



**G R O W T H**  
R U B B E R





# TRUSTED MILL-LINERS AND OPTIMAL SOLUTIONS

Years as a leading global mill-lining system supplier has given us insight into the complementary functions of steel and rubber liners - we understand how each works best for specific mill applications and how your business can benefit from both.

Now with the addition of Growth Rubber, Growth is proud to be your one-stop centre for all mill-liner applications to ensure optimal solutions to suit your specific liner requirements.

## WHAT MAKES US DIFFERENT

- 1 TESTED RUBBER COMPOUND**  
Our differentiated rubber compounds have been developed and field tested for long lasting performance.
- 2 EXPERTISE FROM DEDICATED LINER-DESIGN CENTRES**  
Our global design centre provides in-depth technical support to our experienced site support team, ensuring latest design concepts are at the fore.
- 3 PURPOSE-BUILT FACTORY**  
Our facility is a purpose-built modern factory running the latest rubber processing technology.
- 4 INTERNATIONAL STANDARD, HIGH-QUALITY RUBBER**  
The highest quality rubber is selected for maximum wear resistance.
- 5 WORLD LEADER IN SERVICE EXCELLENCE**  
Growth Rubber is part of Growth Group, an established world leader in service excellence and the design and manufacture of mineral processing wear solutions.
- 6 WORLD'S BEST PRACTICES**  
All our equipment, practices and procedures are carried out in accordance with ISO standards.
- 7 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.

# RUBBER PROPERTIES

PROPERTY	UNIT	GROWTH RUBBER	TYPICAL COMPETITOR
Tensile Strength	MPa	21.8	21
Tear Strength	N/mm	122	80
Elongation at Break	%	665	550
Cut & Chip Resistance*	%	1.5	8
Dry Abrasion Loss, Volume*	mm <sup>3</sup>	55	70
Hardness	Shore A	64	63

\*The lower the unit property, the better for Cut & Chip Resistance and Dry Abrasion Loss, Volume.

## ADVANTAGES OF RUBBER



**REDUCED WEIGHT > 75% LIGHTER THAN METAL**



**HIGH ABRASION IMPACT AND TEAR RESISTANCE**



**INCREASED CHARGE WEIGHT**



**IMPROVED SEALING PROPERTIES**



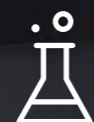
**QUICKER AND SAFER TO INSTALL**



**50% NOISE REDUCTION**



**LOWER COST PER TONNE**




**EXCELLENT CHEMICAL AND ACID RESISTANCE**

## PRODUCT APPLICATION

We understand operating conditions can differ significantly from mill to mill. Growth Rubber has one of the best-equipped laboratory for testing and developing differentiated rubber compounds to suit your specific operation requirements.

**In conventional Mill Lining Systems, Growth Rubber offers a full range of rubber liners for**

- SAG Mills
- AG Mills
- Primary & Secondary Ball Mills
- Regrind Mills
- Lime Mills
- Cement Mills



# RUBBER ENGINEERING TECHNOLOGIES

---

Our full-service facility is the Best-Equipped Rubber Laboratory for the mining industry in South-East Asia, managed by a team of highly experienced technical specialists with extensive international experience.

