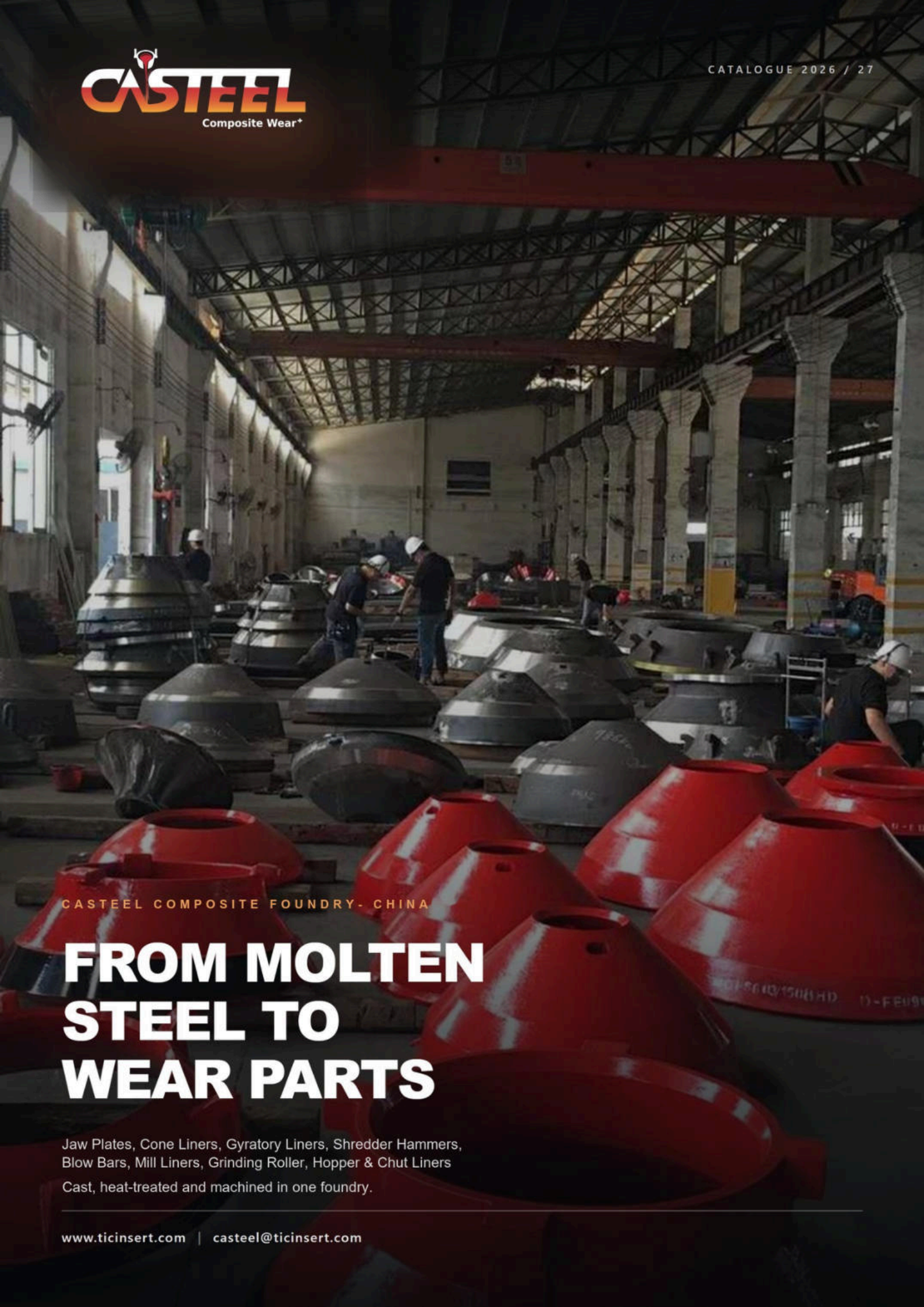
CASTEEL
Composite Wear*



CASTEEL COMPOSITE FOUNDRY- CHINA

FROM MOLTEN STEEL TO WEAR PARTS

Jaw Plates, Cone Liners, Gyratory Liners, Shredder Hammers,
Blow Bars, Mill Liners, Grinding Roller, Hopper & Chut Liners

Cast, heat-treated and machined in one foundry.

www.ticinsert.com | casteel@ticinsert.com

Premium Composite Wear For Global Mining.



