



Company Profile

ESP (Engineering Systems & Projects Ltd) is an organisation specialising in the design, manufacture and installation of a wide range of manufacturing engineering systems.

We offer a complete portfolio of project engineering and consultancy services. These include full Turnkey solutions including up-front studies, specification, detailed design, installation, commissioning and training or any subset as required.

Whilst able to deliver with excellence against a fully specified solution, ESP excels in building long term relationships with their clients, building a sound understanding of their processes, performance metrics and business. This enables us to work up tailored solutions from embryonic ideas, business requirements or production problems that not only match our client's immediate needs, but also in fit with their medium/long-term manufacturing strategies.

ESP has significant expertise in batch manufacturing operations, filling and packaging and process control/automation, particularly in hazardous area applications...



Services Offered

- ◆ Engineering Consultancy
- ◆ Electrical / Mechanical Design
- ◆ Control Panel Design and Build
- ◆ PLC / DCS Control Systems
- ◆ Instrumentation Specialists
- ◆ IT / Network Services
- ◆ Commissioning and Training
- ◆ Lifting Solutions
- ◆ Conveyor Systems, Design and Build
- ◆ Health and Safety Audits
- ◆ Project Management
- ◆ Electrical / Mechanical Installations
- ◆ P & ID's / Schematics / CAD
- ◆ Batch Manufacturing / Process Control
- ◆ Filling and Packaging
- ◆ Line / Machine Integration
- ◆ Documentation (Including FDA)
- ◆ Machine Guarding
- ◆ 3D Solidworks Design
- ◆ PUWER Audits



ENGINEERING SYSTEMS & PROJECTS Ltd

Adding Value By Design

A new concept to many perhaps, but at ESP (Engineering Systems & Projects Ltd) adding value by design is second nature and a key differentiating factor for our clients. The traditional style of manufacturing based projects is changing. Over the past few years we have seen a significant reduction in the number of new facilities being built. Focus has moved more towards 'sweating' existing assets than investing in new plants. Manufacturing improvements are being achieved through smaller, highly targeted projects. When investment is made in new plant, solutions must be more flexible and more 'agile' than ever before.

With the popularity of the 'Supply Chain' model amongst the leading manufacturing organisations, engineering solutions can no longer be limited to the shop floor. Data flows to and from the business systems, and to those of suppliers and customers alike play a key role in those companies striving to achieve excellence.

So what does adding value by design actually mean? To ESP, adding value by design means not only delivering projects to a high standard, on time and within budget, but benefiting from the gearing achieved by doing the 'right' projects at the 'right' time. Providing successful solutions, means understanding the client's requirements fully. Whilst able to deliver with excellence against a fully specified solution, ESP excels in building long term relationships with their client's, building a sound understanding of their processes, performance metrics and business. This enables us to work up tailored solutions from embryonic ideas, business requirements or production problems that not only match our client's immediate needs, but that are also in fit with their medium/long term manufacturing strategies.

ESP's success in developing such award winning relationships is based on flexibility to the extreme, a full commitment to engineering excellence, underpinned by sound technical and project management skills. ESP has significant expertise in batch manufacturing operations, filling and packaging, specialising in hazardous area applications. We can provide full turnkey solutions including up-front studies, specification, detailed design, installation, commissioning and training or any subset as required.



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Turnkey Project Engineering Services

At ESP (Engineering Systems & Projects Ltd). Delivering projects to a high standard, on time and within budget, is just the beginning. Delivering the "right" project at the right time is key to delivering the maximum benefits from any investment.

ESP has a wealth of experience in providing the scope, specification and implementation of projects across a broad range of industries. From an initial concept, embryonic idea or production problem to implementation of a fully specified project, ESP has the skills and experience to ensure our clients gain maximum value for money.

We aim to provide solutions that not only fulfil our client's immediate needs but also fit in with their medium to long-term strategy.

We are preferred suppliers of engineering and project management services to a number of leading blue chip companies and have developed award winning relationships and methods of working in achieving our goal of providing the best services possible at the best value.



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Conveying by Design

The ESP (Engineering Systems & Projects Ltd) team has many years experience in the design, manufacture, and installation of conveying systems. This experience produces cost effective working solutions for the conveying problems associated with the modern day container, and it's associated packaging line.

