

3sun Group

3sun Group specialises in delivering a comprehensive range of products and services to the oil and gas, marine and renewable sectors both directly and via a network of global partners and agents.

Vision

To develop a sustainable ethical oil, gas and renewables business capable of delivering a high level of stakeholder satisfaction.

Mission

We will deliver on our vision by listening to the needs of our Clients and responding in a timely, professional manner. We will work to accredited quality, health, safety, environmental and personnel standards using a combination of innovation, technology and highly skilled competent staff to deliver on the commitments we make.

E: enquiries@3sungroup.co.uk
W: www.3sungroup.co.uk

3sun

3sun is a control and instrumentation service and product supplier specialising in the Energy and Marine Sectors.

3sun is based on a firm foundation of qualified people and quality products and services. From the skills, understanding and resources built up by 3sun's management over many years, we can provide expertise from our specialist in-house teams to work with our Clients to provide sophisticated market responsive solutions. Where there are no traditional solutions available to meet our Clients specific and often unique requirements 3sun will work with its Clients to develop technical and commercially acceptable solutions.

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Dawson Energy

Dawson Energy specialise in supplying skilled technicians for installing and servicing wind turbines, both onshore and offshore and also supply teams of technicians for major outages and rework at hydropower plants. Since the company's formation in 2001, we have been involved with the construction of the majority of wind farms built in the UK. In addition to our UK based activities we have also been involved with construction and service work on wind turbines in Ireland, France, Denmark, Sweden, USA and New Zealand.

All our technicians are staff employees and are fully trained for working on wind turbines and have all necessary safety equipment.

E: enquiries@dawson-energy.co.uk
W: www.dawson-energy.co.uk

Our People



"As a service biased Group of Companies we pride ourselves in the ability, competence and professionalism of our staff. This is why our number one priority is to train and develop them to deliver an exceptional level of Client satisfaction."

Graham Hacon, CEO.

Site Services

Installation and Commissioning

Installation and commissioning is undertaken at Clients' facilities both on and offshore.

Scope includes:

- Instrument tube installation
- Hose installation
- Instrument installation
- Pressure testing
- Flushing
- Calibration
- Loop checking
- Commissioning
- Electrical installation
- Mechanical installation

Our contract management experience and engineering expertise ensure we provide quality installations, on time and to budget.

Our engineers are fully conversant with the relevant regulations and we have an excellent safety, quality and environmental performance record.

Service and Support Maintenance

One of the most important services provided by 3sun and Dawson Energy is the provision of preventative maintenance and on-call support services that support our Clients' worldwide installations. We can offer many options to suit the exact needs of each project.

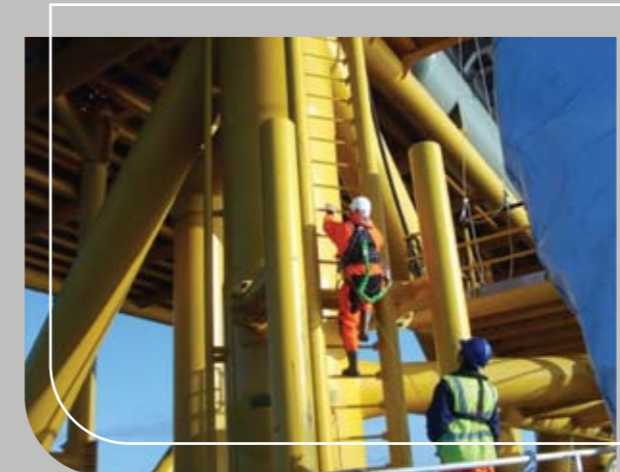
These include:

- Permanent staff
- Scheduled maintenance contracts
- 24 hour on-call engineering support
- Embedded engineering support
- Remote system diagnostics.
- Condition based monitoring
- Healthcare service contracts
- 'Through-life' support

Our unique selling point is that we are fully independent from any OEM constraints providing the Client with unbiased advice and best solutions.

