

Company Profile

INTRODUCTION

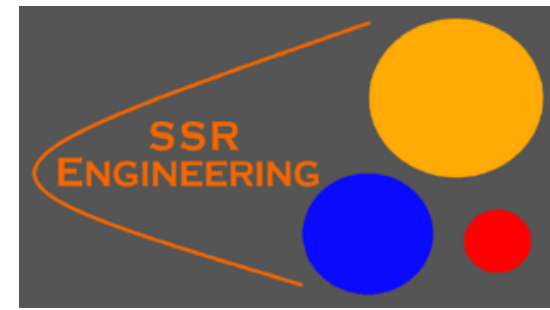
SSR engineering Ltd is a leading Marine Consultancy and Offshore Engineering Services & Solution provider based in Angus Scotland, serving regional and global markets. As a small to medium sized enterprise owned and operated by professional UK Engineers with extensive experience across a comprehensive range of marine and offshore related fields, we supply bespoke and economical solutions for your project or operational needs.

We can offer our clients world-class expertise for solution-orientated engineering and support services. With a wealth of authoritative and technical knowledge gained through working with a multitude of marine and oil & gas companies throughout the world covering an array of sea going vessels, Floating Production and Fixed Platform Oil & Gas Projects, our ability to understand the

requirements and work within an organization is the key factor to our many successful partnerships. We pride ourselves on delivering maximum results on time and on budget.

SSR Engineering takes a lean and pragmatic approach to service and we tailor our services to meet each individual client's needs in order to safeguard the reliable performance their systems need. Based on our hands-on expertise and service framework, we provide the best and most cost-effective solution for every challenge.

We ensure a quick turn-around and reduce your downtime, we have a fully equipped repair and reconditioning workshop available in Malaysia and Brazil. This facility enables us to perform repairs and maintenance in a controlled environment, which helps to reduce time and costs.



SSR Engineering highly experienced team of, Commissioning / Service Engineers and Technicians covering all disciplines , supporting projects with Major EPC and Operators such as SBM, Technip, Enasco, ConocoPhillips, Yinson, Petrobras and Petronas.

Collectively our team has vast experience covering but not limited to the following activates. Construction, pre-commissioning, commissioning, troubleshooting and services. We are highly experienced in the market with our team being involved in many FPSO projects. We are able to support our client on the following system and Technical Services.

Complete Service Provider

Your turn-key Solutions



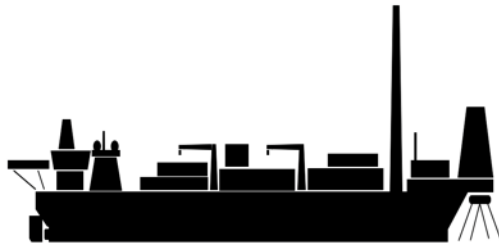
Installation & Commissioning

Hydraulic and E&I Onshore and Offshore



Parts & Spares

Parts & Spares, proportional to scheduled maintenance and upgrading time frame, keeping within budget



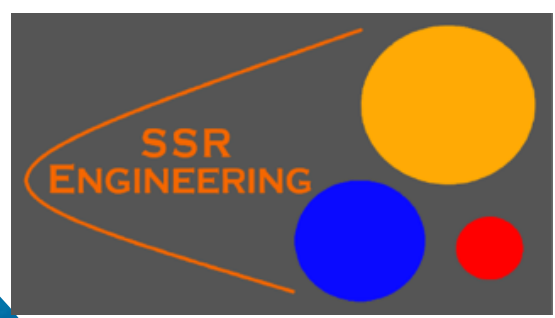
Upgrades & Retrofit

Surveys, reports and planning for hydraulic and electrical systems, repairs / refurbishment and complete renewal small bore tubing and wiring

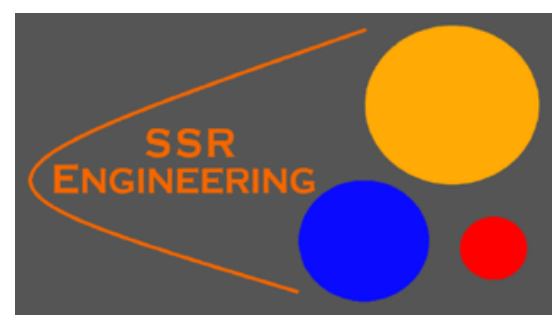


Maintenance for full life

Upkeep of hydraulic and electrical system with periodic inspection and preventive maintenance, detail reports for scheduling maintenance programs and track history of systems



