



**G R O W T H**  
S T E E L





# LEADERS IN EXCELLENCE

As one of the world's leading manufacturing foundries, we pride ourselves with providing excellent wear parts. Manufacturing is our craft - providing comprehensive technical service to our customers is the core of our ambition.

## OUR DIFFERENCE DEFINES US

- 1 HIGH SUPPLY CAPACITY**  
Growth always ensures manufacturing capacity for mill liners is above demand - we can produce up to 65,000 tons of mill liners a year for mining industries both regionally and globally.
- 2 ACKNOWLEDGED BY INDONESIAN MINISTRY OF TRADE FOR OUTSTANDING PERFORMANCE**  
Consistently received Primaniyarta Award as 'Best Performing Exporter' and 'New Market Pioneer Exporter' from the Indonesian Ministry of Trade since 2006.
- 3 WORLD LEADER IN SERVICE EXCELLENCE**  
Growth is part of Growth Steel Group, an established world leader in service excellence for the design and manufacture of mineral processing wear solutions.
- 4 INTERNATIONAL STANDARD, HIGH-QUALITY STEEL**  
The highest quality of steel is created for maximum wear resistance.
- 5 WORLD'S BEST PRACTICES**  
All our equipment, practices and procedures are carried out in accordance with ISO standards.
- 6 CUSTOM MILL-LINERS FOR YOUR NEEDS**  
Our Customised Mill Liners are designed for your specific needs and operational requirements, using the latest in simulation software and manufacturing techniques.
- 7 EXPERTISE FROM DEDICATED MILL-DESIGN CENTRES**  
Our global design centre provides in-depth technical support to our experienced site support team, ensuring latest design concepts are at the forefront.



# MATERIAL GRADES FOR EVERY APPLICATION

The ultimate goal in mill liner designs is to achieve maximum performance and maximum wear life. The nature of the different milling applications determine which material grades are most optimal for the task ensuring reliability of our products.

Whether your milling application requires impact toughness, abrasion resistance or a balance, we carefully select the chemistry and microstructure properties to be produced within our quality liners.

## FEATURES



**TOUGH & WEAR  
RESISTANT**



**INTERNATIONAL  
STANDARD OF HIGH  
QUALITY STEELS**

## WHY WORK WITH GROWTH?



**CUSTOM  
LINER FIT**

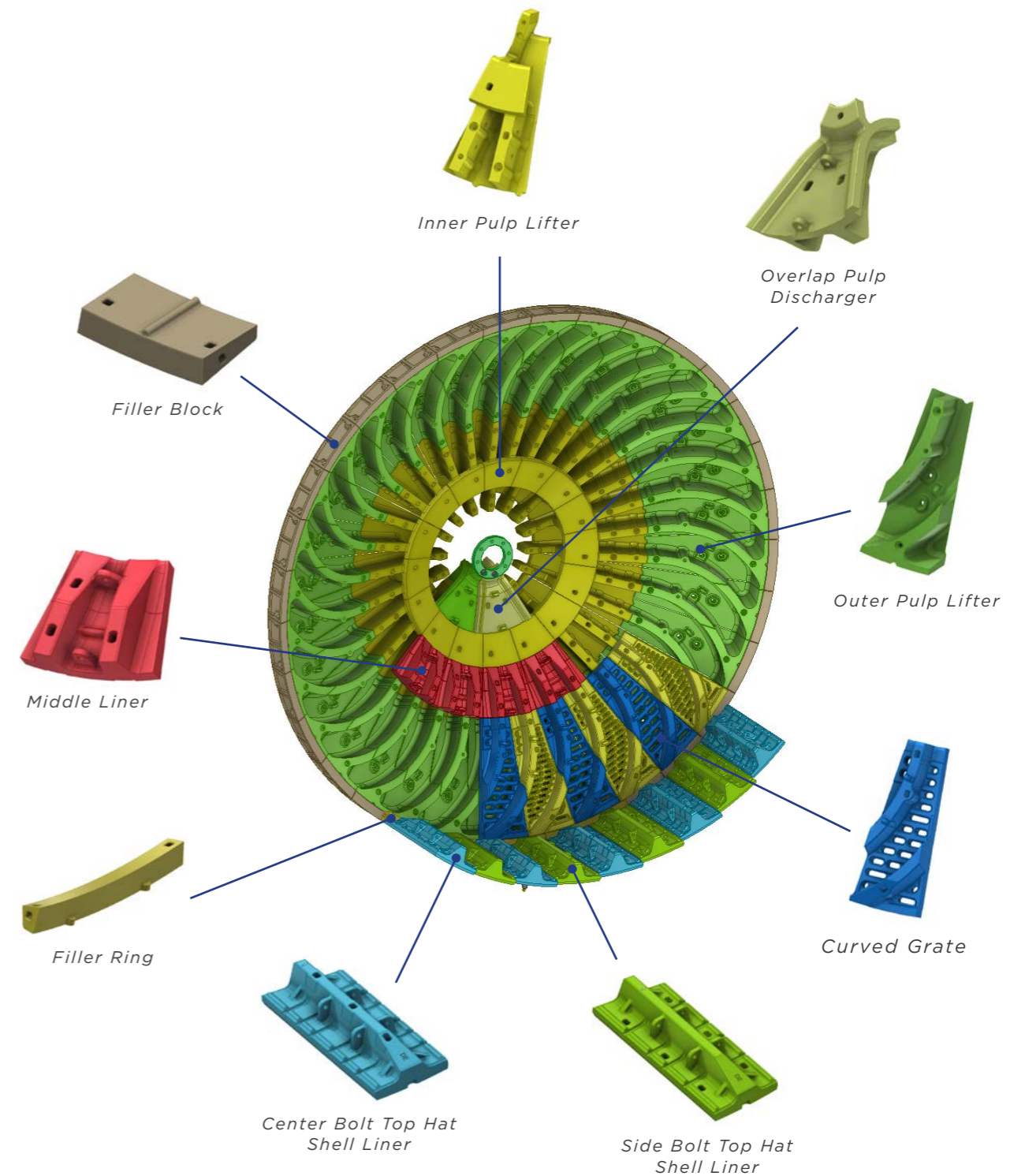
We tailor solutions  
to meet your  
requirements



