

INNOVATION.  
NOT DUPLICATION.™



CRUSHING SOLUTIONS

## DIVISION OVERVIEW

# DIVISION OVERVIEW

H-E Parts Crushing Solutions (H-E Parts) added value is achieved by providing fit-for-purpose design, innovation through engineering and quality through service performance. We have been reducing the risks associated with the installation, maintenance and servicing of mining, quarrying and processing equipment since our inception, and this can be demonstrated by the quality of clients we supply.

H-E Parts is capable of offering a full product life cycle and service solution from; products and parts supply, to engineered application design, manufacturing, assembly and installation, training, on-site and off-site repair, workshop rebuilds and decommissioning. We believe this position's H-E Parts at the forefront of the mineral processing industry.

## OUR MISSION AND CUSTOMER PROMISE

Our mission is to supply customers with the highest quality replacement parts, components and services that improve lifecycle performance and lower costs. We will deliver a superior alternative by providing innovative engineered solutions designed to support mine and industrial maintenance professionals. Our aim is to provide the best customer service through an empowered, talented and responsive team. We will provide a safe, productive, supportive workplace that attracts and retains the best employees possible.

## CORPORATE OVERVIEW

H-E Parts International (H-E Parts) is a leading independent supplier of parts, remanufactured components and equipment to the global mining, quarrying, heavy construction, and energy sectors.

H-E Parts International is comprised of the following divisions:

- Mining Solutions – Complete powertrain solutions.
- Crushing Solutions – Crusher liner development, parts and wear product solutions.
- Engine Solutions – Diesel engine remanufacturing and service solutions.
- Construction Solutions – Mobile equipment parts solutions.

Our divisions offer solutions in support of mobile surface mining equipment, fixed crushing and minerals processing equipment, and mobile construction equipment fleets.

At H-E Parts, we provide our customers with a superior alternative to many of the traditional OEM channels by responsibly delivering innovative solutions that award the customer with the lowest total cost of ownership.

## SAFETY

At H-E Parts, one of our core values is that we will not compromise accident and injury prevention, or environmental compliance for profit or production.

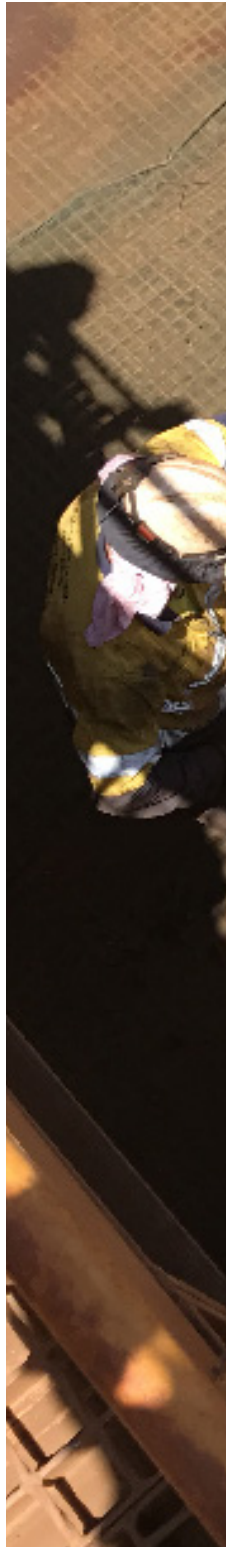
We are working towards creating safety excellence, not just focusing on preventing accidents and as such concentrate on what goes right, not just what goes wrong.

Our “See You Tomorrow” philosophy is underpinned by a set of beliefs, behaviors and key safety promises that drive positive safety outcomes.

