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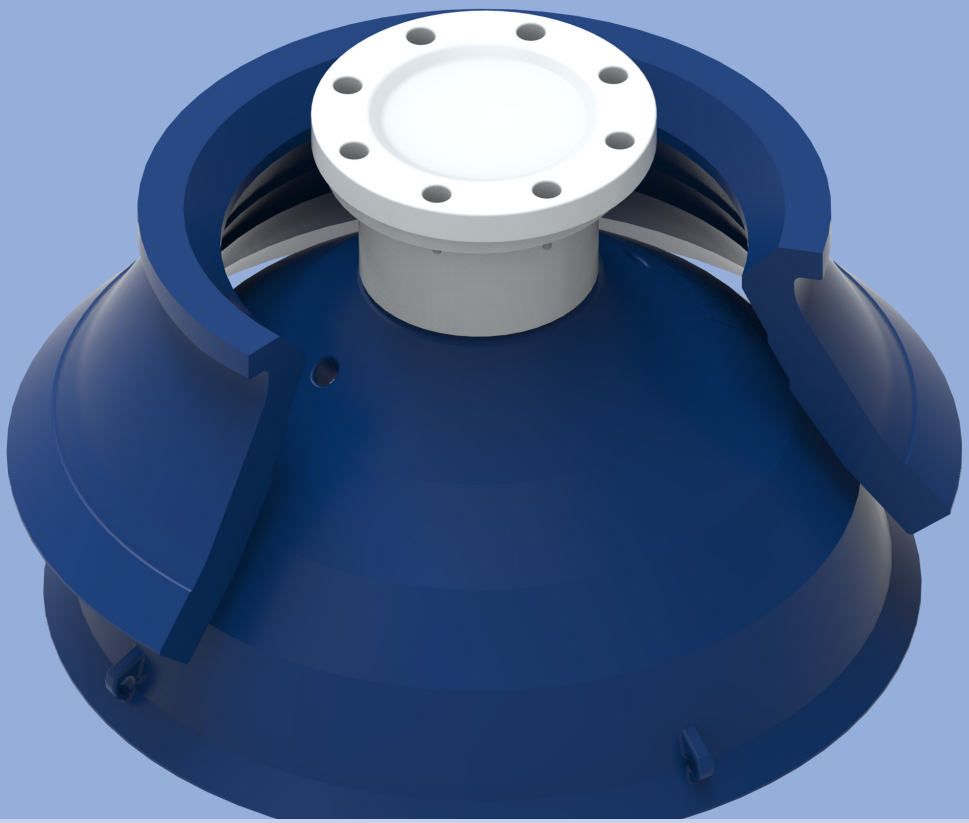


Product datasheet

EXCEL™ Crusher liners for Metso® MP™ crushers

We listen to our customers' problems and work closely with them to find solutions. Using this process, we are continually expanding our selection of spare and wear parts. As one of our solutions, we have redesigned the MP800™, MP1000™ and MP1250™ bowl and mantle liners to improve quality, enhance performance and increase the crusher production. Our goal is to design and manufacture solutions that enhance your crusher's performance.

It's not just a part, it's an improvement

Don't get caught in the trap of thinking that liners are all the same: a commodity. A high quality liner combined with technical expertise will improve your operations and increase profitability. Our liners are engineered to provide you with these added benefits that help you get the most out of your investment.

Benefits

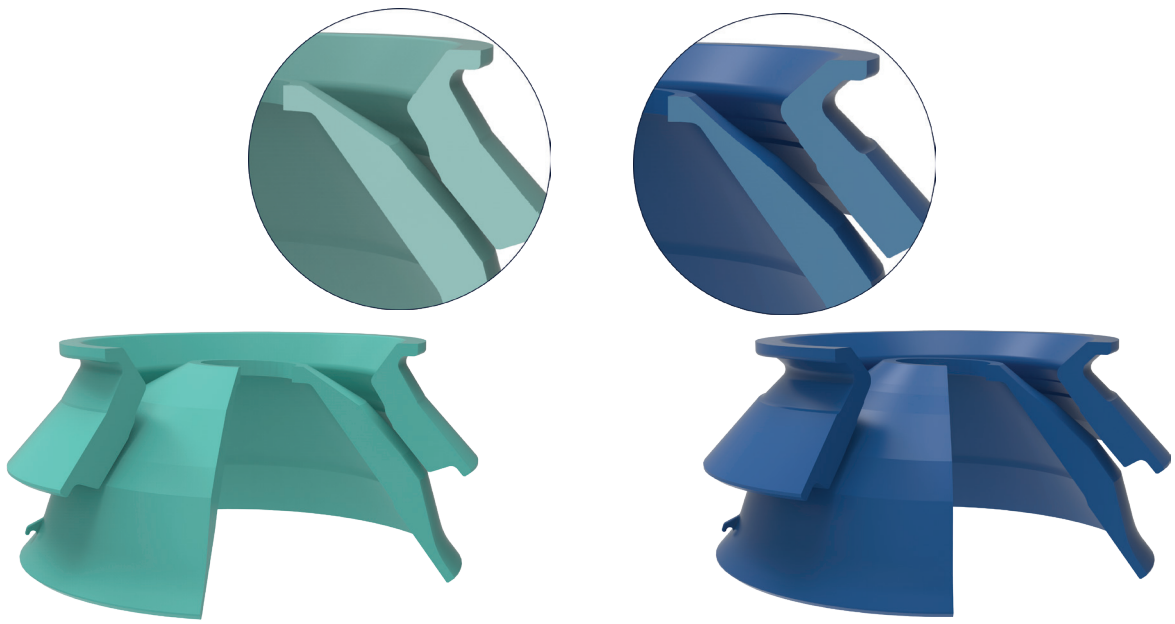
- Increased crusher capacity
- Improved material flow
- Extended liner lifetime
- Adaptability for changing product size
- Improved plant throughput
- Improved reliability

FLS

We manufacture MP cone crusher liners with the same quality and committment as we do for our own crushers

A large copper mine in South America contacted us for assistance with their pebble crusher. The mine operates a MP 1000™ cone crusher and was having difficulty achieving and maintaining their crusher's CSS setting. This was causing the overall plant throughput to suffer and the customer to lose money. The mine's goal was to solve these problems in order to improve overall plant production and increase profitability.