Asset Management

We can administer complete asset management of our Clients' equipment, both on and offshore including stock, repair, recertification and overhaul, together with full database support and certification. Contracts may be incentivised against agreed benchmarks ensuring performance standards are maintained in parallel with a high quality service on a cost-effective basis.



Inspections

We offer a wide array of inspection services designed to provide the Client with detailed 'as found' status and recommendations for improvement in system integrity and performance.



Wind Turbines

Having worked in the UK and overseas on and offshore since the inception of the modern day wind turbine industry we have developed an intimate understanding of the safety, technical and commercial elements of wind turbine erection, retrofit, modification and maintenance.

We are familiar with all the major manufacturers turbine models including Vestas, Repower, Siemens, Nordex, Acciona, Enercon and Gamesa.

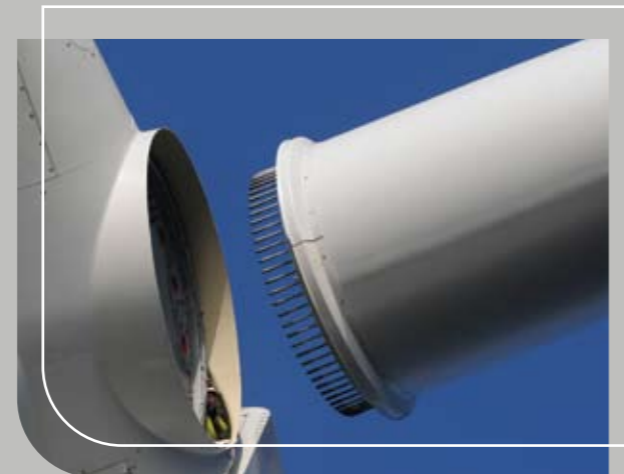
From our full time staff resource pool in excess of 100 technicians and supervisors we can mobilise to any global location. All of our staff are offshore certified and trained and assessed to work at heights.

We offer a comprehensive range of services covering:

- HV/LV electrical installation/testing
- Mechanical installation/testing
- Modification and upgrade
- Design of racks and frames
- Servicing
- Commissioning
- Blade repair
- Craneage
- Inspection
- NDT
- Marine access
- Oil changes
- Cathodic protection

Our unique selling point is our ability to carry out the full design, manufacture, installation, testing and commissioning of system upgrades including all site logistics or marine transfers offering a single point solution to our Clients.

These services are not restricted just to the wind turbines but also cover the entire associated infrastructure of sub stations, transformers, transition pieces and installation vessels.



Engineering Services

Consultancy

We offer consulting services which identify key opportunities for improvement in all areas of processes and systems. Our knowledge and understanding of our Clients' business is what distinguishes us from the competition. Our unique position of strength based on our wide experience in all market areas ensures we can quantify key

opportunities and offer solutions based on the latest standards, technology and industry trends, ensuring that our recommendations provide the optimum solution.

A key element of this work is the modification and upgrade of brownfield systems.