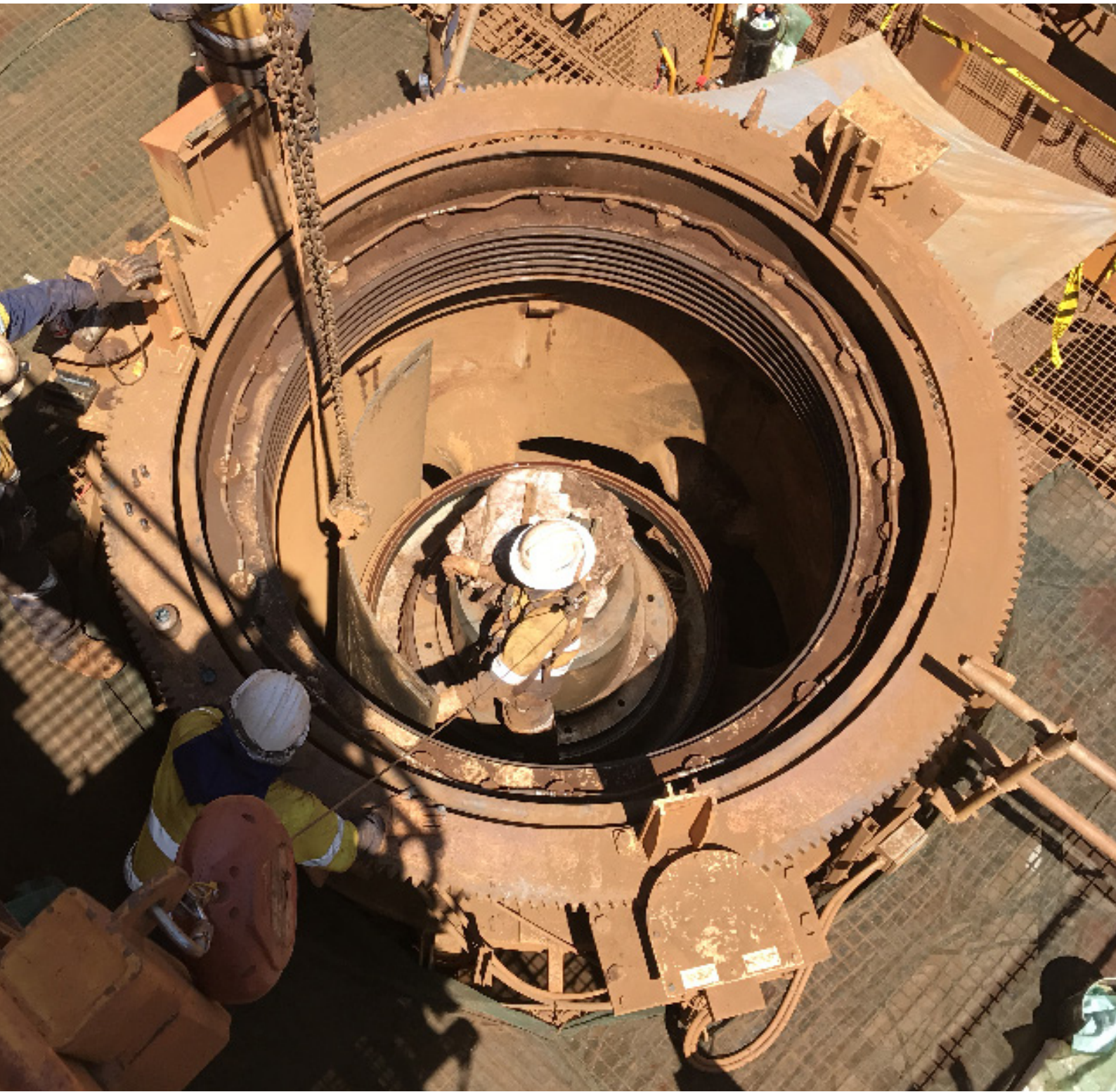
## QUALITY

H-E Parts places priority on quality to ensure we meet or exceed clients' expectations in design, products, services, and solutions globally.

Quality and compliance is an integral part of what we do at H-E Parts, and as such, we regularly review and improve our policies and practices to reflect this.







# CME™ CRUSHER LINERS

H-E Parts has built a reputation on the performance and reliability of our range of CME™ manganese crusher liners. H-E Parts offer liners for most makes of cone, jaw and gyratory crushers, in various grades and customized profiles to suit site applications or address processing problems for specific customer requirements.

Our engineering department are wear management specialists, with proprietary liner development programs to ensure all liners offer our customers the lowest total cost of ownership.

## INNOVATION

As the most innovative liner supplier in the world, some of H-E Parts innovations include:

- Flow controlled feed plates and chamber designs.
- Power-controlled tertiary cone crusher liners.
- Fully corrugated primary crusher mantles.
- High tonnage / decreased power draw gyratory liner sets.
- Self-hardening jaw crusher tooth designs.
- Extended chamber gyratory and jaw crusher designs.

## GRADES AND OPTIONS

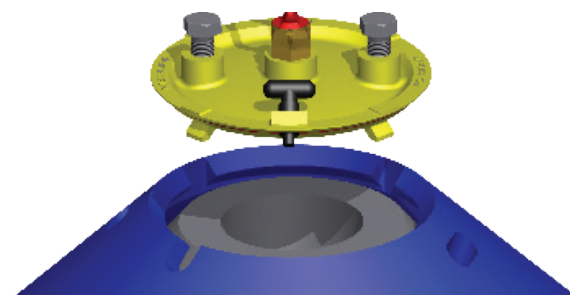
H-E Parts liner development program provides customers with application-specific performance at the lowest total operating cost by matching the optimum profile with the most appropriate grade of manganese steel chosen from one of the following ranges:

- CME™ MnElite.
- CME™ Mm Premium.
- CME™ MnStandard.

