



TSP

ENGINEERING

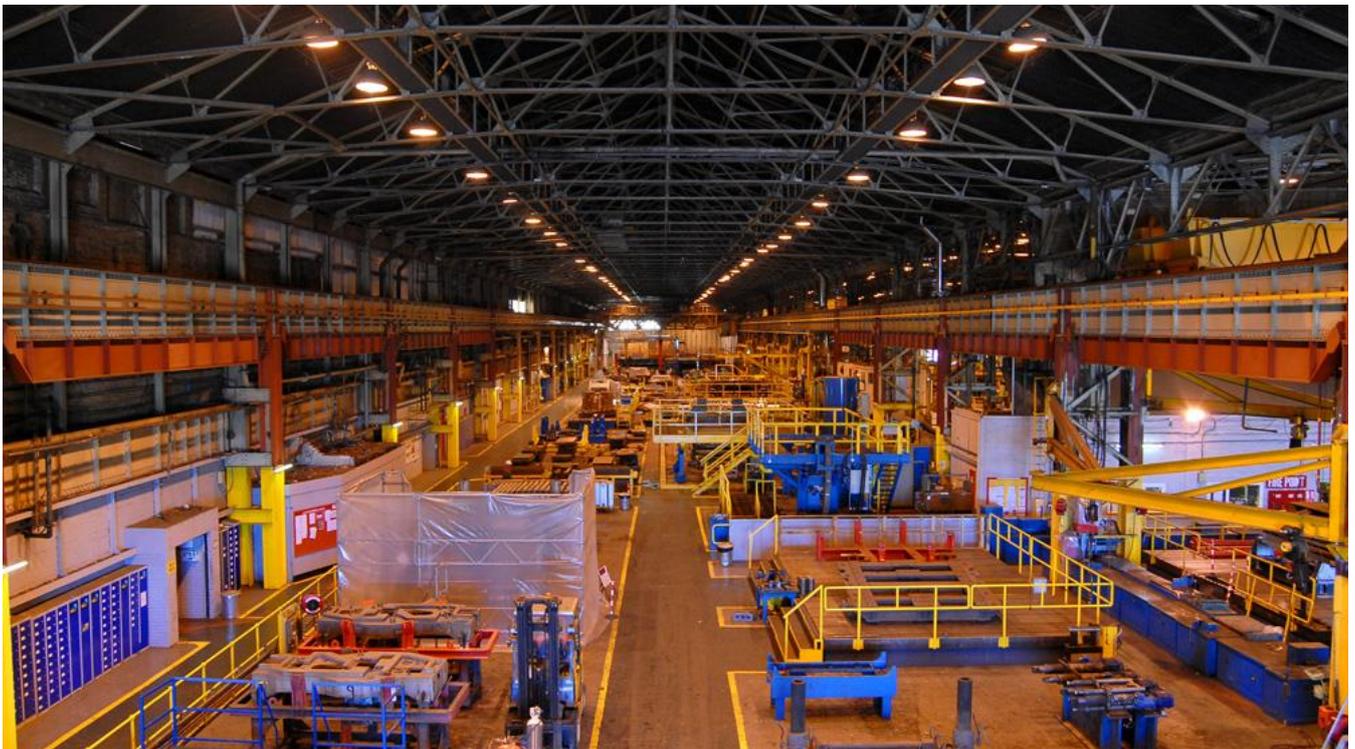


**NUCLEAR CAPABILITIES;
THE DIFFICULT WE DO IMMEDIATELY
THE IMPOSSIBLE JUST TAKES US A LITTLE LONGER**



A LITTLE BIT ABOUT US

Located on Britain's Energy Coast in Workington, TSP Engineering offer technical solutions to complex problems, delivering heavy engineering to Swiss Watch tolerances. We are an important manufacturing supplier to the Nuclear, Defence & Security, Oil & Gas, Steelmaking and Construction industries. We offer a full range of services from design, consultancy, project management, to manufacture and refurbishment along with electrical engineering, instrumentation and testing.



In an ever changing, fast-paced, safety driven industry, we understand the importance of each product and how every one is different. It has always been our aim to provide a tailored service to individual business needs, ensuring a high-quality outcome. With open minds, safe hands and a sprinkle of innovation our skilled employees and comprehensively equipped manufacturing facilities work hand in hand to bring your vision to life.