We performed an analysis of the crushing circuit and found that redesigning the liner profile would let the customer achieve their goals and improve their overall performance. We created the new design and manufactured the liners for the customer. As expected, the customer's problems were resolved and their profitability increased.



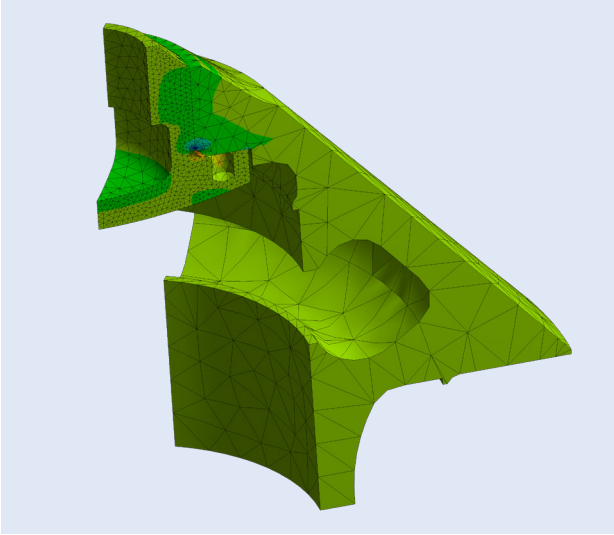
The previous liner design was not able to maintain the necessary CSS during operation and the liners were removed before being fully worn out.

Our optimised liner design modified the feed opening and crushing surface geometry. With these changes the customer obtained their goals throughout the entire life of the liner.

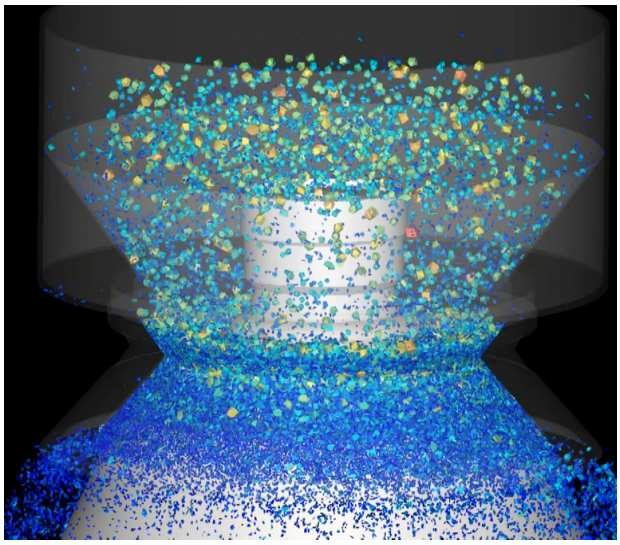
After implementing our liner solution, the plant was able to reduce and maintain their CSS setting on the pebble crusher. This result enabled the customer to remove recirculating load from the pebble circuit and free up capacity in the SAG mill. This liner solution allowed the customer to increase the mill throughput by 3.5%, thereby significantly improving their overall plant production and profits.

Key performance indicator (KPI)	Baseline throughput	FLS Solution	Results
Milling circuit capacity	3,500 mtph	3,500 mtph	---
Pebble recirculating %	22% @ 16 mm (150 mtph)	8.5% @ 16 mm (52 mtph)	-65% (-101 mtph)
Pebble load %	20% (700 mtph)	17.5% (615 mtph)	-12.5% (-85 mtph)
Mill discharge circuit	2,730 mtph	2,829 mtph	+3.5% (+99 mtph)

High-tech analysis provides a clear picture



Stress analysis of the crusher component to optimise design



Performing a discrete element method (DEM) analysis of the crusher liners to ensure optimal performance

The difference between our technical solutions and the standard OEM replacement parts is especially clear in challenging applications.

We use a holistic approach in our designs so we know that they go beyond traditional design to improve the overall function. Our design philosophy includes goal setting, equipment review, design, implementation and follow-up performance review.

With our experience and range of MP™cone crusher liner solutions, we can use existing liner designs or create a custom liner for you. The available range of standard liners have an excellent throughput and extended wear life for typical crusher applications. But for applications that are particularly challenging, you may be interested in a liner that is designed specifically for you.

The discrete element method is one of the simulations we use to understand particle movements within equipment; each subcomputation predicts the behavior of the feed as it moves through the crusher.

This simulation allows us the opportunity to thoroughly review your liner performance, and make recommendations based on the analysis.

Once we have reviewed liner designs based on your process, we use a stress analysis methodology to accurately evaluate stress values within the crusher. The stress values based on applied forces and constraints within the modeling simulation help us see potential failures and avoid expensive repairs and replacements.

We provide a liner recommendation after we have a full picture of the component performance to ensure that we are giving you the best possible match.

We bring years of experience to the table when we meet with you to find the right solution for your crusher. No matter what problems you are having with your crusher, trust us to work tirelessly until we find the answers you need.

FLSmidth A/S
2500 Valby
Denmark
Tel. +45 3618 1000
info@flsmidth.com

www.flsmidth.com

FLSmidth Inc.
Salt Lake City Operations
Midvale, UT 84047
USA
Tel. +1 801 871 7000
info.slc@flsmidth.com