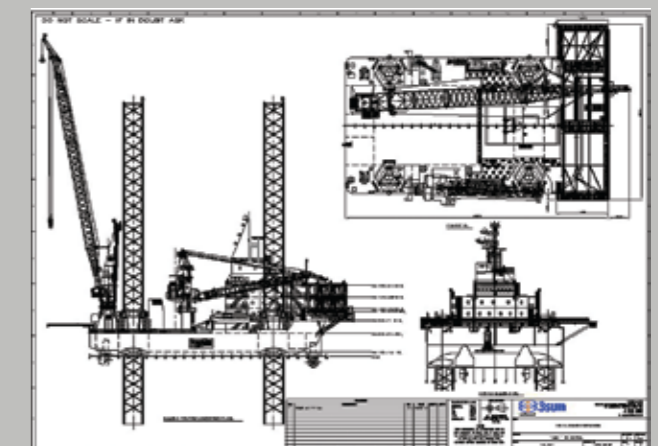
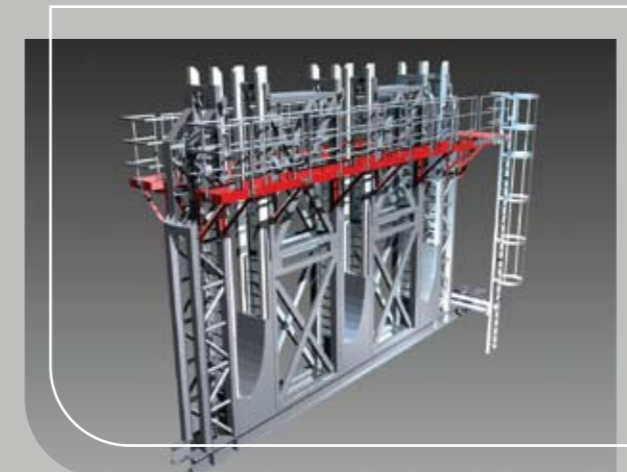
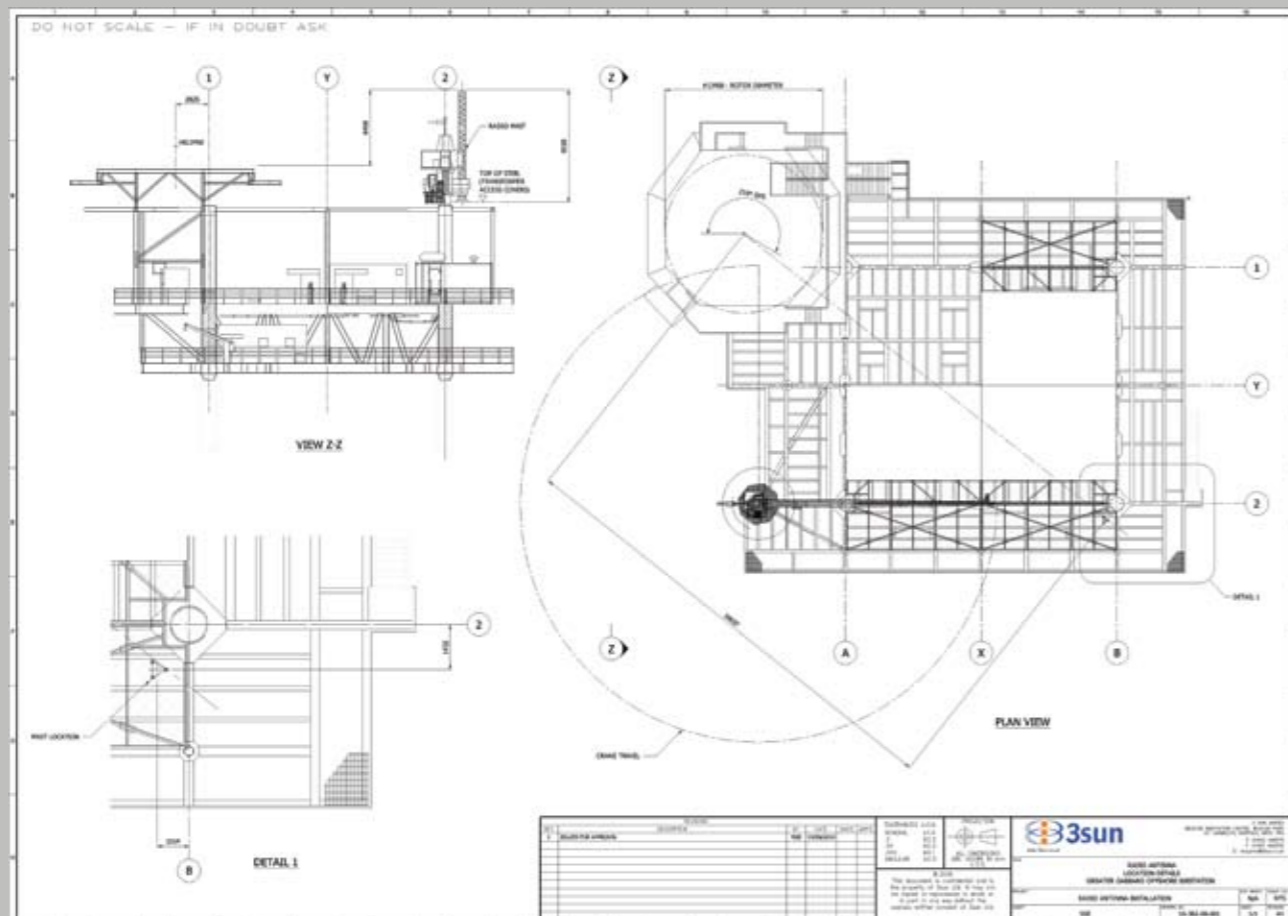
Design

