

**CRUSHCORE**  
DYNAMICS

**TRANSFORMING SUCCESS**

**TEMPUS**  
SMART & GREEN MINING

**A GAME CHANGER IN THE FOUNDRY INDUSTRY  
A GREEN & LOW CARBON FOOTPRINT PRODUCER**

**TEMPUS**  
SMART & GREEN MINING

**TEMPUS**  
NEXT GENERATION STEEL

**IMTUFF**  
STEEL FOR TOUGH JOBS



### **FOUNDED IN 2009**

Owner and Managing Director - Shaun Lou

Previously worked in Australia for Crushing and Mining Equipment (CME)

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### **2015**

Invested in a manganese foundry where all manganese liners were made in compliance with TEMPUS quality standards and procedures.

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### **2020**

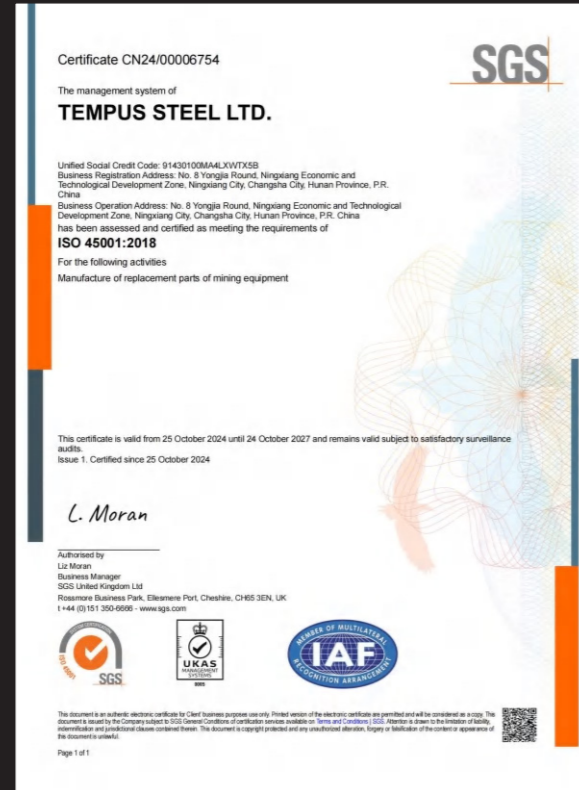
TEMPUS foundry completed with annual capacity of 10,000 tons for manganese, chrome moly, high chrome and composite materials.

TEMPUS is driven by a mission to create values for;

- ≡ The industry – we are setting an example by running a sustainable and low-carbon footprint foundry – doing the right thing, the right way, at the right time
- ≡ Our customers - we supply innovative and reliable products and services to reduce production costs per ton; we provide cost-effective and quality focused procurement & supply chain management services to our partners.
- ≡ Our employees – we provide a safe and comfortable workplace