A wide range of container and package handling equipment is available, either as single items or as part of a complete installation. All of our conveyors are manufactured to the highest standards and also include:

- Fully CE Marked systems
- Manufactured in 304 grade stainless steel or mild steel painted construction
- Multiple widths, from small glass bottles through to full pallet conveyors
- Precision engineered using the highest quality materials suitable for the environment

Extensive use of industry standard Computer Aided Design tools such as AutoCAD and Solid Works 3D Modelling, reduces the time taken for design and enables detailed drawings and layouts to be produced quickly and efficiently.

Our design engineers are up to date with the latest designs and conveyor technology which allows us to provide the most cost effective and efficient layout for each application, When designing conveyor systems within manufacturing, filling and packaging facilities, we assess the following:

- Environment which the conveyors are to be installed
- Product flow and raw material storage
- Operator accessibility
- Health and safety
- Interfaces with up and down stream machines and equipment

Conveyor Types Available

- | | |
|------------------------|------------------------|
| ◆ Magnetic Conveyors | ◆ Modular Belts |
| ◆ Vacuum Conveyors | ◆ Endless Belts |
| ◆ Side Grip | ◆ Slat Conveyors |
| ◆ Accumulation Systems | ◆ Rollerpath Conveyors |

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Filling and Packaging

Filling and packaging lines are seldom purchased from a sole supplier. Correct equipment specification is key to providing all the components that make up a filling and packaging line to deliver the required performance.

Equally important is the specification and implementation of the interfaces that link the various components together. This is often proven to be the weak link in a source of conflict between suppliers.

ESP has a proven track record for correctly specifying equipment together with extensive experience of specifying and designing the interfaces between components and the rest of the process environment. We often undertake the line integration role on projects.

Using state of the art technologies we have developed solutions for management of electronic data associated with the setup, running, monitoring and subsequent reporting of complete filling and packaging facilities. Reduction of changeover times and more accurate and reliable machine setup and monitoring improve quality and performance (e.g. OEE).

In addition, ESP has a wide range of experience with systems associated with filling and packaging such as pigging systems and self-cleaning break tanks and check weighing.

ESP work very closely with the manufacturers of filling and packaging machines, advising both on machine development and standards for construction including CE and ATEX. ESP also provides nationwide service and spares for installed equipment.



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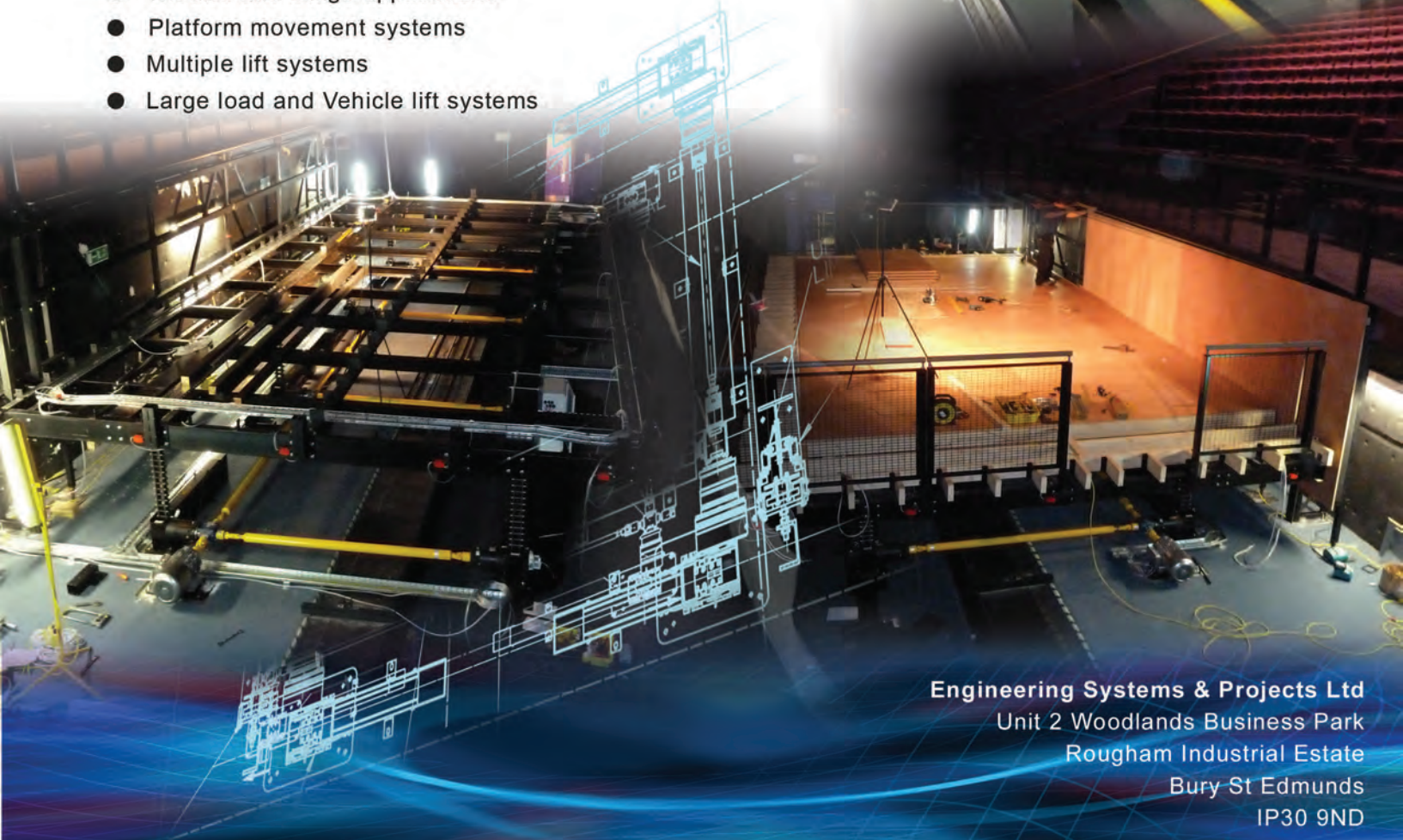
Specialist Lifting Solutions

