Maintain, Repair, Rebuild, Protect

Solutions for Conventional Thermal Power Plants
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.
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**

**EFFICIENCY**
Comprehensive maintenance programs for pumps and other equipment to improve efficiency

**RELIABILITY**
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 henkelna.com/mro
Coal Handling Plant
Solutions for abrasional wear, vibrational loosening, and frequent leaks

Stacker Reclaimer

**YOUR CHALLENGE**
Severe abrasional wear on the reclaimer wheel side walls

**OUR SOLUTION**
Wear protection: LOCTITE Brushable Ceramic and Wearing Compound

**BENEFITS**
- Reduced wear on the wheel face and bucket walls, providing longer equipment life
- Reduced repair 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.
henkelna.com/mro
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 henkelna.com/mro
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.
Call 1-800-LOCTITE (562-8483), or visit henkelna.com/mro
Ash Handling
Solutions for wear and erosion

Slurry Pumps

YOUR CHALLENGE
Ash slurry wears pump, leading to increased power consumption and reduced pump life

OUR SOLUTION
Wear protection:
LOCTITE Pneu-Wear and Brushable Ceramic Coating

BENEFITS
• Cost savings from reclamation of worn-out casing
• Improved pump efficiency

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

**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.

Call 1-800-LOCTITE (562-8483), or visit henkelna.com/mro
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.

VALUE FOR YOU
Henkel offers more than a product portfolio. We are a partner who understands your industry and helps solve your toughest challenges.

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.

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.

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.

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.

For more information, contact your Henkel representative, call 1-800-LOCTITE (562-8483), or visit henkelna.com/mro