

A photograph of an offshore wind farm in the ocean. Several white wind turbines with yellow bases are visible. Two large red service vessels are positioned near the turbines. The sky is a clear, deep blue.

**M&O**

# M&O Suppliers

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World-class solutions for the Maritime and Energy industries.

# ABOUT M&O PARTNERS

M&O



## EXPERTISE

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### International Sales Development

- Develop your International Sales Strategy in a structured manner
- Get access to the Global Maritime & Offshore Markets
- Focus on short lead times from engagement to sales meetings with international clients
- CRM based International Sales Approach

### Strategic and Operational Management

- Get assistance in preparing your company for international growth and expansion

## ORGANIZATION

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An international team of Maritime & Offshore industry experts, based in Norway, USA, Brazil and Singapore.

## EXPERIENCE

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**100+ internationalization projects carried out for clients from 15+ countries**

- Strategy
- Sales
- International Partnership Development
- Restructuring
- Management

# ABOUT M&O PARTNERS



## LOCATIONS



• M&O Offices



# WE CONNECT YOU WITH LEADING SUPPLIERS IN THE MARITIME & ENERGY INDUSTRIES

**M&O**



**Energy  
Companies**



**EPC Contractors**



**Drilling**



**FPSO Owners**



**Vessel Owners**



**Oil Service Companies**



**Shipyards**



**Offshore Wind**



**Subsea**



**Onshore**

## SKIDS PACKAGED SYSTEMS

3P Prinz is an Italian manufacturer specialized in customizable Skids/Packages. The company is highly-specialized in engineering products and innovative technology, serving the demands of marine and oil & gas companies worldwide.

### CHEMICAL INJECTION/DOSING SKIDS



### FUEL GAS SUPPLY AND TREATMENT SKIDS



### GAS METERING SKIDS



#### OTHER SKIDS/PACKAGES

- Methanol Injection Skids
- API 614 Lube oil systems and HPUs
- Pipeline Manifold Packaged Systems
- Water Treatment Systems (Reverse Osmosis, Ultrafiltration, CIP Etc.)
- HIPPS (up to SIL 3)
- Gas Dehydration and Gas Sweetening Packages

#### SERVICE FEATURES

- Site Installation and Assistance, Startup
- Specifications Review
- Detailed Proposals

3P Prinz provides operators and engineers for Site installation and startup for all our Pump Packages and Packaged Pump Systems.

#### AFTER MARKET SUPPORT

- IOM Manuals
- Export Crating
- Worldwide Support
- Spare Parts
- Repairs
- Technical Assistance
- Site Intervention on Start Up
- Equipment Remote Monitoring



## WAFER CHECK VALVES

Abacus Valves was established in 1988 to manufacture and supply wafer check valves to the process industry. Since then, Abacus have developed the most comprehensive range of wafer and nozzle valves and is now a leading UK manufacturer in this segment. This is coupled with the capability to manufacture our range from an extensive range of materials, attractive delivery time and competitive pricing, you can be confident that Abacus is your one stop shop for all your check valve needs.

### TWIN PLATE CHECK VALVES



- Fully API 598 compliant.
- ASME B16.34 P/T Ratings.
- PED 2014/68/EU (Formerly 97/23/EC).
- Continuous, uninterrupted flange faces.
- Resilient seat options (integral and renewable).
- Precision lapped metal seat option (inherently fire safe).
- Retainerless design as standard (no leak path to atmosphere).
- No external actuation aids required.

### AXIAL NON-SLAM NOZZLE CHECK VALVES



- Efficient Streamlined Axial Flow
- Integral Diffuser
- Disc Ease of Opening and Stability
- Non Slam Closure
- Tight Shut-off

## ACCESSORIES TO CASING, LINER & PRODUCTION STRINGS

Ace Well Technology is a Norwegian Oil & Gas company founded in 2012 that delivers a range of innovative products and cost-efficient solutions for downhole components, which need to be locked securely onto any tube. Ace Well Technology is an innovative global technology provider for adherence of products of any pipe.

### ACE RATCHET COLLAR SERIES



All sizes in standard and slim designs, along with custom designs for specific needs

### ACE TRACER CARRIER



All sizes in standard and slim designs, along with custom designs for specific needs

AFC is an Italian company specialized in manufacturing of hydraulic & pneumatic actuators for valve automation. AFC's specialty is to manufacture large actuators for large bore or high pressure valves, on a very competitive delivery time. For any reduced delivery or special high quality hydraulic or pneumatic actuator requirements AFC provides an extraordinarily wide range of products, including Compact Rotary, Compact Linear, Scotch yoke (symmetric & canted yoke) and Rack & Pinion actuators.

## PRODUCTS



- Scotch & Yoke Series, Series YS/YS
- Rack & Pinion Series, Series RP
- Compact Helical Slot Actuators, Series HS
- Compact Linear Actuators, Series LC
- Standard Linear Actuators

## DESIGN



- Design and manufacture of Hydraulic & Pneumatic actuators, rotative up to 1.500.000 Nm, linear up to 2.000.000 N.
- Flexibility & High competence, internal 3D CAD, DWG & FEM analysis for a complete product design.
- Fully custom design actuators for special applications, R&D department to your service.

## ASSEMBLY



- High qualified assembly personnel to guarantee high quality actuators for your complete satisfaction
- Raw materials, oxicutted & un-machined parts, standard parts & accessories, are available in stock
- All products are designed and optimized to be easily assembled and disassembled without special tools



With its high-precision autonomous navigation systems, computer vision, and embedded high-performance computing, Alerion provides intelligent drone solutions for infrastructure inspections and other applications.

### WIND TURBINE INSPECTION



- Inspection services for wind turbines, damage assessment and repair recommendation reports using artificial intelligence and reviewed by engineers.
- Flight permissions to operate in restricted airspace.
- Certified drones for operations worldwide with the required safety mechanisms.
- Pilots with certified GWO training.

### INTELLIGENT DRONE SOLUTIONS



- 15 minutes per turbine
- Damage assessment through artificial intelligence.
- Digital twins and remaining useful life estimates.
- Power curve calculations.
- Lifetime extension plan.

## API CENTRIFUGAL PUMPS ON THE VERY FASTEST AVILABILITY

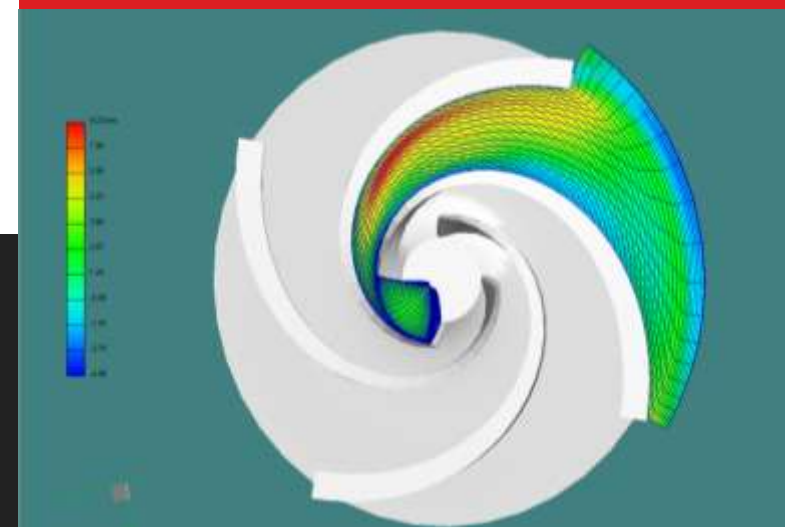
Amarinth is a world-leading pump manufacturer and are firmly established within a range of key energy sectors as specialists in high specification and bespoke pumping requirements. Their excellent reputation is built upon years of cooperation with operators, EPCs, OEMs and packagers and today they are the manufacturer of choice where quality, reliability and ultra-fast paced lead times are essential to project success.

### OPERATIONAL CAPABILITES



- Bespoke API pumps delivered within 22 weeks.
- Carbon Neutral Manufacturer – Key for NetZero.
- Audited and approved by most blue-chip operators.
- Fully ISO9001, 14001, 45001 & IECEx Certified.
- Nuclear standard Project Management Team.
- 24/7 access to our customer portal for project update and monitoring.
- Customisable and project Specific Documentation control system. – Flexibility
- Manufacture, assembly and testing all from one site.

### TECHNICAL CAPABILITIES



- Bespoke and consultative manufacturing capabilities for the most difficult pumping duties.
- Over 450 years of collective experience in API pump design.
- Full in-house 3D CAD, FEA & CDF Capabilities
- ‘Modular’ approach to design – Instant GA, Curve and Pump Datasheet Generation and cost optimization.
- A suite of virtual meeting, testing & witnessing options.
- Full pump strip down, inspection and repair service - Girdlestone and others.



# UNINTERRUPTIBLE POWER SYSTEMS, BATTERIES & CHARGERS



Anda-Olsen is a leading supplier of UPS and hybrid power solutions. Anda-Olsen provides systems that will fulfill all requirements from shipyards, ship owners and operators. The range includes integrated AC and DC UPS systems, standard UPS systems, battery chargers, battery systems, and power supplies.

**EB SERIES**



**CP & FM SERIES**



**INTEGRATED DC-UPS**



**3 PHASE ONLINE UPS**



**1 PHASE ONLINE UPS**



ASVOTEC provides engineering solutions in large special valves, thermal and combustion systems, specialized boiler shop for pressurized equipment, in addition to couplings and repair couplings (clamps) for the most diverse applications in basic industries

## BOILER SHOP



## COMBUSTION



## VALVES



## STRAUB



- Heat exchangers
- Column and Process Reactors
- Pressure Vessels
- Air Coolers
- Cat Coolers
- Condensers
- Pre Heaters
- Silencers
- Vacuum Systems
- Cyclones
- Risers

- Torch Systems (Flare) Burners
- Incineration Systems Process' Heaters and Furnaces
- Spare Parts
- Waste Heat Recovery Unit (WRHU)

- Gate valves
- Butterfly valves
- Louver valves
- Goggle valves and conduit valves, bleeder, with relief and equalization, among others.

The diameters of ASVOTEC's valves have from 6" to 170"/ from 150mm to 4.500mm, depending on the model.

ASVOTEC is exclusive licensed manufacturer of products of Straub brand in Brazil over 30 years, utilizing the same technology, quality, accuracy and standards of our licensor from Switzerland.

ASVOTEC/Straub products are present in several refineries, oil platforms, sanitation facilities, gas treatment units, chemical and petrochemical plants, fertilizer plants, automotive, mining, steel mills, among others.



Belga Marine specializes in Wave & Current Systems, Oil Spill Detection, Drone Survey & Inspection, Navcom Hardware Installation, Commissioning and Maintenance, GMDSS Radio Survey, EPTA, VDR Annual Test. With more than 40 years of experience, Belga Marine is known for its technical know-how and commitment to perform high quality services.