**Our extensive product testing includes**

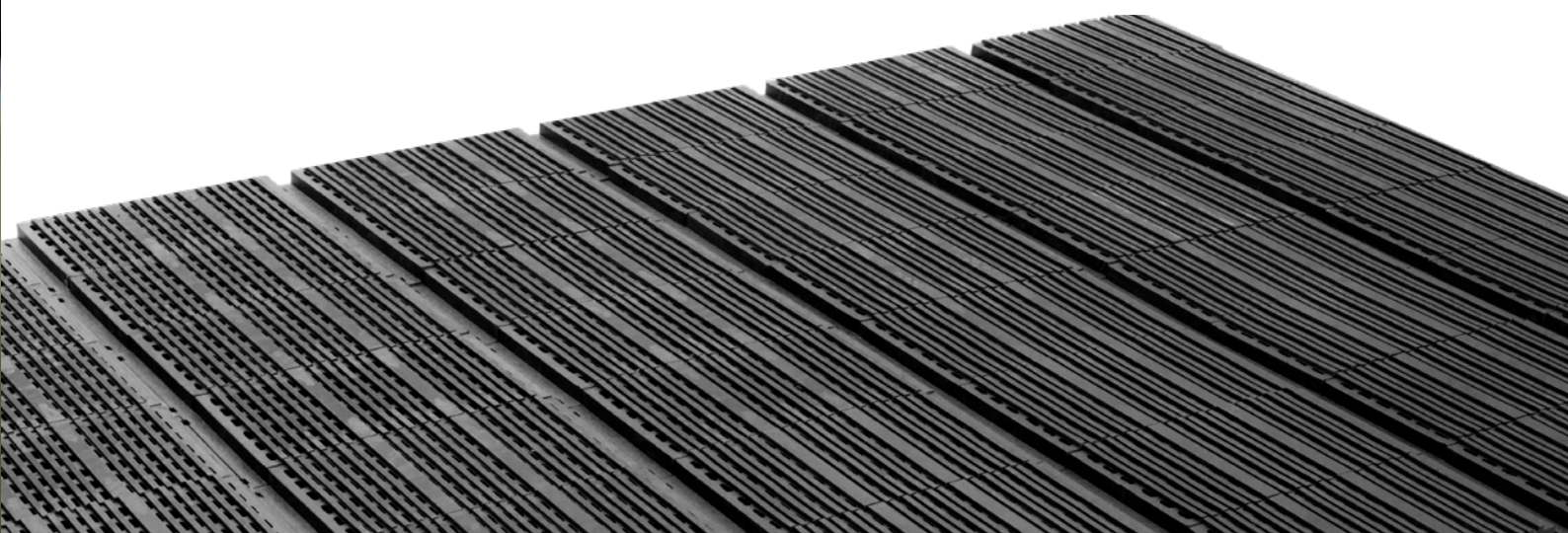
- Dry and wet abrasion
- Chipping and chunking
- Impact
- Rubber to Metal bonding



## OUR RUBBER PRODUCTS

---

All our rubber products are made with quality, tested rubber compounds that meet our international standards. All fully customizable for your needs.



# RUBBER MILL LINERS



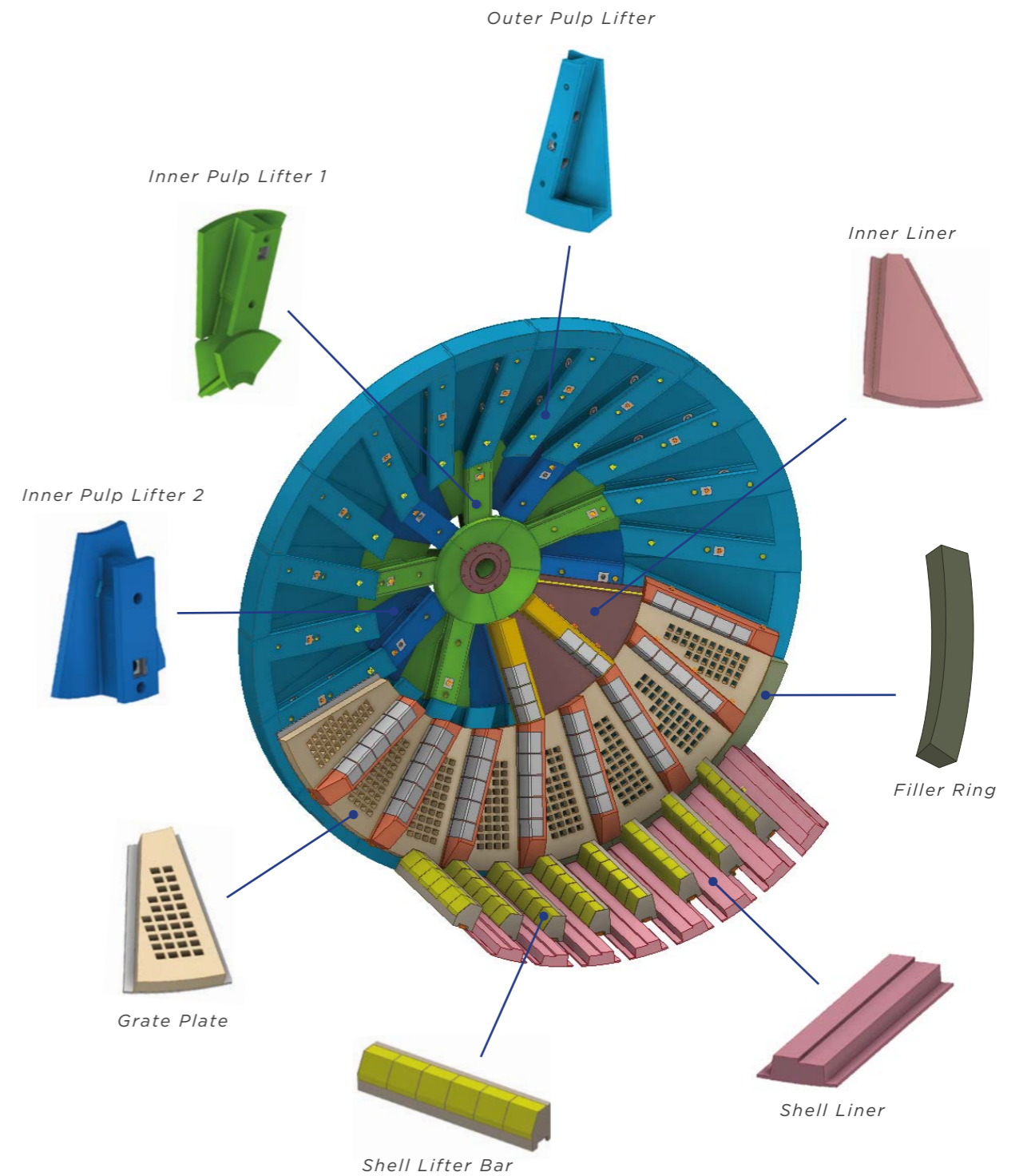
At Growth Rubber we have extended our Steel Mill Liners experience and expertise to a full range of Rubber Mill Liners utilizing uniquely developed polymer compounds.