The key to a successfully completed project lies in the way it is initially designed. Our designers draw upon the many years of experience they have, both in the field and through their training and apply this to the countless original and perplexing situations that tend to crop up when planning a project. We provide innovative designs which take into consideration the latest standards, technology and industry trends and apply them to each unique situation.

CAD

Computer aided design is used to produce, fabrication, schematic, and general arrangement drawings, including 2D or 3D draughting and even dynamic modelling. An example of the projects designed/draughted include:

- Wind turbine - blade carrier racks
- Subsea control systems
- Topside hydraulic power units
- Wellhead control panels
- Subsea distribution units
- Chemical injection units
- Piping ISO's
- Met mast brackets
- Bride access structures
- Hydraulic modelling



Condition Based Monitoring

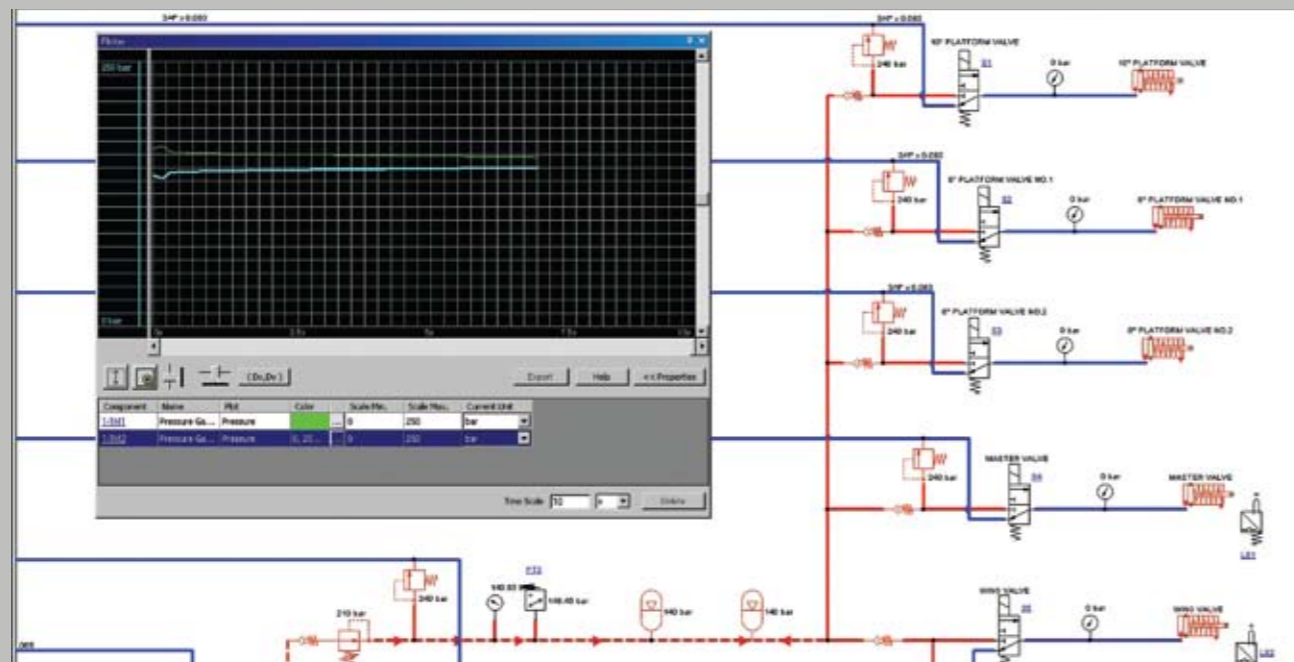
Traditional approaches to maintenance and fault diagnosis tend to revolve around scheduled visits and routine maintenance which report on remedial items based on a snapshot of the system on the day of the visit.

