

LOCTITE[®]

Maintain, Repair, Rebuild, Protect

Solutions for Conventional Thermal Power Plants



Henkel

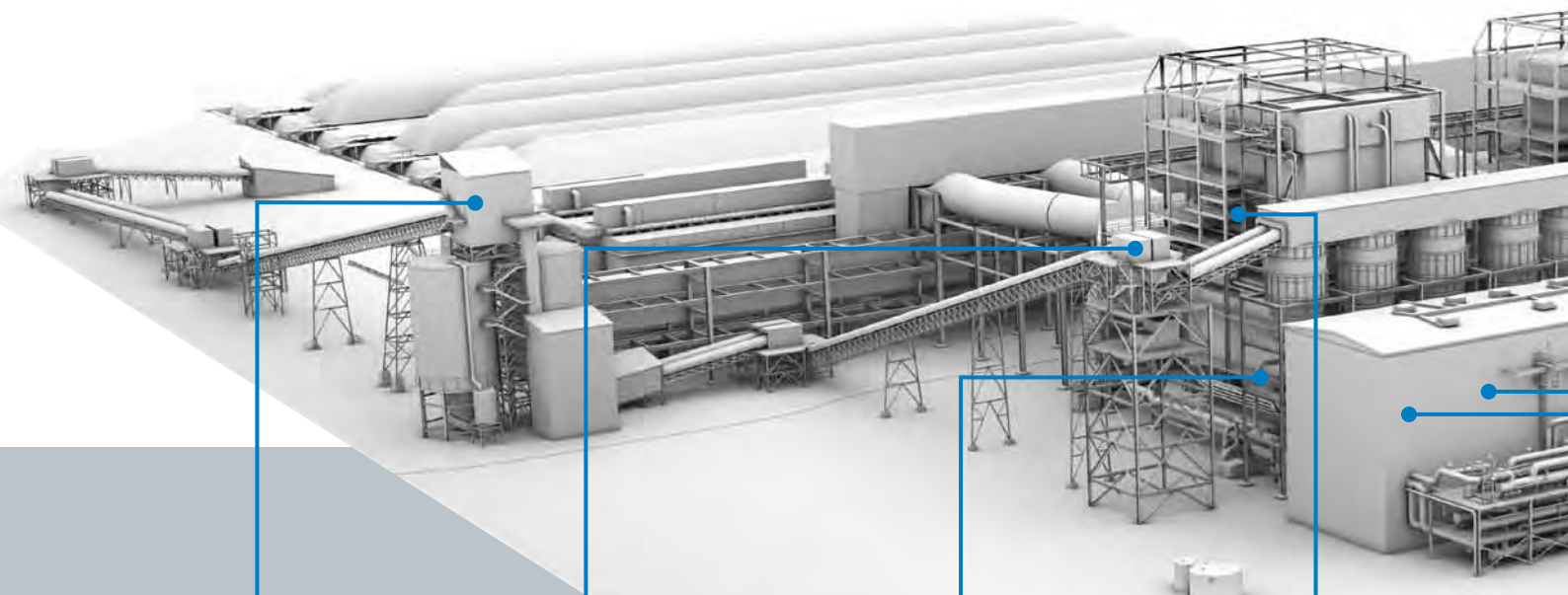
Henkel – Complete Solutions for Your Entire Thermal Power Plant.

Repair, rebuild, maintain and protect your assets

Maximizing production and preventing unplanned downtime are critical in the power generation industry. At Henkel – the leading solution provider for adhesives, sealants and functional coatings worldwide – we understand the challenges you face because we know the power generation industry inside and out.

With more than **50 years of experience** in power generation, we'll help you keep your plants and equipment in top operating condition. **Our LOCTITE brand** adhesives are known around the world for reliability and quality.

Let us show you how Henkel and our LOCTITE brand can help you **reduce costs, increase reliability,** and **improve efficiency.**



CRUSHER:
LOCTITE threadlockers to prevent fastener loosening

CHUTES AND HOPPERS:
LOCTITE protective coatings to prevent wear

COAL MILLS AND PF LINES:
LOCTITE wear-resistant coatings

COAL BURNER NOZZLE TIPS: LOCTITE extreme high temperature and erosion-resistant coatings

Why Henkel?