Environment Management



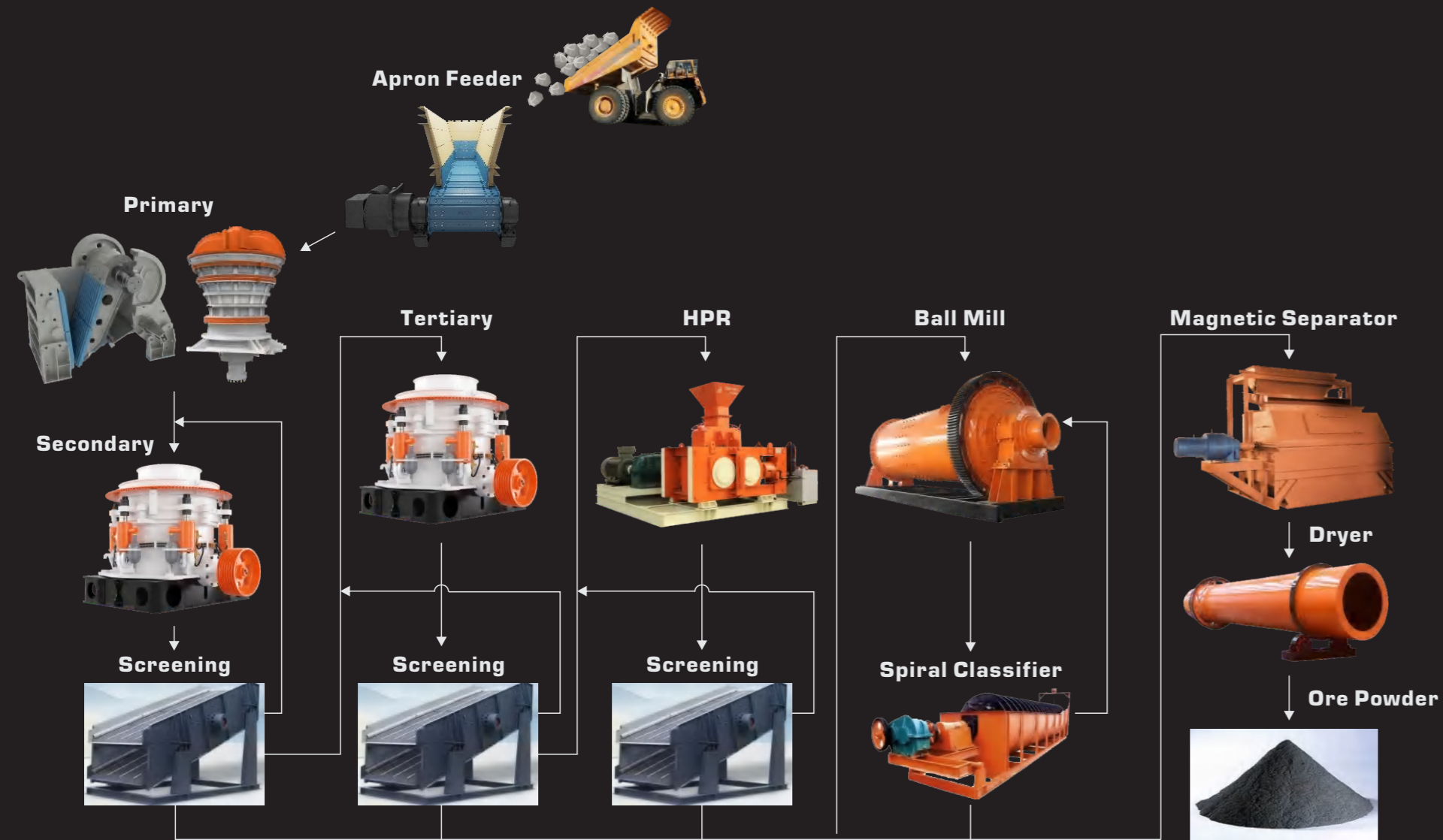
Occupational Health & Safety



Quality Management



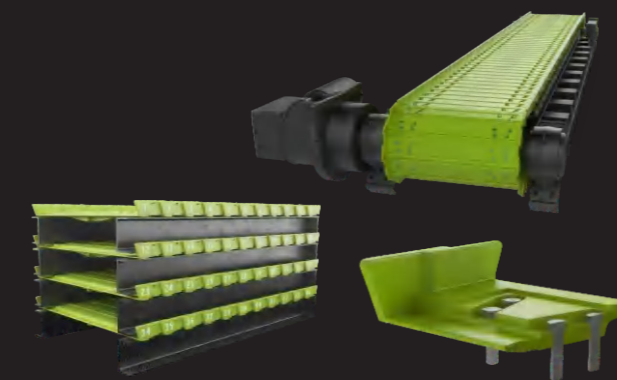
DESIGNING • CASTING • MACHINING • ASSEMBLY • WEAR SOLUTION PACKAGE



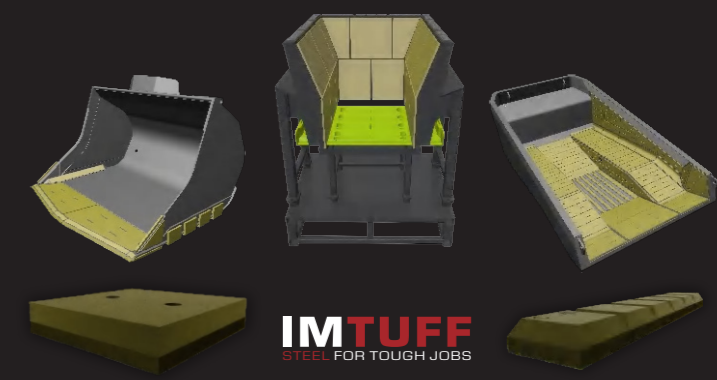
Manganese Crusher Liners



Crusher Parts & Capital Components



Apron Feeder Pans



IMTUFF® Composite Plates, Blocks & Bars

- ≡ We respect customer IP, including drawings, designs, and new technology, and maintain stringent protocols to protect them
- ≡ We use fully licensed versions of all software
- ≡ We have developed an integrated and customised ERP system
- ≡ We have recently launched the on-line Order & Product Status Tracking System