THE TSP ENGINEERING STORY SO FAR...

Tracing our history back to 1945, TSP Engineering was primarily established to meet demand in the iron and steel industry, equipped to make mining machinery, mine cars and ingot moulds. Today, TSP Engineering has evolved and become so much more.

Our history, heritage and heart are very important to us and in a way it's something which allows us to stand out in such a crowded, competitive, challenging market. Over the years TSP Engineering has become a major part of the local community, seeing many generations of families walking in the same building, working on the same machines.

To the right is a timeline of how TSP Engineering has evolved, adapted and changed over the years to become the world leader we are today.



DISTINGTON
HEMATITE IRON
COMPANY

1939

DISTINGTON
ENGINEERING
COMPANY

1945

CUMBRIA
ENGINEERING

1979

BRITISH STEEL
ENGINEERING

1992

CORUS PROCESS
ENGINEERING

2000

TATA STEEL
PROJECTS

2010

BRITISH STEEL
LTD

2016

TSP ENGINEERING
LTD

2017





WHAT MATTERS TO US

EXCELLENCE

Our high calibre workforce work together collaboratively

We attract people with the best aptitude and attitude

We train and develop our workforce to be the best

We create an environment of continuous learning and enjoyment in work

UNDERSTANDING

We listen and ensure that we understand

We share information to maximise understanding, commitment and ownership

We communicate directly in a clear, honest, accurate and timely manner

We offer and accept constructive feedback

INTEGRITY

We are trustworthy and accountable

We treat each other with dignity and respect

We recognise the need for a work/life balance and a healthy lifestyle

We follow the highest standard of ethical behaviour in all our dealings

UNITY

Our success is driven by the success of our customers

We are easy to do business with

Our attitude is 'can do' and we always deliver on our commitments

We help our partners to be successful

RESPONSIBILITY

We are a responsible corporate citizen

All our people take responsibility for quality and we do not compromise

We work together to maintain a safe, clean, healthy and secure workplace

We take responsibility for the protection of our environment

THE LEADERSHIP TEAM

JOHN COUGHLAN, CHIEF EXECUTIVE OFFICER

John joined TSP Engineering in 2014 with overall responsibility for driving strategy, operations and continuous business improvement. John possesses a significant record of delivering operational improvements, efficiencies and customer satisfaction across Europe, Asia, North America and Mexico.

John has received recognition from some of the most prestigious organisations in the UK, proving we're not biased when we say he's a knowledgeable, inspiring, ambitious leader who is fundamental in securing our success as a business. Some of those include:

- Manufacturing Champions: UK Manufacturing Leader of the Year 2016
- The Manufacturer: Top 20 Exemplar
- In-Cumbria Best Businessperson of the Year 2019
- Finalist: IoD Director of the Year Awards 2020



I see a great future for TSP Engineering. We have a visionary, energetic and focused team supporting the business, with a passion to grow the business. TSP Engineering have a clear strategy around the 3P's: People, Product and Profit. We believe by getting our people right through their development, they will get our products and services right, which will then deliver the necessary profit for the business and customer satisfaction for those we serve.



TSP ENGINEERING SENIOR MANAGEMENT

- Paul Simpson, Finance Director
- Sue McCarten, Head of HR and Business Services
- Mike Ames, Head of Technical
- Scott Castlehow, Head of Manufacturing and Supply Chain
- Jamie Macarthur, Senior Project Manager