Material R&D, casting, carbide insertion, hardfacing overlay and precision machining sit under one roof — so a TiC insert, its parent casting and its finished tolerance are all our responsibility, not three suppliers'.

10 t	1 600 t	ISO 9001	100 %
Max single casting weight	Hydraulic press, machining shop	Quality management system	Traceable melt to despatch

— THE COMPANY

CASTEEL Composite Wear Parts Co., Ltd. specialises in composite reinforced wear components for mining, quarrying and mineral processing. The portfolio spans high manganese steel, chromium cast iron, alloy steel, titanium carbide inserts and bi-metal wear solutions for chute liners and metal shredder wear parts. OEM/ODM customisation, wear analysis and one-stop wear solutions are available for the full crushing and processing circuit.

— PRODUCTION EQUIPMENT

- **Melting** — medium-frequency induction and gas-fired furnaces, on-line spectral control
- **Moulding** — resin sand and lost foam casting, HPM controlled cooling
- **Machining** — 1,600 t hydraulic press, CNC vertical lathes, milling and boring, shot blasting
- **Composite station** — tungsten carbide insertion, automatic hardfacing overlay
- **Heat treatment** — water toughening and quenching furnace, stress-relief furnace

— TESTING & QA

- Optical emission spectrometer (SPECTRO), metallographic microscope, hardness tester
- NDT: ultrasonic testing and magnetic particle inspection
- ISO 9001 quality management system
- Furnace-side composition feedback, full traceability from melt to finished goods

— MANUFACTURING CAPACITY

- Extensive pattern library for cone, jaw and impact crushers, ball mills and HPGR
- Maximum single casting weight up to 10 tons
- 3D scanning and reverse engineering; rapid pattern development
- Standard stock for quick shipment; custom parts on scheduled timelines

— MATERIAL CAPABILITY

- **Conventional** — Mn13 / Mn18 / Mn22 manganese steel, Cr26 high chromium iron
- **Composite** — TiC / WC inserts, bi-metal composite, hardfacing overlay, composite matrix
- **Customised** formulations matched to ore abrasion and impact

— BI-METAL LINER TYPES

01 Liquid–liquid cast bi-metal
Fused high-chromium layer on a manganese or alloy substrate. Ball mills, cone crushers, heavy impact.

02 Inserted bi-metal
TiC or WC blocks set only in the high-wear zone. HPGR studs, hard-ore crushing.

03 Hardfaced CCO bi-metal
Chromium carbide overlay on plate, for low-impact sliding abrasion: chutes, hoppers.

04 Explosion-clad bi-metal
Flat panels bonded by explosive cladding, for simple flat liner structures only.

— CORE PRODUCTS

Cone Crusher Mantles, Concaves, Wear Segments	**Jaw Crusher** Jaw Plates, Cheek Plates, Side Liners	**Impact Crusher** Blow Bars, Impact Plates, Apron Liners	**Ball Mill & Grinding** Mill Liners, Lifter Bars
HPGR Wear Segments, Carbide Studs, TiC Inserts	**Transfer Protection** Chute Liners, Hopper Liners, CCO Panels	**Metal Shredder** Hammers, Cutter Blocks, Wear Plates	**OEM / ODM** Custom Composite and Bi-Metal Parts

WHY CASTEEL
WHY BUYERS COME BACK

- **Composite Metallurgy In-House** — TiC and WC Inserts
- **ISO 9001 QA and NDT** — Full Material Traceability
- **Flexible Supply** — Stock for Fast Delivery, Engineered to Order
- **Full Chain, No Subcontract** — Melt to Machined Part
- **Reverse Engineering** — Rapid Pattern Development
- **Wear Analysis** — Aimed at Cost per Tonne of Ore

CASTEEL COMOSITE WEAR PARTS CO., LTD.
Jinhui Road Yushan, Shangrao City, Jiangxi Province, China
Est.2003 · Mn steel, high chrome and ceramic-composite wear parts

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PROCESS

FROM PATTERN TO PALLET

Every liner is cast to our own pattern, heat-treated and machined to drawing — **traced through eight stages**, from foam pattern to packed pallet.