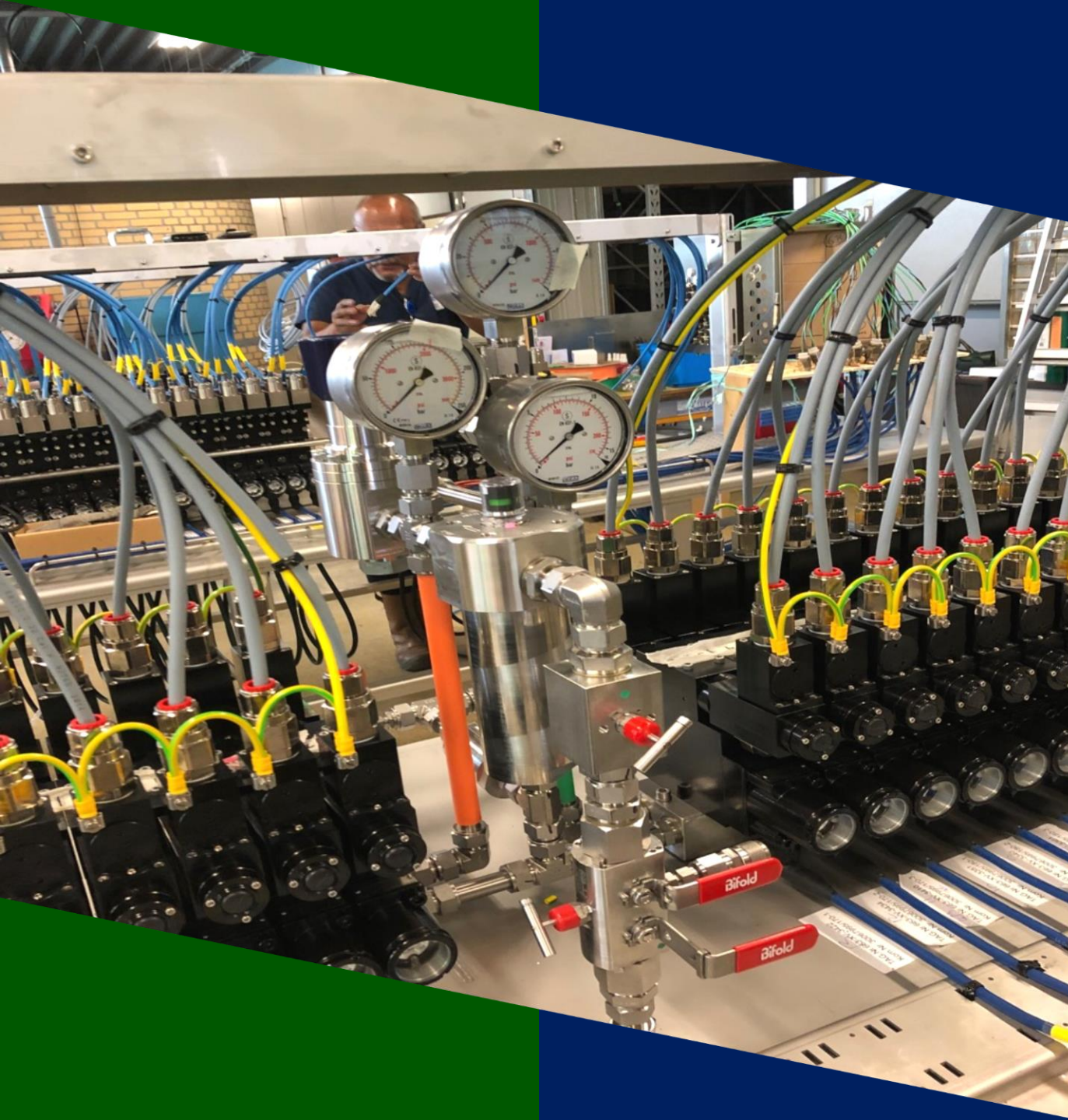
Systems
Technical Services



Hydraulic power Units

HPU's Topside, Marine, Riser and Sub-Sea, Propulsion electrical & mechanical

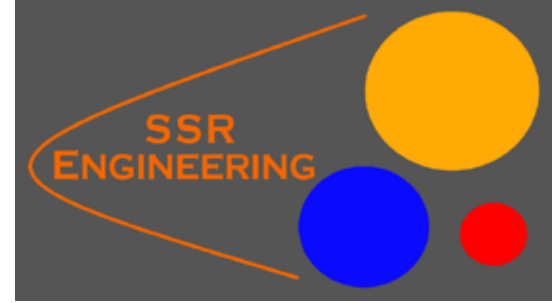
- Installation
- Pre-Commissioning / Commissioning
- Cold & Hot loop checks
- Certified Atex inspection
- Hot Oil Flushing
- Pre-charging Accumulators
- Calibration & Function testing
- FAT / SAT
- Surveys
- Maintenance & Repair
- Retrofits & upgrades



