A leading service provider to the energy, resources, renewables and oil & gas markets worldwide

www.scantechoffshore.com
sales@scantechoffshore.com
ScanTech Offshore is a leading service provider to the energy, resources, renewables and oil & gas markets worldwide.

Our vision is to be the highest quality and best value air & steam service provider for the global energy industry.

Safety, Quality and the Environment
ScanTech work together in arduous, high risk areas, performing in some of the most hostile environments offshore. We have assembled a team of highly-skilled well service engineers, operations technicians and sales engineers, many of whom have over 20 years’ experience in the well servicing field, offering you unrivalled competence and technical assurance.

These are powerful reasons for choosing ScanTech as your partner. Accredited with ISO 9001, 14001 and 18001, our quality, environmental and safety culture is a testament to the hard work of our QHSE officers and personnel around the globe. You can expect to receive the same quality of service from Africa, Brazil and other global locations as you would expect to receive from the UK.

www.scantechoffshore.com/about

ScanTech Offshore is part of James Fisher and Sons plc, a leading provider of specialist services to the marine, oil and gas, and other high-assurance industries worldwide; the company is registered on the London Stock Exchange. With over 2000 employees operating in over 40 countries worldwide, we provide the highest quality services and equipment wherever you are working.
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ScanTech Offshore have extensive experience within the well testing market, with employees collectively boasting hundreds of years of industry experience.

Having rapidly become recognised as market leaders for offshore and well test support services, ScanTech Offshore is renowned globally for its understanding of customer requirements, highly qualified multi-tasking personnel and the safety and quality control standards employed throughout its operations.

ScanTech are proud to supply products and services to support and protect offshore installations during well test operations worldwide, including high volume air compressors, steam generators, heat suppression systems and fire fighting equipment.

- Market leaders
- Multi-tasking personnel
- Safety and quality control standards

[www.scantechoffshore.com/well-testing]
ScanTech Offshore has the world’s largest fleet of Zone II and Rig-Safe air compressors dedicated to well-testing applications, both on and offshore. Our containerised, stackable designs free up your deck space and allow a reduction in costly management bandwidth.

Engineered to operate worldwide in arctic or tropical climates, our compressors provide reliability and a high performance for your service.

Operating the largest fleet of 1300 and 1600cfm Rig-Safe compressors, we offer the best in availability, serviceability and deliverability.

Why choose Zone II air compressors?
Catastrophic results of gas migration into ‘safe areas’ has caused loss of life and made disturbing headlines in recent years. Invaluable in the event of uncontrolled hydrocarbon release, Zone II compressors comply with Certifying Authority guidelines and exceed API RP 14C & API RP500 well testing recommendations. There are no guarantees that an accidental gas or hydrocarbon release will follow the path of gas dispersal studies and our recommendation is to specify Zone II compressors whenever appropriate.

Reducing those risks to as low as reasonably practicable (ALARP) is why eminent operating companies are increasingly specifying the use of Zone II equipment for well testing. With propriety protection and surface temperatures less than 200 degrees centigrade, potential sources of ignition are minimised. Supporting our customers demand, we have built up a proven fleet of 1600cfm Zone II Air compressors designed and modernised specifically for well testing.

What’s the difference with Rig-Safe compressors?
From a safety perspective, Rig-Safe air compressors have many more potential sources for ignition and our recommendation is that they should only be specified for areas that can be guaranteed as permanently non-hazardous when hydrocarbons are at surface. Exhaust surfaces and gas temperatures can exceed 600°C which is well above the auto-ignition point of most flammable gases. Engine inlet and exhaust gas flame arrestors are not required for this category of equipment and this presents two paths for potential flame transmissions.

