



Industrial Applications - Cold Rolling Mills

Alu Treater

Precision Chemical

For continuous purification of process oils



LUCENT 

The Precision Chemical for Oil Purification

- Keep your process oil
- Keep your filtration system

When it comes to process oils, purity is essential. Contaminated oil not only reduces performance - it also shortens equipment lifespan, increases maintenance demands, and drives up unnecessary costs.

Alu Treater is a breakthrough chemical additive designed to continuously purify process oils, helping to keep operations cleaner, more efficient, and environmentally compliant. Thanks to its surface-active properties, Alu Treater binds to microscopic contaminants such as soot, water, and metal particles. These impurities are then aggregated into larger, filterable droplets that can be easily removed using conventional pre-coat filtration systems. Apart from a dosage system, no additional equipment is required.

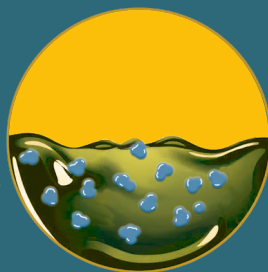
Advanced Microparticle Removal. Thanks to its surface-active properties, Alu Treater binds to microscopic contaminants such as soot, water, and metal particles. These form larger, filterable drops that are easily removed in conventional pre-coat filter systems – no new equipment needed.



Black, Heavily Contaminated Oil



Alu Treater is added



Alu Treater has begun to attract contaminants and forms larger, filterable clusters



Contaminants that have been attracted by Alu Treater and flocculated into larger filterable clusters

Improves Overall System Performance

Cleaner oil leads to less wear on machinery, longer filter life, and better end-product quality. Whether you're running an industrial line or a sensitive process – the difference is noticeable.

Safe, Green & Compliant

Alu Treater is FDA-compliant, non-toxic, and designed to support a healthier working environment. It aligns with sustainability goals while delivering measurable operational benefits.

Cost-Effective Optimization

Forget costly system overhauls – Alu Treater works with your existing filtration infrastructure. One small change in your oil treatment routine can lead to significant cost savings over time.

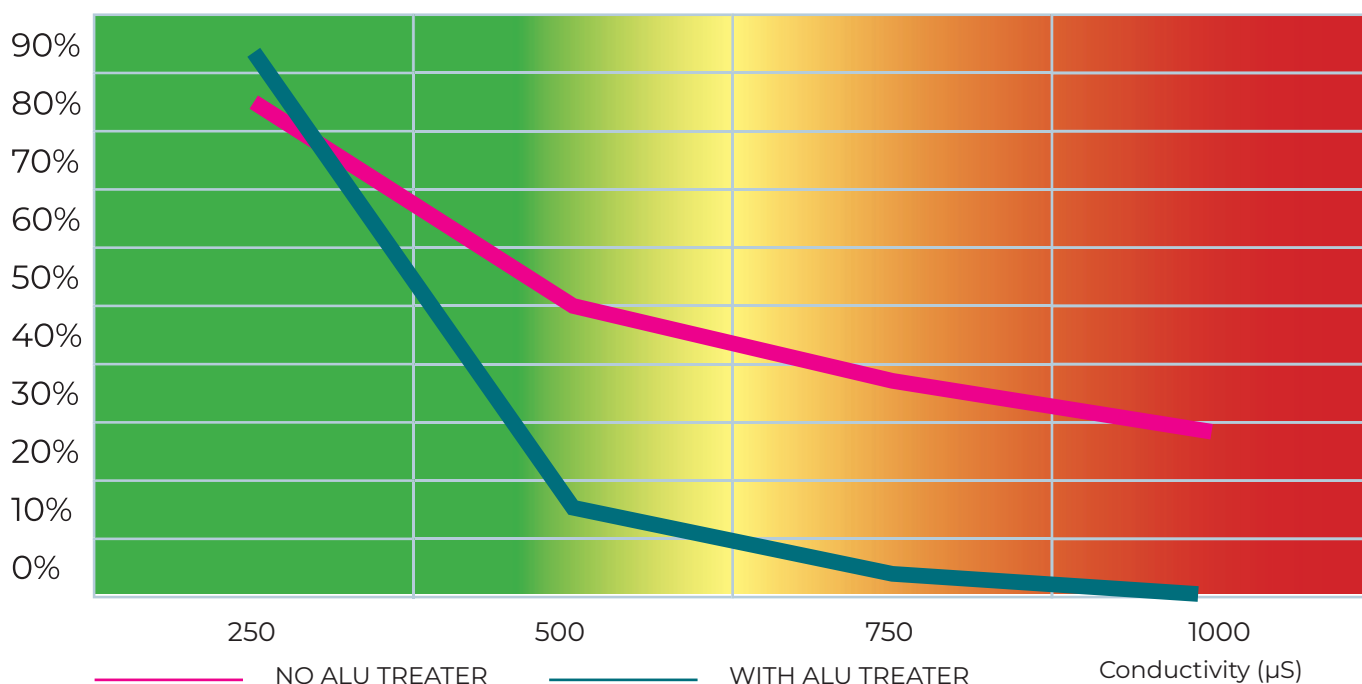
Conductivity - essential for measuring Process Oil Quality

Conductivity is a key property when analyzing process oil. It refers to how well a material allows electric current to pass through it. Most process oils are poor conductors.