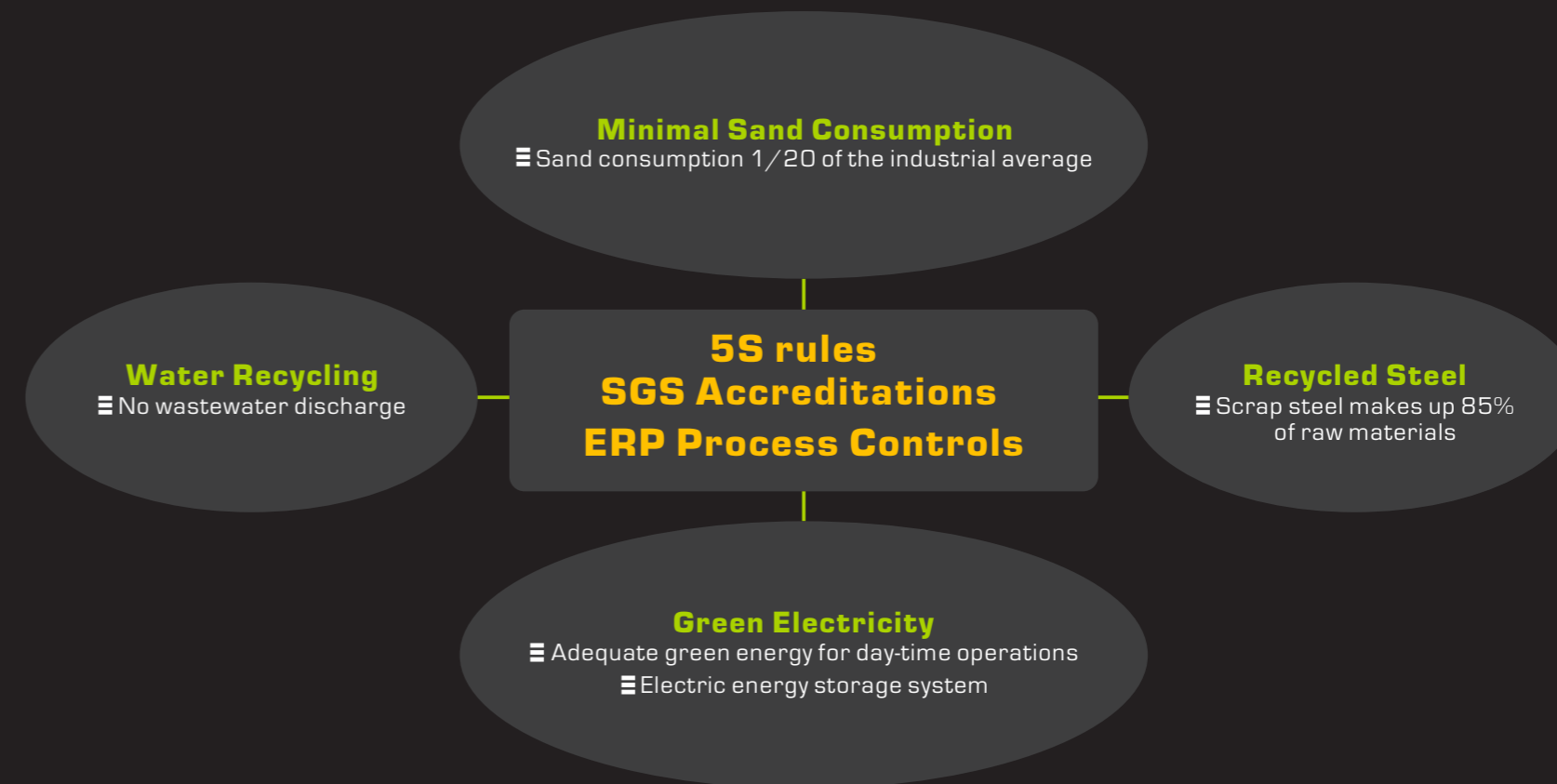
- ≡ Located in Ningxiang, Hunan
- ≡ Bullet train access to Guangzhou (3h) and Shanghai (5h)
- ≡ Direct flights to Hong Kong, Guangzhou, Shanghai, and Beijing



★ SHANGHAI ● GUANGZHOU ● HONG KONG  
TEMPUS



**We are 100% committed to reducing environmental impact, striving to improve efficiency, reduce waste, and recycle materials wherever possible**