### TURNING HARD WORK INTO SMART WORK



- Oil Spill Detection and Characterization
- Wave and Sea-surface Monitoring
- Surveillance and Control systems
- Vessel Monitoring Platforms
- Communication & VSAT
- Energy Generation from Waves
- E-POB
- Offshore Drone Inspections
- Drone Autonomous Inspection for windmills
- GMDSS survey
- EPTA (Helideck Survey)
- Systems commissioning, installation and technical support

# REMOTE CONTROLLED VALVE SYSTEMS

Besi provides flow management systems and maritime technology solutions. Besi manufactures straight and three-way type control valves for industrial and water treatment plants usage.

## CONTROL SYSTEMS



BESI designs and produces centralized and decentralized control stations for hydraulic, pneumatic, electric and electro-hydraulic systems.

## REMOTE CONTROLLED VALVE SYSTEMS



BESI specializes in Remote Controlled Valve Systems as well as Tank Management Systems for maritime application.

- Remote Controlled Valve Systems with Hydraulic, Electro-Hydraulic, Pneumatic or Electric actuation
- Tank Level Gauging and Tank Management Systems
- Anti-Heeling Systems
- Regulating Valve Systems
- References of over 5.000 vessels, floating docks and offshore facilities worldwide.

## ANTI HEELING SYSTEM



- The BESI Anti-Heeling System (AHS) can either be provided as a stand-alone system or as a sub-system integrated in the ballast control.
- The AHS provides manual or automatic heel correction to keep the ship on even keel during cargo operation. The heel angle is measured by an inclinometer which generates a signal for the control system initiating the necessary actions to keep the vessel in a horizontal position.

## WINDOWS, DOORS, HATCHES AND PORTHOLES

With over 30 years of experience, BOHAMET is a world leader in the shipbuilding industry by providing windows, doors and hatches in different sizes and shapes for all types of vessels. Products are GL, DNV, LRS, BV, RINA and ABS approved.

### DOOR & HATCH



### WINDOW & PORTHOLE



### GLASS



#### Product materials:

- Brass
- Stainless steel
- Steel anti-magnetic
- Stainless steel
- Carbon steel
- Aluminum alloys

#### Types of glass:

- Tempered and semi-tempered glass
- Insulated glass
- Soundproof glass
- Laminated glass
- Electrically heated glass
- BOHFLAM fire resistant glass
- Bulletproof glass
- Electromagnetic radiation resistant glass



## CCB YARD SERVICES



Coast Center Base (CCB) is an industrial development partner within the maritime and offshore segments with facilities and services in Norway and Spain. With four decades of experience offering yards services, companies can rely on CCB to solve everything from routine maintenance to technical challenges.

### YARD SERVICES



- Rig Yard
- Ship Yard
- Deepwater Quays
- Drydock (Ship)
- Jack -Up Quay
- Jack -Up Pin –Down
- Engineering & Modifications
- Inspection
- Repair
- Maintenance

### EXPERIENCE & PEOPLE



- The quality of CCB's services is based on more than 40 years of experience. Understanding complexity and details, while working efficiently is what makes CCB unique.
- The right people in the right positions are the most important asset at CCB.

### LOCATIONS



- Norway:
- Ågotnes
  - Mongstad
  - Kollsnes
  - Helgeland
  - Kirkenes
- Spain:
- Las Palmas, Canary Islands



## MANUFACTURER OF FORGED FITTINGS

Chero Piping is an Italian designer and manufacturer of high-quality forged fittings for the oil & gas, on-shore, off-shore, chemical and petrochemical industries.

### FORGED FITTINGS



- Manufactured in accordance with ASME B16.11 and BS 3799.
- Great stock availability of finished products in carbon, low temp, low alloys and stainless-steel materials.
- Inventory of raw materials in grades such as duplex, super duplex, nickel and nickel-chrome alloys, which enables Chero Piping to provide flexible and quick services even in all exotic grades.

### OTHER PRODUCTS



- Insulating joints
- Branch reinforced fittings
- Specialty Products
- Valves
- Piping bulks
- Skid

### CAPABILITIES & TESTING



- Specific machinery to work forged fittings, CNC machinery for special pieces and machining centers equipped with robots.
- State-of-the-art laboratory (ISO 17025 accredited), Mechanical tests, NDE tests, ASTM A262 corrosion and micrographic tests are performed internally by qualified and certified personnel.

Corrosion & Water Control is the leading supplier in cathodic protection systems. Corrosion is a first-class manufacturer and supplier of high quality, turnkey ICCP and ICAF.

## IMPRESSED CURRENT ANTI-FOULING



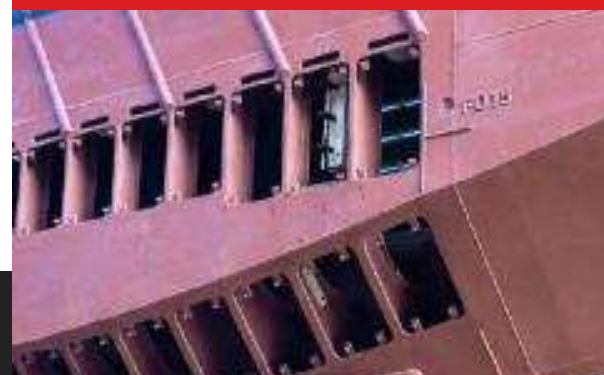
- Advantages of the ICAF of MGPS power unit:
- Automatic correct installation check including alarm function
  - Touch screen operation in all main languages
  - Remaining service life indication of the anodes (+ alarm function)
  - Interactive with seawater pumps via several digital inputs to save anode material
  - Downloading-/uploading via SD
  - History of all data in years
  - Low voltage/short circuit including alarm function
  - Polarity check for anode identification including alarm function
  - Connectable to the Ship Management System via RS485 and RS232 (optional)

## IMPRESSED CURRENT CATHODIC PROTECTION



- Advantages of ICCP Power unit:
- Touch display operation
  - "Off potential" controlled
  - Coating condition indicator
  - Propeller shaft monitoring (+ alarm function)
  - Automatic system scan
  - Down-/uploading via SD
  - Automatic/Manual mode
  - History of all data in years
  - 3 points temperature check of the cabinet (+alarm function)
  - Connect to vessel Management System via ethernet, RS485 and RS232 (optional)

## UV-C COOLER

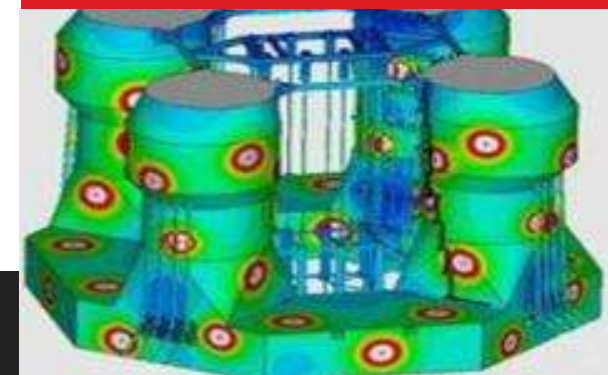


Corrosion has combined two existing technologies: UV-C light technology as a superb technology to prevent fouling and pillow plate technology to provide high-efficient cooling.

UV-C technology provides full environmental box cooler fouling protection, even with stagnant water in the box cooler sea chest.

The UV-C cooler can be used for both retrofit and new building. For retrofit, the UV-C cooler is designed to be backwards compatible to the existing box cooler, where for newbuilding, the cooler is custom designed to meet the specifications.

## SACRIFICIAL ANODES



When two metals are electrically connected to each other in an electrolyte, the more active metal supplies a current and dissolves to effectively protect the other metal.

Applications:

- Vessels
- Port installations
- Offshore engineering
- Underground structures
- Tanks
- Power plants, refineries and chemical plants
- Reinforced concrete structures and buildings' piling foundations

# MARITIME LIGHTING SOLUTIONS

With focus on technology and design, Daeyang provides the best interior and environmental lighting for onshore and offshore plants, and naval ships.

## HAZARDOUS AREA



Explosion Proof LED Ceiling Light

Protection degree IP67

Explosion degree

- Ex d IIC T6 Gb
- Standard : IEC60079-0 / IEC60079-1

## NAVIGATION & SIGNAL LIGHTING



Signal Light | IS-P

Protection degree IP56

## OUTDOOR LIGHTING



LED Pendant Light IP-P/IP-B

Protection degree IP56

Application:

- Engine room
- Workshop
- Toilet
- Chemical processing and industrial areas.

## INDOOR LIGHTING



Fluorescent Surface Ceiling Light FL-WS-F

Protection degree IP55 / IP66 / IP67

Application:

- Engine room
- Hold
- Laundry
- Store
- Chemical processing and industrial areas.

DESMI is specialized in the development and manufacture of pump solutions for marine, industry, oil spill combating, defense & fuel. The DESMI pumps and systems are sold to more than 100 countries.

## RELIABLE PUMP SOLUTIONS



DESMI offers more than 100 types of pump designs and variations, covering all applications of the engine room.

Proven technology and energy efficient pumping solutions you can rely on.

## APPLICATIONS



- Ballast Pumps
- Base Oil Pumps
- Bilge Pumps
- Boiler Feed Pumps
- Brine Pumps
- Drill Water Pumps
- Emergency Fire Pumps
- Fresh Water Cooling Pumps
- Inert Gas Cooling
- Lubrication Oil Pumps
- Main Engine Preheating Pumps
- Seawater Cooling Pumps
- Sewage Pumps
- Sludge/Dirty Oil Pumps



## ENVIRONMENTAL EQUIPMENT FOR OIL SPILL

DESMI is specialized in the development and manufacture of pump solutions for marine, industry, oil spill combating, defense & fuel. The DESMI pumps and systems are sold to more than 100 countries.

### OIL SPILL RESPONSE



DESMI Ro-Clean A/S provides a wide range of equipment for Oil Spill Response and Oil Spill Clean up.

It is a full range of equipment and always state-of-the-art with regard to quality and design.

### OIL SPILL EQUIPMENT



DESMI products and solutions for cleaning up oil spill includes:

- Oil Containment Booms
- Oil Skimmers
- Sweep Systems
- Launch & Recovery Systems
- Dop Pumps
- Drone Solution For Ignition
- Power Packs
- Storage Tanks
- Work Boats
- Training & Commissioning

# WATER AND WASTE MANAGEMENT SOLUTIONS

Detegasa designs, manufactures and markets high-tech water and waste management solutions for Navy, Marine & Offshore Industries, providing an integrated support through all the product lifetime.