As the leading solution provider for adhesives, sealants and functional coatings worldwide, we work as a partner with the power generation industry.

COMPLETE PRODUCT PORTFOLIO

A full range of solutions for the Power industry.

INNOVATION

Solutions developed with our customers to help solve their toughest challenges.

TECHNICAL EXPERTISE

Engineering support to help you improve your operations.

GLOBAL REACH

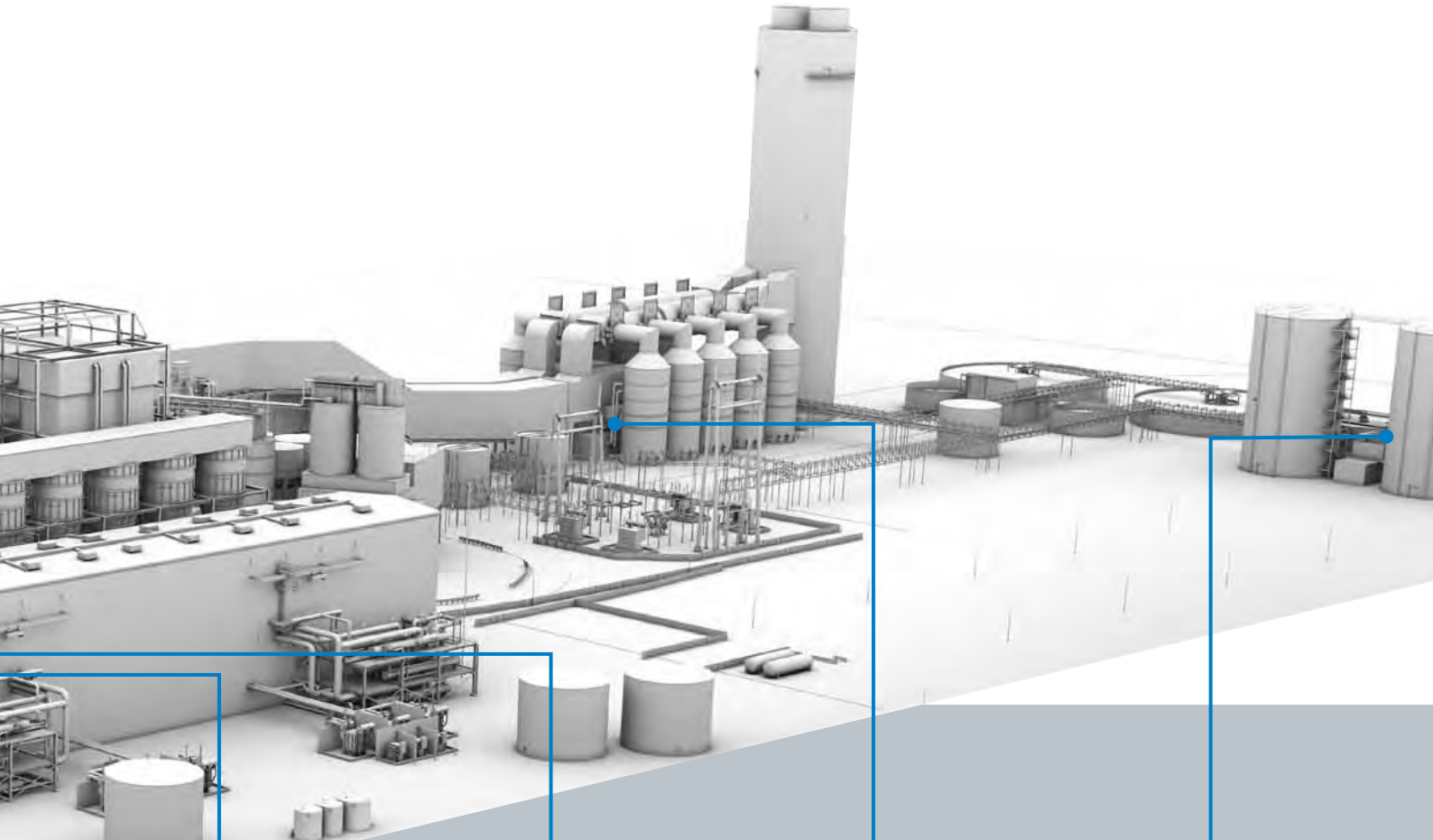
Our products and services are available worldwide.