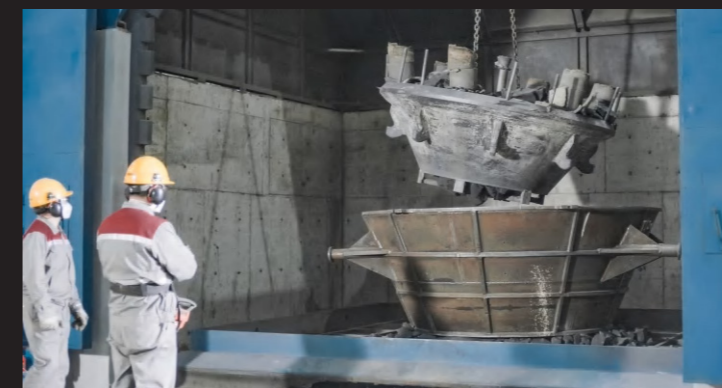
- ≡ Foundries consume large volume of sand for moulding. In general, a 1000kg casting requires up to 5000kg of sand, depending on the shape of moulding box
- ≡ Common types of sand for moulding include Silica, Olivine and Chrome sand
- ≡ At TEMPUS we use ceramic sand for moulding and the overall sand consumption is about 5% of the industrial average
  - ≡ Ceramic sand is ultra-hard and does not break during the process
  - ≡ We use unique reclamation system with a recovery rate of 98.5%
  - ≡ We use customized boxes for moulding



MELTING



POURING



SAND DROPPING



FETTLING

Actual Sand Consumption for 10,000 tons of liners

Traditional	Industrial Average	TEMPUS
30000 - 50000 T	8000 - 12000 T	700 T



- ≡ Adequate green electricity for the foundry day-time operations
- ≡ An electric energy storage system provides emergency power, replacing conventional in-house diesel generator



- ≡ At TEMPUS, labor safety practices and zero harm approach are fundamental requirements
- ≡ The foundry operates under the 5S rules, which refer to Sorting, Shining, Sustaining, Storing, and Standardisation in an operational environment
- ≡ At TEMPUS, the 5S rules translate to being tidy, organised, efficient, and ultimately cost-effective