Our Rig-Safe range of compressors are designed and built to offer the same service delivery benefits. They are containerised, deliver the highest air output in the smallest footprint and can be operated safely in a stacked configuration. Operating the largest fleet of 1300 & 1600cfm Rig-Safe compressors we offer the best in availability, serviceability and deliverability.

www.scantechoffshore.com/well-testing/air-compressors
Steam generators

Our experienced team has developed a robust and reliable fleet of both 6Mbtu Zone II and 4.5Mbtu - 6Mbtu Rig-Safe steam generators.

Improved emphasis on safety during HAZID (Hazard Identification) and HAZOP (Hazard & Operability Study) is focusing on hydrocarbon contamination and overpressure of steam condensate lines. When hydrocarbon detection is not specified, guidance calls for steam condensate are to be diverted away from boiler to protect against these potential high risks.

Zero hot water returns to the boiler shell presents a number of process issues:

- Reduction in steam output by up to 20%
- Cold shock during water make up leading to metal fatigue
- Using 2.5 m3 / hour from the rigs fresh water making facility

Why choose Zone II steam generators?
Built to both DNV2.7-2 & NORSOK Z015 standards, our Zone II steam generators are essential where safety is critical. With propriety electrical protection and surface temperatures less than 200 degrees centigrade, potential sources of ignition are minimised. Invaluable in the event of uncontrolled hydrocarbon release, they comply with Certifying Authority guidelines and exceed API RP 14C & API RP500 well testing recommendations.

Reducing risks to ALARP (As Low As Reasonably Practical) is why eminent operating companies are increasingly specifying the use of Zone II equipment for well testing. Supporting our customers and their clients we have built up the paramount fleet of 6.0Mbtu Zone II steam generators in record time. Designed and modernised specifically for well testing, we operate in this class more than double the world’s fleets combined.

What’s the difference between Rig-Safe steam generators?
From a safety perspective, Rig-Safe steam generators have many more potential sources for ignition. Exhaust gas and surface temperatures can exceed 300°C. An unobstructed flame path into a furnace chamber exceeding 600°C illustrates the risks. Electrical systems are not required to be intrinsically safe presenting other potential sources of ignition.

www.scantechoffshore.com/well-testing/steam-generator
The inspiration for development of this product was born from repeated customer requests. Needing to provide early warning of heat exchanger process coil failures, we set about designing a robust solution. Design philosophy and process is protected by International Patent.

HeaterSentry® installed between the heat exchanger and return line to the steam generator detects and mitigates to ALARP the risks of hydrocarbon contamination of the boiler and surrounding areas.

• Safely detects hydrocarbons in condensed water from heat exchangers
• Conserves 85% water by pumping hot water back to the steam generator
• Reduces risk to ALARP for HAZID and HAZOP
• Prevents heat exchanger stall
• Maintains maximum steam generator output
• Maximises stability of well fluid temperature

www.scantechoffshore.com/well-testing/heatersentry
ScanTech’s heat exchangers are carefully designed and selected to provide tangible added value, outperforming others in the market place.

When seeking a supplier to provide heat exchangers, you would expect to find a deep seated understanding of well testing processes. Our team of highly experienced and qualified well test engineers, senior testing operators and managers understand and work with HYSYS to tackle flow assurance and support front-line sales.

Our heat exchangers are carefully designed and selected to provide tangible added value, outperforming others in the market place. Flow performance criteria was carefully researched to ensure that our heat exchangers were future proofed before being added to our rental portfolio.

- 10,000 psi, 4” I.D large bore coil
- 3” maximum orifice choke box
- 20” ISO high cube frame with stacking facility
- 10,000 BBLS and 60MMSCF/ day with lower back pressure assured
- Pilot operated relief valve allowing greater super imposed back pressure
- 6” rupture disc for rapid control
- Automatic temperature control
- 300% back pressure performance improvement
- 45% flow performance improvement at similar back pressure

www.scantechoffshore.com/well-testing/heat-exchangers
ScanTech’s sand filter has a proven track record in well testing, flow back and clean-up operations.