ESP (Engineering Systems & Projects Ltd) design, manufacture and install bespoke machine lifting solutions for the movement of loads vertically and horizontally. Solutions range from individual component lifts to entire turnkey systems, all of which encompass a wide variety of applications such as:

- Manufacturing
- Personnel Access Lifts
- Industrial Automation and Packaging
- Pallet/Box Lift and Transfer Systems

ESP not only provide systems for industrial solutions but can also cater for a wide range of leisure and entertainment applications, including stage lift and scenery solutions utilising state of the art technologies. Typical applications include:

- Theatre and Stage applications
- Platform movement systems
- Multiple lift systems
- Large load and Vehicle lift systems



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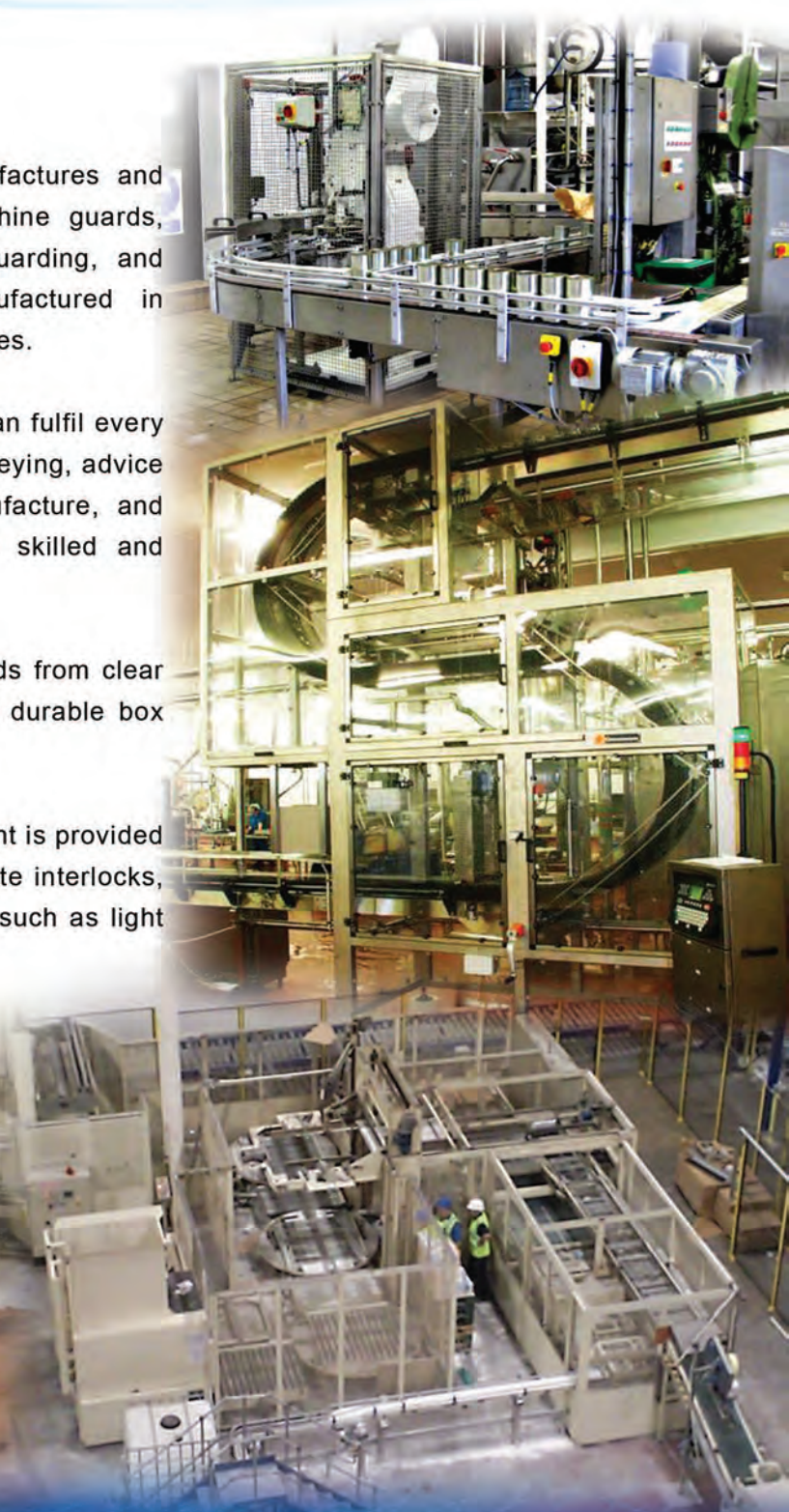
Machine Guarding