**SEWAGE TREATMENT PLANT**



**TECHNICAL WATER HYDROPHORE**



**SHREDDER COMPACTOR**



**OILY WATER SEPERATOR**



**INERT GAS SYSTEM DELTA**



**INCINERATOR**



## DRILLING RIGS, DRILLING EQUIPMENT AND SERVICES

Drillmec is an international leader in design, manufacturing and distribution of drilling and workover rigs for onshore and offshore applications as well as a wide range of drilling equipment.

### OFFSHORE DRILLING SOLUTIONS



Drillmec offers a comprehensive line of offshore equipment for platforms, jack-ups, barges, semisubmersibles and drill ships that can handle a wide range of E&P and production requirements.

From well head to crown, Drillmec supplies mud systems, mud pumps up to 2,200 hp, drawworks packages up to 4,600 hp, control rooms, derricks, pipe handling systems, power tongs, and rotary tables. On top of this, its complete Pre-FEED, FEED and EPC of drilling packages.

### DRILLING SERVICES



Drillmec HoD® (Heart of Drilling) is a cutting-edge drilling package, which offers uninterrupted bottom hole pressure controlling and managing even while making-up or breaking-out drill pipe connections.

Combining an advanced Continuous Circulation System with a High-Resolution Flow Rate Monitoring System, HoD gives operators the capability to achieve the planned TD in all drilling environment with extremely high HSE standards, enhanced performance and, consequently, with a drastic reduction of total drilling project time and costs.

### DRILLING EQUIPMENT



DRILLMEC offers a comprehensive line of fully integrated drilling equipment packages for the following applications:

- Platforms
- TLPs & SPARs
- Jack-Ups
- Liftboats
- Barges
- Tender Assisted Rigs
- Semi-Summersibles
- Drillship

## ELECTRIC VALVE CONTROL

Eltorque develops, manufactures and markets electric actuators and control systems for industrial applications - onshore and offshore. By focusing on the entire value chain and actively meeting the market demand, Eltorque is able to reduce customers' cost as well as offer high product quality.

### SAFE AND CLEAN VALVE CONTROL



Suitable applications:

- Cargo Handling
- Bilge and Ballast
- Tank Gauging
- SPS System
- Anti-Healing
- RSW System
- Bulk Handling
- Fuel System
- Other Systems

### MAINTENANCE FREE SOLUTION



The backbone of the Eltorque valve control solution is found in Eltorque's actuators, which are based on permanent magnet motor technology.

Main benefits:

- Environmentally friendly
- Reduced installation cost
- Reduced operation cost
- Reduced weight
- Reduced space requirement
- System design advances

### INTELLIGENT CONTROL



- The Eltorque solution offers an unsurpassed level of flexibility.
- Configure parameters like torque, closing speed and positioning quickly and precisely.
- At the same time, customers receive detailed and real-time status feedback on all valves.



## TAILOR-MADE INVOICE PROCESS

Eye-Share as provides software for electronic processing of incoming invoices and A/P settlement to over 500 customers. Eye-share's solutions are integrated with all leading financial management, accounting and procurement systems. Eye-share is particularly suitable for industries with complex organizations, distributed management and large purchasing volume.

### AUTOMATED INVOICE AND A/P PROCESS



Eye-share Oil & Gas is integrated with systems from SAP, Oracle and others, and is steered towards project management and installations which is an integral part of Eye-share's solutions.

This industry solution provides a completely paperless and automated incoming invoice process suitable for the industry, and reputable Oil & Gas companies around the world use Eye-share Invoice to handle incoming invoices, DA's and other industry related documents.

Eye-share Invoice is well-fitted for the Oil & Gas industry for several reasons:

- OCR scanning of paper invoices and importing of pdf and electronic invoices enables a paperless account payable process and automated workflow based on interpreted data – which provides automation, easy access from any location, a clean desk and an environmental
- Access documents from any location
- Approve on the move with smartphones and tablets
- Able to handle big investments and many locations (rigs, offices)
- Easier and faster processing and on time payments to suppliers saves time and money
- Automated straight through processing based on automated 3-way matching of PO related invoices
- Automated distribution according to company matrix
- Reduce total processing time significantly – from receipt to final approval
- Reduces manual work in all stages of invoice processing
- Automated follow-up through reminders and emails
- User roles is adjusted to meet requirements in SOX and Euro-SOX

## CAST STEEL VALVES AND STRAINERS

FIRSA is an Italian manufacturer of cast steel valves and strainers for Oil&Gas, chemical and petrochemical industries. Since 1953, FIRSA has developed its production and know-how to be the high-quality manufacturer it is today. FIRSA is one of Italy's leading manufacturers of Steel Gate Globe & Check valves. The manufacturing plant utilizes an extensive range of state-of-the-art computer-controlled design, manufacturing and testing equipment to aid the manufacturing & management control processes.

**GATE VALVES****GLOBE VALVES****SWING CHECK VALVES****CRYO VALVES****BRONZE VALVES****BELLOWS SEAL VALVES**

- Product Portfolio: Cast Valves ASME 150 till 2500lbs –size dn2 above

- Product Portfolio: Cast Valves ASME 150 till 2500lbs

## HOSES FOR OFFSHORE OIL LOADING AND DISCHARGE OPERATIONS

Flexomarine is fully certified, qualified and equipped to design, manufacture and test a full range of floating and submarine hoses according to OCIMF or specific customer requirements.

**REELING TYPE:  
RT REINFORCED SINGLE CARCASS**



**REELING TYPE:  
RT DOUBLE CARCASS**



**MONOBUOY TYPE**





With more than 45 years in the market, Frenstar Valves is one of the largest valve manufacturers and valve solutions providers in the world, delivering its solutions to global clients including BP, Total, Equinor, Shell, ExxonMobil and Petrobras.

### BUTTERFLY VALVES



Butterfly Valves are predominately used to provide flow control or isolation of liquids or gases in a pipeline. The valve can be fully open or fully closed and is referred to as a quarter turn valve providing a leak tight seal when closed.

- Concentric
- Double offset
- Triple offset
- PTFE lined

### BALL VALVES



Ball valves usually function as block valves to fully shut off or fully open flow. They are suitable for conditions where on/off and/or bubble-tight service are required.

- Floating or Trunnion Mounted
- Double Block and Bleed
- Multiport 3-way ball valves
- Soft or Metal Seated
- Fire safe certified
- Cryogenic service

### AIR VACUUM VALVES



Air release valves are used in pressurised pipe work systems to vent off unwanted air within them. Trapped air rises and collects within the high points of the system.

As air vented water fills the valve, the float rises until the valve seat is pushed back against the orifice closing it off from atmosphere again.



## COMPLETE RANGE OF QUALITY PLUG VALVES

GALLI & CASSINA is a world leading Italian manufacturer of plug valves for Oil & Gas and Chemical application. Established in 1919 and having producing plug valves to the Oil & Gas industry since 1946, Galli & Cassina is a prominent Italian valve company, and a leader in design and manufacturing the complete range high quality and reliable Plug valves.



### VALVE RANGE

- Pressure balanced DB&B lubricated plug valves API 6D & API 6A
- Dual seal plug valves DB&B API 6D
- Pressure balanced lubricated plug valves API 6D & API 6A
- Lubricated plug valves standard type API 6D – 2-ways, 3 & 4-ways multiport.
- PTFE sleeved plug valves two-way, tree-way and fully jacketed.



### APPLICATION

- Offshore
- Metering Stations
- Gas Pipelines & Compressor Stations

### ACTUATORS AVAILABILITY

- Electric
- Pneumatic
- Electrohydraulic
- Gas Overoil

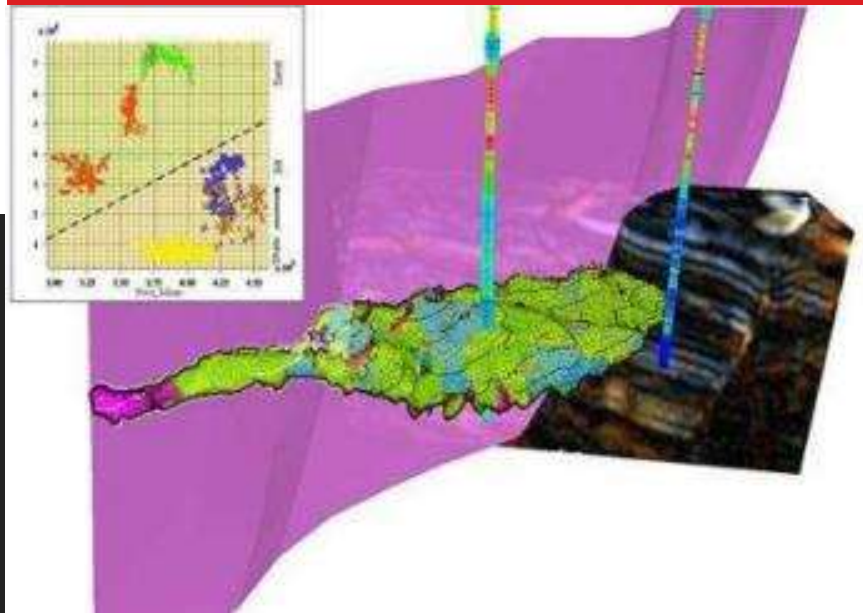


### SERVICES

- Fast Delivery of Engineered Plug Valves
- Plug Valve Stock Availability
- G&C provides skills, experience and commitment via its Field Service whose members perform in site checks on all systems and equipment on which G&C valves are installed.
- Customized training courses are available.
- G&C provides its customers with support on their premises in order to extend the lifetime of the valves.

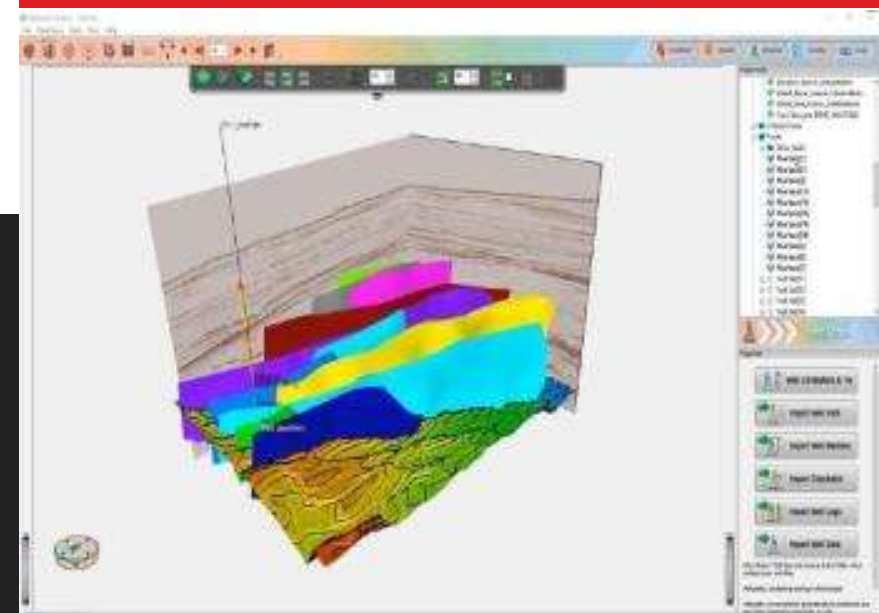
GeoTeriC specializes in the application of cognitive Interpretation workflows on 2D and 3D post-stack seismic data, providing solutions to most seismic interpretation challenges.

