



Mechanical Engineering
Solutions from
Concept to Delivery



Making our customers' lives easier

Proven Background of Excellence in Engineering

Fort Vale Nuclear Ltd offers a wide range of mechanical engineering solutions from initial concept and design through to manufacture and final testing. The company evolved from Fort Vale Engineering Ltd, a global market leading engineering company recognised for setting standards in a safety critical industry. A culture of high quality and safety, along with a state-of-the-art facility and a professional team helped Fort Vale to quickly establish a strong reputation in the nuclear industry.

- Established nuclear safety culture
- State-of-the-art manufacturing facilities
- Robust quality assurance processes
- Successful partnerships with our customers
- Strong alignment with customer expectations



- Award-winning commercial operation
- Industry-leading design and manufacture of safety critical products
- Depth of skills and competencies

Fort Vale Engineering was founded in 1967 by Edward S. Fort, O.B.E., manufacturing valves and associated equipment for the hazardous liquid transport industry. The company is based at a modern manufacturing facility in Simonstone, Lancashire, UK with offices and facilities worldwide.

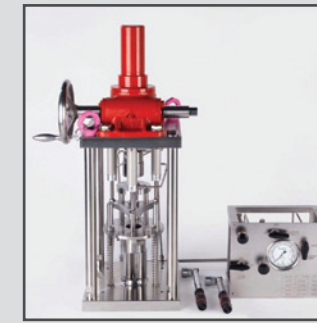
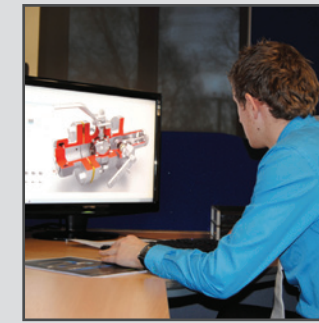
Many years experience of precision engineering and supplying products to safety-critical industries perfectly complemented diversification into the nuclear industry.

A Skilled & Dedicated Team – Suitably Qualified and Experienced Personnel (SQEP)

A team of highly motivated and well trained engineers and support staff with internationally recognised qualifications and professional registration and a wealth of experience support our clients. Our team has also undertaken further training specific to the nuclear industry via the NSAN Programmes or the Award for Nuclear Industry Awareness (ANIA) and the Certificate of Nuclear Professionalism (CoNP).

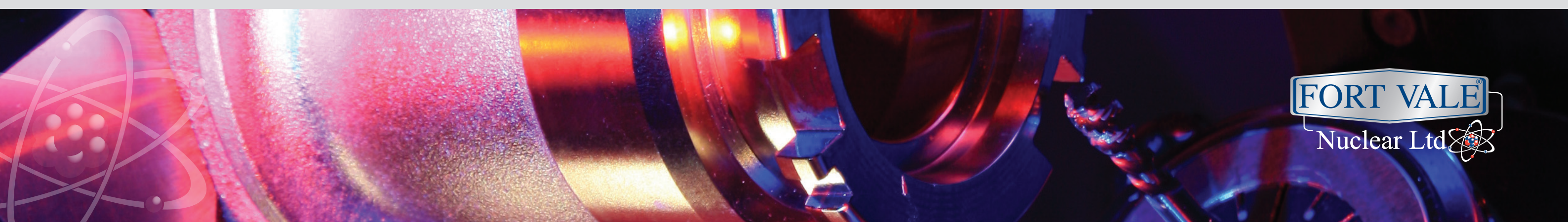
‘Honesty, Commitment, Integrity’

- Staff understand the nuclear industry
- Deliver projects to the highest of quality, scope and schedule expectations
- A desire to excel in everything we do



Our policy is one of continual assessment and improvement – progressing our people, procedures and processes