Using the best ingredients available we can produce high quality Lifter Bars, Shell & Head Plates, Discharge Grates and Pulp Lifter systems to meet your specific grinding mill application.

Our state of the art process means we can manufacture components up to 2060mm long thereby reducing the number of parts you need to install in your mill.

To achieve maximum service life our lifter bars incorporate a low profile, aircraft grade aluminium T-Track. Options available also include Mild Steel and Stainless Steel T-Tracks to meet your specific grinding conditions.

# RUBBER LINER COMPONENTS





## POLY-STEEL MILL LINERS

---

To create the most wear-resistant and high-performance components, we use Poly-Steel, which combines the best properties of rubber and steel in one product.

Lighter than full steel, Poly-Steel is faster and safer to install while contributing to higher productivity. We provide a wide range of steel inserts, from our Chrome Moly and White Iron inserts to commercially proven high wear and abrasion resistant steel plating.

Each of our casting designs can include multiple casting profiles, face angles and weight specifically tailored to suit your grinding conditions.

## OPTI-LINERS

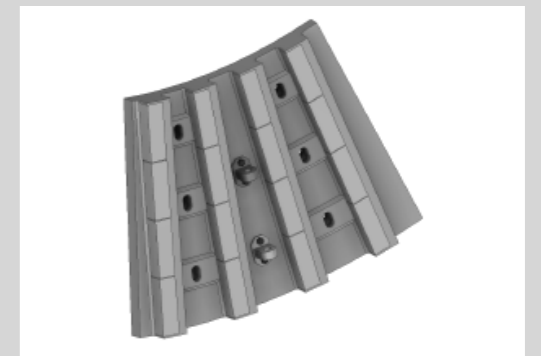
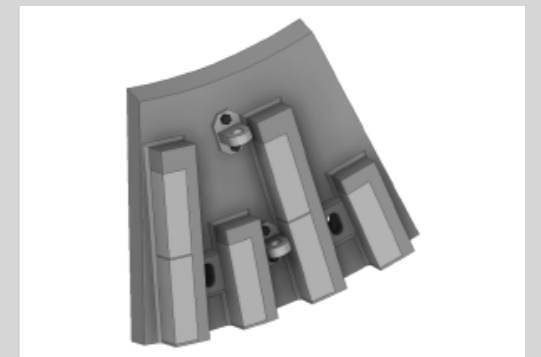
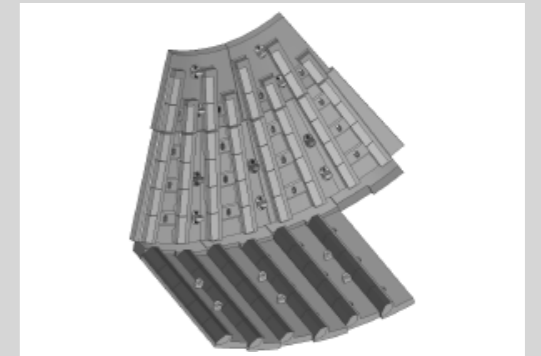
---

