

BELZONA TECHNOSOL LIMITED

Specialist Application Services of Belzona Engineering
Composites and Protective Coatings



NOVEL SOLUTIONS TO AGE-OLD PROBLEMS



Belzona Technosol Limited is the application services company within the Belzona group. We combine industrial repair and protection materials with application expertise to ensure the highest quality repair and protection of all types of equipment and structures.

Providing high performance polymer repair and protection solutions across industries such as Oil and Gas, Petrochemical, Power and Facilities Maintenance, our wide scope of expertise and capabilities include solutions for:

- Erosion-corrosion and chemical attack
- Abrasion and wear
- Waterproofing and weatherproofing
- Safety surfacing

With fully-equipped application workshops strategically situated across the UK, direct access to Belzona materials and a highly trained team of Applicators and Coating Inspectors, Belzona Technosol is able to provide a unique service tailored to your needs.



OUR CAPABILITIES

SPECIALIST APPLICATION

Our highly skilled team has experience in performing a wide range of innovative repair and protection solutions, both in an off-site capacity at our regional workshops, as well as on-site throughout the UK. Backed up by 24-hour technical support, every project we undertake is to the highest standards of quality and safety, ensuring the complete satisfaction of our clients.

INSPECTION SERVICES

Our experienced team of NACE® certified coating Inspectors ensures Belzona systems are applied in accordance with specification standards and to the requirements of our clients. Trained Inspectors are available to undertake global projects and will provide services including failure analysis, coating surveys, consultancy and quality control to clients around the world.



Cold applied
and no hot work



Long-term
and cost-effective



Applied in situ
and minimal downtime

CUSTOMER FOCUS

“ Very impressed with the professionalism of the work that was carried out by the team. ”

“ The 2 repairs were a complete success and the co-operation of the guys was very good. ”

“ The works carried out look incredible - I would like to pass on my thanks to you and your team and also the thanks of our client. They should be very proud of the work that they have undertaken. ”

DEDICATION TO SAFETY

All of our Applicators and coating Inspectors are trained to the highest standards in safety, some of their qualifications include:

- Abrasive Wheels
- Air Quality Training
- Asbestos Awareness
- Blast Training
- Bosiet
- CCNSG
- Confined Spaces
- Contractor Competency Assessment
- COSHH Assessors
- Driver Safety Awareness
- Environmental Awareness
- Fire Warden
- First Aid at Work
- IPAF
- IOSH Managing Safely
- Jet Washing
- Manual Handling
- Minimum Industry Safety Training Standard (MIST)
- NACE® Coating Inspection
- Noise and Vibration Awareness
- PASMA
- PAT Testing
- Risk Assessments
- Scaffold Inspection
- SSSTS
- Working at Height



WHY BELZONA TECHNOSOL?

With combined experience of over 170 years, we have established our expertise in the application of polymeric engineering composites and protective coatings. Across a diverse range of industries our track record has gained the confidence of countless Engineers, Contractors and maintenance personnel around the world.

From the Chemists and Engineers in the Belzona centres, to our nationwide network of Application Technicians, each person plays a vital role in the Belzona Technosol team, ensuring we have the knowledge and training required to solve the problems of your specific industry.

With an outstanding reputation for quality workmanship and reliability, we aim to offer our clients quality installation at competitive prices, whilst complying with the latest health and safety regulations.

As the dedicated Application Service for the Belzona company, Belzona Technosol don't undertake any other work, we are 100% dedicated to undertaking Belzona applications.

GLOBAL ACCREDITATIONS

Belzona Technosol is committed to ensuring our customers are provided with materials and services of a consistently high level of quality, reliability and safety.

As proof of this, we have been awarded the following certifications and accreditations:



FULL SERVICE PACKAGE



QUOTATION

In order to provide you with an accurate estimation of Belzona's recommended repair solution, our team of experienced Engineers will provide a detailed quotation including an outline scope of work along with digital images and examples of similar applications that have been previously completed.



CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

Where required, Belzona Technosol provides a fully compliant construction phase health and safety plan. The plan will provide a focus for managing and co-ordinating health and safety on site, setting out arrangements, policies and procedures to protect the health, safety and welfare of everyone involved on site.