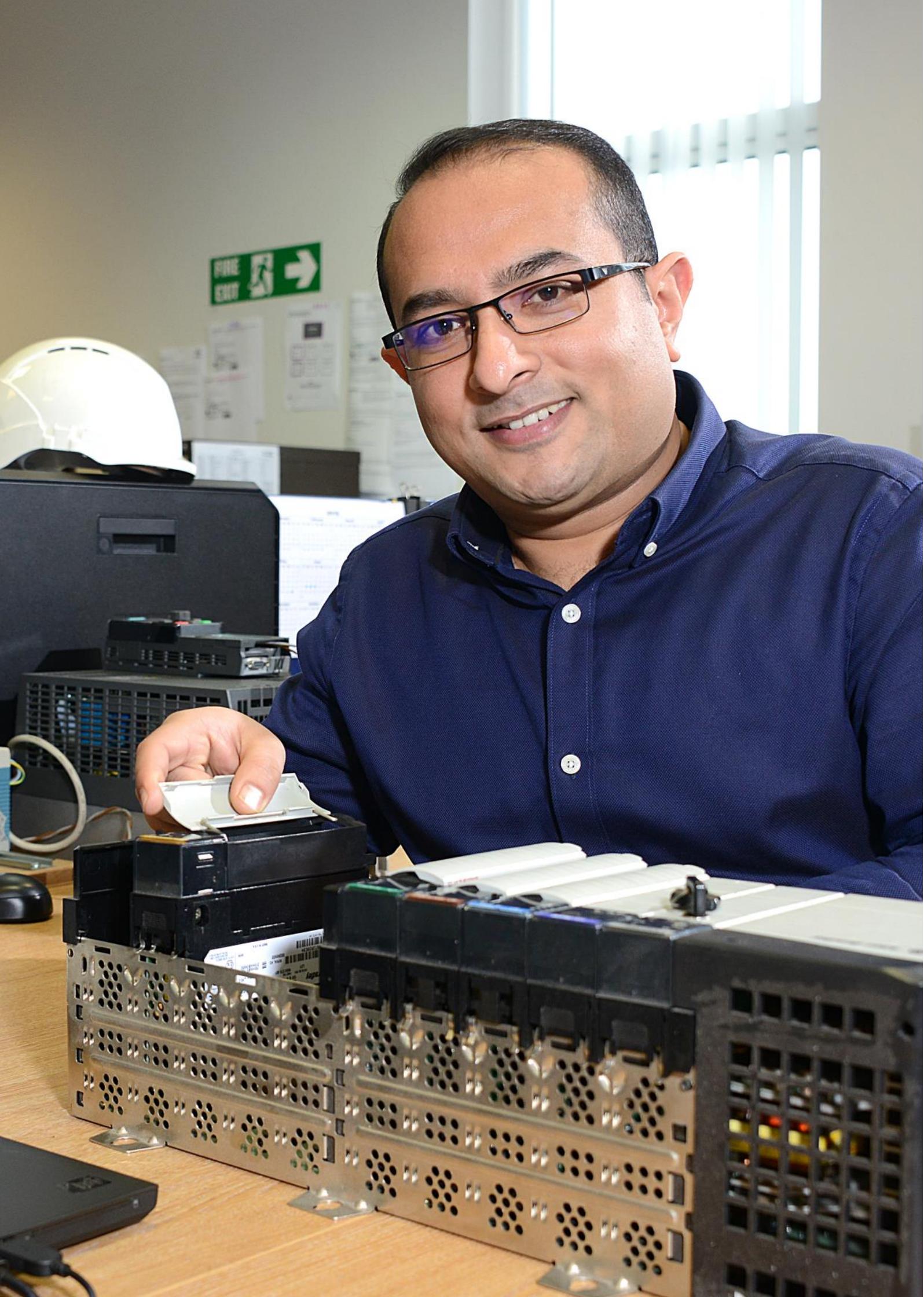


THE TSP TEAM

Our employees are the backbone of TSP Engineering, they're our number one asset. Regardless of your gender, age, background or length of service – we support those who work hard and want to make a positive impact to the complex sector we work in. Our team understand the part they play and their importance in every project. Our expertise and diverse team enables us to innovate and deliver across all areas of nuclear including design, manufacture, maintenance, decommissioning, commissioning, testing, installation and waste management.

We are proud of what we do, and understand we need to invest time and resource into the next generation to allow our heritage and legacy to continue. Apprentices play an important role in our business, their level of enthusiasm, fresh ideas and willingness to learn is often unmatched. Our apprenticeship scheme places the individuals with the most knowledgeable and experienced team members, allowing them to soak-up their valuable skills and techniques. Apprentices are crucial in shaping our future, so providing them with the resource and knowledge to succeed gives them the tools to have a long successful future in engineering, being the future face of Manufacturing.

