##### **Stephen Lang** BSc (open) CEng MIED DipSYSPRAC

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**Profile**

A chartered mechanical engineer who has spent a career within research and development, specialising in mechanical design. Vast experience designing electro-mechanical devices, focussing on mechanical, hydraulic and pneumatic designs that interface with complex electronic control systems. Competent as either team leader or team member. Freelancing has honed the ability to integrate quickly into new organisations. Education in both mechanical and production engineering has given a balanced perspective of the NPD/NPI processes. Project management to Prince2® practitioner level, experienced in applying appropriate practices to specific requirements. Commercial awareness at the business level, including an appreciation of external influences. Degree-level systems management has cultivated the skill set to see through complex detail and not lose sight of strategic requirements. Professional in all aspects of working life, with an eye for detail, exceptional work ethic, drive and enthusiasm. Can always be relied upon to make a meaningful contribution within an organisation.

**Key Skills**

* Proven abilities at all levels of mechanical design, concept, CADD and detailing within highly regulated industries.
* Extensive knowledge of engineering materials and surface treatments.
* Commercial awareness at the business level, with an appreciation of external influences.
* Priority management, always a professional and focused approach.
* Innovative problem solving.
* With an eye for detail, quality is always a priority throughout the product lifecycle.
* Motivation and leadership of multi-disciplinary teams through training and an enthusiastic example.
* Reporting has been a routine part of work activities, from verbal and written reports, to presentations to customers, suppliers and at board level.
* Proven people management and influencing skills, building lasting professional relationships.
* Project management with financial awareness and excellent communication skills. PRINCE2® qualified.
* Mentoring young engineers and passing on knowledge gained through experience.
* Confident with travel throughout the UK and overseas.

**Employment History**

**Design and Technical Solutions Ltd** Mar 2015/Present *Mechanical design projects/contracts*

**Mechanical Design Engineer.**

* Founder and freelance/contract mechanical engineer at Design and Technical Solutions Limited.
* Conceptual and detail design of electro-mechanical and hydraulic products. Design verification and validation.
* 3D CAD modelling including manufacture support, rapid prototypes, marketing documentation, etc.
* Design and manufacture review, verification and validation.
* Fault finding and problem solving.
* Cost-out initiatives - design and manufacture of products.
* Training for manufacture and assembly, alongside product training for sales and customer support.
* Presentations of project/design concepts and progress, to various groups including: board level, sales , prospective customers and manufacturing facilities.
* Working independently and as a team member both at clients’ premises and remotely using either clients’ resources, or home office/workshop based resources including 3D CAD.
* Business management, including budgeting, marketing and sales, accounting and resource management.
* Industries supported: Aerospace, Marine, Medical Device, Naval, Water, Automotive tooling. From high cost low

volume areas to highly cost sensitive commercial products.

**WES Ltd** Mar 2014/Oct. 2014 *Chemical dosing systems within the water industry.*

**Product Development Manager reporting to the Managing Director.**

* Most recent permanent position, this key role encompassed full responsibility for technical management, design, and continuous product improvement.
* Progressed diverse design and development projects from web based remote telemetry technology to large scale chemical dosing systems, gaining an intimate knowledge of rotational moulding.
* Responsibility for all new designs and review of existing designs. Development and introduction of a production system including design of the underpinning part numbering system.

**Chas A Blatchford & Sons Ltd**1993/ Mar. 2014 *Precision hi-tech prosthetic limbs.*

**Senior Mechanical Design Engineer / Project Champion reporting to the Technical Director.**

* Conceptual and detail design. Design verification and CAD modelling for various purposes.
* Leading multi-disciplinary, international project teams through the conceptual and detailed design, development and NPI of modular artificial limb systems. Related responsibilities included design authority, planning, progress reporting, quality strategies and requirements, charts, budget management and producing technical specifications and test schedules. Also working closely with external suppliers regarding initial design and quality.
* Project management of R & D projects from design through development, testing and on to production release.
* Presentations of project concepts and progress, to various groups, including directors, sales personnel, prospective customers and large audiences at seminars.
* Training of sales, production personnel, customers and quality team. Also defining product quality requirements.
* Clinical trials involved working closely with clinical staff and amputees.
* Other duties at Blatchford included CAD demonstrations, product and theory presentations at seminars and for training purposes, lectures to students, interfacing with patent attorneys and assisting in media productions.

**ML Aviation Ltd** 1992/1993*Aerospace weapon deployment systems and ship’s defence systems.*

**Senior design draftsman reporting to the Chief Development Engineer**.

* Detail conceptual design and drafting of aerospace weapons release systems and verification of design quality.
* Appointed design team leader for naval defence systems.
* Control of the design budget and generation of monthly reports. Interfacing with sub-contract companies.

### Planning and instigating procedures for IT system management.

**High Temperature Engineers Ltd** 1977/1992*Aerospace air, fuel & hydraulic system components.*

**Design Group Leader reporting to the Technical Director**

* Management of a design team, taking product from initial requirements to final production.
* Conceptual and detail design of aerospace products.
* Resource management.
* Maintaining quality management procedures to aerospace standards.

**Education**

* BSc (open) Mathematics and Systems Management. 2012
* Undergraduate Diploma in Systems Practice. 2009
* BTEC Higher National Certificate - Mechanical Engineering. 1986
* City and Guilds 255 Part III - Production Engineering. 1982
* Eight GCSE equivalents including English and Mathematics 1977

*Professional Training*

* 4 ½ year tool making apprenticeship within the UK aerospace industry.
* Design orientated and problem solving courses.
* Computer aided design, analysis and drafting courses.
* Independent management training including: Leadership Skills, Managing Time and Priorities and Managing

Engineering Design.

* Strategic management (Hampshire Education Authority).

**Additional Information**

* Member of Institution of Engineering Designers for in excess of 20 years.
* Named as Inventor on patent “Hydraulic Knee” and co-inventor on numerous other patents.
* Promotion of engineering careers within schools.
* Excellent testimonials.
* Mechanical design lead within a team where products won national awards including: The Prince of Wales Award for innovation, The Queens Award for Technological Achievement, Design Council awards and Royal academy of Engineering’s McRobert Award.
* Experience travelling both in the UK and overseas with a full, clean driving licence.
* Microsoft Office.

**Outside Interests**

Actively promoting engineering and science careers within schools. Travel and experience of other cultures.