ESP (Engineering Systems & Projects Ltd) manufactures and supplies a very wide range of high quality machine guards, including bespoke guarding, standard machine guarding, and modular systems. All are designed and manufactured in accordance with the latest health and safety guidelines.

Our comprehensive range of services ensures we can fulfil every aspect of a machine guarding project, including surveying, advice on technical and regulation issues, design, manufacture, and installation - for which we always use our own skilled and experienced team.

Depending on the application we manufacture guards from clear polycarbonate sheet, to steel mesh supported in a durable box section frame.

Access for operatives or materials handling equipment is provided in the form of hinged or sliding gates with appropriate interlocks, or electro-sensitive protective devices are installed such as light barriers and scanners.



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Control Panels

A well engineered design is only effective if the manufacturing standards are high. By retaining a permanent and skilled team of panel builders, ESP (Engineering Systems & Projects Ltd) can ensure that the quality of the design is enhanced by the quality of the control panels.

From a fully suited motor control centre to a simple junction box, the design and build of a control panel can have a dramatic effect, both on the ease of installation, commissioning and its operational life.

Compliance with all the relevant standards and regulations, including the ATEX directive requirements for *Hazardous Area Applications* is a given. In addition, however, detailed consideration is given to the installation, commissioning and future maintenance requirements. This together with an insatiable attention to detail, ensures that the control panels are optimised for the application in every way.

Panels are fully tested before leaving our workshop and we encourage our clients and their maintenance personnel to witness these tests to ensure continued satisfaction and significantly reduce the time to commission the panels on-site.



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Process Control / Software Development

ESP (Engineering Systems and Projects Ltd) offers fully comprehensive enterprise-wide integration and development services.

We firmly believe in a 'right first time' approach to projects. This can only be achieved through performing detailed control and operability studies at an early stage. This ensures that the user requirements are optimally transformed into a high quality, detailed functional design specification tailored to our clients individual needs and operating environment.

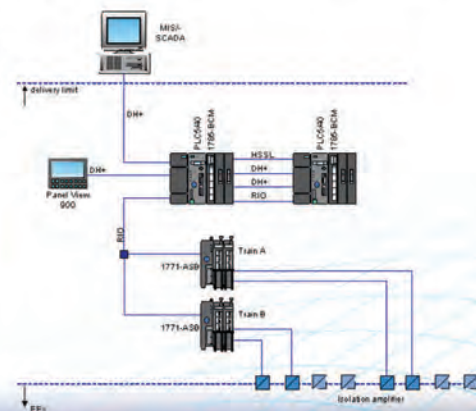
ESP has a wealth of experience in the implementation of all sizes of system from a basic **PLC** system, networked **SCADA** systems, right through to distributed batch control systems fully compliant to **SP88/SP95**.