## PIONEERING ADVANCEMENTS IN 3D SEISMIC ANALYSIS



One of the early pioneers of 3D seismic analysis, GeoTeriC introduced many important technologies to the market. GeoTeriC's innovations include the first commercial 3D geobody delineation techniques, volumetric colour blending and volumetric spectral decomposition.

## EXPLORATION, DEVELOPMENT AND PRODUCTION



Working with exploration, development and production teams, GeoTeriC can directly translate geophysical data into geological information to help you solve your interpretation challenges. GeoTeriC's services are ideal for when you need results quickly.

## FLOORING SOLUTIONS IN VINYL FOR SHIPS AND OFFSHORE PLATFORMS



Streamo is Gerflor's approved product range of vinyl floorings and finishes dedicated to the marine market, fulfilling the fundamental requirements of the International Maritime Organisation (IMO). Streamo solutions have been especially developed to enhance the ship interiors and the offshore living quarters.

**VINYL FLOORING SOLUTIONS**



**INNOVATIVE, DESIGN-LED AND ECO-FRIENDLY**



**IMO APPROVED FLOORING SOLUTION**





## LIFE JACKETS AND PROTECTION SUITS

Hansen Protection develop, design and manufacture both standard and tailor-made hi-tech textile products for various sectors. Hansen Protection has more than 100 years of experience in manufacturing protective clothing and life jackets for seafarers.

**INFLATABLE LIFE JACKETS**



**INFLATABLE LIFE JACKETS**



**WORK/SURVIVAL SUIT**



**TRANSPORT SUIT**



**IMMERSION SUIT**





Høglund creates automation and energy solutions that ensure safe, reliable and efficient operations for any vessel type. Høglund handles both retrofit and new-building projects, acting as trusted advisors at every stage of design, installation and operations.

### AUTOMATION SOLUTIONS



Safe, reliable and efficient operations for any vessel type.

- Integrated Automation System (IAS)
- Power Management System (PMS)
- Ship Performance Monitor (SPM)
- Power Fault Control (PFC)
- Valve Control System (VCS)
- Compressor Control System (CCS)
- Engine Control and Safety System (ECS)
- HVAC Control System (HCS)
- Prilog - Alarm and event logger
- Playback & Fast Data Capture
- cSafe Firewall

### ENERGY SOLUTIONS



Høglund designs and enables smart solutions for a new generation of vessels.

- LNG Fuel Gas Supply System (FGSS)
- Cargo Handling Systems (CHS)
- Floating Storage & Regas Unit (FSRU)
- Høglund Power Solutions (HPS)
- Energy Storage System (ESS)
- Hybrid Propulsion System (HPS)

### RETROFIT



Høglund Retrofit department brings new technology to aging systems.

Høglund has a proven track record in performing retrofit upgrades for all types of vessels. We install integrated systems that improve the lifetime value of your vessel, by ensuring reliable performance and lower operating costs.

Ingeteam's Marine Division designs and manufactures integrated systems for electric propulsion. The flexibility in Ingeteam's design of electric propulsion systems guarantees tailored solutions for special vessel requirements.

**ELECTRICAL PROPULSION**

As a designer and manufacturer of frequency converters, and motors and generators, Ingeteam can define basic parameters in order to achieve the optimal result for the whole installation, maintaining levels of short circuit, harmonics, etc. at its optimal level.

Ingeteam provides in a single package all components of the system:

- Generators
- Transformers (when required)
- Electric switchboards
- Frequency converters
- Motors

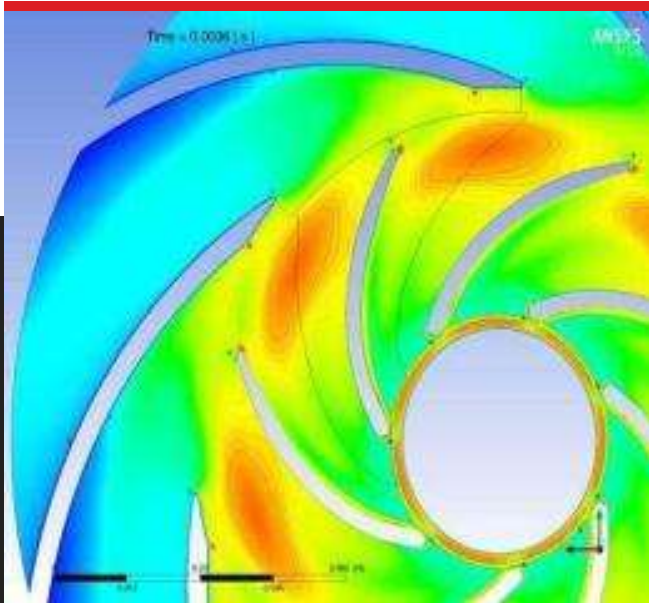
The main advantages of installing electric propulsion in vessels are:

- Optimal design of the propeller
- Maximum torque available at any speed.
- Optimum response to acceleration.
- Minimum vibrations, noise and CO2 emissions.
- Saving of space in the hull.
- Optimization of the power installed on board.
- Supplied power of up to 15,000 kW.
- Low operating costs.
- Flexibility in the location of the components.
- Reduced maintenance.

## RESEARCH AND INNOVATION

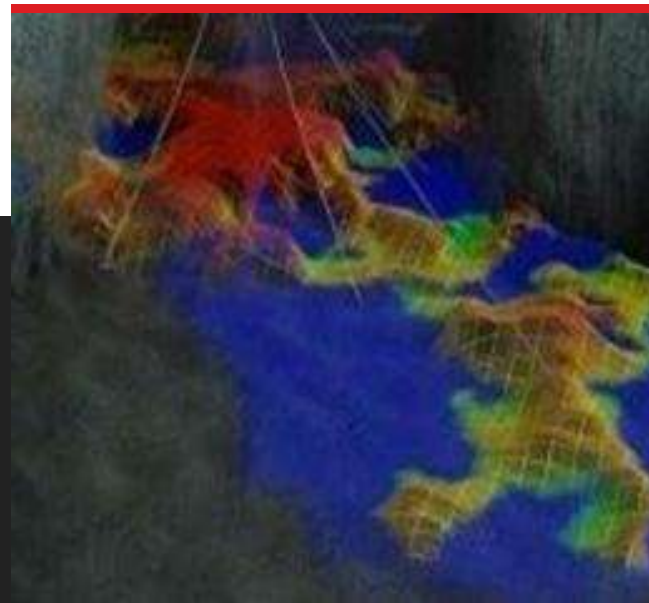
ISdB FlowTech is the legal successor of SINTEF do Brasil, carrying on applied R&D projects with ongoing and prospective customers. ISdB FlowTech focuses on Flow and Reservoir applications, with close links to technical teams at SINTEF in Norway, through a long-term cooperation agreement.

### ARTIFICIAL LIFT AND FLOW TECHNOLOGY



ISdB FlowTech offers expertise in modeling and simulation (1D and CFD) of complex well flows in tubing and associated equipment (pumps, valves, ICDs, etc).

### RESERVOIR TECHNOLOGY



ISdB FlowTech combines 1D and Multi-D modeling and simulation, including fundamental understanding of complex fluids and phase behavior, in a multiphysics approach.

### MULTIPHASE PRODUCTION & FLOW ASSURANCE



ISdB FlowTEch has in-depth knowledge of multiphase flow technology and flow assurance, model and software development (1D and CFD) and industrial applications.





## WELLSITE MONITORING SOLUTIONS

JF Strainstall's wellsite monitoring solution (WMS) augments existing wellsite sensors with smart, hazardous area certified wireless functionality to improve operational safety and provide highly accurate data.

**CHAIN TENSION MONITORING**



**HULL STRESS MONITORING**



**FPSO SWIVEL LOAD MONITORING**



**JACK-UP RIG LEG MONITORING**



**RENEWABLES MOORING MONITORING**



**RISER TENSION MONITORING**



**SINGLE POINT BUOY MONITORING**



**TENDON TENSION MONITORING**







## HVAC SOLUTIONS FOR MARINE AND OFFSHORE INDUSTRIES

**M&O**

JL Marine is a manufacturer of HVAC & Provision Systems for Marine and Offshore industries. JL Marine delivers engineering design, supply, installation, servicing, testing and commissioning of Heating, Ventilation and Air Conditioning (HVAC) & Refrigeration Provision Systems for the marine and offshore industries.

**CHILL WATER UNIT**



**CABIN UNIT & AIR TERMINAL**



**FIRE DAMPER**



**DUCTING AND FITTING**



**DECK UNIT**



**CONDENSING UNIT**



**PACKAGE UNIT**



**AIR HANDLING UNIT**



**VENTILATOR**



## TANK CHECK VALVES

For nearly 40 years, John Gjerde As, has designed, manufactured and marketed high quality tank venting equipment for the shipbuilding industry. Meeting customer needs for tank venting equipment, has been the objective at John Gjerde AS, ever since the company was founded.

**AERO 1.4**



**AERO 1.5**



**AERO 1.6**



**MUD 1**



**MUD CHAMBER**



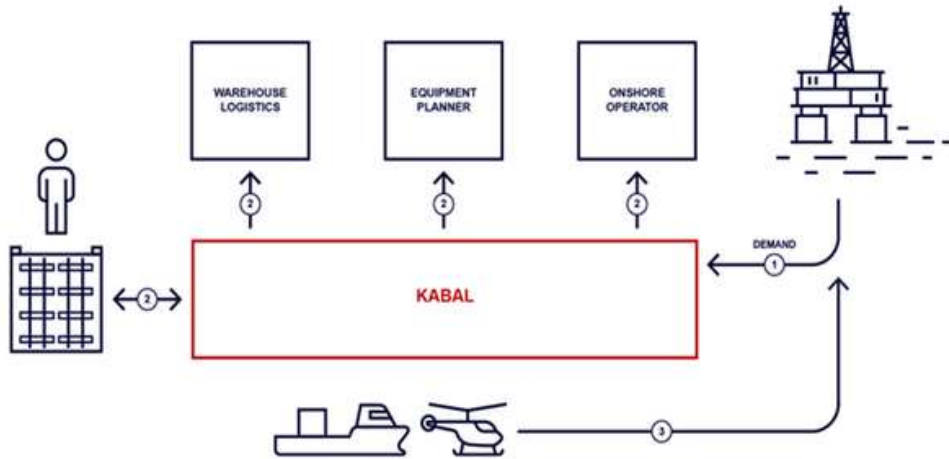
**WATER TRAP**



# TRANSFORMING LOGISTICS FOR THE ENERGY INDUSTRY

Kabal was founded on a disruptive business idea: to transform logistics into a competitive advantage for companies within the global oil and gas industry. Kabal's solution enables all involved parties to use one logistics hub, accommodates big data, AI and modern business intelligence tools and replaces uncertainty and inefficiency with control and predictability.