TRAINING

On-site maintenance workshops to prevent equipment failure.

CUSTOMER PARTNERSHIP

Henkel is more than a supplier – we're committed to your success.



TURBINE:

LOCTITE anti-seize compounds to prevent fastener seizing

CONDENSERS:

LOCTITE protective coatings to prevent tube-to-end sheet corrosion

PUMPS:

LOCTITE wear-resistant and energy-efficient coatings

DE-MINERALIZATION PLANT:

LOCTITE corrosion protection coatings

Put Henkel's expertise to work on some of your toughest challenges:

YOUR CHALLENGE

EFFICIENCY

Greater power consumption and reduced efficiency of equipment due to wear and erosion

RELIABILITY

Chronic equipment failures, increased repair costs and downtime

HENKEL SOLUTIONS

Comprehensive maintenance programs for pumps and other equipment to improve efficiency

LOCTITE products to prevent fastener loosening, fluid leaks, corrosion and other problems

BENEFITS

- Improved equipment efficiency
- Longer asset life

- Prevent unscheduled downtime
- Increased equipment uptime



- Improving plant *efficiency*
- Increasing equipment *reliability*
- Strengthening plant *safety*
- Reducing *costs*

SAFETY

Safety hazards resulting from unreliable machinery, fluid leaks and other failures

Training on use of Henkel products to improve reliability and reduce downtime; plant surveys to identify repair improvements

- Improved plant safety
- Less downtime

COSTS

Equipment subject to wear and corrosion; replacement costs affecting profitability

LOCTITE products to rebuild and protect equipment; in-situ repair without interruption of operations

- Increased asset life
- Reduced replacement costs



Broad Product Range

From threadlockers and thread sealants to protective coatings, our LOCTITE brand provides solutions for every challenge.

visit www.henkel-adhesives.com/in

Coal Handling Plant

Solutions for abrasional wear, vibrational loosening, and frequent leaks

Wagon Tippler

YOUR CHALLENGE

Severe corrosion on the wagon tippler resulting in weakening of structure and high down time

OUR SOLUTION

Corrosion protection:
LOCTITE Chemical Resistant Coating

BENEFITS

- Resists corrosion attack and protects the structure
- Lower maintenance and labor costs



Conveyor Belt

YOUR CHALLENGE

Wear and tear of conveyor belts during operations

OUR SOLUTION

Belt repair:
LOCTITE Rapid Rubber Repair kit

BENEFITS

- In-situ repair results in time savings – back to service in 4 hours
- Cost savings – avoid replacement



Coal Crusher

YOUR CHALLENGE

Fastener loosening due to heavy vibration

OUR SOLUTION

Reliable threadlocking:
LOCTITE Threadlocker

BENEFITS

- Prevents catastrophic equipment failure
- Improves safety of work environment



Gear Boxes

YOUR CHALLENGE

Frequent oil leakages; bolt loosening due to vibration; loosening of bearing in the housing

OUR SOLUTION

Prevent leaks and fastener loosening:
LOCTITE Flange Sealants, Threadlockers, Retaining Compounds, Thread Sealants

BENEFITS

- Improved reliability of gearbox operation
- Efficient gearboxes free from chronic failures



Additional Solutions

To see more solutions for corrosion protection and fastener loosening, contact your Henkel representative or visit our website.