By using either the Client or our own condition based monitoring and data acquisition tools we can remove the necessity for costly offshore interventions by identifying faults from a much larger data range over a much longer period of time. This is undertaken from both our own and Clients' onshore facilities.

Office based diagnosis allows full planning for the visit and ensures the right people,

equipment and spares are mobilised. This enables a clear step change from reactive to proactive maintenance. The traditional approach of 'blind' modifications to fix underlying issues based on assumptions is eliminated. Maintenance frequencies can be extended and alarms can be generated to allow event monitoring anywhere in the world.

Reductions in offshore man-hours with proportional reduction in the risks of such operations. Removal of costs for flights and shipping associated with visits that are no longer required. Replacement parts are only used when required and not simply changed on a frequency based interval.



System Modelling

Using our sophisticated dynamic hydraulic system modelling software an 'intelligent' schematic drawing is created using components from the software database. Variables are assigned to the database schematic components i.e. valve cracking pressures, pump pressures and displacements etc.

The software is run in simulation mode to carry out 'real-time' cause and effect scenarios to validate system behaviour.

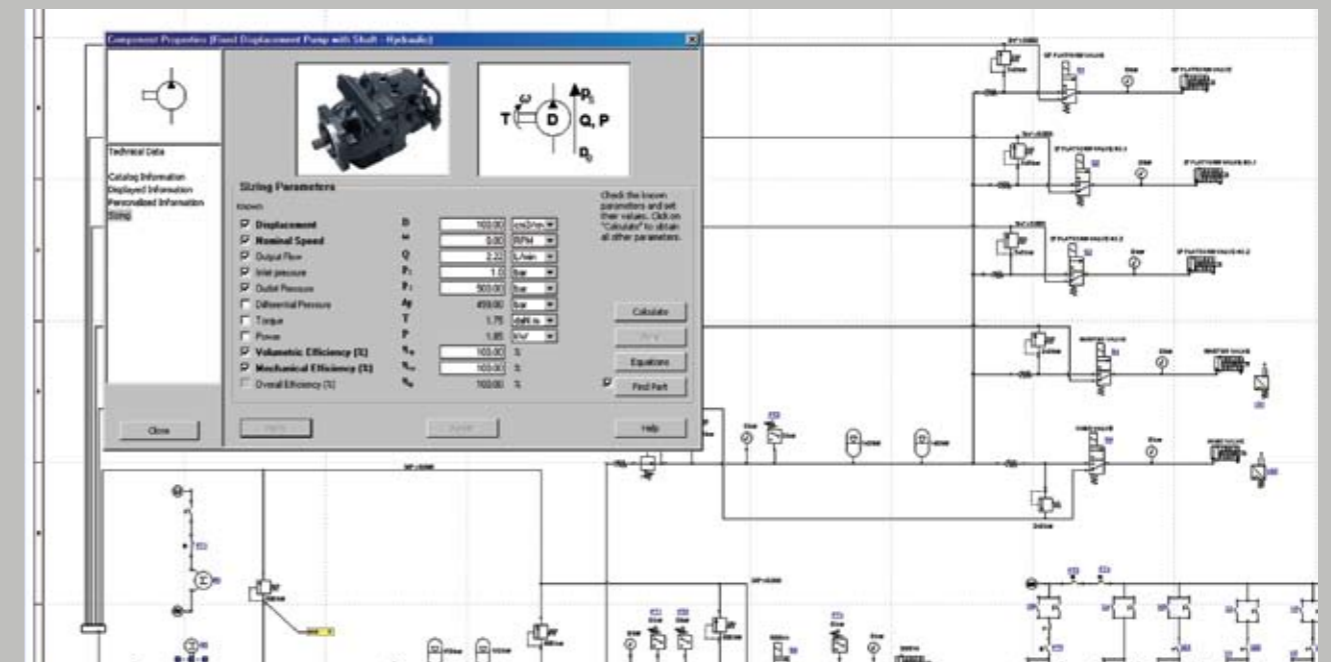
The variables are fine tuned until the desired system functionality and performance is achieved or the underlying fault simulated.