**CRUSHCORE**  
DYNAMICS

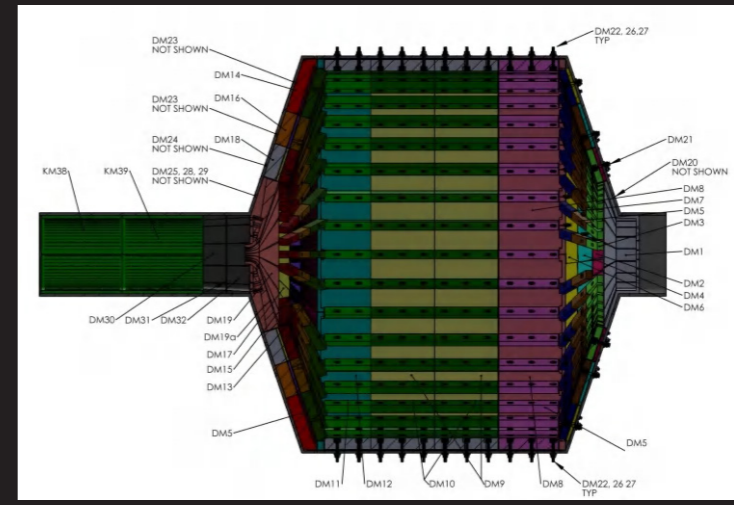
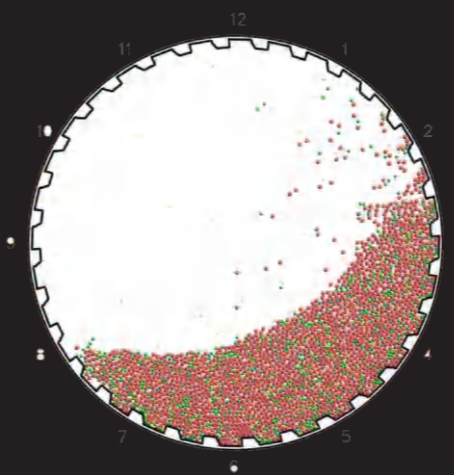
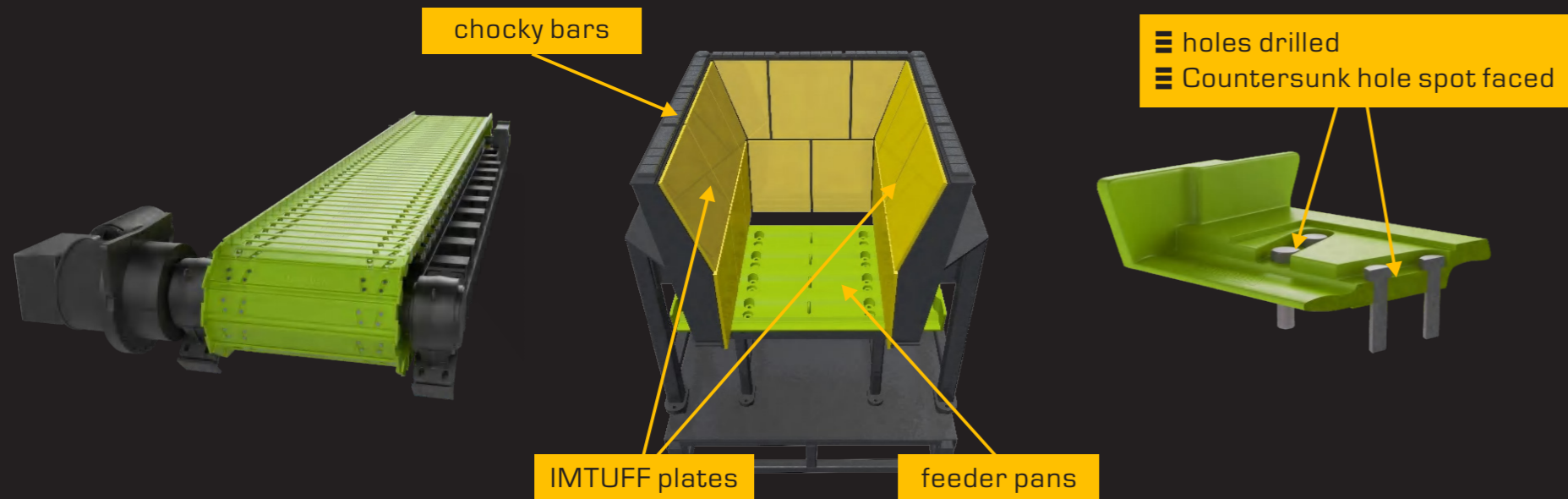
- ≡ A “safe & clean” workplace culture is shaping at TEMPUS. People enjoy working in a safe, clean, and organised environment, and they take pride in maintaining it
- ≡ We are regarded as one of the best companies to work for in the local community



<b>Chemistry accuracy</b>	Top class PMT electro spectrometers(ARL3460)
<b>Rapid cooling</b>	Quenching water kept below 18°C year-round
<b>Fitment guarantee</b>	3D scanning for finished product inspection
<b>Full traceability</b>	Customised ERP and full process control system

We have dedicated production facilities for apron feeder pans, including automated moulding lines, heat treatment ovens, hydraulic pressers, CNC milling and drilling machines, and patented trial assembly tools to ensure manufacturing integrity and fitment

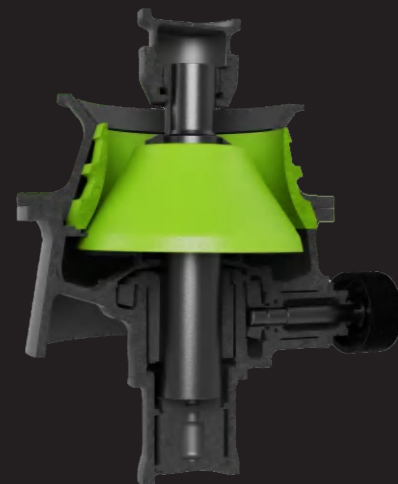
- ≡ Chrome-moly
- ≡ High-chrome
- ≡ Wear Tracking Report (WTR) based on Faro scanning



TEMPUS offers mining grade manganese liners to suit heavy-duty crushing and material transferring applications

- ≡ 14% to 26% manganese steel
- ≡ Strict and precise chemical composition
- ≡ Low temperature water quenching (<18°C year round)
- ≡ ERP process control and full traceability
- ≡ Reliable and predictable wear life