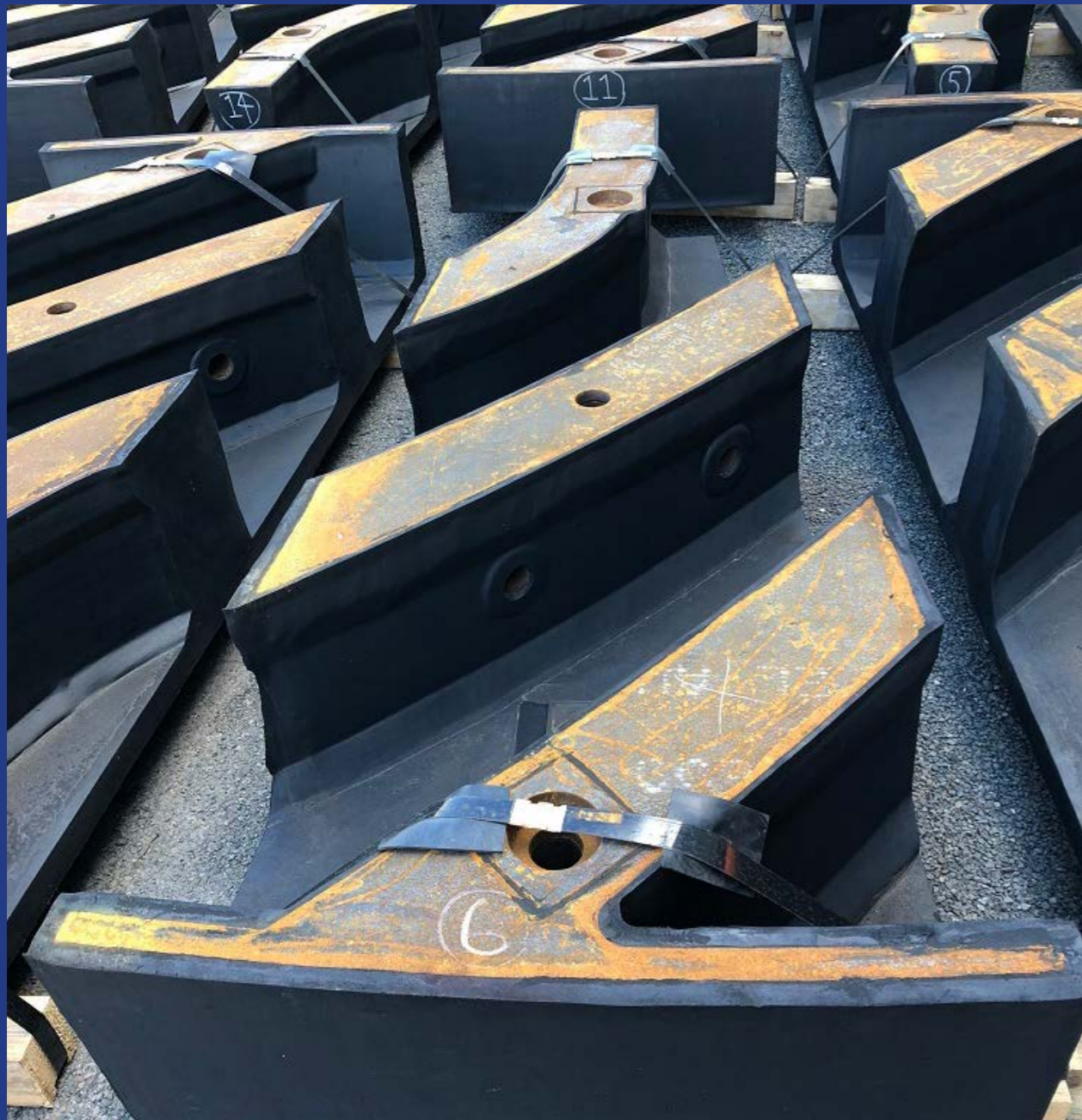
The new Growth Opti-Liner has been developed to combine multiple lifter bar and plate rows into one single unit thereby reducing the number of liner components and speeding up the installation process.