Our award-winning team are like no other – from winning National awards for their commitments to the industry, to suggesting alternative solutions resulting in savings of hundreds and thousands of pounds for our clients. TSP Engineering understand the success of every contract is dependent on the knowledge, passion and calibre of people on the job. We fund further learning and training for our employees as we understand technology, methods and approaches are constantly changing.



AWARDS & ACCREDITATIONS

2017

- RoSPA Award for Health and Safety
- Chamber of Commerce: Health & Wellbeing
- In-Cumbria Business Awards: Manufacturing Business of the Year
- Better Health at Work: Bronze Award
- The Manufacturer Top 100: Hannah Ridley

2018

- BECBC: Company of the Year
- RoSPA Gold Award for Health and Safety
- Better Health at Work: Silver Award
- The Manufacturer Top 100: Dean Robinson
- The Manufacturer Top 20 Exemplar: John Coughlan

2019

- In-Cumbria Business Awards: Best Business Person of the Year, John Coughlan
- RoSPA Gold Award for Health and Safety
- Finalist – The Manufacturer MX Awards: Achieving Customer Value
- Highly Commended – Make UK, Engineering Apprentice of the Year: Jade Hughes
- Finalist – In-Cumbria Business Awards: Best Manufacturing Business
- SME News Energy and Power Awards: Best Nuclear Engineering Company
- The Manufacturer Top 100: Sam Beattie
- The Manufacturer Top 100: Glen Weightman
- The Manufacturer Top 20 Exemplar: Georgina Stalker

2020

- Finalist – IoD Director of the Year Awards. Director of the Year; Small-Medium Business, John Coughlan
- RoSPA Gold Award for Health and Safety
- Make UK, North West SME of the Year
- The Manufacturer Top 100: Andrew Sands
- The Manufacturer Top 100: Mike Ames
- The Manufacturer Top 100: Mohammad Hossain

With our heritage of engineering and manufacturing experience and expertise, we guarantee to deliver exacting standards of quality and excellent levels of service. Our accreditations and approvals include:

- BS EN ISO 9001 : 2015
- BS EN ISO 19443 : 2018 – First in the world to achieve this standard
- BS EN ISO 3834 Part 2
- BS EN ISO 1090 at Execution Level 4
- ISO 45001: 2018
- ISO 14001 : 2015
- Approval of our Quality Management System meeting the requirements of SLM 4.06.02 (Sellafield contract quality requirements issue 4) and ES_0_5394_2 issue 5 (fabrication of stainless steel plant and equipment)
- Cyber Essentials Plus
- Rolls–Royce approvals, e.g. to GS3001 (Nuclear Submarines General QA Requirements)

OUR CUSTOMERS

ALWAYS AT THE HEART OF WHAT WE DO

At TSP Engineering we believe that collaboration is key. Communication, shared knowledge and understanding the customers' requirements are fundamental in delivering a successful project.

We understand every client and project is different, and we strive to work with our customers to deliver in the most efficient way – delivering right first time, every time. Our team aim to deliver a professional, customer focussed and cost-effective quality service safely to our customers.

Achieving many successes when it comes to customers from, being finalists in the prestigious The Manufacturing MX Awards: Achieving Customer Value, to being praised for delivering a recent contract £2.5 million under-budget and ahead of schedule. Our commitment and drive ensure our customers are always our priority.

Working with our world-class team, in our comprehensively equipped manufacturing facility will allow your vision to be brought to life. Our open minds, safe hands and depth of experience and skill enable us to understand your requirements and provide a high-quality tailored service to your individual business needs.

TSP Engineering has demonstrated the highest level of commitment by any supplier as part of the certification process. I'm very impressed with this level of commitment and enthusiasm from the TSP Engineering management and shop floor workers, well done to all.

- Martin George

Head of Supply Chain Quality, Sellafield

Professional engineers providing an excellent service within an everchanging environment gives great confidence that collaboratively we can deliver to stringent schedule.

- Adrian Walker

Construction Section Manager , Altrad

The team at TSP are incredibly accommodating. Each company is different, but I can say out of all the suppliers I deal with TSP are easily within the top five. I honestly believe TSP strive to achieve customer satisfaction and constantly look to improve.

