

REFURBISHING INSTEAD OF PURCHASING NEW

Or: How to keep your mass finishing machine running for a long time.

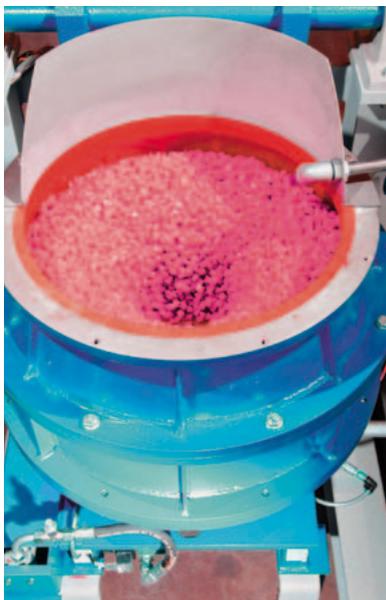
Central function of any mass finishing operation is the removal of small amounts of material from the work pieces. However, the downside of this process is that the inside of the work bowl, in which the mix of media and work pieces is moving, is also exposed to a certain amount of wear, especially in case of aggressive grinding operations.

For this reason, from time to time the protective wear lining in the work bowl must be renewed...an undertaking that belongs to mass finishing like changing the tires on a car. That's why, for many years, Walther Trowal has been offering an exchange service for the complete refurbishment of worn work bowls. The service not only includes the placement of new wear linings into the work bowls but also a complete inspection of all equipment components and, if necessary, repair welding of the steel fabrications as well as the replacement of worn items with original spare parts. This way the customers can be absolutely sure that after the refurbishment work their mass finishing system is running again as if it was brand new.

A cleaned spacer washer in a tub vibrator



In the new service center all casting molds for the different machine types and sizes are in stock and, therefore, immediately available.



The liner material must be chosen carefully

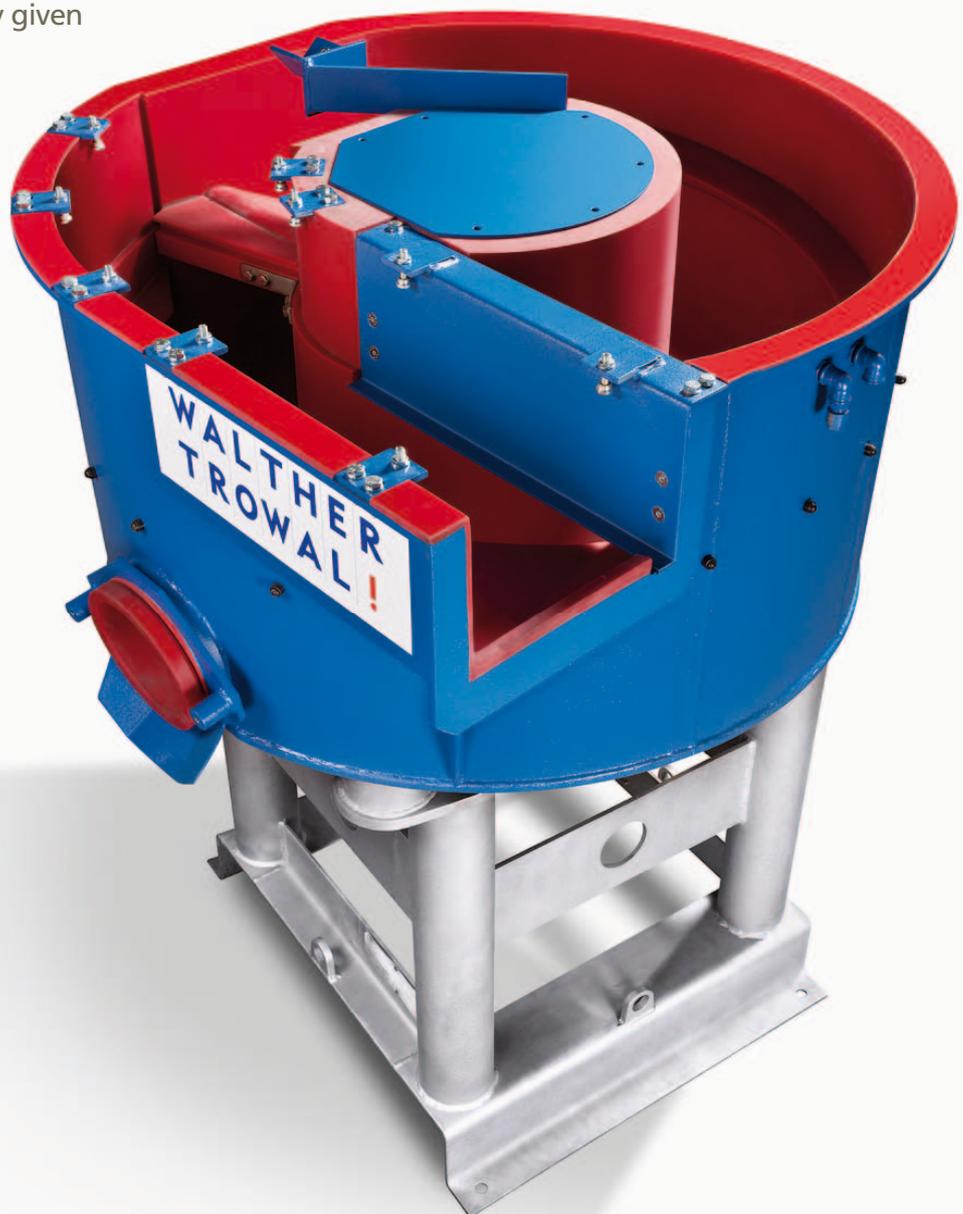
During most mass finishing processes the finishing media removes not only material from the work pieces but also from the wear lining in the work bowl. One could choose a very hard liner material for protecting the work bowl against wear. However, this would cause a poorer movement of the workpiece/media mix and would, therefore, result in longer processing times. That is why it is crucial to find the match for hardness and operating characteristics.