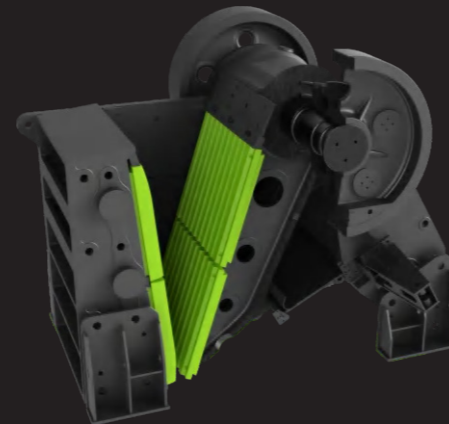
- ≡ The IMTUUFF® TIM long-life liners offer extended wear life without affecting the closed side setting (CSS)
- ≡ Paralleled crushing zones are machined the same as standard liners
- ≡ The crushing stress hit the inserts, which are 8-10mm under surface, and transfer back to the manganese which creates ideal condition for hardening



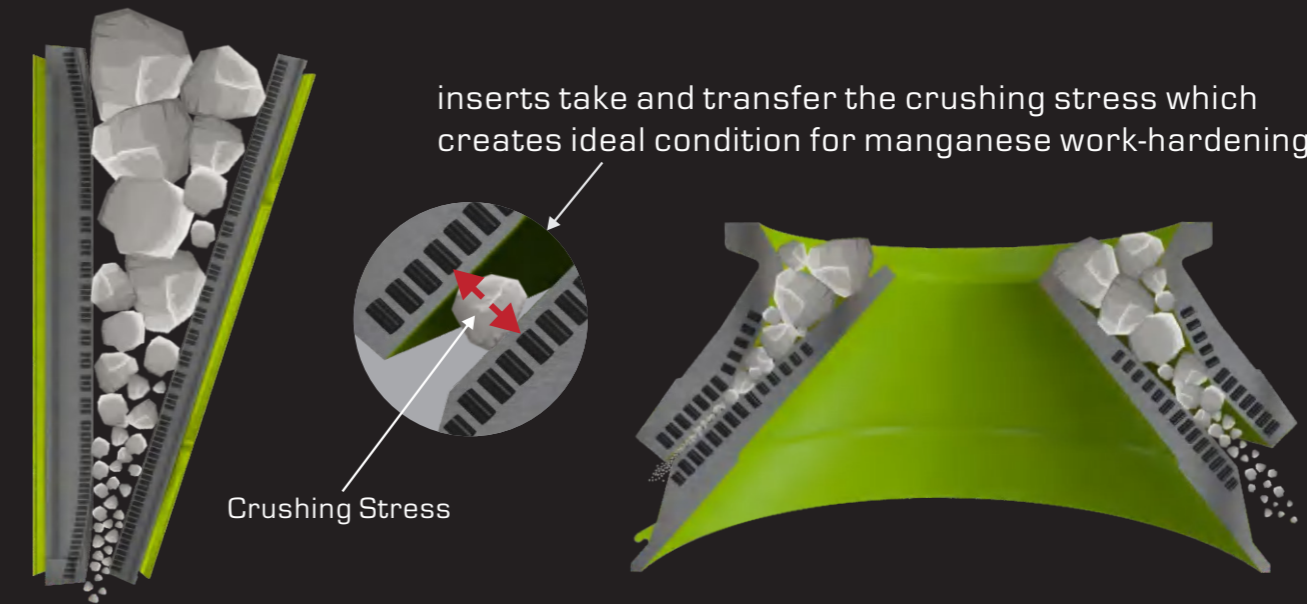
Cone Crusher Concaves & Mantles



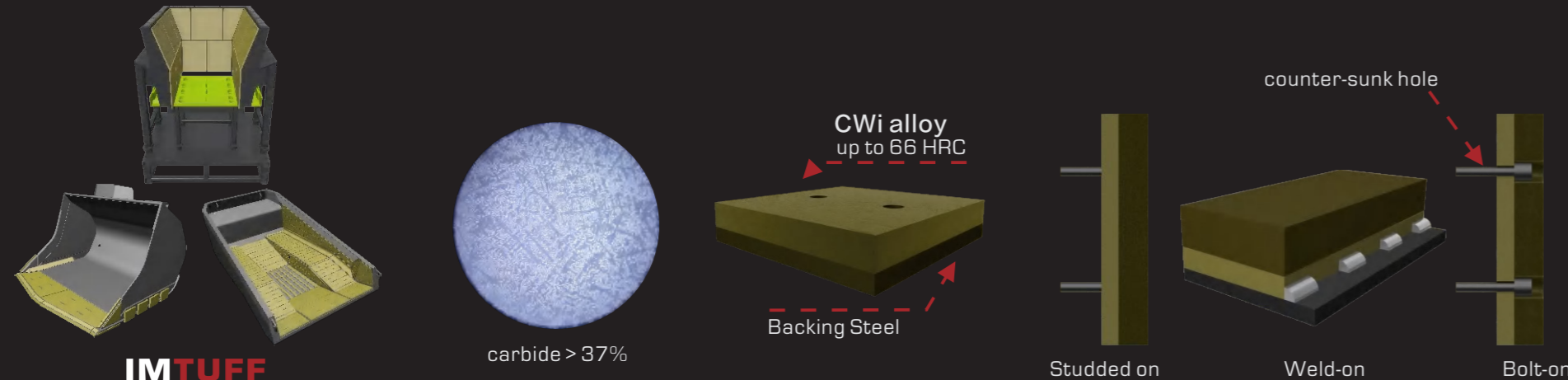
Gyratory Cruysher Mantles & Concave Segments