The Opti-Liner system can be made in full rubber or Poly-Steel to suit a variety of milling applications in Ball and SAG Mills. A selection of fixing systems are available for each mill that best suit your method of installation and liner handler capabilities.

Reducing steel liner mill weight is often a challenge but with the Opti-Liner system you can easily combine steel and rubber resulting in improved grinding options with reduced mill weight.

Whether it is to replicate a Ball Mill steel wave design or a SAG Mill steel top hat design, the Growth Opti-Liner System can be adapted for every milling application.



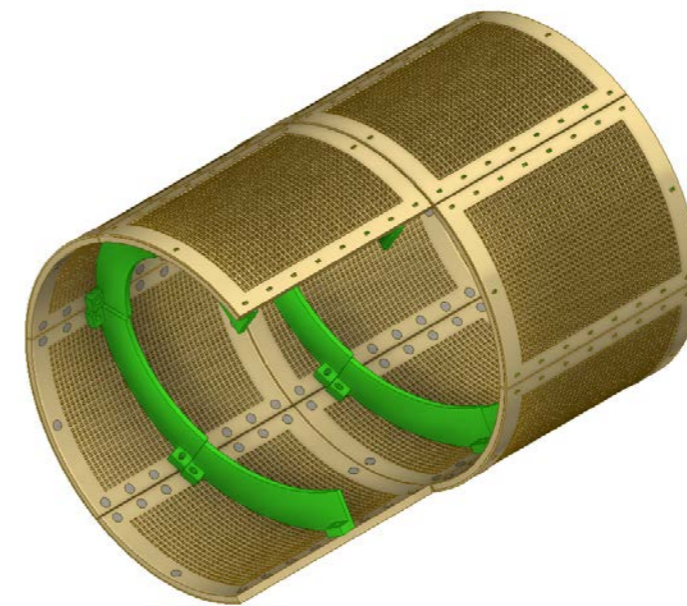
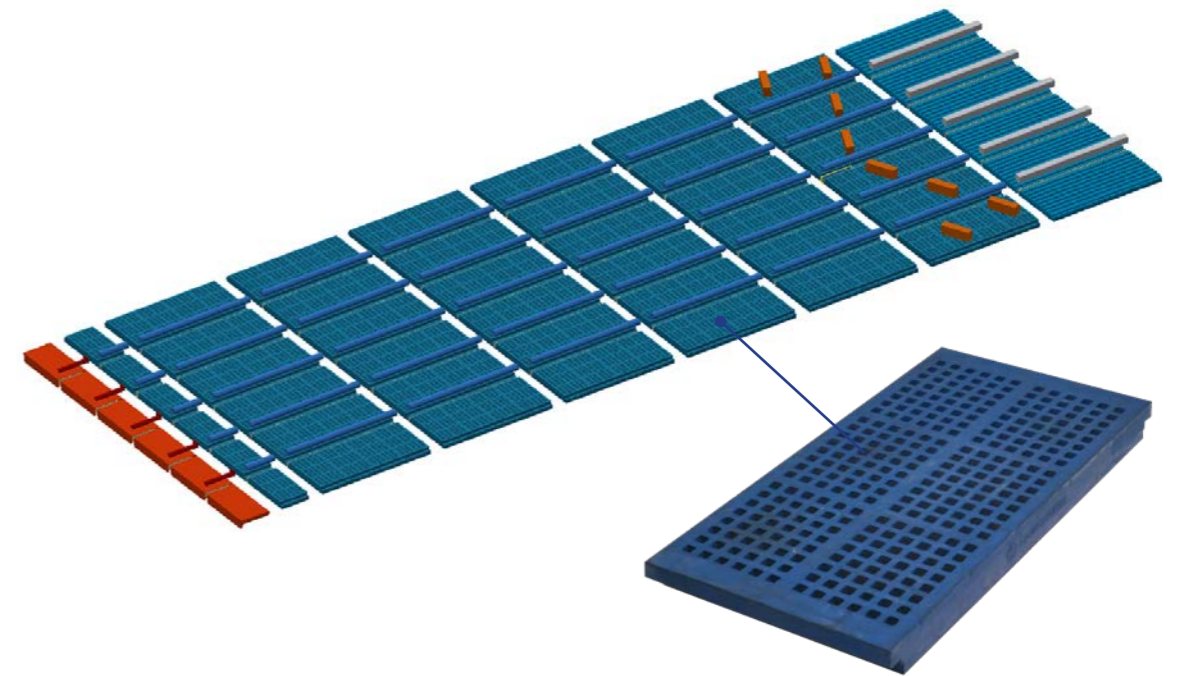