Glimpse into the inside of the processing bowl of a centrifugal finishing machine.

The material: Carefully adapted to the job

For this reason, the company offers wear linings with different hardness values, which are precisely adapted to the respective finishing process. Walther Trowal is one of the few manufacturers of mass finishing equipment who mixes the polyurethane components in-house and, therefore, can precisely control the wear and operating characteristics of a specific lining with certain additives. Depending on the technical requirements of a given mass finishing application Walther Trowal can utilize different polyurethane types within a hardness range from 45 to 92 shore A. of course, a sophisticated documentation system allows tracing every lining material used in any given work bowl.

When it comes to the selection of polyurethane types for work bowl relines, Walther Trowal has early-on chosen eco-friendly materials with a special focus on workplace safety: Since 2012 – long before it became a legal requirement – Walther Trowal has been using mercury-free polyurethane.



The work bowl of
a rotary vibrator



A relined work bowl
ready for painting

No compromises: A reline may only be half the story

Is it sufficient to just do a polyurethane reline? Are all machine attachments still functioning? What happens, if other components are also worn out? Is it possible that the old lining hides a crack in the steel construction of the work bowl? It goes without saying that the work bowls are subject to high, alternating mechanical loads. Removal of the old wear lining offers an excellent opportunity to check all work bowl components.

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High uptime: A refurbished work bowl at the right time

When is the right time for such a refurbishment? If it is done too early, you are giving away time. If it is done too late, the steel jacket of the work bowl might suffer irreparable damage. We are the only mass finishing equipment manufacturer who offers a system, integrated into the work, that signals the wear rate of a lining. Towards this goal the company is using a method that everybody knows from automobile tires: The lining contains polyurethane cones in a color that is significantly different from the color of the surrounding lining material. Once these cones become visible, the user knows that a refurbishment will soon be required. The diameter of the visible PU cone provides a good indication of the time frame, within which the bowl must be refurbished. This allows placing a purchase order for a completely refurbished exchange bowl and its on-site delivery without any interruption of the manufacturing operation.

Of course, the fact that all casting molds for the various machine types and sizes are in stock and, therefore, immediately available, allows the respective mass finishing machine to be up and running again after a refurbishment time of one to two days.



The thickness of the new wear lining is measured and documented



Upon completion of the lining operation the gaps between moving parts are also checked

After painting the refurbished work bowls look as good as new.