visit www.henkel-adhesives.com/in

Boiler Maintenance

Solutions for abrasional wear, vibrational loosening, and frequent leaks

Coal Hoppers & Chutes

YOUR CHALLENGE

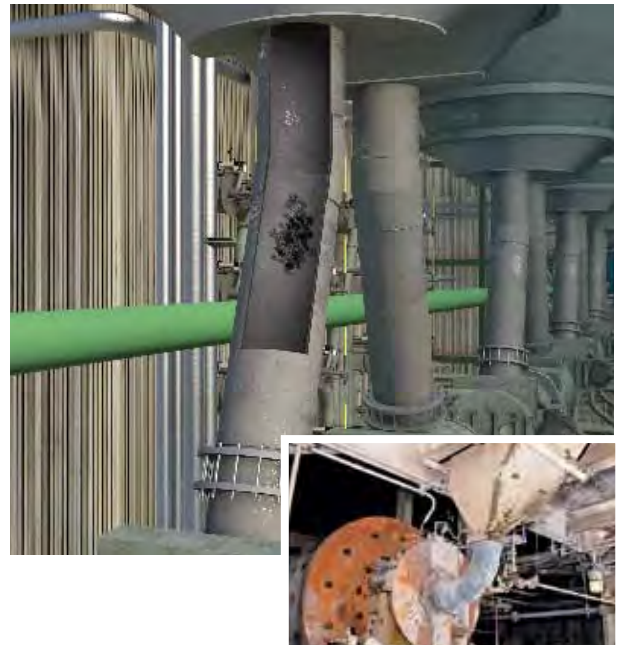
Continuous flow of coal leads to severe abrasion of chute liners, especially at transfer points

OUR SOLUTION

Wear protection:
LOCTITE Wearing Compound

BENEFITS

- Extends equipment life
- Repair at fraction of the replacement cost



Mills – Classifier Cone & Housing

YOUR CHALLENGE

Wear of coal mill interior components subjected to erosion due to flow of pulverized coal

OUR SOLUTION

Wear protection:
LOCTITE Ultra High Temp Pneu Wear & High Temperature Brushable Ceramic

BENEFITS

- In-situ repair
- Longer life than weld repair
- Can be reapplied on existing coating



Mills – Fastener

YOUR CHALLENGE

Loosening of fasteners due to heavy vibration

OUR SOLUTION

Reliable threadlocking:
LOCTITE Threadlockers

BENEFITS

- Prevents catastrophic equipment failure
- Improves reliability
- Increases safety



Mills – Discharge Valve & Outlet Ports

YOUR CHALLENGE

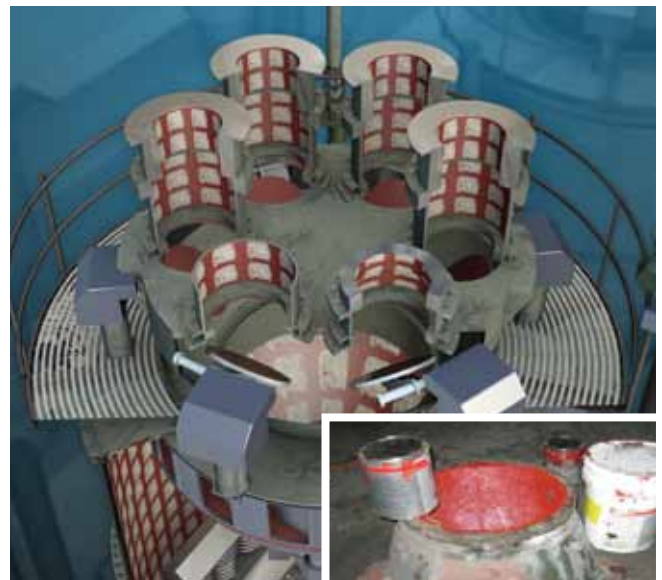
Erosional wear of MDV and MPO along the flow path of pulverized coal

OUR SOLUTION

Wear protection:
LOCTITE Ultra High Temp Pneu
Wear & High Temperature
Brushable Ceramic

BENEFITS

- Extends equipment life
- Avoids frequent costly repair work



Information and Resources

Maintenance guides, catalogs, case studies, additional applications and more – just a click away.