METHOD STATEMENT AND RISK ASSESSMENT

With all projects undertaken by Belzona Technosol, we provide risk assessments, method statements and COSHH assessments prior to site induction meetings and prior to the commencement of our work. All of our projects are assigned a Regional Engineer ensuring a continual source of information is made available to assist you during each stage of the project.



COMPLETION CERTIFICATE

On completion of a project, a certificate will be provided to record project satisfaction from all involved parties with the Belzona solution. The completion certificate assures asset owners that work has been completed to the required standard, with correct health and safety measures in place. This also gives you the opportunity to provide valuable feedback to allow for the continuous improvement of our service.



WARRANTY

The Belzona Technosol 'Standard Warranty Period' for all technically approved applications is 12 months. Should you require a further warranty period, we can provide an extended warranty proportionate to the period stated by the Belzona Polymerics Limited Technical Approval process, as being the period applicable to the specific application.

ENGINEERING COMPOSITES

For the repair, rebuilding, sealing and strengthening of rigid surfaces

Utilising Belzona engineering composites and protective linings, your assets can be cost-effectively maintained and upgraded by Belzona Technosol. Machinery can be repaired and coated on-site to minimise downtime or in one of our state-of-the-art, conveniently located workshops.

Due to the nature of the materials we use, high quality surface preparation prior to application is vital. Belzona Technosol provide on-site grit blasting services allowing us to carry out repairs quickly and efficiently, ensuring your equipment can often be reinstalled swiftly to minimise costly downtime. Even the most severely damaged piece of equipment can be refurbished and protected against corrosion, erosion and other forms of mechanical damage, at a fraction of the replacement cost.

You can be assured that our highly-trained Engineers will advise and apply the correct material in response to specific problem areas which include:

- Cracked or holed engine and pump casings, pipes, tanks, transformers and other equipment
- Pitted metal surfaces
- Damaged shafts and hydraulic rams
- Water and oil leaks
- Leaking joints and flanges

REPAIR OF MACHINERY AND EQUIPMENT



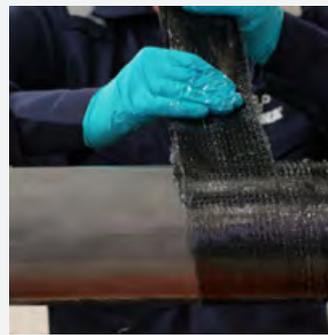
Bonding

Introduced by Belzona in the 1950s, cold bonding technology is now considered to be a viable alternative to welding as it does not require hot work and reduces downtime.



Forming and rebuilding

Cold-curing, paste-grade materials can be used to reinstate damaged equipment. Exact profiles can be rebuilt with the use of forming or machining techniques.



Wrapping and patching

Cold-curing, 100% solids composite wraps offer outstanding adhesion and excellent mechanical properties compared to other non-metallic systems suitable for compliant or non-compliant applications.



Sealing and filling

Rapid-curing, multi-purpose materials can be utilised for in-situ leak sealing and corrosion pit filling for long-term repair and protection, even in wet or oily situations.



PROTECTIVE LININGS

For the coating, protection and upgrading of rigid surfaces

When the performance of your equipment has deteriorated due to physical and mechanical effects and the running costs of your machinery are increasing, protection with a Belzona material could be the answer.

The utilisation of specialist VOC-free coatings featuring erosion, corrosion, abrasion, chemical and temperature resistance, or a combination of these properties, ensures Belzona Technosol has a solution for almost all service conditions. Our highly-experienced applicators are trained to apply protective coatings in confined spaces such as vessels, tanks, silos or other large enclosed spaces.

New equipment can also benefit from the application of a Belzona coating or lining system as an alternative to Corrosion Resistant Alloys (CRAs) for the long-term resistance to corrosion.

Belzona Technosol offers unparalleled expertise in the application of protective linings. Our capabilities include but are not limited to:

- Internal lining of centrifugal and positive displacement pumps
- Long-term erosion and corrosion resistance for heat exchangers, water boxes and tube sheets
- Protection of butterfly and gate valves, pumps and korting nozzles from erosion, corrosion and cavitation
- High temperature coatings for industry e.g. process vessels, separators, flare knock-out vessels and evaporators operating under immersion
- Protection against a variety of chemicals on equipment operating at high temperature and full immersion



Several floating hoses showing signs of damage



Typical Belzona Elastomer repair

FLEXIBLE POLYMERS

For flexible repair and coating applications

Belzona Technosol are proud to offer alternative methods to traditional repairs such as hot vulcanising. Our cold-curing polyurethane polymers are ideally suited to protect flexible components and linings suffering from extreme erosion, abrasion, and impact damage.