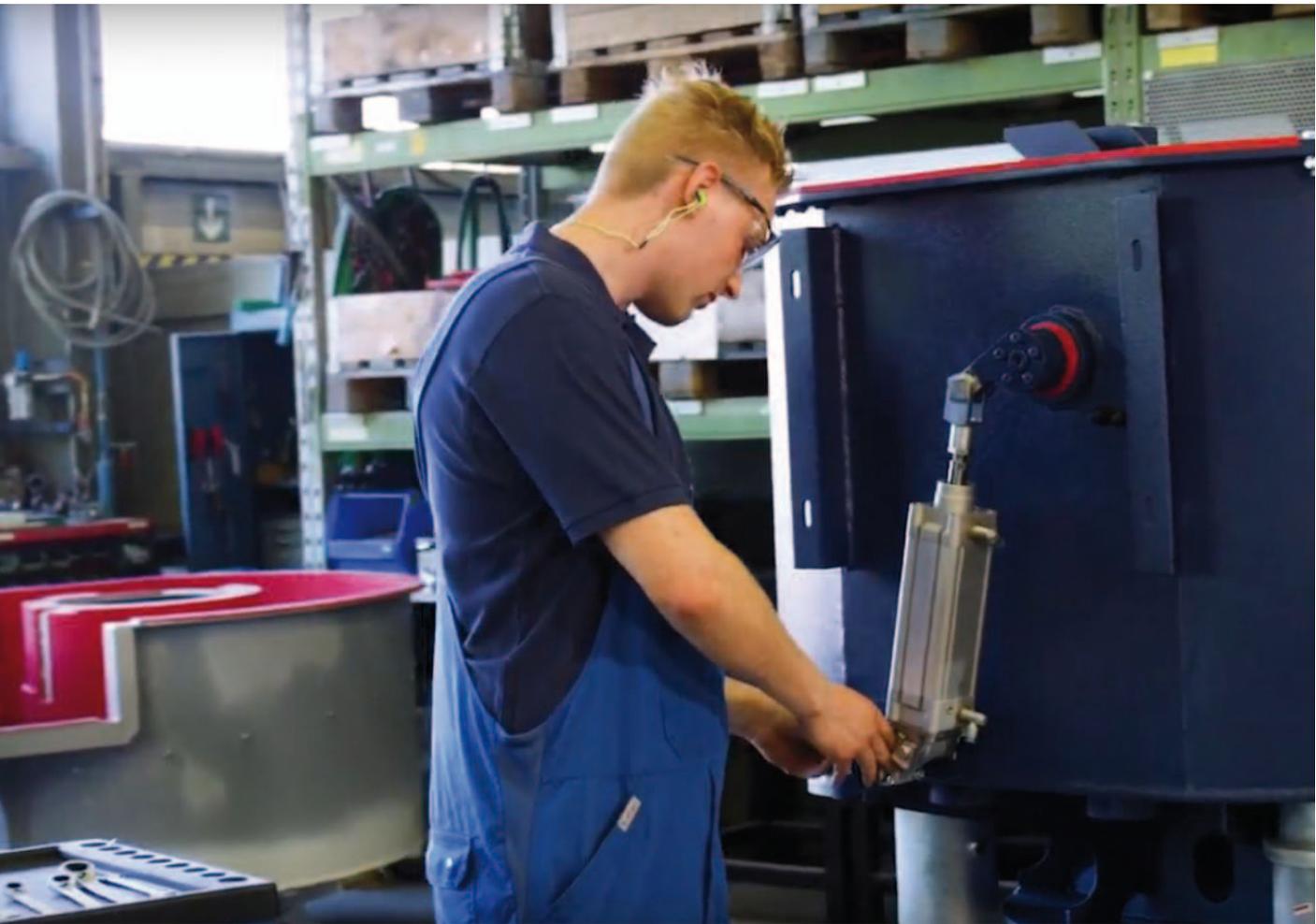
Refurbished work bowls in the final assembly stage.



Refurbished work bowls: Like new

Each work bowl received at the Haan facility undergoes a comprehensive inspection that not only covers the wear lining but also the structural integrity of the steel fabrication, all built-in components and, upon customer request, also the drive mechanism.

The refurbishment process starts with the thermal removal of the existing wear lining. Then the work bowl is shot blasted, checked for cracks in the steel fabrication and, if required, repair-welded. For the welding operation we have developed special systems that ensure that the work bowl is not warped. This is extremely important: The vibratory motors mounted to the work bowl generate a high amount of torque that must be absorbed by the steel fabrication. For this reason, the motors must be carefully mounted. Even tiny irregularities of the mounting flanges, induced by the heat of the welding operation, can cause a catastrophic failure of the vibratory motor mount.



Final assembly of a newly lined work bowl

Genuine spare parts: A perfect fit

Subsequently, the work bowl is relined. Before a refurbished work bowl is dispatched to a customer, worn accessories and components are repaired or replaced with new, genuine parts. In a last step the machine undergoes a rigorous test to ensure that it is running without flaws. The overall result: A refurbished work bowl with all the characteristics of a new one.

We guarantee the quality of our work:

After the exchange we provide a one-year warranty for the complete work bowl.



A newly lined and painted work bowl ready for dispatch to the customer.

Good for the environment: Refurbishing instead of purchasing new

Last-but-not least: Because the work bowls are continuously recycled, the customers participating in our exchange service make a significant contribution towards ecological sustainability in the industry.

This saves valuable resources and lowers costs.

IMAGE LICENSING:
Production stills Walther Trowal

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