visit www.henkel-adhesives.com/in

Boiler Maintenance

Solutions for abrasional wear, vibrational loosening, and frequent leaks

Coal Carrying Bends

YOUR CHALLENGE

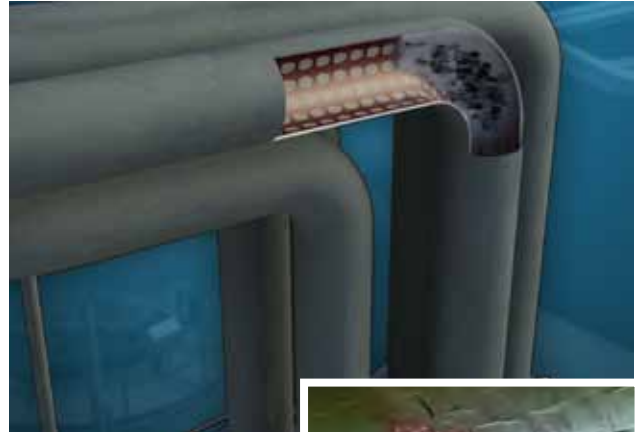
Flow of fine coal leads to erosion and puncturing of pipes at the bends

OUR SOLUTION

Wear protection:
LOCTITE Ultra High Temp
Pneu Wear

BENEFITS

- Extends equipment life
- Repair at fraction of the replacement cost



Coal Burner Tips

YOUR CHALLENGE

Wear of PF burner tip, increasing coal consumption and lowering efficiency of boiler

OUR SOLUTION

Wear protection:
LOCTITE PC 7000 High
Temperature & Abrasion
Resistant Coating

BENEFITS

- Higher wear resistance than weld overlay
- Cost-effective repair
- Reduces downtime



Turbine Maintenance

Coal and combined-cycle gas plants

Steam and Combustion Turbine

YOUR CHALLENGE

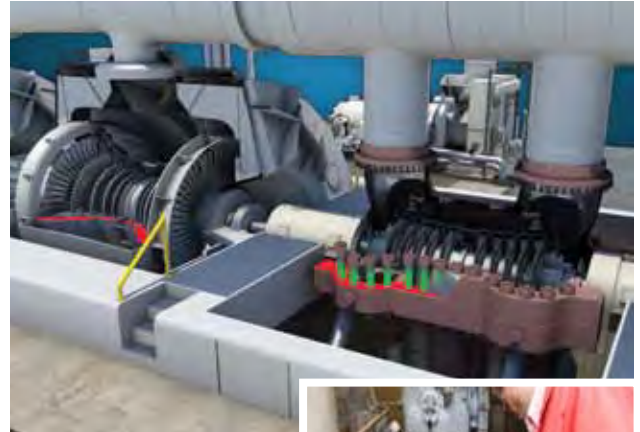
Seizing of threaded fasteners of turbine casing subjected to high temperatures

OUR SOLUTION

Anti-seize:
LOCTITE N-7000 or Heavy Duty Anti Seize

BENEFITS

- Prevents seizing and allows disassembly when needed
- Avoids expensive process of bolt shearing/cutting



Steam Condenser

YOUR CHALLENGE

Corrosion and pitting leads to leakage of cooling water into condenser steam, reducing overall turbine efficiency and contaminates DM water

OUR SOLUTION

Wear protection:
LOCTITE Wear Resistant Putty and Brushable Ceramic Coating

BENEFITS

- Prevents bi-metallic corrosion and seals joints, reducing frequency of tube replacement
- Improves efficiency of condenser and turbine



On-Site Training

Our maintenance workshops will help your staff improve safety and reliability and reduce costs.

visit www.henkel-adhesives.com/in

Ash Handling

Solutions for wear and erosion

Ash Handling Pipe Bends

YOUR CHALLENGE

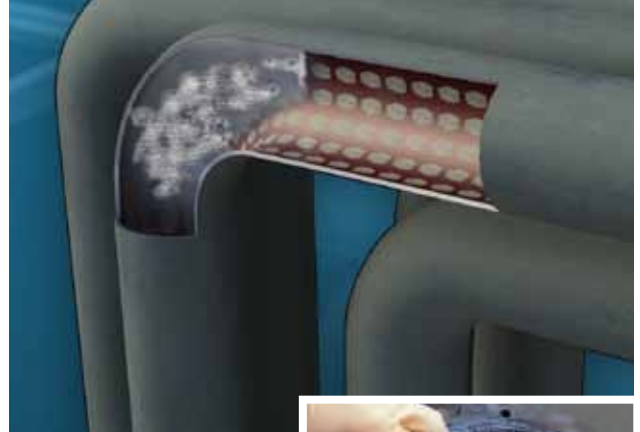
Ash handling pipe bends get worn out resulting in huge cost of replacements and maintaining inventory

