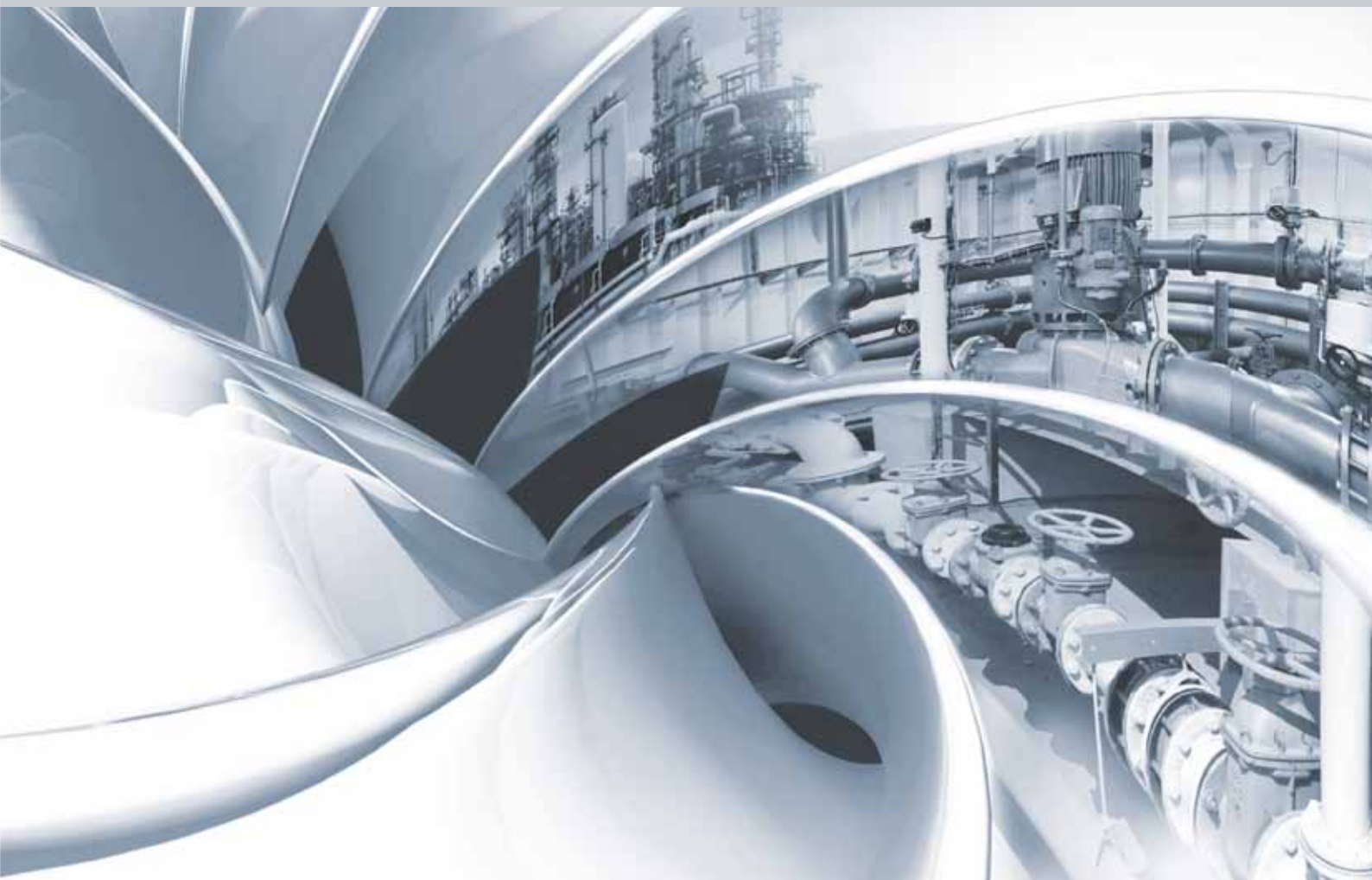


**LOCTITE**<sup>®</sup>

# Application Engineering Services

Solutions for all Surface Engineering Needs



Excellence is our Passion

# Henkel – Your Partner for Maintenance & Repair Solutions

With years of experience in the industrial maintenance market, Henkel as the worldwide market leader in adhesives, sealants and surface treatment has the proven competence and reliability to support you in all your surface engineering needs.



