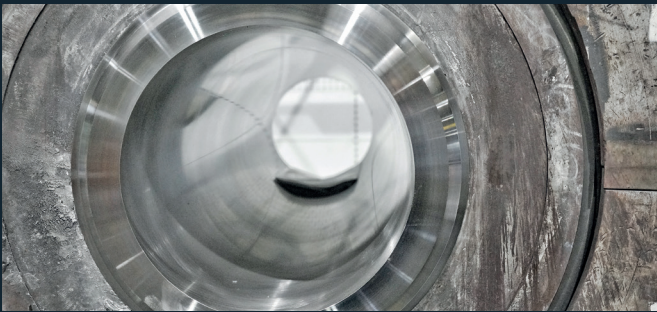


EXAMPLES FOR ADDITIONAL
PREMIUM SERVICES

Aluminium
Redressing of sealing surface on aluminium containers if there is sufficient allowance (e.g. 10mm).



Copper/Brass
Conical sealing faces, which are mainly used in copper/brass applications, can also be repaired. This repair is usually carried out by welding on the cone followed by re-turning.



Cleaning of inner liner bore (e.g. copper oxide) by re-honing inner liner e.g. every 10,000 pushes.



Check keyways and guidance
If necessary, keyways are welded on and reworked to ensure centric fixation of container.



Inspection using a borescope of hard-to-reach boreholes in the container - Modification to KCPC (Kind&Co Power Connector)
Cracks on power supply pockets for heating system can be avoided by design improvements.



High-performance refurbishment for reliable extrusion performance

RELINING SERVICE
of Extrusion Containers

EXTEND PERFORMANCE. MAXIMIZE RELIABILITY.

 **Edelstahlwerk Kind & Co.**
GMH GRUPPE
Pure Performance

Extend Performance. Maximize Reliability.Extrusion containers operate under extreme thermal, mechanical and cyclic loading. As wear, dimensional deviations and local damage develop over time, they can compromise process stability, product quality and equipment availability.

At Kind & Co., relining is more than replacing a worn liner. It is a precision refurbishment process designed to restore the functional performance of your extrusion container while preserving reusable components wherever technically appropriate.

The result is a reliable solution that helps maintain consistent extrusion performance, extend operational service life and reduce unplanned downtime.

Kind & Co.

Kind & Co. combines premium tool steel production, heat treatment and precision machining at a single site in Germany. Our application specialists support customers with material expertise, refurbishment know-how and application-specific engineering for extrusion technology.



FROM INSPECTION TO RELIABLE PERFORMANCE

Every refurbishment follows a structured process that combines technical expertise, precision machining and comprehensive quality control.

1. UNDERSTAND THE CONDITION

Every project begins with a comprehensive technical assessment.

The extrusion container is inspected to determine its overall condition. Dimensions, hardness values of mantle, resistance values of the heating system, cover rings and insulation are evaluated and documented. Following disassembly of the inner liner, inspection of bore geometry and hardness check inside the bore will be done. All measurements and results are assessed to determine which components remain suitable for continued use.

Where required, the heating system also undergoes resistance and current-flow measurements, with repair recommendations provided by specialized service providers.

Only after this assessment is the refurbishment strategy defined.

2. RESTORE WHAT MATTERS

Each refurbishment is adapted to the actual condition of the container.

The existing liner is removed under controlled thermal conditions, allowing the shrink fit to be released while minimizing unnecessary machining. Based on the inspection results, additional refurbishment measures are carried out where required. These may include restoring support force, renewing intermediate liners, installing thicker-walled inner liners or repairing functional areas such as keyways, power supply pockets and air inlet holes.

Wherever technically appropriate, reusable components are preserved.

3. REBUILD WITH PRECISION

Reliable extrusion performance depends on precision.

The container bore is machined to restore the required cylindrical geometry and prepare the specified interference fit. The new liner is then installed under controlled thermal conditions using monitored positioning and controlled cooling before final machining of the bore, stem and die side completes the refurbishment.

Every step is carried out to restore the functional performance of the container.

4. VERIFY EVERY DETAIL

Before shipment, every refurbished container undergoes a final dimensional verification.

The completed documentation includes the shrink-fit protocol, manufactured dimensions of all components, verification of liner interchangeability and complete records to support future relining cycles.

Only after successful final inspection is the container prepared for safe transport and returned to the customer.

WHY RELINING MATTERS

Every extrusion container represents a valuable asset within your production process. Restoring its performance at the right time helps maintain reliable operating conditions while maximizing the value of existing components.

Our refurbishment process is designed to help you:

- Restore dimensional accuracy
- Maintain reliable shrink-fit conditions
- Extend operational service life
- Reduce unplanned downtime
- Support consistent extrusion performance



PURE PERFORMANCE IN EVERY DETAIL

Reliable extrusion begins long before the billet enters the press.

Through structured inspection, controlled refurbishment and precision machining, Kind & Co. restores extrusion containers to support reliable operation throughout their service life. Every refurbishment is carried out with the same commitment to technical quality, precision and consistency—helping customers maintain stable production processes and dependable extrusion performance.

Pure Performance.

