

“ Technica believe in long term relationships. We want you to have total trust that we will deliver excellence in our solutions to your engineering problems.

”

TECHNICA

MULTI-DISCIPLINE ENGINEERING
DESIGN, MANAGEMENT & CONSTRUCTION



VISION

“ Technica believe in long term relationships. We want you to have total trust that we will deliver excellence in our solutions to your engineering problems. ”

John Davison – Managing Director



“ Thank you for the quick turnaround. I would have no problem in recommending Technica for future works. ”

Technica client

VALUES

Honesty

- the ability to admit mistakes and the willingness to learn from them

Openness

- We discuss issues through the correct channels
- We do not complain behind the scenes

Self-Awareness

- Self-management and the display of high personal standards
- We take responsibility for our personal performance; appearance, speech, punctuality, trustworthiness

Tolerance

- Of the views of others and alternative perspectives

Commitment

- To our client
- To the business and to the team
- Aligning personal efforts with the goals of the team and the business

Passion

- Deliver excellence to our clients in the work we do
- Anticipate, recognize, and meet client needs

Excellence

- In all aspects of our work; “good is not enough”

Innovation

- Continual improvement in our daily work
- To display flexibility in handling change

WHAT WE DO

Technica provide a range of services from...

- ✓ Multi discipline design
- ✓ EPC project services
- ✓ Construction services
- ✓ Control panels and modular construction
- ✓ Software engineering
- ✓ Functional Safety
- ✓ Fiscal metering

An independent company, built from the ground up, with hard working chartered engineers who have managed major multi-million pound projects throughout the world both for the customer and contractor. Technica is made up of a close knit

team of process, mechanical, electrical, control and instrumentation engineers who come from varied backgrounds. Led by experienced project managers and Managing Director John Davison who joined the industry as an apprentice over 30 years ago.



“The technical design is the solution we wanted to solve this issue. I really enjoyed working with Technica.”
Technica client

EPC PROJECT SERVICES

Our project team have completed many **EPC** (Engineering, Procurement and Construction) and **EPCM** (Engineering, Procurement and Construction Management) projects for our clients.

Our internal systems and processes are designed to let the different disciplines act as a single, highly effective team. This allows our managers and engineers to be as flexible as possible and react quickly to your needs. Our focus is on giving you an excellent service and delivering your projects when you need them.

Our passion for seeing things through from start to the finish means you can relax in the knowledge that we are as interested as you are in the

successful completion of your project. If required we can assist you through all stages of third party vendor management.

- ✓ UK gas networks
- ✓ Gas terminals
- ✓ LNG/LPG loading and storage
- ✓ Offshore oil and gas production platforms
- ✓ International GasPorts™
- ✓ Chemical



MULTI DISCIPLINE DESIGN

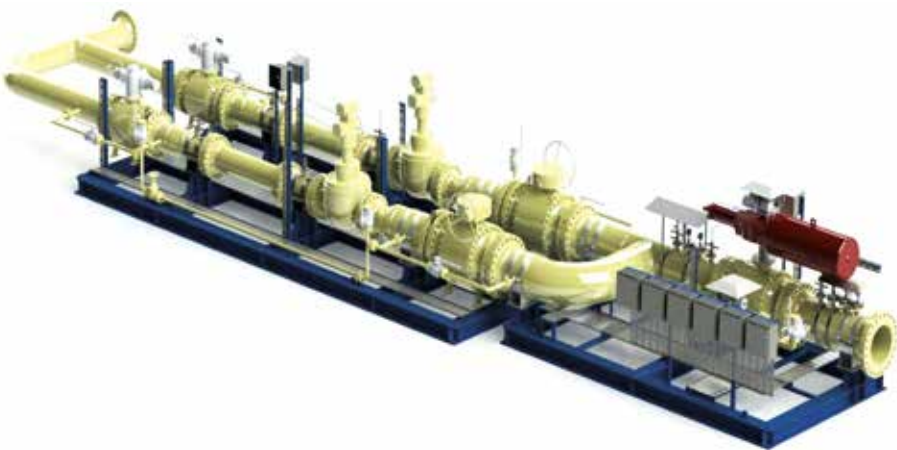
We have the **experience**, **expertise** and **passion** to help with all your multi discipline design needs. Our in-house process, mechanical, electrical and instrumentation teams work closely ensuring an excellent integrated design output.