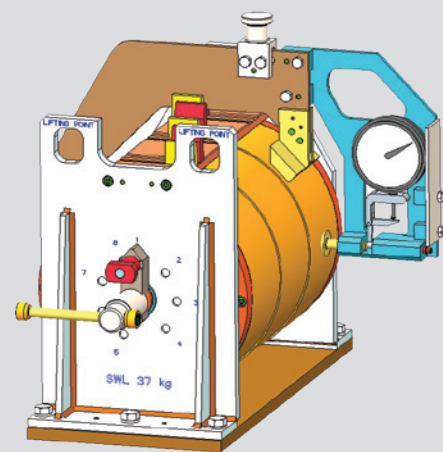
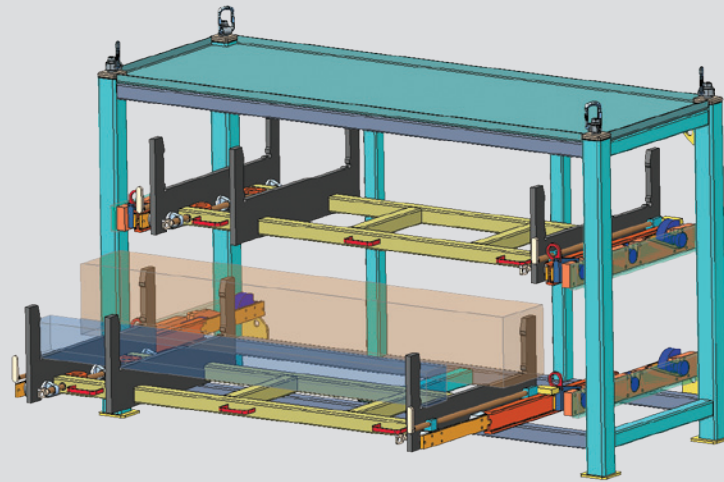
- CEng & IEng qualified Engineers
- Design Engineers (CEng, BEng Hons, BSc Hons)
- Project Leaders (BEng Hons, BSc Hons, APMP)
- Materials Scientist (BSc Hons)
- Qualified European Welding Engineer (EWE)
- European Welding Specialist (EWS)
- Qualified Welding Inspectors (CSWIP 3.0 & 3.1)
- Coded Welders; stainless steel, carbon steel, nickel alloys, duplex stainless steels
- PCN Level II LPI & MPI and ASNT RI
- Within Group 80% time served qualified Engineers



Comprehensive Capabilities for a Complete Service

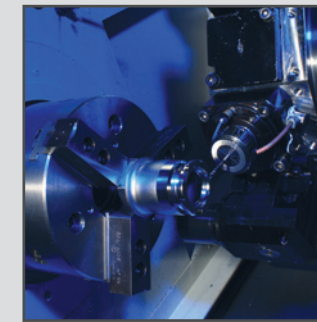
The wide range of design, production and supporting capabilities available in-house allows for the ability to complete the life cycle of a multidiscipline project with little or no requirement to outsource. This provides for a high level of control and risk management.

- Research and Design development
- Concept evaluation for manufacture
- One-off and batch production
- Wide range of production processes
- Factory acceptance testing, flow – pressure – impact – load, with traceability to national standards
- Documentation stream from raw material to finished component



Design

- 3D CAD software
- 3D Printer – rapid prototyping
- Finite Element Analysis / Stress simulation software
- Casting simulation software
- Fluid flow simulation software
- Pressure vessel design software
- Manual calculations to support designs

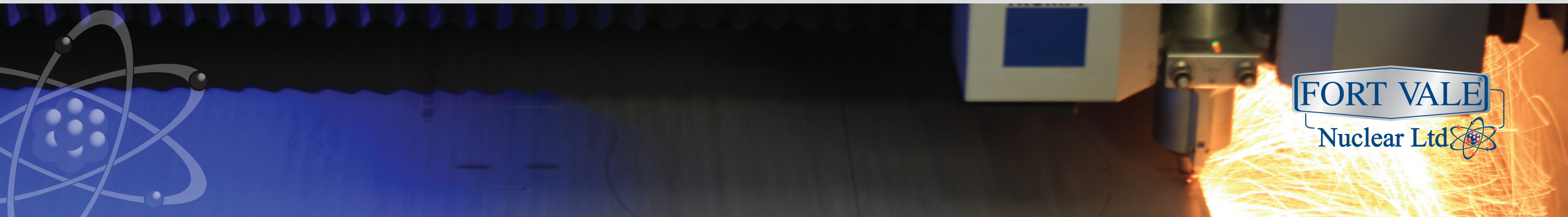


Manufacturing

- CNC capabilities include;
 - 27 CNC lathes (max Ø 1.2m)
 - 15 CNC milling machines
 - 10 driven tooling lathes
 - 4 barfeed (up to 50mm Ø)
 - 2 Multi task mill/turn machines
- General fabrication and assembly capabilities
 - CNC vertical press break
 - CNC section bender
 - CNC horizontal bender
- Welding capabilities
 - manual, robotic & seam welding; longitudinal & circumferential
 - in excess of 25 coded welders
 - PQRs covering a wide range of material
- 4 axis laser cutter (3m x 1.5m plate)
- Stainless steel shot blasting and electro-polishing