01

PATTERN MAKING

CAD-checked foam and wooden patterns.



02

FLASK MOULDING

Resin-bonded sand, hand-packed and vented.



03

MELTING

Induction furnace melt, chemistry checked before the tap.



04

POURING

Poured straight from the furnace at set temperature.



05

SHAKEOUT

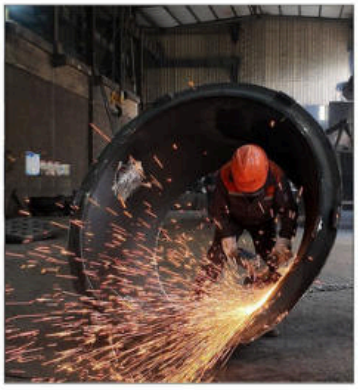
Mould broken out, sand cleaned off.



06

HEAT TREATMENT

Annealed and tempered to hardness.



07

POLISHING

Gates and fins ground, edges chamfered.



08

MACHINING

CNC and vertical lathe to drawing tolerance.

MATERIALS MN13CR2 · MN18CR2 · MN22CR2 · CR26 · CR20 · BRONZE · TIC COMPOSITE



FOUNDRY · AS CAST, AS MACHINED

RAW CASTINGS

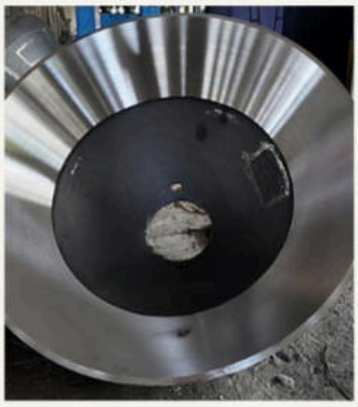
QUALITY YOU CAN JUDGE BY EYES

Bright where it matters. The polished ring is the machined seat and backing face, turned to the OEM profile and checked for straightness.













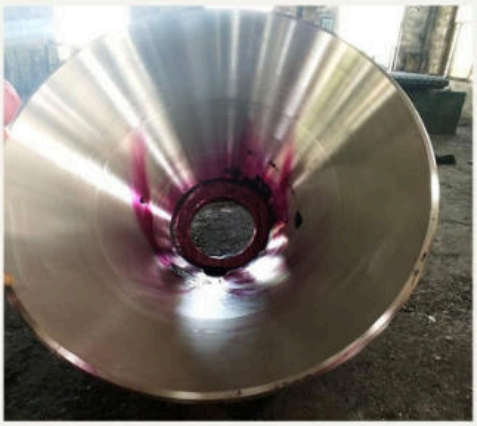
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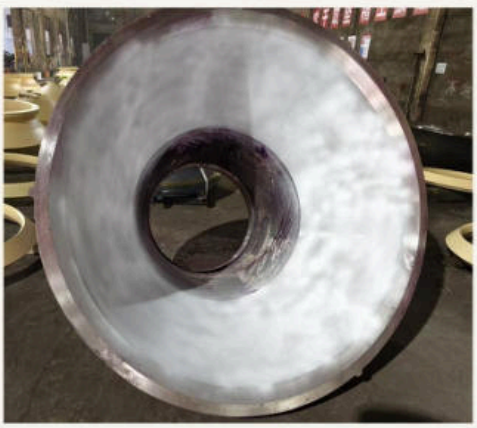
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INSPECTION · AFTER HEAT TREATMENT