Whether an E&I upgrade to a gas compressor station or a multi-discipline design and build of a LPG tanker loading bay we can ensure all aspect of your projects are taken care of.

We have SR25 practitioners and CompEx EX12 certified designers experienced in hazardous area classification and the subsequent design of installations in hazardous areas.

Our 3D CAD design enables quicker and more intuitive design reviews and provides a cost effective method of generating various design deliverables.

- ✓ Feasibility and conceptual studies
- ✓ Front end engineering design
- ✓ Safety studies
- ✓ Multi discipline detailed design
- ✓ Gas network design approval and appraisal



CONSTRUCTION SERVICES



- ✓ In house team
- ✓ Electrical & Instrumentation techs
- ✓ Offshore platforms
- ✓ UK gas terminals
- ✓ Compressor stations
- ✓ Pressure reduction stations
- ✓ Above ground installations (AGI)
- ✓ International GasPorts™
- ✓ CompEx qualified installation team

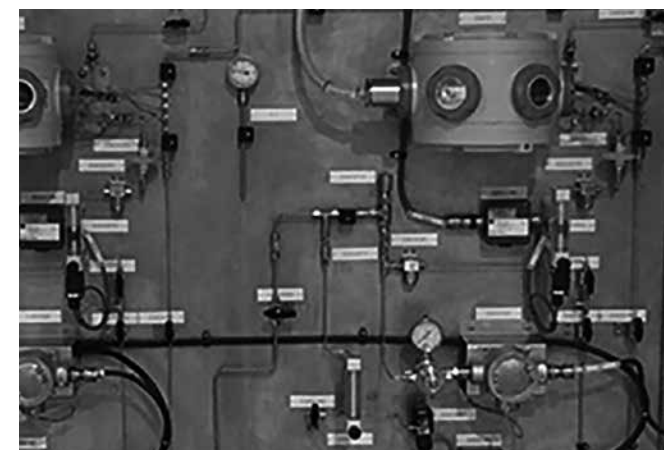
We have a close knit team of electrical and instrumentation technicians, with a great reputation, who have all the experience, competencies, certification and health and safety awareness needed to complete works to a high standard.

Our projects for the gas transmission and distribution networks include; **Re-instrumentation / UPS installations / compressor cab fire and gas detection / motor control centre replacements.**

Our team's offshore experience includes; **platform lighting and upgrades/wellhead instrumentation/choke valve replacement projects.**

CONTROL PANELS AND WORKSHOP BUILD

- ✓ **Control Panels**
 - PLC / SCADA / DCS
 - Emergency shutdown
 - Flow metering
 - Fire and gas
- ✓ **Equipment Rooms**
 - Instrument equipment rooms
 - Switch rooms
 - Modular control rooms
 - Plant rooms
- ✓ **Analysers**
- ✓ **Instrumentation**
- ✓ **Factory Acceptance Testing**



Our installation teams take great pride in the quality of their workshop builds.

10,000 sq. foot workshop space designed to accommodate the construction and testing of multiple modular equipment rooms and control panels.

This complements our design, software engineering and site installation services, providing a dedicated team to design and build your system and take responsibility from concept to operational service.

HAZARDOUS AREA





FUNCTIONAL SAFETY

- ✓ Wide experience of functional safety
- ✓ Application of both IEC 61508 and IEC 61511
- ✓ Application of associated machinery safety standards
- ✓ Hazard identification
- ✓ SIL determination
- ✓ Safety requirement specifications
- ✓ Functional safety assessments
- ✓ Proof test procedures
- ✓ Verification and validation
- ✓ TÜV Functional Safety Engineers

Technica have extensive experience of functional safety and the application of both IEC 61508 and IEC 61511 and the associated machinery safety standards.