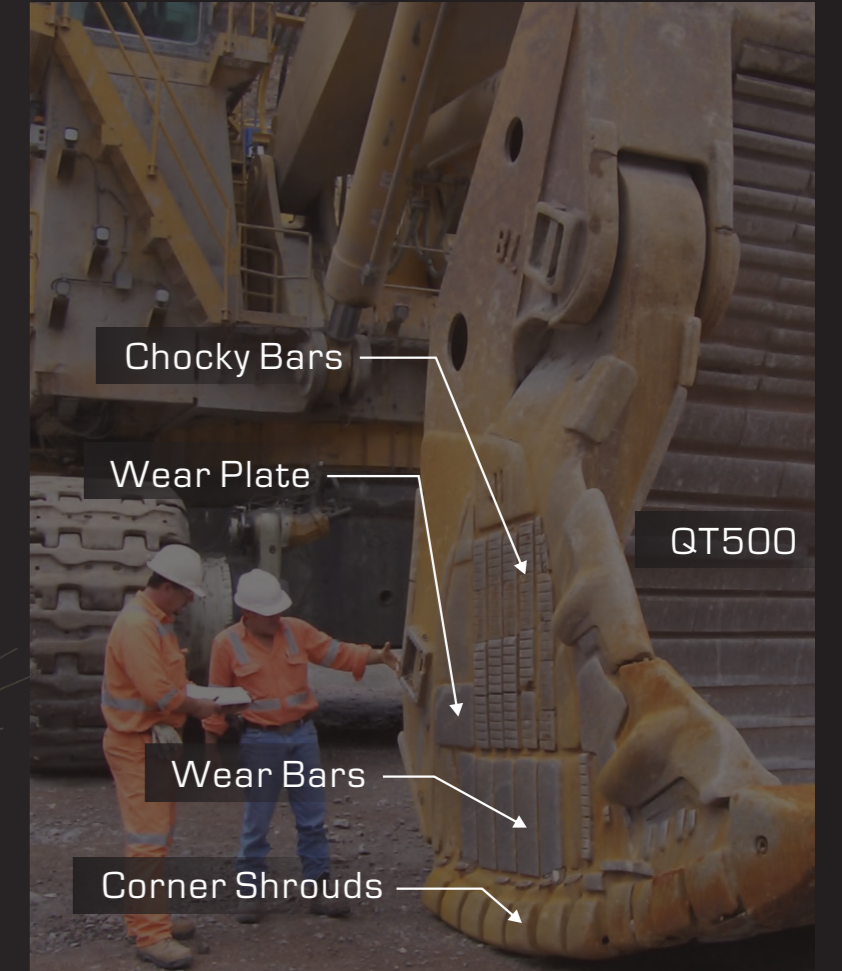
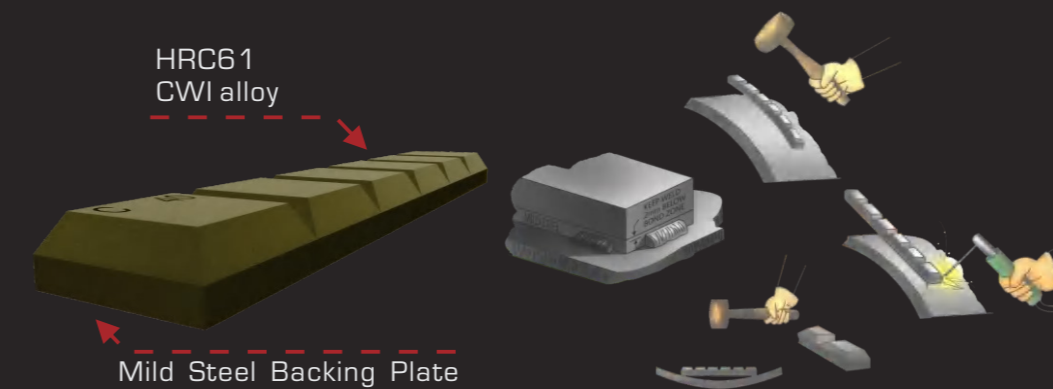
Jaw Crusher Jaw Plates