Whatever you rebuild, repair and protect we offer you everything you need.

## Reliable partnership

- A team of experts in over 126 countries for high quality service wherever you need us
- Technology expertise and application knowledge to provide support and training for your surface engineering needs

## Innovative solutions

- State-of-the-art research centers to develop new products and solutions
- Tailor-made solutions for your specific surface engineering needs

## Latest technology

- Latest technologies in rebuilding and protecting industrial equipment
- Awareness of relevant industry standards and approvals by cooperating with leading certification societies
- Highest health & safety standards

## Trusted brands

- Proven quality & reliability in manufacturing and maintenance

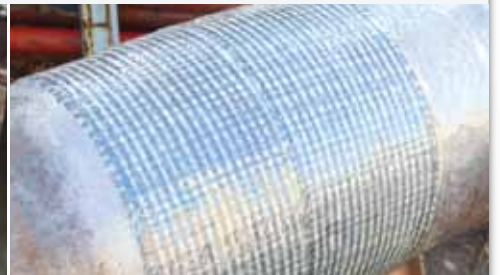
## Industry competence

- In-depth maintenance knowledge for your specific industry



## Device knowledge

- Specific knowledge of all major industrial devices and components

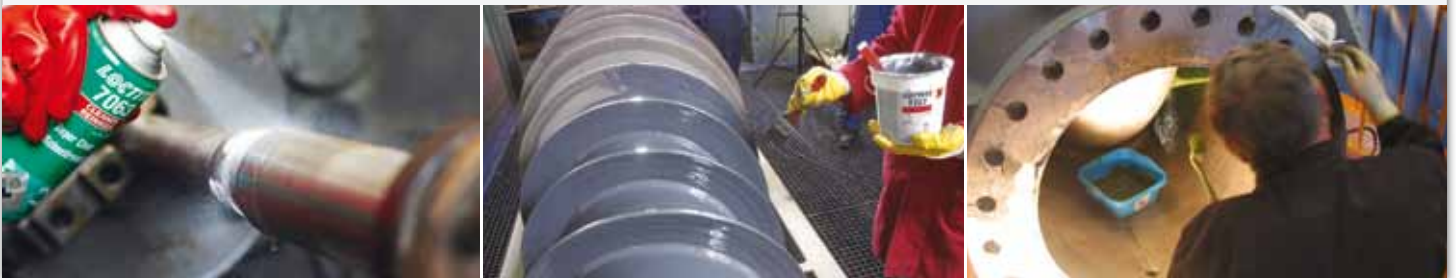


# Our Application Engineering Services

## Surface Engineering Solutions

Henkel's different repair and application solutions enable you to rebuild, repair and protect your industrial equipment and components:

- Restoration of equipment and components (instead of investing into new equipment)
- Protection against corrosion and chemical attack
- Protection against abrasion, erosion and mechanical wear
- Improving energy efficiency in fluid energy equipment
- Chocking of motors, pumps and auxiliary elements
- Reconstruction and structural reinforcement of pressurised containers and pipes using laminates



## Henkel Certified Applicator Network

Henkel is partnering with selected industrial maintenance service providers to offer application engineering services along with our surface engineering products. These applicators have the manpower to conduct the required application operations – combining the knowledge and experience of traditional skills such as welding, mechanical fitting and machining with the application knowledge for adhesive-based solutions.

Applicators can only obtain the status of a Henkel Certified Applicator Center if they follow the same high standards as Henkel:

- Demanding quality standards
- Well-trained application engineers
- Quick response time
- Health & safety standards compliant



Henkel Certified Applicator Center



## Application expertise

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Together with our Certified Applicators we are able to offer you extensive application expertise for your surface engineering needs:

- Innovative solutions and technologies in adhesives, sealants and surface treatment
- Development of customised repair systems
- Application engineering and consulting
- Specialised Henkel Certified Applicator Centres
- Field work and support in your workshop
- Testing laboratory
- Product development laboratory



## Your benefits

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The combination of innovative solutions and a network of application engineering experts enables us to face all your surface engineering challenges. Benefit from our competencies and fulfill all your surface engineering needs:



### **Increase Reliability**

of worn parts by restoring them to a serviceable condition



### **Improve Safety**

by preventing occupational accidents due to part failure



### **Save Time**

by minimising downtime and extending part life



### **Reduce Costs**

by avoiding part replacement and increasing equipment efficiency

# Application Operations

To rebuild, repair and protect your industrial equipment, the following operations are crucial services for surface engineering solutions.