OUR SOLUTION

Wear protection:
LOCTITE Pneu-Wear and
Brushable Ceramic Coating

BENEFITS

- Extends equipment life
- Repair at fraction of replacement cost



Vacuum Pumps

YOUR CHALLENGE

Ash particles erode casing and impeller of vacuum pump

OUR SOLUTION

Wear protection:
LOCTITE Wear Resistant Putty and
Brushable Ceramic Coating

BENEFITS

- Save replacement cost of casing
- Improved pump efficiency



Off-site Maintenance

Coal and combined-cycle gas plants

CW Pumps

YOUR CHALLENGE

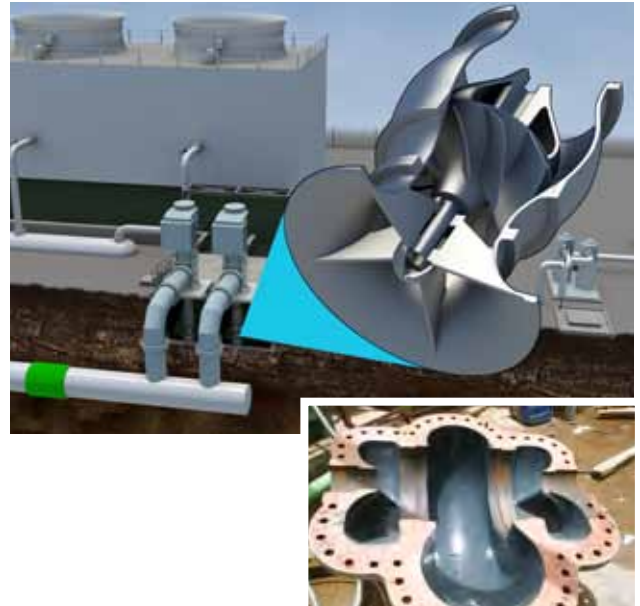
Cavitation deteriorates smoothness of pump casing, increasing power consumption and decreasing efficiency

OUR SOLUTION

Wear protection:
LOCTITE Superior Metal and
Brushable Ceramic Coating

BENEFITS

- Cost savings from improved pump efficiency, faster payback period
- Increased life of internal parts due to reduced wear



De-mineralization Plant

YOUR CHALLENGE

Chemicals used in DM plant lead to corrosion of containment vessels and damage to concrete floor and drainage

OUR SOLUTION

Wear protection:
LOCTITE Chemical Resistant
Coating or LOCTITE Flexible
Structural Coating