Cargo Ballast Control

Cargo ballasting control systems are used to ensure that the hull remains safe with ballasting distributed evenly through the operation of actuators for valve positioning so that the facility is always in balance.

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Chemical Units

A chemical injection system integrates software and hardware equipment designed to inhibit deposits and corrosion and improve the quality of oil and gas before transport. The required equipment often varies depending on application, environment, and usage.

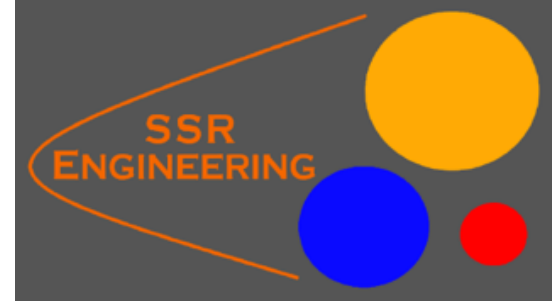
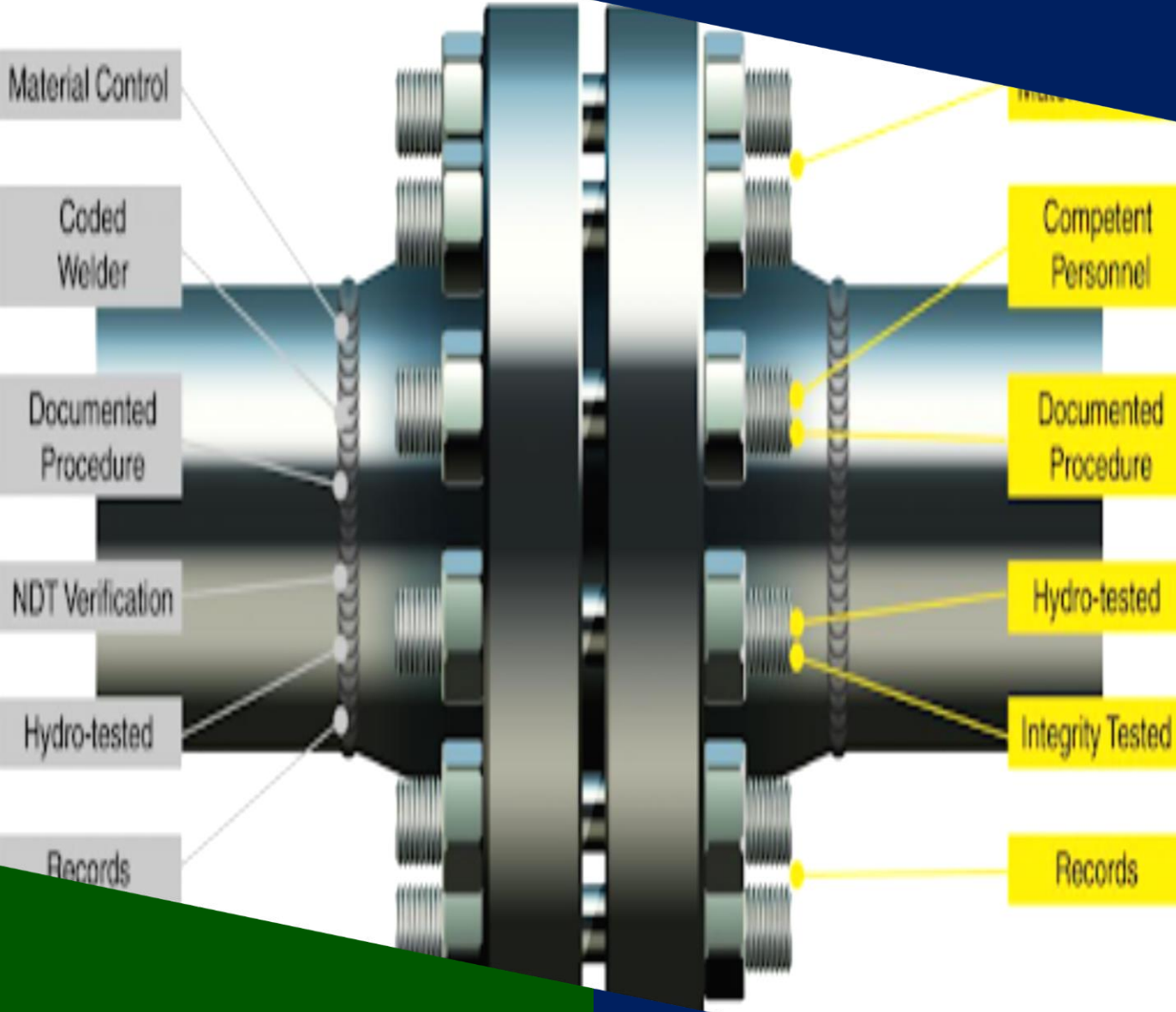
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Well Head Control Panels