Changes in conductivity can indicate contamination or chemical degradation of the oil. Water, oxidation or the presence of metal particles can alter the conductivity, signaling that the oil is breaking down or picking up impurities. The conductivity should be within the optimal range. Very low levels of conductivity may result in inadequate protection against static buildup. If it's too high on the other hand, it may interfere with electrical insulation properties. By monitoring conductivity, you can prevent failures.

Performance of Alu Treater

Percentage of time conductivity is at certain level



The graph illustrates a comparison between two samples: The results highlight how the Alu Treater (green curve) effectively optimizes conductivity over time compared to the sample with no Alu Treater (red curve).

By using Lucent's Alu Treater, conductivity typically remains within the range of 50–300 µS and rarely exceeds 500 µS. Within 15 minutes, the conductivity decreases significantly and stabilizes at around 100 µS in less than one hour. This demonstrates a clear improvement compared to untreated samples, where conductivity tends to continue rising.

Case Study - Cold Rolling Mill

- Gränges AB, Finspång Sweden



Gränges AB has been a leader in aluminium rolling since 1922. Today, it specializes in advanced aluminium solutions, focusing on materials for automotive heat exchangers, building applications, and battery components. With extensive industry expertise, the company invests in state-of-the-art technology, including a recent expansion for aluminium battery foil production to meet the rising demand from electrification. Committed to quality, sustainability, and customer satisfaction, Gränges Finspång delivers high-performance aluminium products for a wide range of industries.

Since 2007 Gränges has used Alu Treater in its cold rolling-mill. Alu Treater is added to the clean oil tank by means of a dosing pump. It is either controlled by conductivity or handled manually. By adding Alu Treater, the conductivity usually drops to acceptable levels within 60 minutes. Alu Treater is mixed with the oil, which is sprayed on the foil. In the filter, the addition of Alu Treater creates an extra layer that slows the increase in differential pressure (DP) and simultaneously increases the effect of the precoat media.

Outcome:

- Production losses due to stains and pinholes are down due to less small particles
- Higher filter availability and extended life by several years
- Pre-coat media consumption reduced by 50 percent
- Average conductivity (pS) reduced by 60 percent and rarely exceeds 500 pS.
- Prolonged life span of the process oil

Our Onboarding Procedure

– your Safety

When it comes to oil analysis and purification, we leave nothing to chance. Our onboarding process is designed to ensure the highest standards of quality, safety, and customer satisfaction in every step.



Expertise and facilities

Highly skilled chemical staff ensures:

- Initial analysis to ensure compatibility
- Knowledge in purification of a wide range of oils
- Chemicals of our production

Expertise & Advanced Facilities

Our highly trained chemists operate in sophisticated laboratories. That guarantees precision and reliability in every step of the analysis. Our wholly owned production facilities ensures control over the process.

Attention to Detail & Customer Satisfaction

We meticulously examine every aspect of the process to deliver the best possible solution regarding quality and service.

Thorough Testing – Before, During & After

- Pre-analysis of clean oil establishes a reliable baseline.
- Sample analysis of used oil provides a clear understanding of its condition.
- Final analysis of the cleaned oil ensures optimal performance and quality.

Lucent Chemicals AB

- Part of the HEAD Engineering Group

Lucent is a Swedish company specializing in the development, production, and supply of chemical products within two core business areas: Industrial Oils and Oil Recovery. Our expertise lies in delivering customized process solutions by combining surface chemistry with thermomechanical technologies. We formulate and manufacture our own chemicals to optimize processes and enhance conventional methods across various industries.

Industrial Oils: Lucent develops and produces advanced process solutions and surface-active products for the continuous cleaning and recirculation of process oils used in manufacturing industries. Our product portfolio includes oil purification, synthetic lubricants, and regeneration solutions for rolling mill oils and lubricating oils.

Oil Recovery: Our oil recovery division focuses on advanced methods and processes for separating and reclaiming oil from low-quality sources. This includes the recycling of slop oil sludge and bilge water from the shipping industry. Through our refining processes, we produce REACH-classified fuel oil, clean water, and minimal residual waste.



HEAD Engineering

Parent company Head Engineering, a leading mechanical design firm founded in 1982, brings a unique and powerful combination of chemical innovation and separation expertise. With decades of experience in mechanical engineering Head Engineering creates high-performance solutions that maximize efficiency, durability, and sustainability across industries. This synergy between chemistry and thermomechanics enables the group to develop superior solutions.

Phoenix Collector

Phoenix Collector in Finland is specializing in the collection and purification of slop oil from the shipping industry. Using HEAD Engineering's advanced centrifugal separation technology, combined with Lucent Chemicals' specialized formulations, Phoenix Collector ensures the efficient recovery and recycling of waste oils. By integrating cutting-edge mechanical processes and advanced chemistry, transform contaminated oils are transformed into high-quality, reusable fuel.



LUCENT

Address:

Lucent Chemicals AB
Box 1192
131 27 Nacka strand
Sweden

Visiting address:

Jakobdalsvägen 19
131 52 Nacka strand
Sweden
Tel: +46 8 22 60 60

Info@lucent.se
www@lucent.se