CRACK DETECTION

DYE PENETRANT · EVERY CASTING · BEFORE IT IS PAINTED





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JAW CRUSHER

JAW PLATES

CORRUGATED · RIBBED · TOOTHED — BANDED ON STEEL PALLETS

THE FIRST HIT IN THE CIRCUIT

Jaw plates take the first and the worst of the feed. Profile, tooth pitch and alloy decide whether a plate wears evenly across the face or wears a groove down the middle while the edges are still new. We cast corrugated, ribbed and toothed profiles in manganese for impact and in high chrome where the rock is abrasive and the feed is already sized.

RANGE & OPTIONS

Positions — fixed and swing
Profiles — corrugated, ribbed, toothed
Fixing — wedge or bolt, to machine
Alloys — Mn13Cr2 · Mn18Cr2 · Mn22Cr2 · Cr26
Also — cheek plates, side liners, toggle seats
Marking — part number + heat number



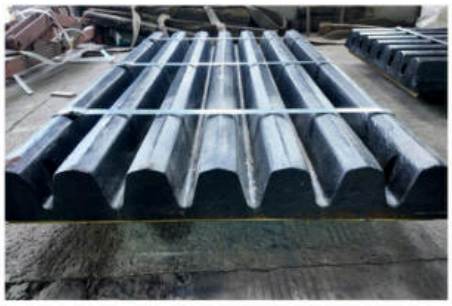
01
LAID OUT FOR COUNTING
Sets on the floor, checked against the order.



02
CORRUGATED PROFILE
Deep corrugations for slabby, abrasive feed.



03
RIBBED SWING PLATE
Ribbed face cast in one piece with the fixing lugs.



04
STACKED IN THE YARD
Corrugated plates set down as a matched set.



05
COLOUR TO ORDER
The same plate in green, yellow or red.



06
WRITTEN UP
Series and size stencilled before the truck.

ORDER INFORMATION

WHAT WE NEED FROM YOU

Crusher model and jaw opening; fixed, swing or both; the tooth profile drawing, or a photograph of the plate you are replacing with a tape measure across it; alloy; and whether the feed carries oversize or tramp metal. A worn plate sent to the yard is the fastest route to an exact match — we copy the profile and correct the dimensions that have worn out of tolerance.



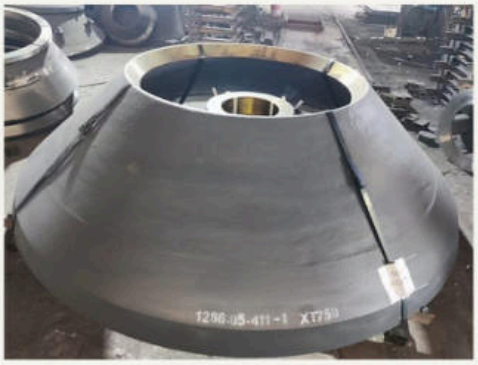
CONE CRUSHER

MANTLES & BOWL LINERS

MACHINED SEATING · HEAT NUMBER STENCILLED · BANDED FOR SEA FREIGHT













Turned seat, cast-in lugs, marked per heat. Mantles and bowl liners in Mn18Cr2 — the seat and backing face machined on our own lathe, lifting lugs cast with the part rather than welded on afterwards,

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GYRATORY LINERS

Finished, inspected, marked. Cone seat machined to the OEM profile, lifting lugs cast in, each piece tagged with its heat number before it is strapped to a pallet — and every concave set match-marked so the crew bolts the right ring to the right cone the first time.



