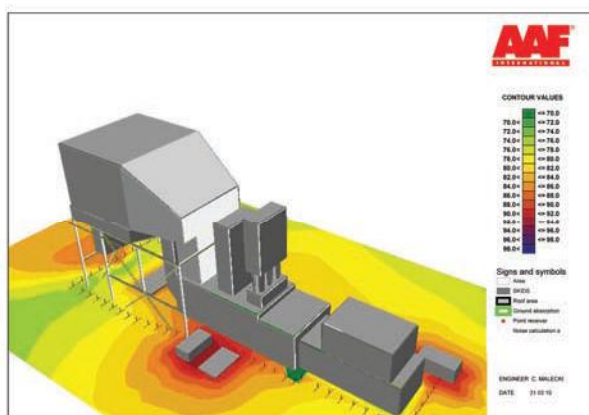


Acoustic products:

- Inlet Silencing
- Ventilation Silencing
- Exhaust Silencing
- Enclosures
- Control Rooms
- Buildings
- Barriers
- Cladding

Acoustic services:

- Feasibility Studies
- Consultation
- Surveys
- Modelling & Mapping
- Design & Engineering
- Production
- Installation
- Verification & measurement



Maintenance & repair

Being close to our customers in all key regions is fundamental to our strategy. To guarantee the reliable performance of your machinery risking failure of ancillary equipment is not an option.

High performance and reliability of critical assets is worth nothing without the compliment of highly qualified, well trained and planned equipment maintenance. AAF provide field specialists whose expertise ensure gas turbine ancillary equipment is kept within optimum working conditions.

Using our expertise in original equipment manufacture we can renovate your filter housings, ductwork, silencers, enclosures and exhaust systems in accordance with OEM specifications to give many more years of reliable service.





Our program of regionalisation has allowed us to locate our expertise close by meanwhile ensuring the development of local equipment and labour suppliers as well as subcontractor fabricators to enhance responsiveness and inventory capability for scheduled and unplanned events.

- Installation supervision and commissioning specialists
- Equipment life assessments
- Health and Safety risk assessed
- On and offshore equipment dimensional assessments
- Materials and design analysis
- Repair/troubleshooting
- In situ or factory repair to OEM standards
- Failure Modes and Effects Analysis (FMEA)





Service agreements

A customized service which combines the complete AAF service portfolio;

Gas turbine air intake, exhaust, ventilation and acoustic systems are vital components which when maintained operate to protect gas turbines and maximize availability.

New equipment can quickly deteriorate due to the difficult environments it is asked to operate in, Seal leaks, corrosion, failing fans and valves, heat induced exhaust damage gradually accrue eroding the performance of the Gas Turbine and increasing risk of an unplanned shutdown.



Starting with understanding your past and current plant performance, as well as ambitions for improvement AAF take ownership of the gas turbine auxiliaries to guarantee a dependable air quality hour after hour supported by ancillary equipment in peak condition posing no risk to the reliable availability of your Gas Turbine.



Working with AAF ensures the following services provide visibility of your equipment health and performance at all times.

- Full inspection and maintenance of GT ancillaries
- Plant acoustic management
- Air Quality Guarantee
- Gas Turbine efficiency reporting
- Inventory management (filter and spares)
- Installation supervision and commissioning specialists
- Equipment life assessments
- Health and Safety risk assessed
- On and offshore equipment dimensional assessments
- Materials and design analysis
- Repair/troubleshooting
- In situ or factory repair to OEM standards
- Failure Modes and Effects Analysis (FMEA)

Spare parts supply

Ensure peace of mind by investing in genuine parts guaranteeing reliability.

AAF appreciate that failure of a low value component can contribute to an unplanned shutdown incurring severe loss of revenue.

Our entire range is certified to International and Original Equipment Manufacturers (OEM) standards. AAF incorporates the most advanced materials and guarantees superb quality across the whole range of spare parts.

Our application-specific solutions, extensive field and laboratory testing, gives us the experience and understanding to help you select the most suitable product for your environment.

The AAF range of high quality spares will cover your requirements for maintenance and overhaul of the filtration system and its associated equipment.





- Replacement elements for AAF and non AAF static filter elements
- Replacement elements for AAF and non AAF pulse filter elements
- Filter element retention hardware and frames
- Evaporative cooler media and accessories
- Pneumatic valves, switches and couplings
- Electrical control panels, instrumentation and solenoids
- Flexible connections for intake and exhaust systems
- Enclosure damper and fan units

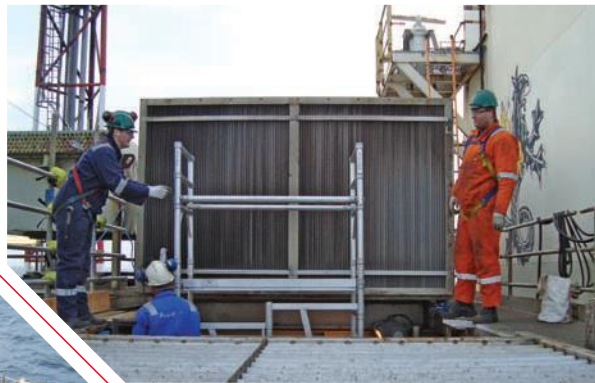
Our LTSA program provides many advantages including:

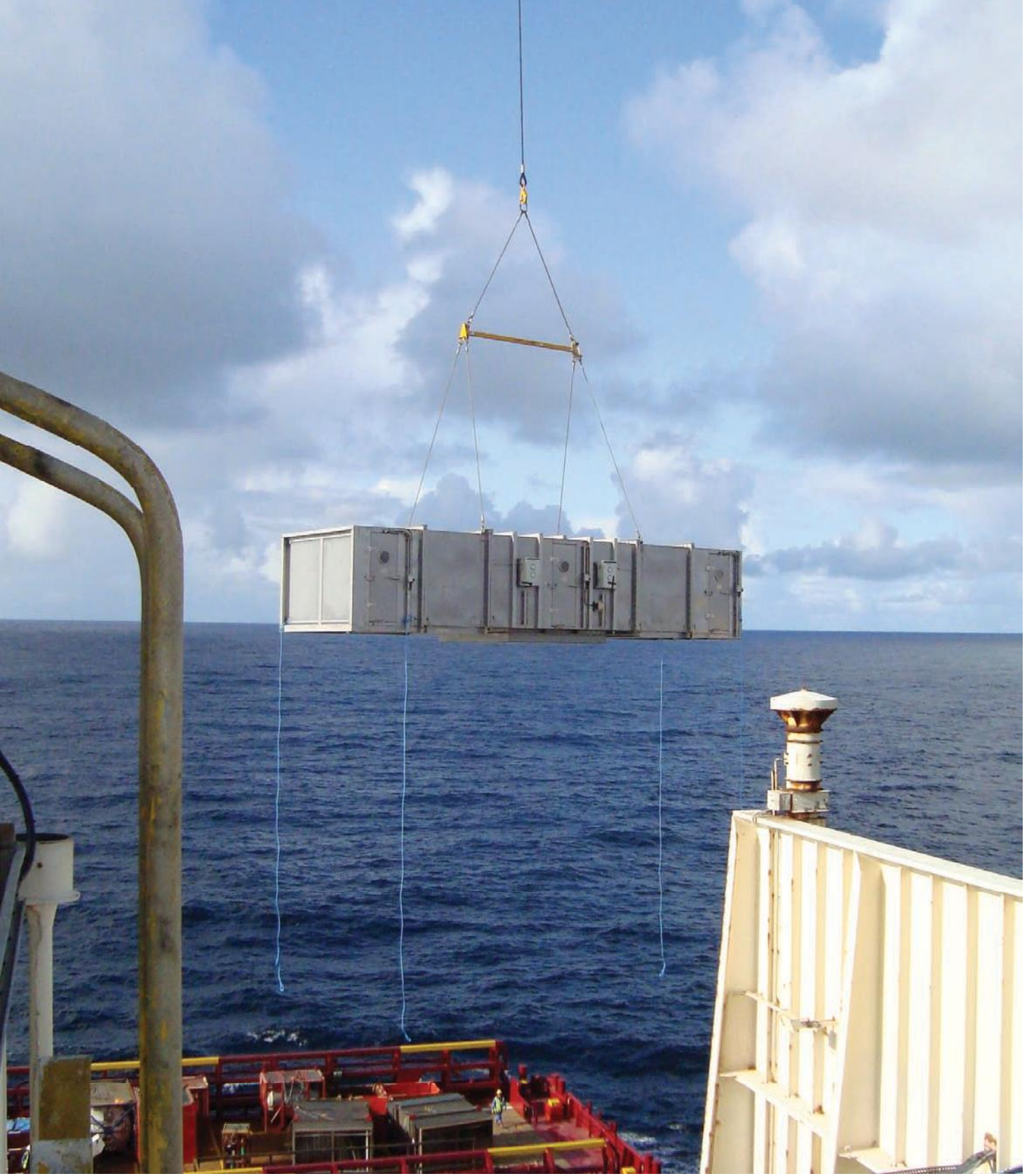
- Filter Management Program
- Quarterly GT Efficiency for your whole fleet
- Equipment Health Check
- Removal, Fit, Commission and Disposal service

Upgrade & modifications

Operating environments and performance expectations are rarely fixed for the working life of a Plant, indeed original equipment is often found lacking when actual site conditions are realised.

To respond to this AAF's technical centre has engineered solution driven modification, upgrade and conversion packages which can be applied to Gas Turbine and Diesel Engine equipment. Our engineering division aim to utilise your existing plant through exploiting our wide range of solutions. However, we understand many operators have equipment which has either come to the end of its useful life and is unsafe to operate or could be upgraded to deliver more reliable, improved revenue streams from the asset.





Quality, expertise and innovation

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