## THE KABAL LOGISTICS SOFTWARE BOOSTS OPERATIONAL EFFICIENCY FOR OIL AND GAS COMPANIES AROUND THE WORLD.



### WHY USE WELS:

- Optimize operations
- Increase profits
- One-click solution
- Easy to use
- Unleashing the power of AI and big data
- Integrate, communicate and collaborate
- Expert support 24/7

### WHO ALREADY TRUSTS WELS:

- Statoil
- Total
- BP
- ConocoPhillips
- Equinor
- Baker Hughes
- Schlumberger
- and many more

# EFFECTIVE INCIDENT INVESTIGATION SYSTEM

The Kelvin TOP-SET system is a straightforward and user-friendly incident investigation system, which is suitable for use in the investigation of all levels and types of incidents – from minor, non-lost-time incidents such as slips, trips and falls to major catastrophic incidents such as oil spills and explosions.

## EFFECTIVE INCIDENT INVESTIGATION



### Incident Investigation

Incident investigation is a vital process for understanding and preventing incidents.

Both large and small incidents can cause untold and often irrecoverable damage to individual lives, equipment, organizational safety culture, company reputation and profit.

## INCIDENT INVESTIGATION METHODOLOGY



### Straightforward Incident Investigation System

The Kelvin TOP-SET system is a straightforward and user-friendly incident investigation system which is scalable for all levels and types of incidents – from minor, non-lost-time incidents such as slips, trips and falls to major catastrophic incidents such as oil spills and explosions.

## INVESTIGATION COURSES



### Professional Incident Investigation System

Kelvin TOP-SET incident investigation courses are designed to teach delegates the practical skills required to conduct effective incident investigations competently with confidence.

- In-house or open courses
- 1-Day: Investigator
- 3-Days: Senior Investigator



## PNEUMATIC ACCESS PLATFORMS

Reglo AS manufactures the pneumatically operated access platform LIFTMAN FOLD™ for worldwide distribution. The LIFTMAN FOLD™ is designed for offshore/onshore oil and gas installations and chemical plant segments. Reglo AS is ISO 9001:2015 certified.

### ACCESS PLATFORM LIFTMAN FOLD™



LIFTMAN FOLD™ is challenging the traditional way and process of doing maintenance and related work at height.

It saves time, cost and keeps the workers safe at all times.

Immediate Return of Investment by reducing the need for scaffolding.

### LIFTMAN FOLD™ BENEFITS



- Cost savings
- New ways of handling time-consuming work-tasks at height.
- Safe work environment for the operators.
- LIFTMAN FOLD can be used in explosive environment
- Reduces lead time for work to be finished / no need for “third party” scaffolding.
- Can be used both indoors and outdoors (max 12 m/s wind).

## LUFKIN GEARBOX/REDUCTION GEAR



As the premier partner for industry-leading gearing solutions, Baker Hughes has added the technology and expertise of Lufkin™ transmissions to its portfolio. With more than 250 years of combined expertise, LUFKIN delivers custom gear solutions to the global marine industry.

### LUFKIN RELIABILITY BUILT ON DECADES OF MARINE EXPERIENCE



Rugged. Robust. Reliable.

- Custom marine applications with single engine rating up to 20,000 kW.
- Options for PTO/PTI, thrust bearings, roller or sleeve bearings, CPP OD Box, clutches, controls.
- Input speed 500 - 2,500 rpm. Output speed as required.
- AGMA and API rating practices which exceed ISO 6336, ABS and DNV-GL standards.
- Hydraulic clutches mounted for easy access without removing cover.
- Heavy duty construction to last the life of the vessel.
- Ultra low noise and vibration to ISO 6336 grade 2.
- Complex configurations requiring specialized engineering skills.
- Integral lube oil systems and controls.
- Fixed pitch propeller reverse gears and clutches designed for full power and speed.
- Gear design allows the propeller rotation to be the same or opposite flywheel rotation of the engine.

## GREEN PASSPORT AND DOCUMENT HANDLING SOLUTION

Metizoft is among the world's first and leading consulting companies providing turnkey Green Passport / IHM (Inventory of Hazardous Materials) solutions to shipyards, shipowners, suppliers and others in the maritime industry on a global scale.

### SHIPOWNER



Metizoft provides a full range of HazMat services and more to shipowners worldwide, for instance ensuring that vessels are in line with IHM regulations throughout their lifecycles.

Metizoft clients:

- Farstad Shipping
- Thome Group
- Eidesvik
- Siem Offshore

### SHIPYARD



Shipyards in all markets around the world can benefit from our expertise when working towards meeting class notation requirements and more.

Metizoft clientes:

- Ulstein Group
- Kleven Maritime
- Nam Cheong
- Gulf Coast Shipyard Group
- and many other

### SUPPLIER



Metizoft helps an increasing amount of suppliers when it comes to HazMat documentation and more - enabling them to focus on their core business of delivering equipment and components to vessels around the globe.

Metizoft clients:

- Pon Power Scandinavia
- Ahlsell
- MMC Group
- and many others

MTG Marinetechnik is an independent naval design agency with five decades of experience in the worldwide naval business. MTG is a strategic R&D partner at the German MoD acting as an independent centre of excellence for the planning and design of naval surface vessels.

### MILITARY VESSEL DESIGN



### INDIVIDUAL SOLUTIONS



### CONSULTANCY FOR NAVAL PROJECTS



#### Prototype elaboration

- Initial design development.
- Elaboration of detailed designs.
- Estimated costs.
- Technical and military performance analysis.
- Capacity certificate.

#### Conceptional solutions conducted through research and technical projects.

- Solutions based on manufacturer data.
- Solutions based on publications.
- Solutions based on data, tests and trials.

#### Highly educated professionals with more than 50 years of experience in the naval area

- Analysis of project requirements.
- Development of the general view of the project.
- Integration of subsystems to the general system.
- Analysis of cost effectiveness.



Neuron is a “plug and play”, vendor independent software solution that transports data from sensors and control systems to any storage or processing system, ensuring data ownership and quality.

### ENABLING INDUSTRY 4.0



- One-of-a-kind software extracting data from all kind of sensors and systems.
- Access to real time data enables Big Data and AI effects on traditional production. Powering Industry 4.0.
- A vendor-independent solution that transports data direct from sensors or control systems to any storage or processing system.
- Avoid risk factors involved in traditional IT-projects. Neuron Data Management enables all common industry protocols and secure data quality.
- Easily manage complete setup and management of your data streams. No need for expensive consultants.

## INDUSTRIAL FACILITIES IN MACAÉ

OSEP Brasil Industry Base & Offshore Competence Center is strategically located in Macaé with an area of approximately 54,000m<sup>2</sup>, including office spaces, warehouses, workshops and external storage area.

### FLEXIBLE SOLUTIONS



OSEP Brasil offers a complete package of services. The Industrial Park has environmental licensing which proves respect for the environment.

OSEP Brasil also provides specialized services, including:

- Import and Export Handling
- Transportation Services
- Translation
- Concierge and 24 hour Surveillance Service

### OFFICES FOR RENT



The offices at OSEP Brasil occupy a total of 1.500m<sup>2</sup>, all in different sizes.

Each office has air conditioning, and in addition to the offices, warehouse 01 also has a restaurant, which has the capacity to serve 85 people.

### WORKSHOPS & INDUSTRIAL WAREHOUSES



The infrastructure that OSEP Brasil offers is an excellent choice for small, medium and large companies.

The team behind OSEP Brasil facilitates the daily activities for companies of all sizes.

At the same time OSEP Brasil provides a comfortable and peaceful environment, which ensures productivity of employees.

## MEASUREMENT AND CONTROL FOR SHIPBUILDING & OFFSHORE

Panasia is a global leader in green technology and smart instruments. Panasia's level control and measurement system for ships makes it possible to control and gauge levels, volumes, temperatures, etc. of the ship's crude oil, fuel, and ballast tanks. In addition, equipped with monitoring and alarm features, the system also provides a foundation on which ships can sail safely and stably.

**ELECTRIC PRESSURE TYPE LEVEL TRANSMITTER**



**PANOX**



**LEVEL GAUGE**



**LEVEL SWITCH**



PCM is one of the world's leading pump manufacturers for the oil and gas sector. PCM specializes in pumping solutions for the lifting, transferring, mixing and dosing of abrasive, fragile, viscous, corrosive, hot or heavy products. PCM uses Eco- Design to develop solutions that offer lower Life Cycle Costs.

## SURFACE TRANSFER PUMPS



API specialists for transfer progressing cavity pumps systems.

### Application

- Closed Drains
- Open Drains
- Produced Water
- Sump Caisson
- HP & LP Flare KO
- Mutiphase Booster
- Polymer
- Crude Oil Transfer
- Recovered Oil
- Well testing disposal
- Water disposal

## ARTIFICIAL LIFT SYSTEM



PCM supplies the most appropriate rod driven PCP systems for unconventional resources and managing multiphase flow patterns.

Other option goes to Electrical Submersible PCP (ESPCP) enabling production where conventional ESPs reach their limits.

### Application

- Heavy Oil
- Medium-Light Oil
- Thermal EOR
- CBM Dewatering

## INNOVATIVE TECHNOLOGY



### Benefits

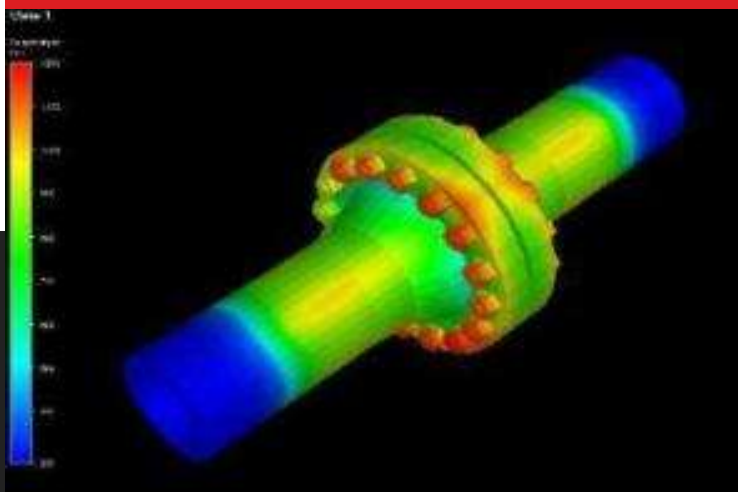
- Viscosity & Solid handling
- Low fluid emulsion
- Easy to install, maintain and operate
- Low initial investment cost
- Energy Saving & Environment Impact



# MULTI-PHYSIC PROCESS SYSTEM SIMULATIONS

Petrell is a Norwegian company that develops technology for multi-physics simulation and tailor-made simulations systems. Their market is oil & gas, and they serve clients worldwide, including oil companies, engineering companies, consultancies, authorities, and manufacturers.