By making use of flexible Elastomers we can repair and cast rubber components, as well as re-line metallic substrates in situ. The resulting repairs are extremely durable, abrasion and tear resistant and retain the elastic properties of the original material.

Recognising health and safety standards, our methods do not require any hot work and allow for simple and safe application without disruption to plant works; minimising costs, downtime and health and safety risks.

Belzona's Elastomer range has been proven to:

- **Reduce capital expenditure**
- **Lower maintenance costs**
- **Improve efficiency and safety**
- **Reduce downtime**
- **Simplify maintenance procedures**
- **Extend machinery and equipment life**

POLYMERIC MEMBRANES

For weatherproofing buildings, structures and insulation

In addition to the machinery and equipment solutions, Belzona Technosol provides a wide range of services essential to maintaining infrastructure. Utilising liquid-applied polymeric membranes, roof problem areas such as joints, seams, upstands, flashings and gutters can be repaired and protected.

Our team is competent in the inspection of scaffolds and compliant with all current legislation and codes of practice. In addition, they are trained to work safely in exposed, at height locations to give you complete confidence in our service.

Our low odour, cold-applied systems incur minimal disruption during the application process, allowing for a rapid and safe installation in many locations such as schools, hospitals and other public buildings.

Belzona systems are:

- ✓ **Cold-applied - no hot work**
- ✓ **Low odour**
- ✓ **Microporous allowing trapped moisture to escape**
- ✓ **Adaptable to roof movements due to their outstanding elasticity**



Corrugated roof showing signs of cut end corrosion



Belzona polymeric membrane applied to prevent water ingress and provide long-term protection



CONSTRUCTION POLYMERS

For the repair of concrete and stonework

When concrete and stonework become deteriorated by erosion, corrosion, chemical attack or physical damage, Belzona Technosol offers a reliable solution. Our comprehensive service package includes all aspects of the repair application including surface preparation using high-pressure water cleaning or water-jetting methods and hand held rotating equipment. These services are all undertaken by PASMA and IPAF certified personnel.

Our range of materials can be used in a variety of application situations including overhead and vertical repairs without the requirement for shuttering. Our 100% solids systems offer:

- ✓ **No shrinkage**
- ✓ **Impact resistance**
- ✓ **High adhesion**
- ✓ **Chemical resistance**

ENVIRONMENTAL BARRIER POLYMERS

To protect against and reduce environmental impact

We carry out a variety of surface preparation methods, from grit blasting to mechanical hand preparation, and supply high performance, environmental barrier polymers, both airless spray and brush-applied, which prevent corrosion, chemical and environmental attack.

Belzona systems can be applied in a variety of operation situations including on-line application to hot, wet or underwater surfaces and in areas suffering from environmental deterioration. Our services include:

- **Corrosion under insulation barrier protection**
- **Surface-tolerant coatings**
- **External corrosion and weathering protection**
- **Protection against chemical attack**

INSPECTION SERVICES

To ensure Belzona systems are applied correctly

Belzona Technosol recognise the need to set and monitor global application standards to ensure the success of the solution implementation.

We provide highly trained Coating Inspectors who will oversee the application of Belzona materials to ensure applications are completed in accordance with relevant standards and the client's specification.

Our NACE® certified Coating Inspectors will visit your plant, monitor the situation and advise on technical issues arising from the application of products manufactured by Belzona.

Our Inspectors form an important part of our service, providing inspection to oil rigs, refineries and general industry. They will provide advice on surface preparation, environmental control and application of the Belzona product, along with:

- **Coating inspections**
- **Verification of conformance to specification**
- **Failure analysis**
- **Belzona Coating surveys**
- **Consultancy and quality control**
- **End of service life inspections**

Independent
third-party
inspections

Maintenance
of a correct
application
environment

Completion of
daily QA/QC
documentation





ISO 9001:2008
Q 09335
ISO 14001:2004
EMS 509612

Belzona products are manufactured under an ISO 9000 Registered Quality Management System



Belzona App

Product and application information available at your fingertips