With the ever popular supply chain model, it has also become increasingly important to provide associated data management/historian and analysis tools linked to systems at the enterprise level. ESP has a proven track record in delivering such projects.

In providing turnkey automation solutions, ESP have developed particular expertise and techniques for the automation and upgrade of existing facilities with minimum disruption to production. This enables our clients to maintain competitive advantage without paying the penalty of major production outages.

Other speciality areas include **Batch Manufacturing**, **Line Integration**, **Product Transfer/Pigging** and **Database Systems**.

Our process control and software development services are strongly complimented by our proven ability to provide the hardware, panel design and build and electrical installation, especially in hazardous areas to **ATEX** standards.



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Field Installation Services

Field installation is often the client's first exposure to the quality of service that can be expected from a supplier. For this reason ESP (Engineering Systems & Projects Ltd) retains a field installation team familiar with the pitfalls likely to be encountered. Whether it is an update of an existing installation, starting from a green field site, or replacing obsolete equipment with new, it is probably a situation which has been encountered before.

Apart from working extensively throughout the UK, ESP engineering staff have installed in many European countries, and in various parts of the Middle East, Far East, USA and Australia.

The type of installation service offered to clients varies. In some cases ESP provides a complete installation team taking total responsibility for all aspects of the work, in others the client may wish to use their own labour with ESP providing an on-site Construction Manager.

Installation of Electrical Systems In Hazardous Areas

The electrical division of ESP employ specialist service engineers and experienced installers who are more importantly qualified in ***"the safe use of electricity in potentially explosive environments"***. This includes the use of many standards of hazardous area engineering disciplines to include the intrinsic safety, flameproof and increased safety types of installation.

ESP has led the way in the implementation of projects using the new ATEX directives and as such have the capability to audit and consult upon new or old installations.

ESP employ qualified test and inspection engineers certified to the latest IEE regulations and standards.



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Line / Factory Re-location

ESP (Engineering Systems & Projects Ltd) has many years experience in both re-organisation and relocation of equipment and machinery associated with the manufacture and packaging of various products.

ESP prides its self on undertaking these tasks in the minimum possible time, minimising the impact on production and overall manufacturing downtime.

ESP offers a complete engineering service to include:

- Full design and project management capability
- Asset tagging of equipment prior to removal
- Equipment/Line/Process disassembly
- Packaging and loading for transportation
- P.U.W.E.R. assessment and alterations where required
- Full re-assembly and commissioning

ESP has experience in most industrial sectors including:

- Equipment re-configuration, modification and refurbishment
- Food and Beverage
- Chemical
- Pharmaceutical
- Manufacturing and assembly

ESP prides themselves on assessing and mitigating the health and safety related risks and has achieved SafeContractor accreditation in this regard.



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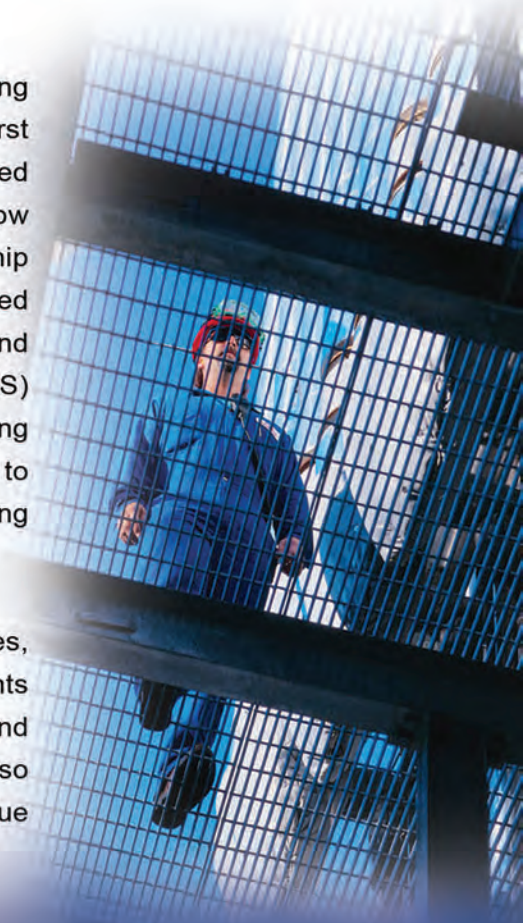

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Maintenance and Support Services

ESP (Engineering Systems & Projects Ltd) have provided engineering maintenance and support to all of our major clients for many years. At first this was normally as a follow up to completed engineering projects and aided a smooth transition when installing new plant and equipment. We now however provide core maintenance and support services to blue chip companies such as ICI, Bosch, and IBM to mention but a few. Our plant based maintenance teams have been responsible for successfully managing and implementing Computerised Maintenance Management Systems (CMMS) referencing all plant assets and equipment. We also believe that engineering maintenance linked to a robust continuous improvement process is key to significant production improvements and in some cases, record breaking performances.