The arrangement is classed as a type ‘A’, meaning that it is configured for the well to flow from the inside of the filter and the sand to collect therein.

The principle of sand filtering is well understood, with the size of the separated particles determined by the mesh size in the filter elements. Continuous operation is achieved by switching the flow between the two pots and draining the collected sand from the bottom of the pot that is isolated from the flow.

The assembly is also equipped with a water flushing system utilising fixed pipework and nozzles providing the option to purge at lower pressure with water.

- Simple to operate
- Eliminates erosion on choke manifold
- Enables high rate well testing
- Allows representative solid sampling and sand production rate estimation
- High differential pressure filters reducing cleaning intervals
- Solids can be removed under reduced pressure shortening cleaning times
- Purpose-built vented sand box to separate sand from fluids complete with flame trap
- Solids safely stored for measuring and disposal
- Range of elements available on request

www.scantechoffshore.com/well-testing/sand-filter
Our rig cooling services protect personnel and structures from radiated heat in accordance with API 521 standards. We provide fully portable rental systems, dedicated fixed systems and custom designs for new and older installations. If you are looking to rent, buy or lease, we can provide and design an option to suit your budget.

ScanTech Offshore combined rig cooling inventory to its service offering via acquisition during the year of 2009. The following years witnessed significant investment in fleet additions, equipment upgrades and the integration of manpower and operating processes. Today, with that experience gained, we offer the best in combined services with a one stop shop for all your well test support needs.

- Full rig cooling systems
- Aquashield flare boom cooling systems
- Aquashield rigside cooling systems
- Heat-reflective covers

www.scantechoffshore.com/well-testing/rig-cooling-services
ScanTech Offshore’s high pressure liquid pumps are renowned for reliability, quality lightweight construction and designed for rigorous use in offshore and marine environments.

Powered via instrument quality air, the pumps are available in six different models, each with three different piston sizes. With the extensive choice of pump and piston permutations, we have a solution to suit most pressure testing, liquid and chemical injection applications.

Operating pressures range from 1,000 to 20,000 psig with volume of stroke varying depending on the selected piston. Pump internals are manufactured using high-grade stainless steel and modern ceramic materials. Frames are made from lightweight marine high-grade aluminum.

The assembly is also equipped with a water flushing system utilising fixed pipework and nozzles providing the option to purge at lower pressure with water. All pumps are ATEX and NACE compliant and bear a CE mark.

**Stainless steel construction**
- 316 stainless steel pump body

**Ceramic pistons**
- Technologically advanced
- Low friction coefficient
- Low temperature running
- Highest chemical resistance

**Multiple piston sizes**
- Range of flow and pressures
- Three pumps in one
- Interchangeable
- Excellent versatility

**Polyethylene ‘U’ cup seals**
- Self-lubricious
- Pressure energised
- Reliable and long-lasting

**Optional equipment**
- PyroSentry
- Methanol fire protection systems
- Automated methanol fire detection
- Fire suppression systems
Booster pumps

ScanTech’s sea water booster pumps take low pressure and high volume suction from our sub-pumps or rig supply and boost its pressure.

Our range includes electric, diesel and twin drive diesel/hydraulic pumps in Zone II and Rig-Safe formats. Sea water is pumped around the rig cooling system and exits via strategically positioned nozzles. These nozzles transform the water into millions of optimal size droplets that refract and scatter the light radiating from the flare.

**Rig safe sea water booster pumps** - Our Rig-Safe sea water booster pumps are available from 2000 to 4000 gallons per minute. They are suitable for operating in areas designated as permanently non-hazardous. Designed primarily for well testing support, they are provided within approved frames and containers that conform to DNV2.7-1 lifting regulations for worldwide industry acceptance. This range includes a twin drive variant where the prime mover provides power for both the centrifugal booster pump and sub-pump.