## Cleaning & pre-treatment

Correct surface preparation is crucial for the successful application of metal repair products and protective coatings and compounds. The main important factors for a successful application are surface profile and surface cleanliness.

- **Mechanical treatment (abrasive blasting)**

Mechanical treatment eliminates surface pollutants and at the same time modifies the shape and the roughness of the surface in order to improve adhesion. Incorrectly treated surfaces are the main cause for failures of a coating.



- **Cleaning**

Careful cleaning is critical for adhesion and therefore the overall effectiveness of any surface engineering application. Any pollution and chemical contaminants have to be removed before and after mechanical pre-treatment and prior to repair.



- **Flash rust prevention**

Pre-treatment of the freshly blasted metal surface with a “conversion layer” provides a temporary anti-corrosion protection against flash rust and increases the adhesion on a number of substrates.



- **Priming**

Primers can be used to improve the adhesion to the substrate and therefore to increase the reliability and versatility of the coating. They are applied prior to the coating to ensure that even high viscosity products fill all the voids of the substrate's surface.



## Coating

Protective coatings and compounds offer maintenance solutions to problems caused by wear, abrasion, erosion, chemical attack and corrosion. Damaged surfaces can be rebuilt and protected against future mechanical or chemical attack.

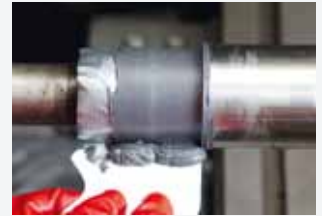
Typical applications are air ducts, pumps, heat exchangers, centrifuges, impellers, fan blades, cyclones, pipes, tanks and retention areas.

Henkel products are available in brushable, trowelable or sprayable formulations for different application needs: While all coatings offer outstanding chemical resistance and corrosion protection, our protective compounds additionally contain high performance ceramic fillers providing long-term protection against wear, abrasion and erosion.



## Filling & rebuilding

Worn metal parts can be repaired and rebuilt with metal-filled compounds without the need of heat or welding. Usually an additional shaping operation is needed. Typical applications include cracks in housing, worn keyways in shafts and collars or worn cylindrical shafts. Rebuilding operations are one of the most complex in the surface engineering discipline and must be carried out by qualified personnel with proven experience.



## Supplementary operations

- **Inspection**

To ensure an application meets all required standards, inspection of different technical parameters need to be incorporated into the application process. Collecting and recording results of the different inspections is important to establish traceability.



- **Heat treatment**

Many products are highly sensitive to temperature affecting parameters such as viscosity, cure behaviour etc. For example maintaining control of the temperature with infrared lamps and hot air cannons ensures the optimum operating conditions for correct product application.



- **Auxiliary operations**

By combining the most advanced adhesive-related applications polymer composite application techniques with traditional methods of mechanical fit, materials shaping and turning, our multidisciplinary operating teams provide you with innovative, simpler, more versatile and cost-effective repair systems.



## Special applications

- **Structural reinforcement**

Henkel Composite Repair System is an innovative alternative for repairing pipework and equipment in diverse industries. The two-component epoxy technology allows fast repairs without the need to shut down the line or substitute equipment – with the benefit of significant cost savings. The application can be carried out on the outside of pipes in case of corrosion and on through-wall defects.



- **Chocking of industrial equipment**

Loctite® Marine Chocking is a two component epoxy system specifically designed for chocking machinery, ship engines and other equipment. It guarantees 100% contact between surfaces, maintains the machine's critical alignment, and offers high resistance to compression, chemicals as well as to vibrations. The product has approvals from all major classification societies.



- **Treatment of industrial infrastructure and floors**

Henkel diverse product portfolio offers solutions to protect floors and rebuild concrete surfaces. Apart from the typical application on metal surfaces and concrete, construction materials can be restored and protected, enabling the operating life of industrial infrastructure to be extended.



# Henkel Certified Applicator Network – your Choice for Application Engineering Services

- Find out more about **our solutions** for your surface engineering needs: [www.loctite.nl/oppervlaktetechnieken](http://www.loctite.nl/oppervlaktetechnieken).



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