Ability to perform office-based 'what if' scenarios.

Eliminating the need to use a 'try it and see' approach, where the software is used as a diagnostic tool.

For new designs it facilitates incorporating the system philosophy, operational specification, component selection, detail design and simulated functional testing of the system, in one assignment without purchasing any components.

Technical Data for analysis or reports including graphs showing, flow, pressure etc experienced by each component throughout the cycle of operation video Animation of the electro - hydraulic system in operation, displaying the actions taken and its 'real-time' effects.



Products

Summary

3sun supply a range of products and systems that are all designed and manufactured in house using state of the art technology and accredited management systems.

Care is taken to ensure that all aspects are tailored and designed to suit the Client's specific requirements whilst still complying with the latest legislations, regulations and guidelines.

Systems are designed using our in house 3D CAD drafting and hydraulic packages, modelling structures to minimise production time and ensure a right first time basis of design.

As well as the standard range of products any custom design can be undertaken.



Chemical Injection Units (CIUs)

- Methanol
- Corrosion inhibitors
- De-scalers
- Anti foam
- e-waxer

Test Packages

- Pressure test HPU units
- Fluid cleanliness kits
- N2 booster pumps
- Flushing units

Umbilical Termination Unit

- Topside
- Subsea



Hydraulic Power Units (HPUs)

- Control valve
- Topside
- Subsea
- In riser control
- ESD valve
- Riser tensioning

Wellhead Control Panels (WHCPs)

- Surface
- Multi well
- Single well
- Gas storage
- Subsea
- Wireline



3sun Group Policy



ISO 9001:2008

3sun Group of Companies have a documented Quality Management System independently accredited to the requirements of ISO 9001:2008

The management system defines the processes and activities that are employed in the execution of our business activities primarily to our Clients.

As a company we are committed to providing products and services which meet or surpass our Clients' and legislative requirements.

Continuous improvement in both our performance and our products and services are delivered through management commitments and clear communication to the organisation.



ISO 18001:2007

3sun Group of Companies have a documented Health and Safety Management System independently accredited to the requirements of IOS 18001:2007

We believe that Health and Safety management is of prime importance in all aspects of our business and are committed to continually improving our performance in these areas.

High standards of Health and Safety management are vigorously promoted and implemented as an integral part of the business.

Through our risk management processes, we aim to ensure a safe and healthy environment for our employees, our Clients and all those affected by our activities.