A wellhead control panel (WHCP) is the main part of a safety system on a production platform or production location. The panels enable safe and reliable operation of the Xmas tree valves by providing hydraulic power and controls, and in some cases pneumatic controls.

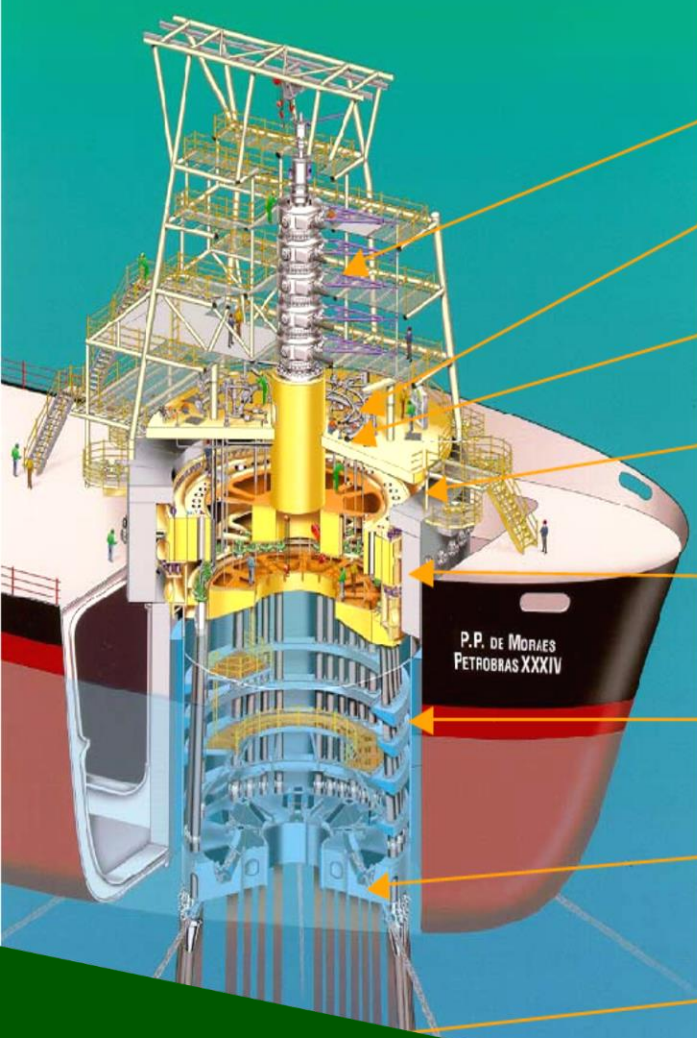
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Flange Management

Controlled flange management is a recognized technique for leak prevention in bolted flange assemblies. Across a number of industries maintenance and pre-commissioning schedules are prioritizing flange management from design in order to develop start-ups that are leak-free.

- Project Managers
- Inspectors
- Supervisors



- Swivel Stack (Product/Lift/Controls)
- Manifolds & Pig Launching/Receiving
- ESD Valves, Injection Skids
- Anchor Leg & Riser Installation Equipment
- Bearing
- Turret Shaft/Riser Guide Tubes
- Chain Table (Hawse Pipes/Chain Supports)
- 6 Anchor Legs + 34 Risers

Turret & Buoys

Turret and Buoys servicing requires high responsibility. Our teams have many years experience to support our clients.