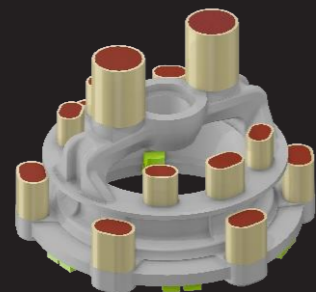
- ≡ The IMTUFF® fused composite is ultra-hard CWI alloy fused onto mild steel backing plate.
- ≡ The unique manufacture process includes the use of plasma rotating electrode process (PREP) that applies alloyed powder on a mild steel plate. The combined technology of laser engineering net shaping (LENS) and wire arc additive manufacturing (WAAM) creates a molten pool that allows rapid solidification and forms a smooth surface finish which means less friction and reduced material hang-up.



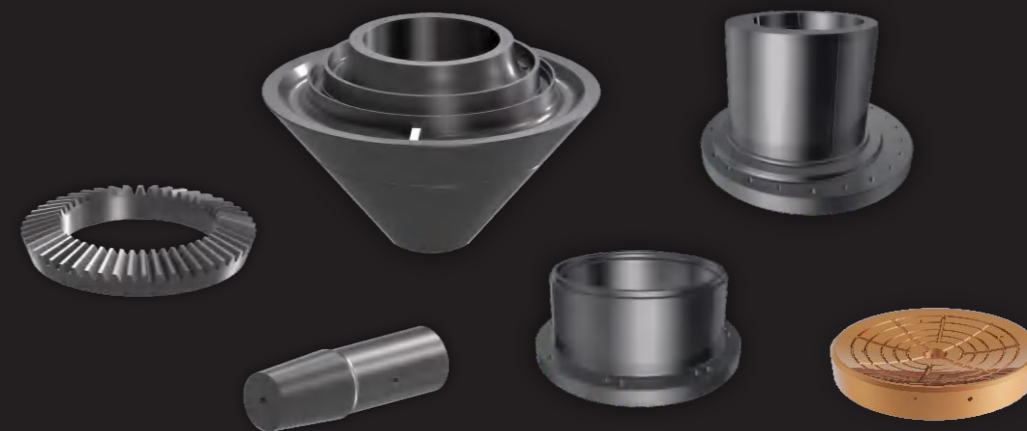
A composite material of CWI alloy vacuum-brazed bonded onto mild steel backing plate. It offers a simple and cost effective solution to protecting fixed and mobile assets against abrasion and impact wear.



- Crusher capital components are essential parts that are critical to its operation, durability and efficiency, requiring significant investment for acquisition, installation and maintenance
- We offer premium quality capital components such as shells and main frames which are made to the highest standards, that being casting / forging integrity, material and dimensional accuracy



- We design and manufacture steel, iron and bronze replacement parts, as well as nearly any other part needed to keep comminution equipment running smoothly
- Our complete line of crushing and screening parts is driven by customer need and second to none. With a commitment and guarantee to outperform any others and keep your mission critical equipment moving.



- ≡ Stringent chemistry controls
- ≡ ERP-based process controls (from TP1 to TP7)
- ≡ 3D scanning to guarantee fitment
- ≡ Full traceability and online access for customers

CD8016 M/3

Pattern no   material code / serial no

Concave

Description

2022/03/17

Date received in stock

TP4-22-0034

TP3A-22020051

HT batch no   Melting batch no



Unique bar code

FITMENT & PERFORMANCE  
GUARANTEED

Despite various challenges in recent years, our partners have continued to work with us. By providing products that meet the highest quality standards—whether it's a cone liner we've produced hundreds of times or a one-time request to meet a unique challenge—we enable our partners to consistently exceed their customers' expectations.

*" At Unified, our screening, crushing, and wear parts perform so well on the job because they are inspired by real on-the-job situations. We work closely with our customers to solve their problems and help them maximize production.*

*We choose partners who help us serve our customers by providing products that meet the highest quality standards. Whether it's a cone liner they've produced hundreds of times or a one-time request to meet a unique challenge, TEMPUS enables our team at Unified to consistently exceed customer expectations.*

*We are proud to partner with TEMPUS."   — Unified Screening & Crushing*