From hazard identification and SIL determination, Safety Requirement Specifications to verification and validation, if you need assistance with any phase of the functional safety lifecycle Technica can help. We have completed projects on many novel applications and systems and assisted our clients through the all-important Functional Safety Assessments and utilise industry recognised software including ExSILentia for both SIL assessment and verification.

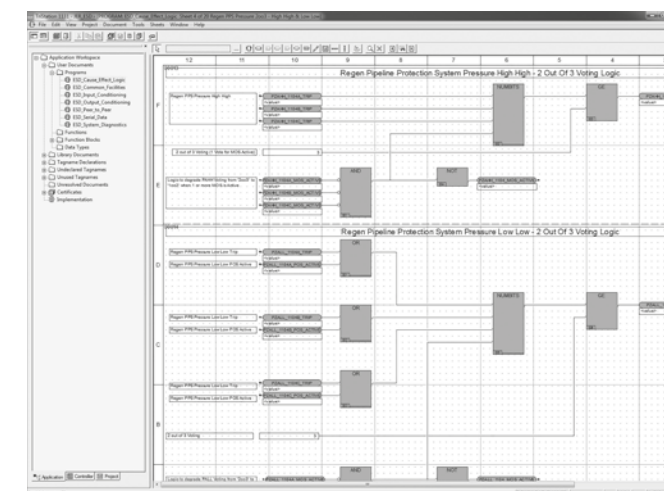
Many of our design engineers have worked on the various aspects of functional safety and because we understand the importance of proof of competence to meet the standards and your requirements, a number of our engineers including software engineers are TÜV Functional Safety Engineer (FSE) certified.

SOFTWARE ENGINEERS

- ✓ Emergency Shutdown (ESD) Systems
- ✓ Fire & Gas (F&G) Systems
- ✓ Process Control Systems (PCS)
- ✓ Distributed Control Systems (DCS)
- ✓ Programmable Logic Controllers (PLC)
- ✓ Supervisory Control & Data Acquisition (SCADA)
- ✓ Human Machine Interfaces (HMI)
- ✓ Data Historians
- ✓ Network Engineering
- ✓ Alarm Management
- ✓ Automation Digital Security & Integrity

Our in-house Software Engineers are TÜV Rheinland certified Functional Safety Engineers (SIS) and have considerable experience designing Safety Systems to meet the requirements of IEC-61508/61511.

We have delivered major solutions using technologies such as Triconex, Siemens, Rockwell, Wonderware, GE, Det-tronics, Modicon and numerous others. We also offer a number of consultative services such as: System Specification / Requirements, Technology Evaluations, Site System Evaluations, Digital Security Assessments & Alarm Management expertise.