- Michael Crockett

Senior Supplier Quality Engineer, Rolls Royce

TSP Engineering is a world-class company. Its success in winning this contract proves our nuclear supply chain can compete with the best in the world.

- Martin Chown

Chief Executive Officer, Sellafield



FIRST IN THE WORLD!

In order to continue growing in the nuclear industry, it's crucial our ambitions and objectives are shared and aligned, evidencing we are working towards to same goals and values as our clients and sector.

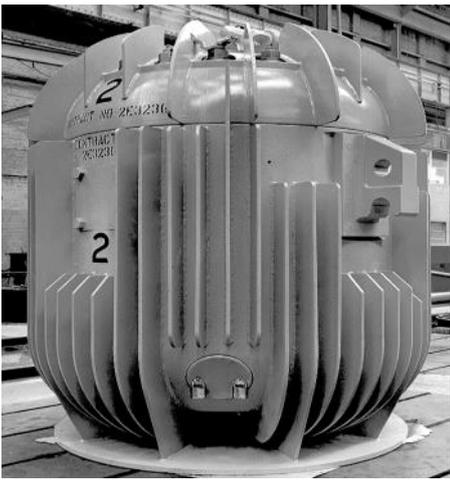
TSP Engineering share many of the same ambitions and objectives as the Nuclear Industry, with one of the most important being the continuous drive to improve safety. The nature of the products being manufactured demands high quality across safety, delivery and precision.

To evidence our teams extensive knowledge and passion to put safety first, we worked to become the first company globally to be certified to the ISO 19443 standard following an intensive audit by Lloyds Register.

The standard is an addition to ISO 9001 and focuses on improving both safety in the Nuclear sector and the Supply Chain of the Nuclear Energy Sector, supplying products and services Important To Nuclear Safety (ITNS). Being not only the first company in the UK, but in the world, to be certified to this standard provides our customers with the assurance of a standardised level of quality whilst delivering quality products and components.

NUCLEAR CAPABILITIES

TSP ENGINEERING ARE A KEY SUPPLIER OF HEAVY MANUFACTURING AND COMPLEX ENGINEERING SOLUTIONS TO THE NUCLEAR INDUSTRY



Offering over 80 years' experience in specialist engineering services within challenging nuclear environments, TSP Engineering has worked on some of the largest most exciting nuclear projects in the world. These projects have typically involved design, manufacture, testing and commissioning of large scale plant and machinery to an exacting quality standard.

TSP have experience in designing and building kit for decommissioning high level and low level waste in a variety of physical states. Additionally, we have been heavily involved in transportation, handling and relocation equipment for new and spent reactor fuel. This includes type A and type B casks for a variety of fuel such as MOX, HLW used fuel, and radioisotopes, through to equipment for intermediate (ILW) and low level waste (LLW).

We have experience, knowledge, and expertise across the fuel handling cycle. Encompassing areas such as initial fuel transportation through to final processing, storage and decommissioning of equipment; examples include retrievals machines and maintenance equipment.

TSP Engineering are engaged in taking concept designs of innovative AMR reactors through manufacturability review, into detailed design, and full maturity to enable regulatory and licensing requirements to be met in accordance with relevant Safety Assessment Principles (SAP) and Technical Assessment Guidance (TAG) requirements.

TSP Engineering firmly believe in being at the forefront of cutting edge technologies which will yield critical benefits to the nuclear industry. We are part of a number of consortiums taking novel technologies from initial R&D into industry trials as part of the Manufacturing and Materials Phase 2B (Advanced Materials and Construction) nuclear innovation programme funded by the UK Government. The technologies promise to bring exciting improvements in cleanliness and cutting requirements of materials and the inspection of safety critical components.





In order to successfully deliver complex multifaceted engineering projects to time, cost and quality – collaboration is key. TSP has the experience to bring together and manage a collaborative team and combine its skills and expertise into a single product offering for the nuclear industry.

We operate our own in-house design, manufacture, project management, test facilities and operations. Having full control over projects enhances contract efficiency and delivery, as it is in our hands from start to finish. TSP offer bespoke designs to suit your needs alongside complete turn-key solutions and can offer specific safety cases associated with these tailor made designs.