**Zone II sea water booster pumps** - Zone II sea water booster pumps are available from 2000 to 4000 gallons per minute. Similarly to our air compressor range, these Zone II sea water booster pumps have propriety protection and surface temperatures less than 200 degrees centigrade, minimising potential sources of ignition. This range also includes a twin drive variant where the prime mover provides power for both the centrifugal booster pump and sub-pump.

**Zone II twin electric booster pumps** - Zone II twin electric booster pumps are available from 2500 to 3000 gallons per minute. The Zone II Twin Electric Booster Pump Package has been designed and advanced by ScanTech Offshore to survive the harsh environments associated with well testing and other well service operations. Reliability is assured via the combination of ABB electric motors coupled to heavy duty sea water pumps elements.

www.scantechoffshore.com/well-testing/rig-cooling-services/booster-pumps
Submersible pumps deliver sea water at high volume and low pressure to deck located sea water booster pumps. Our range includes electrical, hydraulic and high head sub-pumps with flow rates between 2000 and 4000 gallons per minute. Fully engineered, these offer portable independent water supply for all types of installations and drill ships.

Electric driven sub-pumps are provided inside approved lifting frames with integral marine life filters, ships code armoured cable and electric starter panels. Pumps are generally provided as dual packages to provide contingency when in the water. Our hydraulic range of sub-pumps obtain their power independently via the surface sea water booster pump and require no customary electrical tie in to the rig.

- Zone II and rig-safe starter panels
- Redundancy via twin train arrangement
- Hydraulic drive independence
- High head options
- Optional automated deployment
ScanTech pride themselves in innovating safety, enhancing products that can be used alongside our core equipment. The markets we work within can be challenging and dangerous, which is why ScanTech’s innovative equipment incorporates the safety of our clients’ personnel.

Our range of safety products range from flammable chemical management, marine riser protection (in the case of a compensator lock up), and protecting personnel and equipment from the risks associated with negative pressure.
The use of methanol and other flammable chemicals are often used in well testing and completion processes.

Derived from natural gas, methanol is a colourless alcohol, hygroscopic and completely miscible with water. It is a good solvent but very toxic, extremely flammable and easily ignited. Pure methanol has a flash point of 11°C. At all stages of transportation and distribution, methanol must be stored securely and handled responsibly.

PyroSentry™ was designed for stewardship and to embody an improvement in health and safety for the management of methanol, other flammable liquids and chemicals in offshore and marine environments. The concept for this award winning product was the brainchild of our team in Australia. First used on a well test project for ENI offshore Australia, this product has been refined to provide the best in methanol handling safety.

PyroSentry™

- Perpetual fire detection
- Automatic fire supression activation
- Requires no power
- Plug and play installation with no tools required for rig up/down

Options
- Audible visual alarm system
- Thermal imaging cameras
- Portable fire fighting system

www.scantechoffshore.com/well-testing/pyrosentry
In the event of compensator lock up while locked to bottom, Safety Bails are designed to protect the marine riser during well testing and completions operation.

Complying with ISO 13628/7 standards ScanTech Offshore has invested in the Safety Bails, an innovative controllable product that advances the safety of semi submersibles and drill ships during well testing, completion and workover operations. The development of the Safety Bails demonstrates ScanTech’s continued commitment to the offshore oil and gas industry, enhancing safe operations and reducing risk to personnel and the environment.

- ISO 13628/7 standards
- Enhancing safe operations
- Reducing risk to personnel and the environment

www.scantechoffshore.com/well-testing/safety-bails
The VacuumSentry™ has been developed to monitor and protect the steam boiler feed and condensate return pipework from negative pressure.

The system is fully automated and does not require manual intervention to relieve an induced vacuum, which is particularly important when the boiler steam supply has been isolated from the well test heater exchanger and going on standby or bypass.

The VacuumSentry™ enclosure has been fitted with a pressure/temperature gauge to provide a visual indication of the status of the pipeline contents, particularly important if the steam operator is required to slacken a connection and is unsure whether there is residual pressure present.