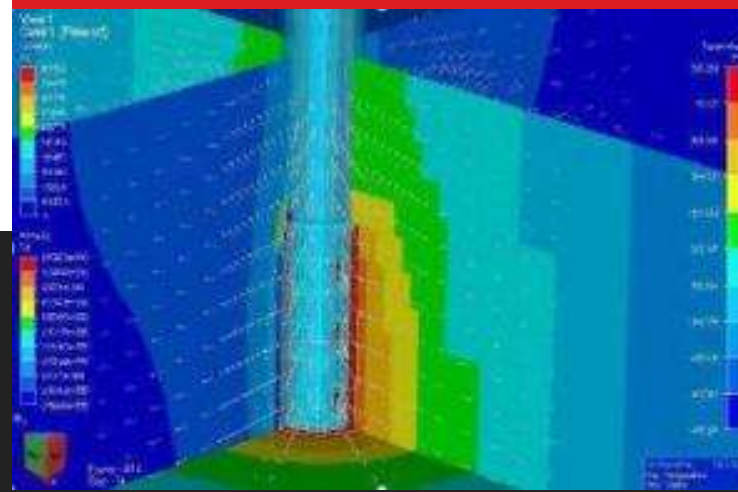
**VESSFIRE**



VessFire is developed for time-dependent, non-linear analysis of thermo-mechanical response of process segments and process equipment (vessels and piping) during blowdown, with or without exposure to fire.

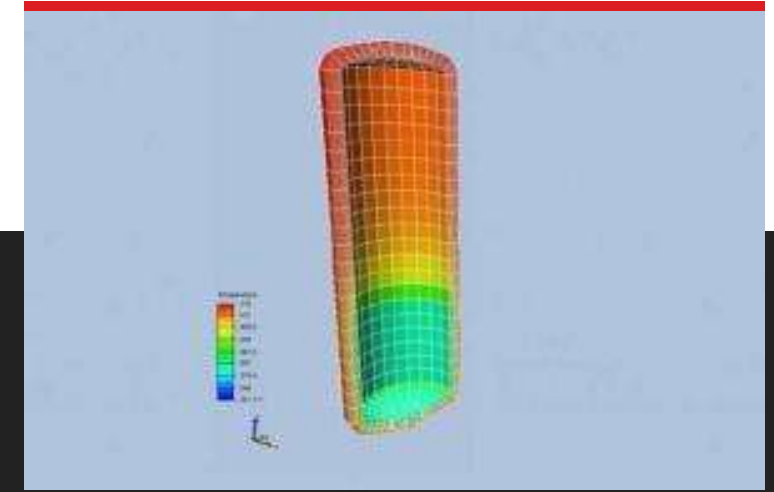
VessFire captures all relevant physical phenomena which take place in these scenarios.

**NEAR WELLBORE SIMULATION**



The Near Wellbore Simulator is a simulation system built upon Brilliant for modelling and analysis of issues related to the zone near the wellbore, providing seamless integration of flow in the reservoir, in the near wellbore area as well in the production (or injection) liner with rock mechanics and stress analysis, supported by complete thermodynamics and materials library.

**SOLID CO2 SIMULATOR**

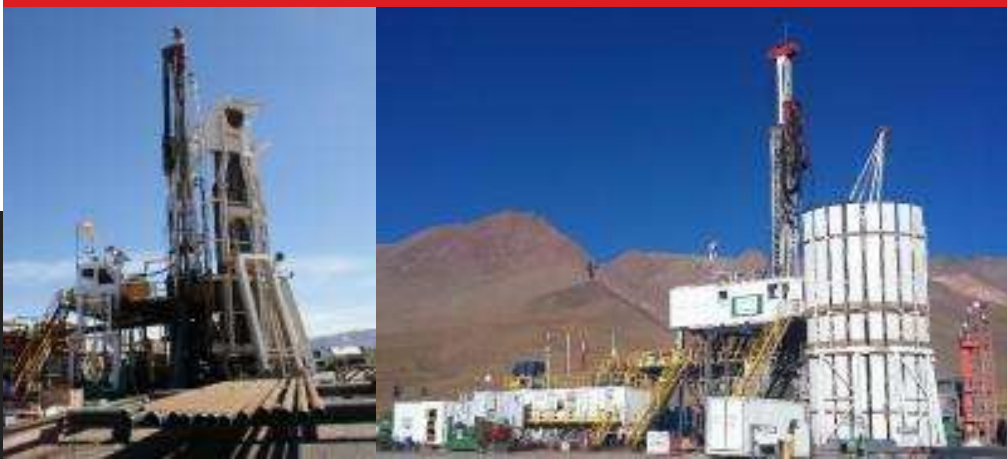


Petrell has developed a simulation system to calculate CO2 behavior under various process conditions. Of special significance is predicting formation of solid CO2.

## ONSHORE DRILLING RIG SERVICE

Petreven is a drilling contractor that develops and optimizes drilling services utilizing the new generations hydraulic drilling rigs HH type, manufactured by Drillemec. Petreven has a long-standing tradition in offering a range of workover operations. Over the past 5 years, the company performed more than 250 workovers and well completions for different companies in South America.

### INNOVATIVE HYDRAULIC DRILLING RIGS - HH102, HH220, HH300



Modern drilling rigs that performs at the highest technological level, while fully meeting all safety and environmental requirements.

The rigs are constructed and manufactured in compliance with API standard and the most recent legislation.

All rigs are fully automatic and joystick-controlled.

### Workover Operations

- Replacement of down-hole pumps
- Rinsing of sand plugs across perforations
- Removal of scale or wax deposits
- Special completions (installation of rotary down-hole pumps, down-hole pressure gauges and bridge plugs)
- Repairs of disposal wells and cementation operations
- Isolation of produced horizons
- Development of new and high-pressure horizons
- Well stimulation via acid treatment and hydraulic fracturing
- Special completions (packer assemblies, subsurface safety valves, etc.)
- Well performance testing
- Completion of underground injection-withdrawal wells, including casing, milling, under-reaming, gravel packing.
- Final completion of the well with gas-tight tubing and packer assembly outfitted with a subsurface safety valve.

## MANUFACTURER OF PROCESS EQUIPMENT

A complete range of products, systems and services to provide clients with comprehensive end-to-end solutions. Pietro Fiorentini has the expertise and know-how to guarantee presence and competence at every stage of the process and high-value solutions.

### SOLUTIONS



- Multiphase Flow Meter
- Gas Dehydration & Sweetening Packages
- Dew Point HCDP Control
- Gas Purification Membrane
- HIPPS
- Gas Conditioning Packages
- Indirect Heaters
- Oil Dehydrator & Desalter

### ON-SITE SERVICES



Technical expertise and talent are the main resources Pietro Fiorentini teams rely on to provide on-site services for systems and plants worldwide, from pre-commissioning to start-up and maintenance, always ensuring maximum safety.

### SUPPORT



Pietro Fiorentini's services span from engineering to after-sales support, including on-site analysis, project evaluation, design, installation and regular or extraordinary maintenance. Pietro Fiorentini is the ideal single point of contact for all companies operating in the energy sector.

PIC provides IOR and Flow Assurance Services and Products. PIC has new and superior diagnostic capability that allows for the design of targeted, low-cost, more effective treatments. The novel systems remove organic and inorganic scales downhole and prevent seawater ingress during commissioning, efficiently remove waxes and asphaltene deposits, and remove debris and hydrates for flow assurance.

SoleAcid

All the power of HF acid with none of the risks associated with conventional sandstone acid.

- Kinetically Controlled Increasing the Removal of Targeted Damage.
- Slow-Dissolving Increasing the Depth of Damage Removal.
- No Need for Flowback Equipment, Will Not Cause Facility Upsets.

NoPhalt™

Advanced Removal of Asphaltenic Deposits

- Multifunctional Chemistry Increases Penetration Rate and Zonal Coverage.
- Novel Chemistry Prevents the Reagglomeration of Dispersed Asphaltene Clusters.
- Offered as a Solvent or Viscoelastic System for Continuous Diversion and Superior Zonal Coverage.

BioZonal™

Sustainable Biological Chemicals

- High-efficiency Biocracking Technology
- In-situ CO<sub>2</sub> Stimulation





## SUPPLIER OF OEM PARTS

PK OEM Parts is a Dutch supplier of quality spare parts suitable for Wärtsilä engines, Westfalia & Alfa Laval separators and ABB turbochargers. PK OEM Parts offers an excellent alternative to sourcing parts from the original engine, separator or turbocharger manufacturer without compromising quality.



### 4-STROKE ENGINE PARTS, SEPERATOR PARTS & TURBOCHARGER PARTS DELIVERED



Spare parts suitable for the following engines types:

- Wärtsilä 20
- Wärtsilä 26
- Wärtsilä Vasa 32 (Low NOx)
- Wärtsilä 32
- Wärtsilä 34SG
- Wärtsilä 38 A/B
- Wärtsilä 46, A, B/C, C-Miller and D
- Wärtsilä 50DF
- Separators Westfalia and Alfa Laval
- Turbos ABB
- And more

PK OEM Parts offers a 12-month warranty after delivery.

# GLOBAL LEADER IN ADVANCED DOOR SOLUTIONS

Rapp Bomek is a global leader in the design, development and manufacturing of advanced door, window and wall safety solutions for global markets, certified with the highest industry standards.

## DOOR SOLUTIONS



- Fire doors
- Security doors
- Custom built doors
- Operation systems

## CUSTOM SOLUTIONS



- Tailored to specific needs according to
- Size
  - Functionality
  - Technical requirements
  - Design requirements

## BENEFITS & QUALITY



- Hinged and sliding doors
- Fire, explosion, bullet, gas, weather, water, noise proof
- Fire rating from NR to H120
- Jet fire rating up to J60
- Resistance class up to RC 5
- Pneumatic, hydraulic or electric operation system

Red Rock provides the client with a 'one stop shop' from design and fabrication to delivery and service. Red Rock has developed a strong and competitive equipment portfolio: Cranes, 3D compensation technology, Davits, control systems and Gangways meeting the requirements of the client, regulative bodies and project specific specifications.

### 3D MOTION COMPENSATED CRANES



The 3D Motion Compensated Cranes keep the load still due to advanced sensor signals together with compensating hydraulic system.

The system's simplicity ensures reliable operation.

Tailor made to your requested specifications, different outreaches, lifting capacities and operating conditions.