These services are undertaken by our skilled employees who have many years' experience in the nuclear industry. This experience allows us to solve complex problems whilst ensuring compliance with the strict regulatory regimes. Both quality and safety is at the forefront of what we do and is embedded in our culture, procedures and processes.

We are constantly being approached by businesses, the majority from the nuclear supply chain to discuss the potential for collaborative working and to explore opportunities of working together in the future.

BREADTH OF NUCLEAR SOLUTIONS

TSP Engineering have a long standing history of supplying nuclear waste transport and spent fuel flasks and are actively involved in producing effective solutions that improve processes, using value engineering and the latest technology. Projects have typically involved design, manufacture, testing and commissioning to industry quality standards. Some examples are below.

- Flask Lids
- Gamma Gates / Floor Valves
- Shield Doors
- Decommissioning Equipment
- Lifting Equipment
- Retrieval Flasks
- Storage Flasks
- Transport Equipment
- Electrical Equipment inc. Harnesses and Junction Boxes
- Control Panels
- Access Platforms
- Maintenance Equipment / Machines
- Bogies
- Park Stands
- Endurance Trials
- Test Rigs



BREADTH OF NUCLEAR CAPABILITIES

ENGINEERING SERVICES

- Project Management
- Installation & Commissioning
- Manufacturability Studies
- Mechanical, Electrical & Pipework Engineering
- Design (initial concept to detail design, including modelling)
- Fluid & Gas Media Services
- Process Control
- Consultancy
- Feasibility Studies
- Process Evaluation

MANUFACTURING

- Heat Treatment
- Testing
- Electrical & Control Panels
- Machining
- Fabrication
- Assembly / Fitting
- Weld Reclamation & Cladding
- Shot Blasting & Painting

SAFETY AND RISK ANALYSIS

- Hazard and operability
- Shielding and criticality
- Failure Modes and Effects Analysis
- Safety Case Management

DESIGN SERVICES

TSP have a well-skilled and experienced team of mechanical and electrical design engineers able to provide a vast range of services from initial concept through to full detail design of bespoke equipment.

TSP provides services tailored to specific customer requirements from pure mechanical challenges through fluid power, water systems, pipe-work layouts to electrical design including SCADA, PLC programming and system upgrades.

TSP Engineering has the ability to tailor electro-mechanical design solutions to suit customer requirements and a dedicated panel shop facility allows us to build and test MCC, control panels, junction boxes etc. to deliver quality managed manufacturing.

Our services include:

- Multi-disciplined design from initial concept through to full detail, using both 2D and 3D software
- Bespoke Test Rig design and build
- The design of Flasks, Handling, Storage and Transport Equipment, including Lifting Beams, Stands and Turning Frames.
- Design and support of bespoke Proof Load Testing equipment
- CE Marking of machinery and equipment
- Design and Engineering support throughout the entire project lifecycle
- Manufacturing reviews to ensure fit for manufacture / cost value engineering
- On site installation and commissioning (global basis)

DESIGN CAPABILITIES

- Drawing updates, modification and redesign
- Reproduction and modernisation of archive drawings (including conversion and update from imperial to metric measurements)
- Engineering Feasibility Studies
- Consultancy Services (problem identification, efficiency assessments & technical reviews)
- Peer to peer review on design and plant automation
- Manufacturability reviews to ensure the design is fit for manufacture and / or cost value engineering
- Creation of Technical Documents and Procurement Specifications
- Project Scope Identification and Development
- Technical Files for CE Marking
- Operator and Maintenance Manuals
- Operator Training Packs
- Design Risk Assessments
- Functional Design Specification
- Control system design (including compliance to BSEN-13849)
- PLC and SCADA programming utilising Allen Bradley, Siemens, Unity and Wonderware InTouch software packages
- Works Test Schedules and supporting documentation
- Installation and Commissioning documentation
- Paper / PDF to CAD drafting service (including Vector Conversion).