This compact and lightweight package means that it can easily and unobtrusively be inserted anywhere in the steam feed and condensate return pipework. ScanTech Offshore recommend that this simple device should always be utilised in a well test steam system as a protection against potential hose failure and all the inherent dangers that this may pose.
ScanTech Offshore has supplied and operated high pressure services to support drilling operations. Through our sister company, ScanTech AS, we are also able to supply ultracompact mud cooling systems. With our range of quality equipment and global operating locations, ScanTech are best placed to support the following drilling operations:

- Underbalanced drilling (UBD)
- Air drilling
- Foam drilling
- Cutting re-injection

www.scantechoffshore.com/oil-and-gas/drilling
ScanTech’s high pressure compressors are a fully containerised unit that has a rated compressed air flow of 1070 acfm with an operating pressure range between 150 and 350 psig. The container is certified to DNV 2.7-1, the globally accepted standard for mobile offshore containers.

Discharge air from the compressor is cooled down to 10°C above ambient air temperature and then filtered to remove any oil carry over to less than 0.01 mg/m³, making it technically oil free.

Extra-large coolers have been fitted to allow the compressor to work in very high ambient air temperatures without compromising on container footprint. For safety reasons, the control and refuelling stations are external to the container.

- High oil flow rate well testing or land applications where there is a long pipeline run between the burner and the compressors
- Air drilling, under balance drilling and nitrogen generation
- Pipeline de-watering, pigging and testing
- Decommissioning - fluid lifting, slurry lifting & pneumatic cutting tools

www.scantechoffshore.com/oil-and-gas/drilling/high-pressure-compressors
ScanTech’s High Pressure Boosters are an open framed unit that has a rated air flow of 2500 acfm, with an operating pressure of 2500 psig.

Discharge air from the booster is cooled down between stages and then further cooled before being fed downstream to operating equipment. Extra-large coolers have been fitted to allow the booster to work in very high ambient air temperatures without compromising on footprint.

For safety reasons, the control station is easily accessible from the perimeter of the oilfield skid, as are the drains from the scrubber bottles. The booster has a 30-gallon diesel day tank for run-up checks and servicing, and remotely fuelled from a separate bulk tank for operation.

Applications for high pressure boosters:
• Air drilling
• Under balance drilling and nitrogen boosting
• Pipeline de-watering, pigging and testing
Our sister company, ScanTech AS, designed and developed their ultracompact mud cooling system and brought it to market in 2019. The unique patented pleat cooling technology gives users of this product a tin in comparison to traditional solutions.

Mud cooler

- Full redundant system, ensuring there is no downtime
- 200 m³/h and 6-8MW of cooling, to cool the most demanding HPHT wells
- 1.9m² footprint delivering extreme deck space saving
- Can be positioned with pallet trolleys, benefiting from huge installation time-saving
ScanTech Offshore support offshore wind farm construction in Europe, UK, Asia and the US, with a focus on environmental protection. ScanTech support Big Bubble Curtain (BBC) Operations with the supply of Oil Free (Class 0) compressed air delivery packages.

Ordinary construction noises travel much more easily underwater, and sound levels can be five times higher than in open air. This can be enough to harm and even kill sea life. However, air bubbles resonate in response to sound, absorbing sound energy and when formed into a curtain they reflect the sound, effectively keeping it within the curtained area.

A ship is typically fitted with a set of ScanTech air compressors to deliver compressed air to a flexible tube with special nozzle openings. The tube is installed on the seabed around the locations where the sound is generated, and the compressed class zero air creates the bubble curtain through the nozzle openings.

The big bubble curtain was developed as a compressed air system for sound absorption in water, and especially protects porpoises and seals which use ultrasound as orientation in water.