### 3D GANGWAY



Modular system:

- 3D-compensated Gangway only (stand-alone)
- 3D-compensated Gangway with elevator shaft/tower
- 3D-Compensated or AHC Crane installed on the elevator shaft/tower (Modular add-on)

### DAVITS



Designed to work in the toughest conditions, you can always trust the performance of the high-quality davit system from Red Rock.

Whether it involves crafts for rescue operations, stand-by operations, or other related activities the davit can be equipped to perform the task.

## MOORING SYSTEMS, RISER PULL-IN, PIPE HANDLING EQUIPMENT

Remazel has experience and know-how in design and construction of plants, machinery and equipment capable of handling cables, pipes, ropes and chains for Pipe Laying Vessels, drilling platforms and units of oil extraction type FPSO. Remazel is also a service provider for winches and offshore cranes.

### ACTIVE HEAVE COMPENSATED SYSTEMS



Integrated automation, security and advanced control: active and passive wave compensation (Heave Compensation) systems, designed and built by Remazel Engineering, are highly reliable, highly integrated products that can be installed on the new and upgraded machinery of existing equipment.

### DRILLING UNITS EQUIPMENT



Remazel Engineering provides in-house design and manufacturing of systems and equipment to be installed on board, including complete mooring systems, drilling rigs, mooring, winches, guide and rope systems, chains, HPUs and command and control panels.

### OFFSHORE WINCHES



Remazel Engineering's wide range of winches allows a flexible and versatile supply that can respond effectively to the different customer needs. High-quality, reliable and long-lasting products, in which the engineered component is combined with construction with a focus on the smallest detail.

### OFFSHORE CRANES



Remazel Engineering, with its vast knowledge accumulated over a number of decades, designs and provides offshore, military and naval applications, and cranes for all types of offshore applications, to respond with increased flexibility to the needs of customers, who operates under different environmental and loading conditions.



## BUOYS & FLOATS

Resinex is an Italian company specialized in customized polyethylene subsea buoys. Resinex proceeded to constant innovation to maintain its leadership in every area of floats production, mooring systems and every other products of marine technology. From elastic beacons by deep buoys, passing trough land beacons and floats of all sizes.

**PIPE DEPLOYMENT FLOATS – TIE IN**



**SUPPORT AND MOORING SYSTEM**



**CATAMARAN MOORING BUOYS**



**UNDERWATER & ULTRA DEEPWATER BOUYS**



**CABLE AND UMBILICAL FLOATS**



**DEEPWATER FLOATS FOR SPM**



**RISERS FLOATS (SLWR BUOYANCY MODULES)**



## SPECIALISTS IN QUALITY ANTI-SLIP SAFETY PRODUCTS

**Scotgrip International** manufactures heavy duty, anti-slip safety products. Scotgrip's products are designed to help mitigate slips, trips and falls. Scotgrip designs and manufactures its products from start to finish using ISO 9001, 14001 & 45001 quality-controlled processes and is an accredited Carbon Neutral company.

### PRODUCTS



- Rig Floor and Set-Back areas safety matting
- Cargo landing mats
- Dunnage mats
- Stair tread nosings
- Grating cover tiles
- Pipe-walker safety matting
- Ramps and covers
- Gangway Brows
- Ladder rung covers
- Crane Boom Rest Pads

### MARKET SECTORS & INDUSTRIES



- Oil & Gas / Drilling
- Marine Shipping
- Renewable Energy
- Petrochemical

### BENEFITS



- Field proven in harsh environments
- Heavy duty, tough and durable products manufactured under BS EN ISO 9001:2015 quality-controlled conditions.
- Improve your safety standards
- 3D Laser scan site-survey service
- Accredited Carbon Neutral supplier



## HIGH PRESSURE AND/OR STEAM CLEANING EQUIPMENT

**M&O**

Since 1939, Sioux Corporation has been designing and manufacturing industrial-quality cleaning equipment, water heating and cooling systems, solution heaters and steam generators. Sioux's equipment is extremely reliable and built to withstand the rigors of the industrial workplace. Highly knowledgeable sales and engineering departments will ensure that you get the machine that best fits your application.

### EXPLOSION-PROOF PRESSURE WASHERS & STEAM CLEANERS



### FUEL-FIRED PRESSURE WASHERS



### DRILL PIPE ENVIRO-CLEANER





Spacx Actuators & Controls is a valve actuator manufacturing company based in Boxmeer, The Netherlands. Spacx manufacture their type BLS & BLX actuator, which allow for a short overall dimension, as well as the possibility for close couple actuators to valves as required. Depending on client AMVL, Spacx is also an authorized stockist for Emerson, and can use all specified actuator brands to automate your valve package. Spacx provide valve automation systems to Exploration and Production contractors, Oil and Gas companies, Valve Manufacturers and Valve Distributors.

### PRODUCTS



Spacx Actuators & Controls currently manufacture or distribute the following products:

- Spacx Actuators
- Bettis Actuators
- Biffi Actuators
- Elomatic Actuators
- Hytork Actuators
- Control Systems
- Valves Position Feedback Modules
- Valves Position Monitors

### MAIN BENEFITS



In the offshore oil and gas industry Spacx Actuators & Controls is the supplier of choice for clients who seek reliable, professional and fast delivery of actuators.

Main benefits:

- Reliable, professional and fast delivery of actuators.
- Extensive knowledge and experience to advise its customers and provide a high-quality product that meets the specifications and requirements of each client.
- SIL Certificate and ISO Certificate 9001:2015.



## MECHANICAL EQUIPMENT & STEEL STRUCTURES

Stavanger Engineering is a leading solution provider for purpose-built mechanical equipment, steel structures and modification project for the oil and gas industry. Certified according to ISO 9001:2015, 14001:2015 and Achilles.

### CARGO LIFTS



### MINI CRANES



### SCISSOR LIFTS



Stenca offers worldwide professional services in areas as insulation, interior outfitting, accommodation and fire protection equipment for platforms, drilling rigs, vessels, onshore terminals and FPSOs etc.

### THERMAL INSULATION FOR PIPES



Stenca has a highly developed product range to supply the necessary thermal insulation for Pipes or Tanks.

- Superior insulation capabilities to avoid Corrosion under Insulation (CUI)
- 50% reduction in installation time.
- Easy clamp-on/off technology, reusable after inspection.
- Long design life.

### HT PIPE INSULATION



Stenca HT Pipe system provides an exceptional and very high-quality standard for insulation of hot process applications.

- This fine quality product is made of non-combustible calcium silicate.
- Environmentally friendly insulation manufactured.
- Insulates and reduces noise with only one layer of 40 mm insulation.
- There can be saved a lot of time and working hours.

## PIPE COUPLINGS

With more than 40 years of experience, STRAUB has the highest engineering competence in pipe systems and connections. STRAUB stands for high quality products, customer-oriented engineering excellence, and the highest service and support commitment for demanding connection solutions for piping systems made from all types of materials.

### STRAUB-METAL-GRIP



Pull out resistant pipe coupling for all metal pipes to meet the highest standards.

### STRAUB-ECO-GRIP



Economical, pull out resistant pipe coupling for use in low pressure and temperature areas with metal pipes, PVC, ABS, CPVC.

### STRAUB-FLEX 1



Axially flexible pipe coupling for pipes of all materials.

#### Product benefits:

- System independence
- Flexible pipe connection
- Easy assembly
- Safe assembly without risk of fire or explosion
- Damping characteristics
- Reduces vibration and noise
- Economical

# Waste Heat Recovery Units (WRHUs)

## Design, Engineering and Supply of World-Class Energy Recovery Plant

World Leading Patented design of Circular Waste Heat Recovery Units and Circular Heat Recovery Steam Generators as well as Traditional Serpentine Coil Waste Heat Recovery Units are widely acknowledged by Oil & Gas Majors as offering the best available solution for energy recovery both onshore and offshore.

### WRHU PRODUCT PORTFOLIO

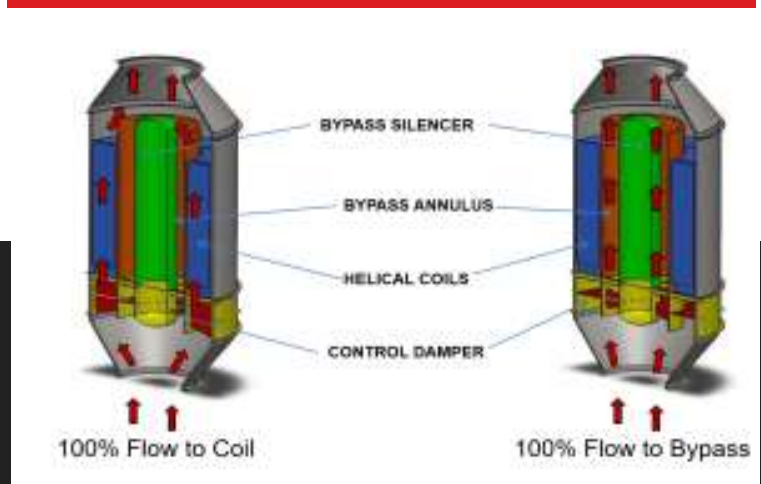


With innovative technology, Struthers has manufactured over 200 traditional and Circular WRHUs worldwide.

Products:

- Rectangular integral bypass units
- Circular integral bypass units
- Fired or unfired

### TECHNOLOGY



Unique in-house manufacturing techniques have been developed and refined over the past 20 years.

- Patented Integral exhaust gas bypass design
- Integral Turbine Silencing
- Compact – small footprint (50% Saving on Footprint)
- Lightweight (30 % savings on weight)
- Higher thermally efficiency
- Modular concept
- Low draft loss
- Low wind resistance

### CUSTOMERS



CF Struthers has delivered heat recovery solutions to big energy companies such as:

- Total
- Statoil
- Conoco Philips
- Chevron
- Samsung Heavy Industries
- Petrobras
- PEMEX



## SUBSEA EQUIPMENT SOLUTIONS



Subsea Energy Solutions offers a range of products and services, from stock items to bespoke topside and subsea equipment design solutions making, incl. offshore cable, polyurethane and buoyancy processing. Its portfolio has been designed to cover all common applications and peripheral systems to umbilicals/subsea cables and their associated installation and protection within the harsh marine environment.

### SUB-LINK™ BUOYANT VERTEBRAE BEND RESTRICTORS



#### FEATURES

- A split design allows installation of the restrictor after pipe termination
- Ease of installation onshore and offshore
- Buoyant in water, eliminating self weight loading on pipe

### SUB-BUOY™ BUOYANCY MODULES



#### FEATURES

- Depth ratings of unto 9,000 meters
- Bespoke and modular construction

### SUB-FLEX™ CABLE PROTECTION SYSTEMS



Installation onto any risers underneath FPSO vessel hulls. SUBFLEX™ Cable Protection Systems can also be utilised on any cables, umbilicals or flying leads within free span locations.