GYRATORY CRUSHER · WEAR PARTS

Sections Pre-Assembly TO ONE PIECE





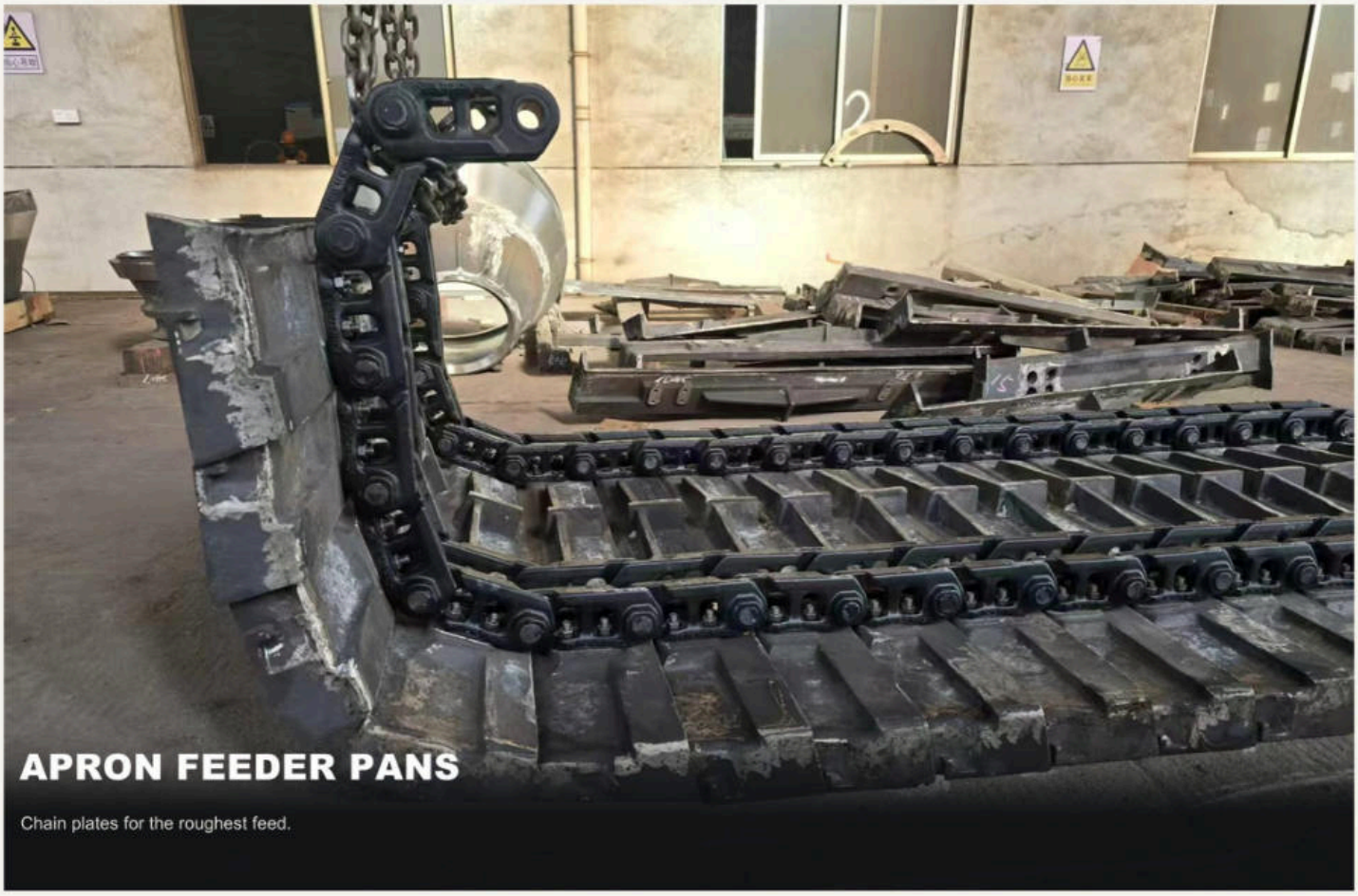






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APRON FEEDER PANS

Chain plates for the roughest feed.