## RUBBER LINED PULP SYSTEMS

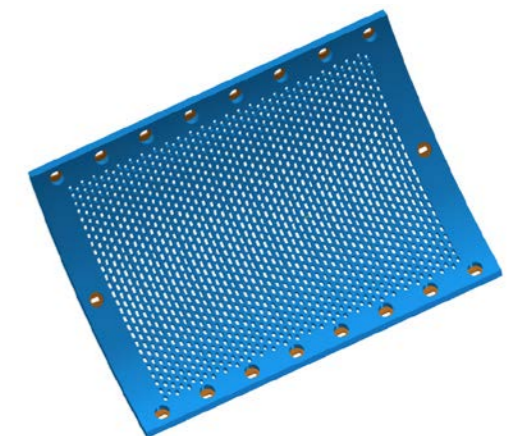
A successful and well-balanced Mill Liner needs to be supported by combining an advanced and efficient Pulp Lifter System.

At Growth Rubber we can design, fabricate and rubber cover the most sophisticated pulp lifter configurations that can also incorporate additional high wear zones made with our Chrome Moly, White Iron, Wear Plates and Ceramic inserts giving you a light-weight yet highly abrasion resistant system.

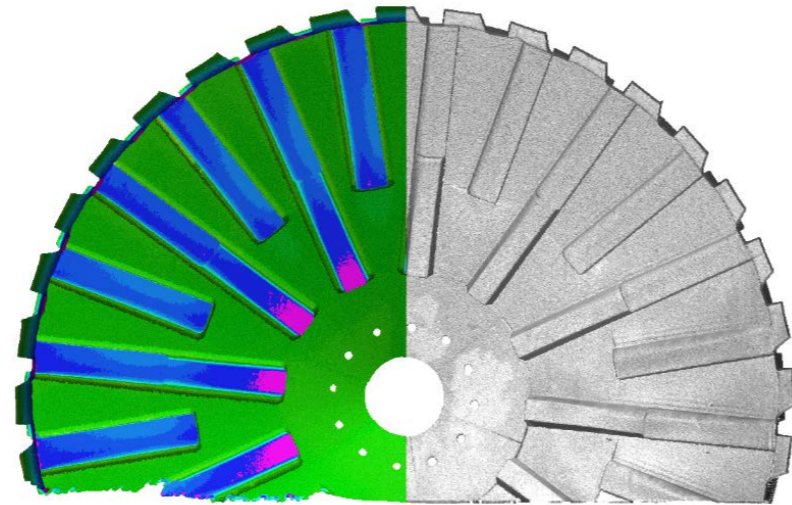
## VIBRATING AND TROMMEL SCREEN PANELS



Modular design with various locking system



Customized aperture configuration for optimum performance



# RUBBER DESIGN CAPABILITIES

---

At Growth Rubber we know the importance of an optimized Mill Liner design. That is why we utilize the latest design and simulation software to ensure your Mill Liner System will provide optimal grinding performance at the lowest operational cost.

- Computer-Aided Design (CAD)
- 3D DEM Simulation
- 3D Laser Scanning

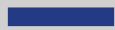
## CONTACT US

**HEAD OFFICE /  
MANUFACTURING FACILITY**  
Jl. K.L. Yos Sudarso Km 10,5  
(Medan Industrial Estate 1),  
Medan 20242, Indonesia

**T** +62 (0) 61 685 0206  
+62 (0) 61 685 0207  
**F** +62 (0) 61 685 0208  
**E** [enquiry@growthsteel.com](mailto:enquiry@growthsteel.com)



**GROW WITH US**



[WWW.GROWTHSTEEL.COM](http://WWW.GROWTHSTEEL.COM)