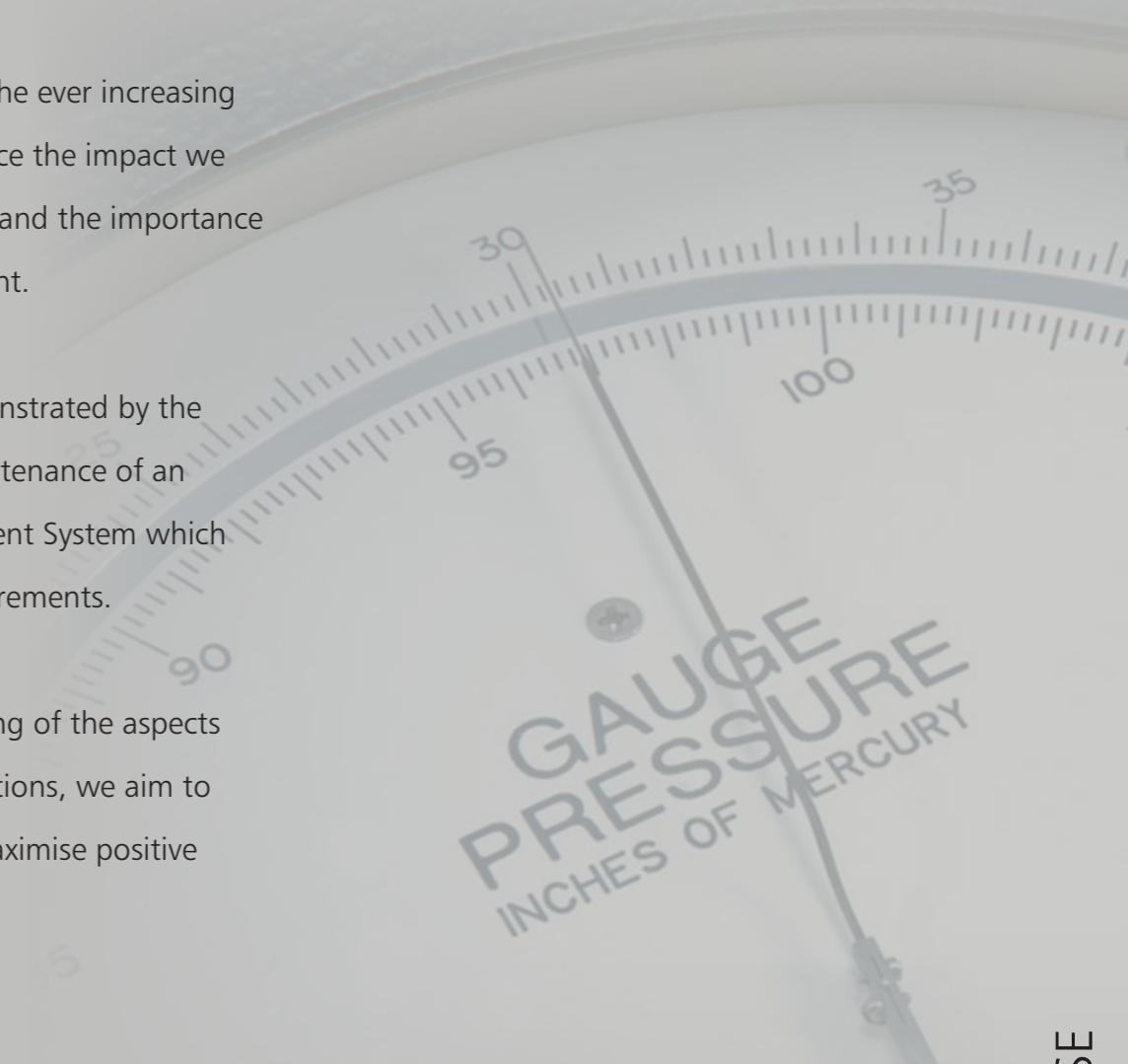
ISO 14001:2004

3sun Group of Companies have a documented Environmental Management System independently accredited to the requirements of ISO 14001:2004

We are acutely aware of the ever increasing demand for us all to reduce the impact we have on the environment and the importance of sustainable development.

Our commitment is demonstrated by the implementation and maintenance of an Environmental Management System which complies with these requirements.

Through our understanding of the aspects and impacts of our operations, we aim to minimise negative and maximise positive environmental Impacts.





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