Bubble curtains are used underwater to protect marine life from loud noises during subsea operations.
SeaSentry™ is a bespoke 5 stage filtration system, that when combined with ScanTech’s primary air compressors, cleans and conditions the compressed air to a class 0 quality. Each SeaSentry™ can process 10,500cfm or 295m3/min of compressed air & ensures that the air quality meets ISO8573-1:2010 Class zero in terms of total oil content.

A typical set up below can be seen (showing the 1600cfm / 45m3/min air compressors) demonstrating the ability to stack air compressors to reduce footprint, and giving the client a robust solution when deck space is tight.
ScanTech Offshore has a robust fleet to support decommissioning, with several years experience working in various services in this growing segment.

As part of James Fisher and Sons plc, we also have the capability to partner our sister companies to enable us to offer complete service capability of the decommissioning life cycle, thus reducing the need for several different subcontractor companies. The requirement during decommissioning and deconstruction for utilities, such as compressed air and fluid pumping, are just a few examples of where ScanTech can offer a number of products and services, essential during the critical decommissioning phase of the wells life cycle.

- Temporary fire pumps
- Pipeline flooding
- Abrasive cutting
- Well kill
- Fluid / pipe circulation
- Oil transfer
- Engineering services
- Oil transfer

With the North Sea decommissioning sector currently undergoing a surge in activity, our one-stop-shop is best placed to support and maintain customer projects with it’s large manufacturing and operational facilities in Great Yarmouth and Aberdeen, providing great local reinforcement with a combination of expertise, equipment availability and manpower.

www.scantechoffshore.com/oil-and-gas/decommissioning
ScanTech Offshore is not limited to designing and manufacturing individual items of equipment for our own fleet, but can provide multiple bespoke solutions to suit your needs.

Despite having one of the largest rental fleets of servicing equipment in Europe, we have extensive experience in designing and manufacturing for client specific products, whether their needs be large or small.

Our in-house design and manufacturing team are able to follow through from concept to completion from our purpose-built Great Yarmouth packaging facility. Utilizing the latest computer graphic technology, such as Solidworks 3D design, our Project Engineers are able to produce conceptual drawings upfront and accurately assess costs.

We have developed new to market equipment, such as the Heater Sentry® and PyroSentry™ for which ScanTech Offshore won a national IADC Safety Award, Best in Offshore Well Testing 2017 and Oil Rig Fire Protection System of the Year.
Support services

Sale or lease purchase
If you prefer to own your equipment, the majority of our products are available to purchase. New build and ex-rental fleet are available via cash sales and lease purchase. Purchases can be supported by contract maintenance and the provision of operating personnel.

Engineering solutions
Providing a wide range of well test support engineering solutions, we design and deliver bespoke packages for high profile testing projects around the world. Our capability extends to the complete design, build and installation of fixed rig cooling systems, air compressor and steam generating systems, and ancillary safety systems.

Flare simulation
We provide radiated heat simulations for many different environmental conditions using FlareSim and Trianglia Software. By collating relevant data, we can accurately predict heat radiation, structure temperatures and potential hot spots. The final system proposal will provide personnel and installation protection to API 521 standards.
Safety and certification

QHSE
ScanTech Offshore always makes a conscious effort to reach and surpass client standards. Part of our effort to ensure we offer the highest quality service is to stay up to date with all the industry regulations, standards and accreditations.

ISO accreditation
Our Integrated Management System (IMS) and safe working practices have earned us DNV accreditations OHAS 18001:2007 (health and safety), ISO 9001:2008 (quality) and ISO 14001:2004 (environmental). Det Norske Veritas (DNV) is an independent foundation with the purpose of safeguarding life, property and the environment.

International Association of Drilling Contractors
ScanTech Offshore is an associate member of the International Association of Drilling Contractors (IADC) North Sea Chapter, Brazil Chapter and Southern Arabian Peninsula Chapter. The IADC’s mission is to advance drilling and completion technology, improve industry health, safety and environmental practices, and champion sensible regulations and legislation which facilitates safe and efficient drilling.

www.scantechoffshore.com/about/qhse