### BESPOKE MACHINING & FABRICATION



As part its end-to-end product delivery model, Subsease Energy Solutions offers full machining and fabrication services utilising some of the best technicians in the industry, skilled in precision CNC machining, milling and turning, moulding and all other manual conventional methods of construction.



## SAFE AND EFFICIENT SUBSEA WORK

Techno Dive is your partner for safe and efficient subsea work. Over the years the company has gathered comprehensive knowledge of subsea constructions, installations and vessels.



### OIL & GAS SERVICES



Experience from all types of rigs and systems

- Semi submersible, Jack up and FPSO

Special competency in:

- Thruster maintenance and change out
- Blinding and Overhaul Replacement of Valves and Sea Chests
- Dry Habitat Solutions
- Hull Surveys (UWILD)
- Structural Repairs and Upgrades
- Hull Cleaning and Maintenance
- NDT testing: Eddy Current , MPI (DNV GL approved)
- SPS (Special Periodic Survey)
- Heavy Lifting Solutions (Strand Jacks)
- Corrosion Prevention (Anodes and coating solutions)

### THRUSTER CHANGE OUTS



- An integrated process combines diving, mechanical and lifting competencies to perform the job safely and efficiently.
- Computer controlled Enerpac Strand Jacks, 30 and 70 ton capacity each with 2/3 in each system.
- Wide reference library from global O&G operators, mobilization worldwide.

Advantages of our concept:

- Precise and efficient handling of thruster weight with computer systems.
- Highly customizable to different thruster arrangements.
- Easy transport and handling in purpose built 10 ft containers.
- Proven and reliable system with certified jack operators.

### LOCATION & MOBILIZATION



- HQ in Norway and co-operative partners through out the world (Africa, South America and Asia).
- Equipment is container based for easy shipment wherever needed.
- Standardized equipment mobilized on O&G projects includes:
  - 20 ft dive station
  - 20 ft tool container (for internal work on thruster/valves)
  - 10 ft Strand Jack container (for thruster change outs)
  - 20 ft hyperbaric chamber (if regulatory requirements)
- Possibility to use local manpower under TD supervision, which reduces costs and secure safe and efficient operations.

## FLEET MANAGEMENT SOFTWARE

Tero Marine is one of the world's leading developers of marine information systems. Based on a thousand years of Norwegian shipping knowledge, the product range of Tero Marine includes systems for planned maintenance, procurement, crew management and quality & environment.

### TM MASTER® SOFTWARE SUITE



TM Master has been designed to enable you to take care of your assets; vessels, crew and cargo. The fleet management system consists of the following modules:

- TM Maintenance
- TM Procurement
- TM Human Resources
- TM Quality & Environment

### KEY BENEFITS



- Fully integrated fleet management system
- Software tailored to your needs
- Best-in-class user interface
- Rapid deployment, great learning experience
- Excellent support service





# COMPACT FLANGES, ULTRACOMPACT FLANGES & CONNECTORS



TP Products has more than 25 years of experience with field proven products worldwide and extensive experience with global partners. TP offers customer/third party qualified products, high flexibility to client requirements and have the advantage of design, development, production, assembly and test facilities at one location. Products are designed according to ISO 10423:2009(E)/API 6A.

## ULTRACOMPACT FLANGES



- Weight reduction is estimated to be 78%
- Price reduction of 50%
- CO2 emission reduction

## COMPACT FLANGE



- **STATIC CONNECTION** = no relative movement
- **HIGH RELIABILITY** = allows the TP Compact Flange to be used in restricted areas
- **ADVANTAGE** flanged connections vs welds : when it comes to equipment, flanges make maintenance and replacement a lot easier, faster and cheaper.

## CLAMP CONNECTORS



- TPC Clamp Connector type approved, with regards to design, capacity interchangeability and also for ship/vessel/offshore use
- Interchangeable with all Grey type Clamp Connectors
- DNV GL standart and certifications



## TOP SIDE & SUBSEA VALVES

Valland is a proud manufacturer of high performance and made in Italy Ball, Gate and Check valves for critical service for the Oil and Gas applications. All of the Valland valves are 100% internally engineered.

### TOP SIDE & SUBSEA VALVES API 6A, 6D, 6DSS



- Side entry ball valve
- Floating ball valve
- Top entry ball valve
- Modular ball valves double block and bleed
- Side entry subsea ball valve
- Side cryogenic entry ball valve
- High temperature floating ball valve
- Slab gate valve
- Double expanding gate valve
- Dual plate check valves

### TECHNICAL FEATURES



- Metal-to-metal sealing
- Full bore – reduced bore – special bore
- BW ends with welded pups
- Hub ends or SPO compact flanges
- Interpolated ratings
- Double piston effects
- Fire safe design
- Emergency seat and stem sealant injection
- Stem extension for buried service
- Cryogenic extended bonnet
- Locking device

## DAVITS & BOAT HANDLING SYSTEMS

Vestdavit designs, supplies and supports tailor-made solutions for launching and recovering boats in difficult conditions at sea. Vestdavit's range of boat handling systems and davits are the first choice of navies, coastguards, seismic survey operators, pilot authorities and offshore operators who need to operate small boats safely from larger vessels.

NAVY/ COASTGUARD



SEISMIC



RIG/ FPSO NORSOK



OFFSHORE





## VIDEORAY OFFSHORE ROVS



VideoRay ROVs are the ultimate FPSO vessel inspection tool. Its ultra portable design means it can be moved and deployed all over the vessel to ensure complete inspection coverage. VideoRay's compact size and minimal power consumption, intuitive and easily mastered controls, and extremely powerful thrusters can be employed by a variety of operators from crew to captain to carry out rapid and accurate inspections.

**OFFSHORE ROV**



**MANIPULATOR**



**EXTERNAL CAMERA**



**METAL THICKNESS GAUGE**



**HULL CRAWLER**



**IMAGING SONAR**



Be it out at sea or in port, on rivers or lakes - Voith makes maneuvering more precise, safer and faster with its custom-made propulsion systems.

### VOITH SCHNEIDER PROPELLER



The Voith Schneider Propeller is unique. The system generates stepless thrust in all directions with precision and speed.

Propulsion and steering are combined in one unit, thus allowing precise maneuvering. The Voith Radial Propeller and Voith Turbo Fin complete the range of propulsion solutions.

### THRUSTER/PROPULSOR



The Voith Inline Thruster (VIT) significantly improves vessel comfort and also increases the performance of transverse thrusters. Be it during Dynamic Positioning (DP) or maneuvering in the harbor.

In combination with a nozzle, the swing-out and fully controllable Voith Inline Propulsor (VIP) is designed both as main drive and as assist system in DP operation or tracking mode.

### VOITH LINEAR JET



The Voith Linear Jet combines the best properties of propellers with the best properties of waterjets.

Low installation complexity, low sensitivity to marine growth, sustained high efficiency across the vessels' speed range and high bollard pull are borrowed from the propeller side.

Reduced vessel draft, the ability to reach high speeds with high efficiency and low noise and vibration levels are borrowed from the waterjet side.



## SELF-LEVELLING FLOOR SCREEDS

Weber Marine is a part of Saint-Gobain Weber, which is Europe's leading manufacturer and supplier of materials and solutions to the Building and Marine industry. Saint-Gobain Weber is owned by the French, worldwide operating Saint-Gobain group. The Weber Marine Premix range leads the world in production of pumpable cementitious self-levelling floor screeds.

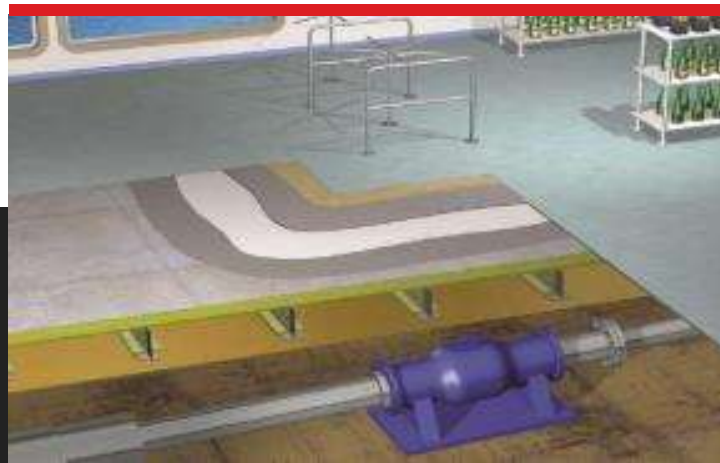
### PRIMARY DECK COVERING



Weber Marine Primary Deck Covering features flexible, durable pumped screed systems for steel decking with a low constructional height.

The fresh surface can be smoothed gently with a spatula to give a perfectly smooth surface.

### LIGHT DB FLOOR



Weber Marine Light dB Floor is a flexible, durable pumped screed system for steel decks, with low constructional height and structure borne sound insulation.

### DNV APPROVED A-60 FLOOR



Weber Marine A-60 is DNV A-60 approved and designed for ships and oil platforms requiring fire insulating constructions where the material must be non-combustible according to IMO rules.

Weber supplies functional and durable floors specified for ships requiring fire insulating constructions with non-combustible materials.

## ROTATING MULTIPOSITION FLOW CONTROL VALVE



Well Innovation is a Norwegian technology company, specialized in engineering, design and production of downhole tools and solutions, having their main focus on completion, intervention and P&A.

**SOLID TUNGSTEN CARBIDE  
INNER SLEEVE AND INSERTS**



**ROTATING MULTIPOSITION  
FLOW CONTROL VALVE**



**ACCURATE CHOKE  
CONTROL**



Wencon specializes in the development of epoxy products for rebuilding and surface protection of metal exposed to corrosion, galvanic corrosion, cavitation, wear or breakage in maritime and offshore applications. The products provide easy to use solutions for high temperature, underwater and wet conditions. All products hold classification society certificates and approvals from all the major societies.

**REPAIR KITS AVAILABLE IN DIFFERENT SIZES****Wencon Repair Kit # 1**

Complete kit for large and old vessels. Besides covering most aspects of emergency repair, long-lasting maintenance.

**Wencon Repair Kit # 2**

Big repair kit for emergencies and long-lasting maintenance. Suitable for most vessels.

**Wencon Repair Kit # 3**

Medium sized repair kit for emergencies and long-lasting maintenance. Suitable for most vessels.

**Wencon Repair Kit # 4**

Small sized repair kit for emergencies. Suitable for new and smaller vessels, which calls at port often. Suitable for small vessels and ferries.

**DOCKING KIT**

The Kit is ideal suited for preventive maintenance, corrosion protection and repair of worn-out equipment.

WENCON Docking Kit Standard is suitable - but not limited - for repair jobs in areas connected to seawater, including:

- Cooler Cover and End Plates
- Cooling and ballast systems
- Seawater filters
- Pumps





# Thank you for your attention!

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