Mn13 / Mn18 / Cr-Mo
MANGANESE STEEL AND CR-MO PANS

16–50 mm
PAN THICKNESS, BY DUTY

Bolt for bolt
MATCHED TO YOUR WORN PATTERN

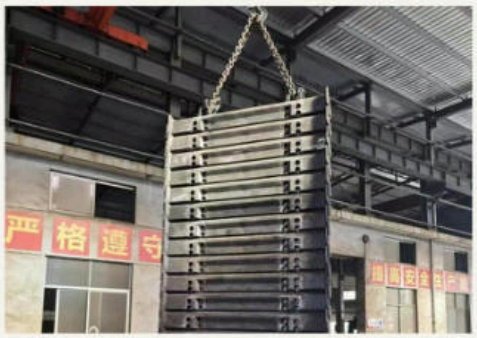












Cast, painted, stacked and counted. Each batch is laid out on the floor and numbered before it is palletised — a full set leaves as a full set, every pan drilled to the same pattern.

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COMPOSITE · CAST-IN RODS

CARBIDE TECHNOLOGY

CAST-IN ROD, NOT GLUED



Set in the mould before the pour. Each rod is positioned in the sand and gripped by the matrix along its full length. As the face wears away, the rod ends stand proud and keep cutting — no weld

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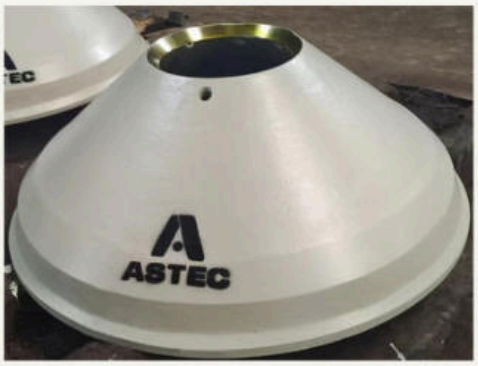
OEM · TO DRAWING

OEM VIEW

YOUR DRAWING, YOUR PART NUMBER













Same foundry, different nameplate. Jaw plates, mantles and bowl liners in customer livery — poured to one internal standard, inspected to the same drawings, shipped with the customer's own paperwork.

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SERVICE · IN YOUR PLANT

ON SITE, NOT JUST ON PAPER

WEAR REVIEW · GRADE CHECK · CHANGE-OUT SUPPORT

WHEN WE COME OUT

A liner is half the job. The other half is knowing what the machine is doing: how much wear face is left, what alloy is actually in the chamber, and whether it is the setting or the feed that is killing it. We walk the chamber with your maintenance team, then write down what the numbers support.

A VISIT COVERS

Wear measured on the liner in place
Grade read with a handheld XRF
Chamber and closed-side setting
Change-out plan and parts list
Backing compound and fitting
Photos and a written report



01
AT THE CRUSHER
Chamber review with the customer's maintenance team.



02
WEAR, MEASURED
A jaw plate out of the machine, wear face spent and read off it.



03
GRADE READ ON THE SPOT
Handheld XRF on a liner in the yard, no sample cut.



04
BATCH, COUNTED
Numbered, counted and photographed before it ships.



05
THE INSTALLED BASE
A line of chambers, all on the same wear programme.



06
BACK FROM SITE
A season's worth of pans, photographed where they came off.

WHERE THE NEXT ORDER STARTS

MEASURED, NOT GUESSED

Most repeat business starts with a measure, not a price. Send the worn part, or the numbers off it — weight lost, wear depth, hours run — and the next set is specified against the rock you actually crush, not the one in the catalogue.

DISPATCH · LOADING

BY TRUCK, BY TRAIN, BY CONTAINER

LOADED, LASHED, PHOTOGRAPHED



















CASTEEL
Composite Wear+

FACILITY & FINISHED WEAR PARTS



01
Austenite Manganese Steel
(Crusher & Grinding Liners)

02
Chromium Cast Iron
(Impactor Bar, Hopper & Chut Liner)

03
Martensite Alloy Steel
(SAG Mill Liners, Shredder Hammer)

04
Composite Steel
(TIC Inserts Liner, Chrome Carbide Liner)

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