IN-HOUSE MANUFACTURING CAPABILITIES

TSP Engineering has one of the UK's largest and most comprehensively equipped engineering facilities offering:

- 20,000m² Shop Floor space
- Two 5m deep engineering / manufacturing pits
- Lifting capability of 130 tonnes

We have highly skilled professionals specialising in:

- Fabrication
- Plate Preparation
- Plate Rolling
- Welding (semi-automatic, manual and machine techniques employed)
- Machining
- Assembly / Fitting
- Weld Reclamation and Cladding
- Shot Blasting and Painting
- Heat Treatment
- Electrical, Process Control and Control Panels
- Testing
- Inspection / NDE Capabilities (including MPI, DPI, Ultrasonics, PCN Qualified Operators for all techniques, Ferroxyl Testing, Salt Test, Ferrite Meter Checks, Passivity Testing, PMI, Paint Thickness Checks etc.)

TEST RIG & TRAINING FACILITIES

For test rig, simulation and training requirements in support of the nuclear industry, TSP Engineering can offer a full package to suit your needs.

Providing a safe testing environment for procedures that may be required to be carried out in hazardous environments, TSP will ensure that the procedure is carried out right first time.

From initial concept through to fully operational live simulation of the production plant, we can use reverse engineering to provide solutions for any design issues that may arise during project development.

TSP's workshops house 2 x 5m deep engineering / manufacturing pits, which allow maximum overhead height of more than 13 metres. Our own experienced project managers are also on hand to help manage specific areas of concern if required by the client.

TSP Engineering offers:

- In-house Design and Manufacture of bespoke Control Panels
- Manufacture of dummy items to help with Functional Testing
- Skilled trades personnel
- Project Management with award-winning Project Engineers and Supervisors

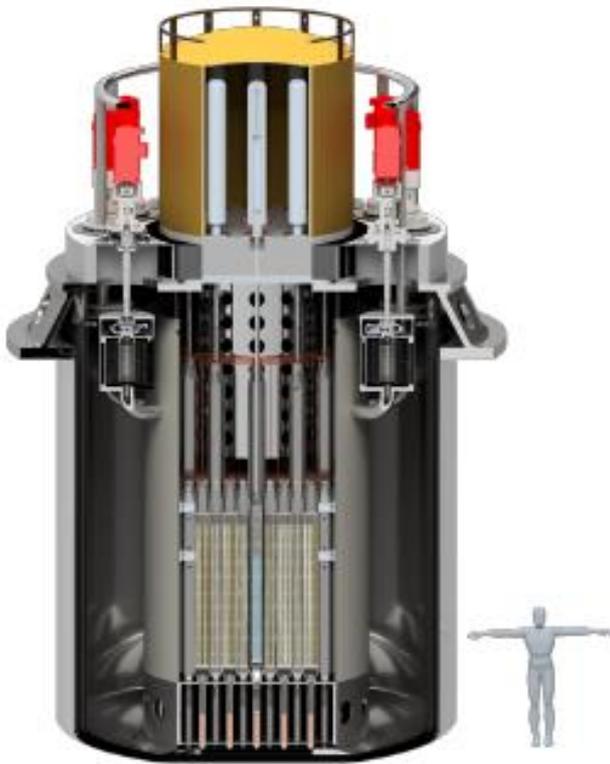
PROJECT MANAGEMENT

We offer a highly professional project management service, priding ourselves on working to deliver flexible schedules that integrate with our clients' requirements. TSP Engineering believe that collaboration is key therefore, one of our priorities is to work closely with the customer from start to finish. Our aim is to deliver the most appropriate solution providing benefits to our customers and smooth on time contract completion.



ADVANCED MODULAR REACTORS

With the awareness around climate change and social responsibility, it's important we contribute where we can to ensure the safety of our planet.



TSP Engineering are engaged in innovative projects which could change the face of the nuclear energy and manufacturing industries across the UK. The focus of the innovative project is to explore the next generation of nuclear new build, making nuclear energy cheaper, cleaner, easier and quicker to build, and will see TSP Engineering be a part of designing the cutting-edge technology and manufacturing process.

TSP Engineering considers nuclear power as one of the means to address climate change, and factory manufactured Advanced Modular Reactors (AMR's) have been recognised as a solution. TSP Engineering are an advanced manufacturer and have the capability to lead and encourage the development of AMR technology.

NUCLEAR PROJECT EXAMPLES

NUCLEAR SHEILD DOORS



NUCLEAR DEFENCE MANUFACTURE



NUCLEAR TRANSPORT VESSELS





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