BENEFITS

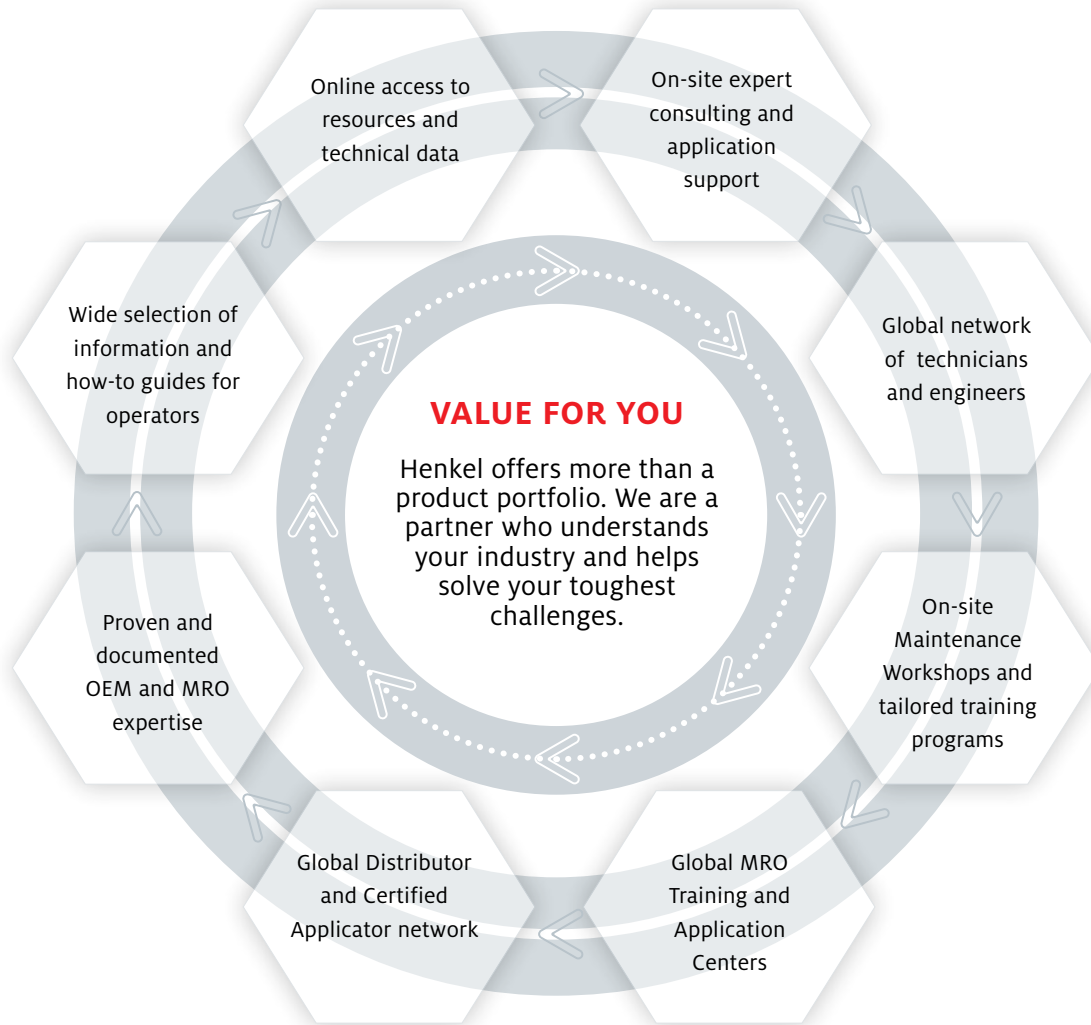
- Reliable protection against chemical attack
- Cost savings due to reduced frequency of recoating



Documented Cost Savings

More than 90% of our customers realize above-target cost savings after just 4 months. Let us do the same for you.

visit www.henkel-adhesives.com/in



Broad Solution Portfolio

From reducing wear and corrosion to sealing leaks, Henkel has a wide range of products that can solve any challenge in your facility.



LOCTITE MACHINERY ADHESIVES

- Threadlocking
- Thread Sealants
- Gasketing
- Retaining

REBUILDING, PROTECTING AND COATING

- Metal-Filled Compounds
- Concrete Repair
- Wear Resistant Coatings

BONDING AND SEALING WITH LOCTITE

- Epoxies
- Polyurethanes
- Instant Adhesives
- Industrial Sealants

SUPPLEMENTARY MAINTENANCE PRODUCTS

- Cleaners
- Metal Pretreatment
- Anti-Seize and Lubricants

Henkel Partnership

Services to help you succeed



Plant Survey

A plant survey will analyze current maintenance practices and culture and offer opportunities for improvement. It can also be used to customize training workshops specific to your needs.

Date	
Time	
Place	
Contact	



Product Trials

Product trials allow you to test the performance of our products in your plant. Henkel will train your staff on the correct application methods.

Date	
Time	
Place	
Contact	



Maintenance Workshop

This on-site training customized to your needs will help your staff increase equipment reliability, reduce routine and redundant maintenance tasks, improve safety, reduce energy costs, and increase productivity.

Date	
Time	
Place	
Contact	



Surface Engineering Solutions

Our experts will show you how to identify and apply the proper surface protection coatings to keep your assets up and running with minimal downtime. We can also recommend Henkel Certified Applicators who specialize in these types of repairs.

Date	
Time	
Place	
Contact	

For more information, contact your Henkel representative,
visit www.henkel-adhesives.com/in

LOCTITE®
BONDERITE®
TECHNOMELT®
TEROSON®
AQUENCE®

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