- Field Engineers
- Replacement of swivel stacks
- Bolding of seals
- Overhauls



Hot Oil Flushing

Hot-Oil Flushing is a proven cleaning method. It gives hydraulic and/or lubrication oil systems a clean start and removes assembly debris. Hot oil circulates through (pipe) systems at high turbulent velocity. Loose or dislodged soil is entrained in the oil and filtered. Depending on system requirement cleanliness NAS 6 or less

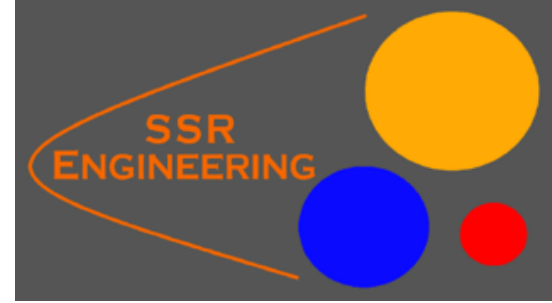
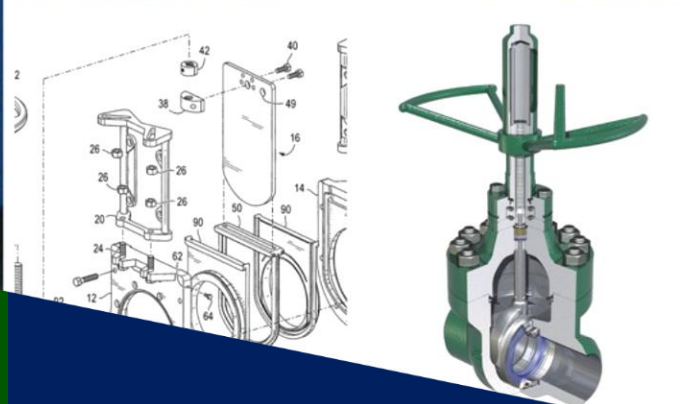
- Small bore tubing
- Pipes
- Umbilical's
- Heat Exchangers
- Gas Manifolds
- Topside systems

Piston wear:	
Condition acceptable	Yes
Size OD	100mm
Cylinder wear:	
Condition acceptable	New
Size ID	100mm
General condition:	
Internal acceptable	Yes
External acceptable	Yes
Case of failure:	
Internal leak	No
External leak	Yes
Reason:	
Gaseous corrosion to the cylinder and end plates.	
Action:	
Actuator new with complete new seal set.	
Pressure test:	
SN	157
Duration hours	3
Pressure drop	0
SN	



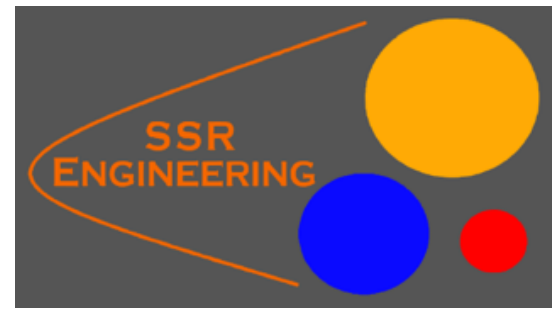

Gaseous corrosion mitigation:
If SS diverly washer was used on carbon steel plug the plug will become the anode and gaseous corrosion will take place.

Valve shaft integrity:
There are no anodes remaining on the side of the head, resulting in gaseous corrosion on the valve shaft and plugs. Anodes need to be mounted and based on the damage to valve shaft there should be a new valve.



Valves and Actuators

- Inspection reports
- Testing
- Overhauling and Repairs
- Process and Marine
- Dennis Nakakita
- Nakakita
- Damcos
- KSB
- Bloomfoss



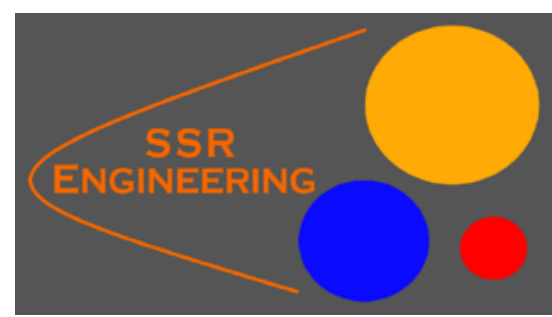
Cause of Failure:		Spools wear:		Pressure test P line		
Internal leak:	Yes	Condition acceptable:	Yes	BAR:	150	
External leak:	Yes	Duration hours:	1	Pressure test A line:	0	
Reason:	Size OD: N/A	General condition:	Yes	Pressure test B line:	2	
Quality of oil contamination from failing actuator seals:	Condition acceptable:	Yes	BAR:	150	Duration minutes:	30
Action:	General condition:	Pressure drop BAR:	2	Pressure test B line:	3	
	Internal acceptable:	Yes	BAR:	150	Duration minutes:	30
	External acceptable:	No	BAR:	150	Pressure drop BAR:	3
	General condition:	Pressure test B line:	3			

NOTE: Slight pressure drop on the A and B sides of the solenoids is acceptable.



