

Improving Aluminum Forging Throughput with Lusterlume

The Challenge

An aluminum forging company had been struggling with several persistent issues in their existing process. After the annealing process, residual oxidation was left on the forged parts, compromising their quality. Slow production speeds were impacting overall throughput and profitability.

Additionally, the costs associated with their current cleaning chemicals and processes were extremely high and negatively impacting margins.

The Approach

Hubbard-Hall's technical team collaborated closely with the company's manufacturing engineers to understand their needs. They ultimately decided to use **Lusterlume ALB 4**, a mildly acidic, concentrated liquid burnishing compound designed specifically for use with mass finishing equipment like vibratory and barrel finishing systems.



Aluminum billets tumbled with media and Lusterlume ALB-4

Executive Summary

Hubbard-Hall's chemistry delivered impressive results for a leading aluminum forging company:

- A forging company needed to increase production speed, improve cleaning, and reduce costs
- Hubbard-Hall used **Lusterlume ALB 4**, a specialized burnishing compound
- Production volumes increased by 15% to over 1.5 million pieces while providing superior cleaning and cost-effectiveness

The key features of Lusterlume ALB 4 include:

- Formulation for brass, steel, zinc, and aluminum parts
- A unique blend of conditioning agents
- Excellent lubricity for superior burnishing results
- Conditioning of metal surfaces prior to electroplating
- Detergency to remove light to moderate oil and grease
- Inhibitors to prevent corrosion and tarnish

The Outcome

By implementing **Lusterlume ALB 4**, the aluminum forging company realized impressive results: production volumes increased by 15% to over 1.5 million pieces, effective removal of residual oxidation for clean, blemish-free parts, and improved process efficiency and cost reduction compared to previous system.



Finished aluminum rifle receivers:
Left: Before vibratory cleaning process
Right: Superior results after vibratory cleaning with Lusterlume ALB-4

What is forging?

Forging is a manufacturing process where metal is pressed, pounded or squeezed under great pressure into high strength parts known as forgings. The process is normally performed hot by preheating the metal to a desired temperature before it is manipulated. Forgings provide superior strength and reliability for many industries from automotive, aerospace, valves, fittings, hardware and ordinance.



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