| ESD CAUSE & EFFECT - 1 | | | | | | | | | |
|---|---|----------|-----------|---------------|---------------|--------|------------|------------|-------------------------|
| ESD C&E 1 ESD C&E 2 ESD C&E 3 ESD C&E 4 | | | | | | | | | |
| Hide Tagname | | | | | | | | | |
| ESD RESET EDP RESET CLEAR ALL OVERRIDES | | | | | | | | | |
| CAUSE | | | | RAW VALUE | LATCHED ALARM | FAULT | EFFECT | DISCUSSION | TAG NUMBER |
| TAG NUMBER | DESCRIPTION | CAUSE | RAW VALUE | LATCHED ALARM | FAULT | EFFECT | DISCUSSION | TAG NUMBER | ESD - Cause to FSRU ESD |
| XZA-2300 | FSRU SS - FSRU to show ESD (regas operations) | | | | | | | | |
| XZA-1013 | From Loading area PLC LA-1-001 signal stage 2 (ESD 1) | | | | | | | | |
| XZA-1014 | From Loading area PLC LA-1-001 signal stage 3 (ESD 2) | | | | | | | | |
| H2S-1113 | Loading Area area ESD pushbuttons | | | | | | | | |
| PZAH-1104A | Regas pipeline protection system pressure HH (Gca3) | !!! BaG | | | | | | | |
| PZAH-1104B | Regas pipeline protection system pressure HH (Gca3) | !!! BaG | | | | | | | |
| PZAH-1104C | Regas pipeline protection system pressure HH (Gca3) | !!! BaG | | | | | | | |
| PZAL-1104A | Regas pipeline protection system pressure LLo (Gca3) | !!! BaG | | | | | | | |
| PZAL-1104B | Regas pipeline protection system pressure LLo (Gca3) | !!! BaG | | | | | | | |
| PZAL-1104C | Regas pipeline protection system pressure LLo (Gca3) | !!! BaG | | | | | | | |
| TZAL-1105A | Regas pipeline protection system temperature LLo (Gca3) | !!! DegC | | | | | | | |
| TZAL-1109B | Regas pipeline protection system temperature LLo (Gca3) | !!! DegC | | | | | | | |
| TZAL-1109C | Regas pipeline protection system temperature LLo (Gca3) | !!! DegC | | | | | | | |
| H2S-1111 | Jetty ESD Push Button | | | | | | | | |
| H2S-1112 | Jetty ESD Push Button | | | | | | | | |
| H2S-2230 | Jetty Access Walkway ESD Push Button | | | | | | | | |
| State TimeLCT Group Name AlarmComment | | | | | | | | | |
| PCS & ESD COMMUNICATIONS STATUS | | | | | | | | | |
| JER ESD | JCR SERVER 'A' | | | | | | | | FSRU & JETTY HEAD |
| TJA ESD | JCR SERVER 'B' | | | | | | | | |
| JER PCS | JER ENG WS | | | | | | | | TREND SYSTEM |
| ALARM & EVENT SYSTEM | | | | | | | | | |

FISCAL METERING



- ✓ Experts in fiscal and custody transfer requirements
- ✓ Specialists in tailoring flow metering solutions
- ✓ Allocation and environmental systems
- ✓ Designed to comply with ISO, AGA, API, IP and OIML
- ✓ Independent from metering manufacturers
- ✓ Cost effective and optimum accuracy and performance

Examples include:

Technica's Bio-methane to Grid kiosk complete with Flow Weighted Average Calorific Value measurement system and gas quality analysers to ensure the Gas Safety (Management) Regulations are met.

A metering station for the measurement of re-gasified LNG consisting of two stream 16", Ultrasonic Flow Meters. The system was configured as duty/stand-by with master/check z configuration available, allowing auto proving for reduced off-site calibrations. The system also consisted of dual C6+ Gas Chromatographs, flow computers and duty / standby supervisory system. The station was designed and installed to meet OIML Class 0.5.

Design specify and commission an offshore single stream Ultrasonic Flow Meter, complete with field mounted Gas Chromatograph for the measurement of North Sea Natural gas, post 3 phase separation. The system also included coriolis liquid measurement for the well water and gas condensate. Measurements from all three phases handed off to a locally installed flow computer for transmission to Hydrocarbon Accounting and SCADA Systems. The overall system uncertainty for the gas measurement was designed to 1%, with liquids being 0.5%.



MANAGEMENT SYSTEMS



- ✓ ISO 14001 Accredited
- ✓ ISO 18001 Accredited
- ✓ ISO 9001 Accredited

Our philosophy and objective is to aim to deliver excellence in all that we do. This effort is underpinned by our externally accredited Management Systems in Quality, Health & Safety and the Environment. **Not just a 'tick box' exercise for Technica;** we understand the real value that comes from embracing management systems as a bona fide business improvement tool. That is why we are completely comfortable in being audited by your QA representatives should you require it.

Technica Spectrum is a promise badge of Total Commitment to project delivery and success. Each element of our delivery - Design, Construct, Manage and Support - is geared to ensure that we partner you throughout.

**TECHNICA
SPECTRUM**





Get in touch



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