



LOCTITE®

INDUSTRIAL PLANT MAINTENANCE AND EQUIPMENT RELIABILITY

Henkel

Reliability starts here...

**WORLD-CLASS
MANUFACTURING**

A strong improvement program starts with your skilled tradesmen at the base component level during the installation, repair and rebuild of your equipment.

“ Cost Reduction does not improve reliability. Improved reliability results in lower costs.”

Christer Idhammer
CEO Idcon Inc.

PROACTIVE:
“Prevent the Unpredictable”

PREDICTIVE:
“Replace Prior to Failure”

PREVENTATIVE:
“Protect From Neglect”

REACTIVE:
“Fix After Failure”

LOCTITE Maintenance Plant Survey

Our first step in working with you is to conduct a Plant Survey.

- 1** A Plant Survey is a walk-through of portions of your plant and maintenance operations.
- 2** Identification of your current processes, needs, challenges, tools in use, etc.
- 3** One result of the Plant Survey is our ability to customize our solutions to your specific needs and operations.

LOCTITE Maintenance Reliability Workshop



- Hands-on training
- Covers all trades
- Conducted on-site
- Training materials supplied
- Review common failure causes and prevention
- Standard 90 minute workshop can be tailored to meet your needs
- In-plant follow-up Application audits

Standard Training Syllabus

Threadlocking

- How clampload is achieved and maintained
- Advantages and disadvantages of mechanical locking devices
- Chemical Threadlockers
 - How they work
 - How to select the right product
- Hands-on demonstrations

Thread Sealing

- Types of threads and fittings
- Causes of leaks
- Chemical Thread Sealants
 - How they work
 - How to select the right product
- Hands-on demonstrations

Gasketing

- Flange design basics
- Why gaskets fail
- Form-in-place gasketing basics
- Product selection
 - Rigid cast flanges vs. flexible flanges
 - Service factors
- Hands-on demonstrations

Retaining

- Types, classes, and typical uses of cylindrical fittings
- Potential fit problems and possible solutions
- Retaining Compounds
 - How they work
 - How to select the right product
- Hands-on demonstrations

Bonding

- Benefits of adhesives and their impact on plant reliability
- Type of adhesive chemistries
- Typical applications and where adhesives are used in your plant
- Hands-on demonstrations



After a Maintenance Reliability workshop

Your skilled tradesmen will have the knowledge and the cost savings tools to:

SAVE TIME

- Reduce routine maintenance tasks
- Reduce standard repair time
- Reduce redundant repairs

REDUCE ENERGY COSTS

- Reduce air leaks that drive plant energy costs up
- Eliminate loose connections that cost money

IMPROVE SAFETY

- Improve safety by eliminating some personal injury hazards

REDUCE FLUID CONSUMPTION

- Reduce oil and hydraulic leaks that cost money
- Reduce cleanup and disposal costs



TRAINED, MOTIVATED AND EQUIPPED PERSONNEL DRIVE COSTS DOWN!

AIR LEAK COST CALCULATOR			
LINE PRESSURE AT 100 psi			
DIAMETER OF OPENING (IN.)	CFM LOSS*	CUBIC FEET OF AIR LOSS/YEAR	COST PER YEAR
1/32	1.62	849,139	\$210
1/16	6.49	3,401,798	\$842
1/8	26	13,628,160	\$3,375
1/4	104	54,512,640	\$13,498
3/8	234	122,653,440	\$30,371
COST PER kWh		\$0.065	

*CFM loss may vary based on the shape of the opening and assumes facility maintains air pressure 8,760 hours per year.

OIL LEAK COST CALCULATOR				
GALLONS LOST				
LEAKAGE RATE	PER DAY	PER MONTH	ANNUAL GALLONS LOST	ANNUAL COST TO PLANT
ONE DROP IN 10 SECONDS	0.112	3.36	40.3	\$201.50
ONE DROP IN 5 SECONDS	0.225	6.75	81	\$405.00
ONE DROP PER SECOND	1.125	33.75	405	\$2,025.00
THREE DROPS PER SECOND	3.75	112.5	1,350	\$6,750.00
STREAM BREAKS INTO DROPS	24	720	8,640	\$43,200.00
COST PER GALLON*			\$5.00	

*Typical gallon costs range from \$1.00 to \$2.00. However, the costs associated with leaks need to be considered, such as: cleanup labor, absorbents, transaction, shipping, storage, recycling and disposal.

Choose From Additional Henkel Services

Surface Engineering Workshop

- How to identify and quickly apply the proper surface protection coatings to protect your assets and keep you up and running with minimal downtime.

Pump Rebuild

- How and where to use LOCTITE brand products to increase pump reliability and pump efficiency.

Application Assistance

- Our expert engineering staff will assist you with specific product and maintenance applications.

Inventory Consolidation

- We will conduct a shop chemical review to help you consolidate purchasing efforts. This will enable you to better manage the shop chemicals in the plant.

Documented Work Instructions

- We can help you write work instructions and maintenance procedures to help maintain your key equipment.



Henkel Corporation
Adhesive Technologies

www.henkel-adhesives.com