**RELINE CHANGE-  
OUT TIME MINIMISED**

Minimising your  
down-time to  
optimise production

# STEEL LINER COMPONENTS

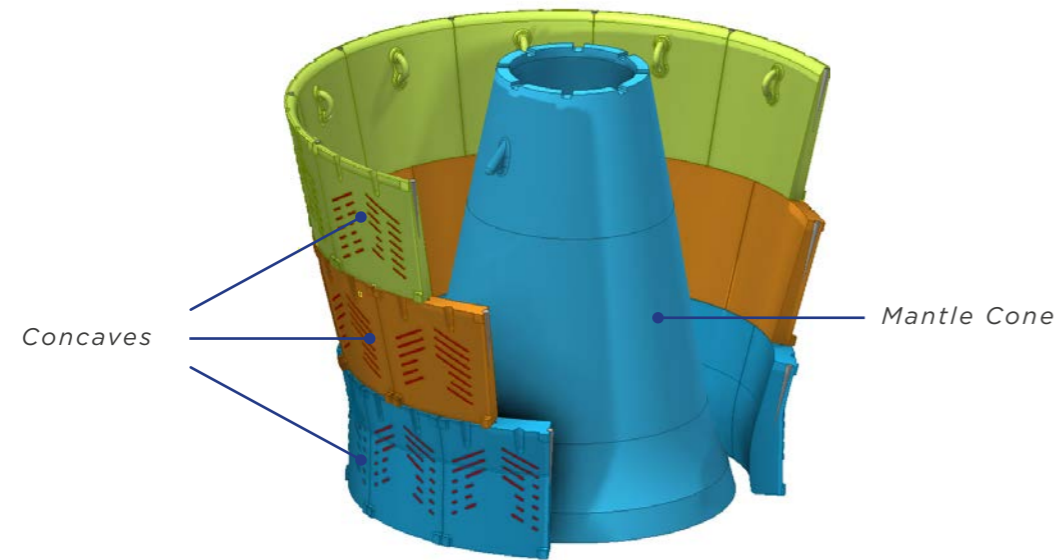


## MATERIALS

> Cr - Mo

> Hi - Cr

# CRUSHER WEAR LINERS



GYRATORY CRUSHER



JAW CRUSHER

## MATERIALS

High Manganese Steel

# FASTENERS



## FEATURES

- Physical Testing
- Cold Rolled Threads
- Forged or Machined Heads
- High Quality Raw Materials
- Metallographic Inspection
- Quality Assured Process Controls
- 100% Magnetic Particle Inspection on Bolts
- Specialized Heat Treatment



# TECHNICAL SUPPORT

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We understand that demands are ever-changing in the mineral processing industry. As such, our experienced site support team is always on hand to provide ongoing consultations, to achieve a liner wear solution that suits your changing operational needs.