To compliment our comprehensive software design and development activities, ESP also provide a full IT support service to a number of our clients including 24 hour call-out, software, hardware, communications/networks and server upgrades. This is not only for the standard office environment but also for industrial applications, often avoided by many support organisations due to the diversity and often bespoke nature of such systems.



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Design Services

Adding Value by Design...

A new concept to many perhaps, but at ESP (Engineering Systems & Projects Ltd) adding value by design is second nature and a key differentiating factor for our clients.

ESP's reputation for innovative and well-engineered solutions is based on our strong engineering design resources and an ability to be able to analyse our client's needs and to identify their key requirements. As such, our engineers are equally at home starting from a blank sheet of paper to modification of existing designs.

ESP has extensive design experience in the electrical, controls, piping and instrumentation, mechanical and pneumatic fields. Design of equipment and installations in hazardous areas governed by the ATEX standards are our speciality. This wide ranging expertise enables a coherent and efficient approach to multi-disciplined projects.

Extensive use of industry standard computer aided engineering tools such as AutoCAD reduces the time taken for the design and enables detailed drawings to be produced efficiently.

Our design engineers work in an environment where management of change procedures are second nature together with playing an attractive role in the project safety reviews (HAZOP).

Specialist Services Offered

- ◆ PID creation
- ◆ Control system design
- ◆ Process and factory layout drawings
- ◆ Filling and packaging layout drawings
- ◆ Copy drafting (as fitted drawings)
- ◆ Piping and steelwork isometric drawings
- ◆ Drawing database and system management
- ◆ AutoCAD and AutoCAD 3D qualified engineers



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Health and Safety Audits

With a focus on safety solutions that help our clients introduce and maintain effective risk management control systems, ESP (Engineering Systems & Projects Ltd) can offer an un-biased assessment of your safety needs, and provide a cost effective solution that will protect personnel and the environment from hazardous operations in the workplace.

ESP offers a unique seamless service by combining advice on compliance with Health and Safety Regulations with engineered solutions for plant and machinery safety. We can also help organise or improve your health and safety management policy and procedures, undertake report based safety audits, design safe systems of work and undertake risk assessments.

In addition, our project management services include system design, product supply and integration, installation, commissioning, training and after sales support.

ESP are proud to have been awarded a SAFEcontractor accreditation.

"More companies need to understand the importance of adopting good risk management in the way that ESP has done. This firm's high standard has set an example, which hopefully will be followed by other companies within this sector."

John Kinge, Head of risk at SAFEcontractor



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The Provision & Use of Work Equipment Regulations 1998 (PUWER)

These regulations implement, in the UK, the European Use of Work Directive. They came into force on 5th December 1998. These regulations replace PUWER 1992 and include a few changes and additions.

“Work equipment” is broadly defined to include any machinery, appliance, apparatus or tool. It includes assemblies of components and complete plant.

“Use” means any activity involving work equipment and includes starting, stopping, programming, setting, transporting, repairing, modifying, maintaining, servicing and cleaning. The regulations give a detailed list of requirements for employers. These cover general and specific requirements. General requirements include aspects such as:-

- Ensuring the suitability of work equipment for its use
- Maintenance of the work equipment
- Provision of equipment that conforms to relevant EC product safety directives
- Provision of adequate information, instruction and training regarding the use of equipment and health and safety

Specific requirements include aspects such as:-

- Guarding and interlocking of dangerous machinery
- Ensuring that maintenance operations are carried out safely
- Ensuring protection against work equipment and articles/substances at high or very low temperatures
- Provisions regarding work equipment control systems and control devices
- Ensuring protection against specific hazards. These are listed in the regulations and include, for example, any article or substance falling or being ejected from the work equipment and explosions
- Ensuring that work equipment is provided with suitable means to isolate it from all of its energy sources. It is also necessary to take appropriate measures to ensure that re-connection of any energy source does not expose any person using the work equipment to any risk



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