Instrumentational repairs

- Inspection reports
- Solenoid valves
- VPI (Volume position indicators)
- Hart Protocol Calibrations
- Dr Breit
- Bi-Fold
- Rotork
- Kracht



Small Bore Tubing

- New installation
- Inspections
- Replacement hydraulic systems
- High pressure / Auto Clave & Butech cone and thread type

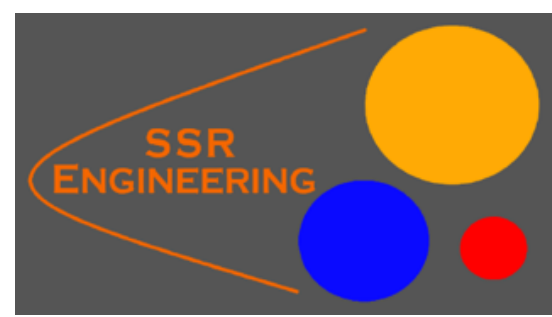




Fire and Gas System

The fire and gas detection system provides early and reliable detection of fire or gas, where such events are likely to occur, alerts personnel and initiates protective actions automatically or manually upon operator activation.

- ICSS commissioning
- Cold loop checks
- Hot Loop Check
- Cause & Effect testing
- SAT & OTP acceptance test
- PTW & Isolation Authority



Instrumentation & Controls

Responsible for designing, developing, installing, managing and maintaining equipment which is used to monitor and control engineering systems, machinery and processes. Our job is to make sure that these systems and processes operate effectively, efficiently and safely.

Pre-Commissioning & Commissioning

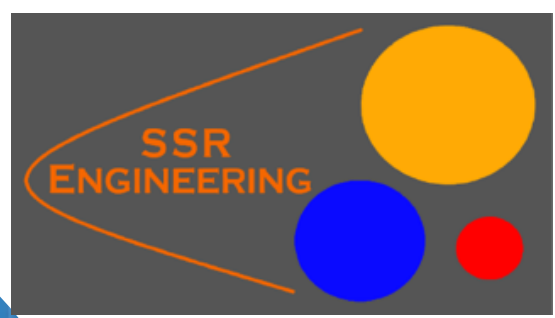
- ITR's
- Cold loop checks
- Hot Loop Check
- Calibration & Function testing
- Punch List Killing
- SAT & OTP acceptance test
- PTW & Isolation Authority



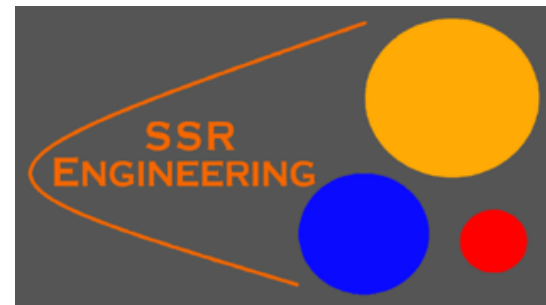
Ex Inspection

Ex inspection is a must have on site in a possible hazardous environment for all electrical installations. Ex inspection is just one footstep on the way to achieve full compliance for hazardous area industries

- Ex Register
- EX01, EX02, EX03, EX04
- ATEX / IECEx Standards
- Classification of Hazardous areas
- Inspection & Maintenance
- Repair & Overhaul



Project Services



How we can support

SSR Engineering Ltd Has experienced Superintendents, Supervisors, Engineers and Technicians, all of which have or are currently part of project team for our clients, FPSO projects and refinery's.

Mechanical Disciplines

- Superintendent Mechanical
- Construction Supervisors
- Rotary Engineer Supervisors
- Hydraulic Supervisors
- Mechanical Technicians

Electrical Disciplines

- Superintendent E&I
- Construction Supervisors
- Instrumentation Supervisors
- Atex Compex Inspectors
- Electrical Engineers
- Electrical Technicians
- Instrumentation Technician