## ON-SITE SUPPORT & EXPERTISE

Our experienced site support team will work to assess your operational requirements, provide installation support and work closely with you to optimize production throughput.

## WEAR ASSESSMENT, MEASUREMENT & MONITORING

- Wear Monitoring and Assessment via Laser Scanning and Ultrasonic Thickness Inspection
- Progressive Wear Overlay
- Liner Profiling and Sectional Thickness
- Wear Prediction and Mapping

# ENGINEERING TECHNOLOGIES

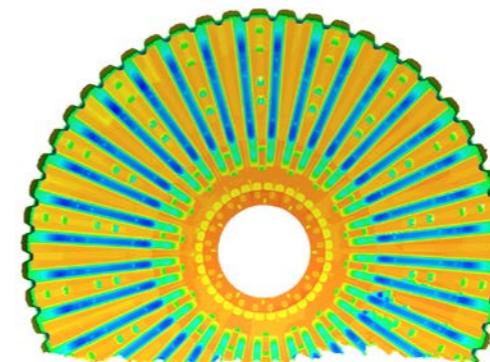
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Growth's full service offers cutting-edge technology for technical specialists to assess and optimise casting design and maximise product quality.



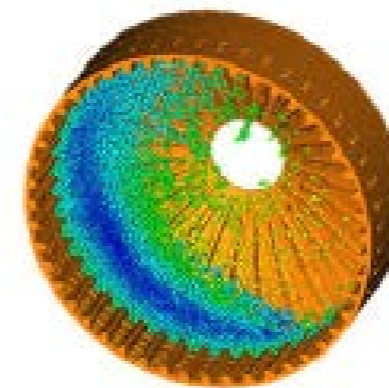
## 3D LASER SCANNING

Growth implements advanced software and 3D laser scan technology that offers a continuous condition monitoring of installed liners in mills and accurately forecasts reline timing based on wear trend analysis. Mill scanning improves the liner inspection in terms of time and accuracy.



## 3D LINER PROFILING

Growth analyses the scanned worn liner profiles recorded to enable those profiles to be optimized in terms of performance in wear life and grinding efficiency.



## 3D DEM SIMULATION

3D DEM is an engineering simulation tool that simulates particle behaviour within a conveyor chute, mill, or other materials handling system. In grinding mills, this software can be used to validate a recommended liner design under operational conditions, providing information on mill power draw, grinding effectiveness, and discharge end performance.



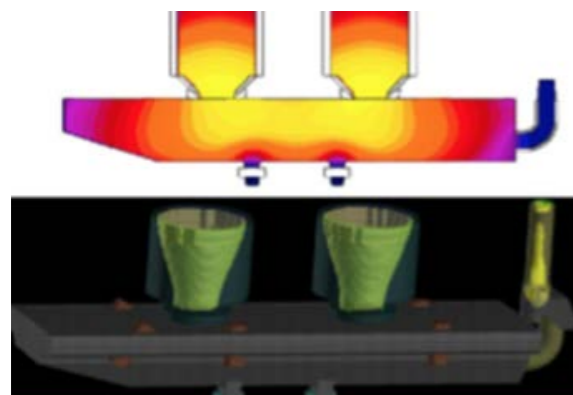
### COMPUTER-AIDED DESIGN (CAD)

Creating a virtual representation of the final product to validate the form, fit and function of the product before they are built. All these product models are stored in our data management tool integrated with the CAD software, recording the history of the models, monitoring the progress as well as maintaining the version control in multi- user environments.



### CNC PATTERN MANUFACTURING

Growth continually improves manufacturing capability and accuracy by utilising to utilising 3D CAD/CAM and CNC process to provide high quality products.



### CASTING SIMULATION SOFTWARE

Casting simulation software uses Finite Difference Method calculations to simulate the thermal solidification of casting while Computational Fluid Dynamics simulates the fluid flow inside the cavity of the moulding sand. This software offers many advantages including the improvement of a casting's quality, reduction of lead time, optimization of cost, ease of redesign and elimination of the potential casting defects prior to production.

## CONTACT US

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**GROW WITH US**



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