Detailed Manufacturing Capability sheet available on request



Quality

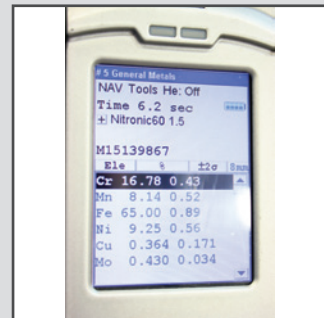
Quality Assurance

Fort Vale Nuclear is accredited to ISO 9001 and ISO 3834-2. Our well established processes and procedures ensure quality, safety and reliability, supported by a comprehensive inspection process and robust documentation tracking system throughout the entire project.

Documentation & Traceability

Lifetime Quality Records are compiled concurrently during the course of the project using a bespoke computerised system which allows real-time dynamic access to project specific information; this speeds up the process and has built in mistake proofing.

We offer full traceability – the ability to identify an item and relate it to all documentary evidence of its history from material source through all stages of manufacture, including processes, inspection, test, calibration evidence and SQEP.



Inspection

- LPI and MPI NDT Inspection PCN level II
- Radiographic Interpretation ASNT RI
- Mitutoyo Crystal CMM
- UV-Dark facilities cleaning & inspecting
- Certified clean room facility to ISO 14644-1
- Pressure testing
- Helium leak detection
- TESA-SCAN 52
- FARO Gauge portable CMM x 3 (1 with laser scanning)
- Positive Material Identification (Niton XRF analyser)
- Measurement System Analysis
- FAIR

Safety, Knowledge and the Nuclear Industry

Established Nuclear Safety Culture

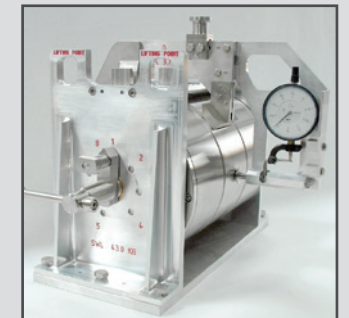
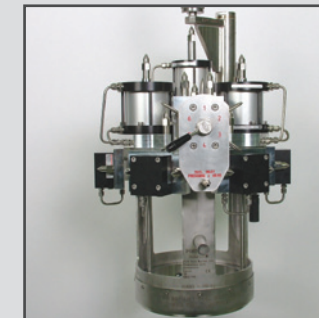
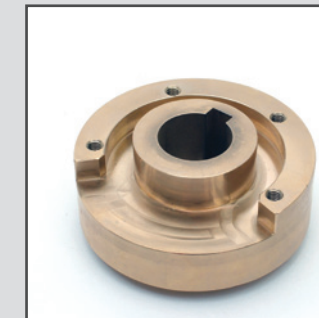
- Safety in everything we do
- Effective communication
- Open reporting culture
- Safety messages
- Project kick off meetings
- Post project reviews
- Continuous learning
- SQEP
- STAR principles

Fit For Nuclear (F4N) – developed by the Nuclear AMRC:–

- scored Fort Vale Nuclear highly in key areas including internal quality management and health and safety
- F4N reported: “documentation control tools and methods employed by FVN are fundamentally underpinned by an extremely robust, and best-in-class, quality documentation and control total management system and tool.”

Fort Vale Nuclear has signed up to the Nuclear Skills Passport (NS4P) sustaining Skills for a Safe and Secure Nuclear Future. The NS4P:–

- provides a transferable record of competence across the industry.
- recognised platform to demonstrate and share skills



Protecting the Environment

Fort Vale is currently working towards ISO 14001 accreditation.

We continually assess the environmental impact of company operations on the environment and community. We encourage commitment from all employees to improve the environmental performance of the business.

Protecting People

Fort Vale are accredited to OHSAS 18001.

Fort Vale sets and maintains high standards of Health and Safety and welfare to ensure that all who work with us do so in a safe and healthy environment.

“ FVN demonstration of an extremely robust (outstanding) approach to quality documentation management and tracking. Is a best-in-class application. ”
(Fit For Nuclear Diagnostic report)

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F4N
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