Further material upgrade options are available upon request to suit aggressive wear conditions or site-specific processing problems.

## SAFETY LIFTING DEVICES

All H-E Parts crusher liners are inherently designed with CME™ lifting cavities that allow our patent lifting devices to locate and provide for a safe, more efficient and cost effective method for changeouts and handling of crusher liners.





# CME™ CRUSHER PARTS

H-E Parts carries an extensive inventory of parts to suit all major brands and models of crushers, screens, mineral processing and handling equipment, ensuring prompt delivery of parts to global markets. H-E Parts can supply parts for most makes of;

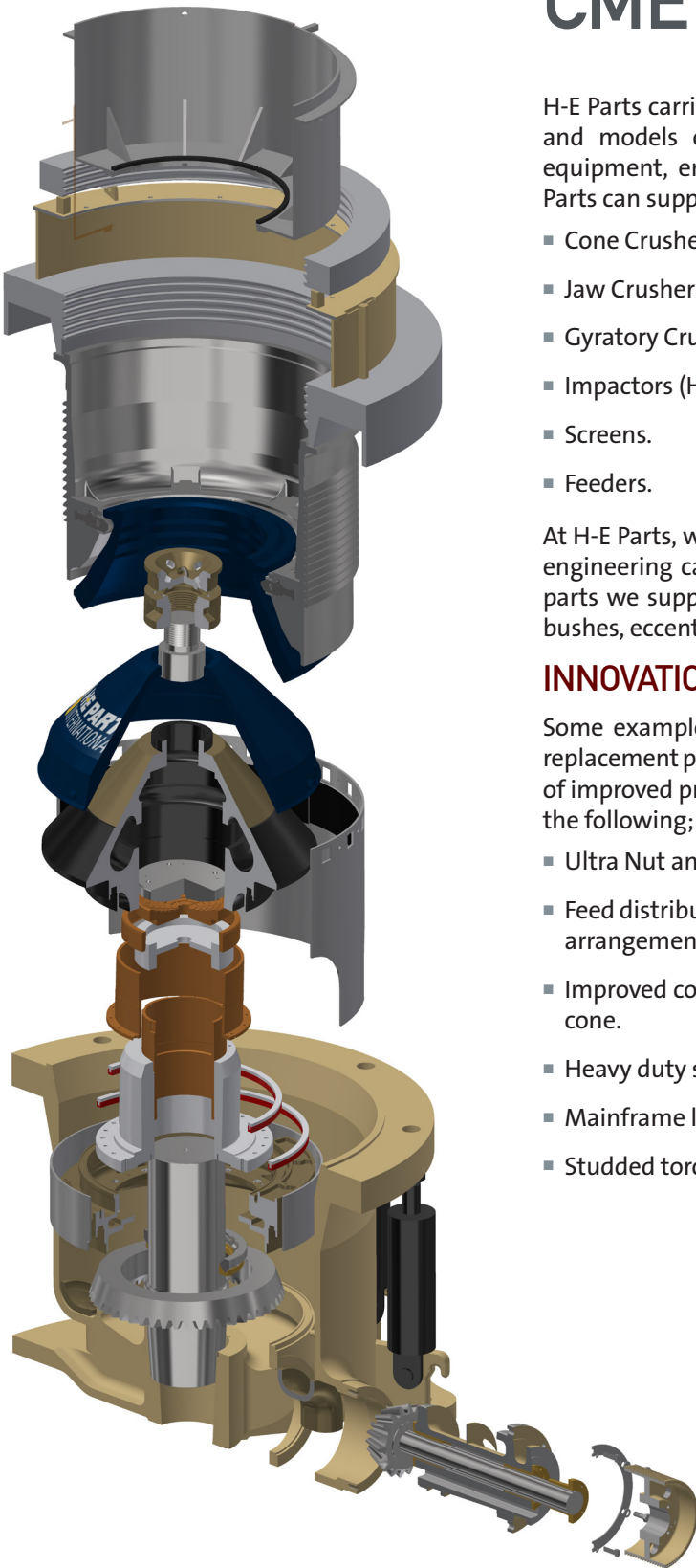
- Cone Crushers.
- Jaw Crushers.
- Gyratory Crushers.
- Impactors (HSI, VSI).
- Screens.
- Feeders.

At H-E Parts, we are continually adding to our product offering and have engineering capabilities to extend this range at short notice. Common parts we supply include; crusher heads, bowls, counterweights, bronze bushes, eccentrics, gears and countershafts.

## INNOVATION

Some examples that illustrate H-E Parts ability to provide compatible replacement parts with improved design elements, such as a combination of improved productivity, cost savings and safety enhancements, include the following;

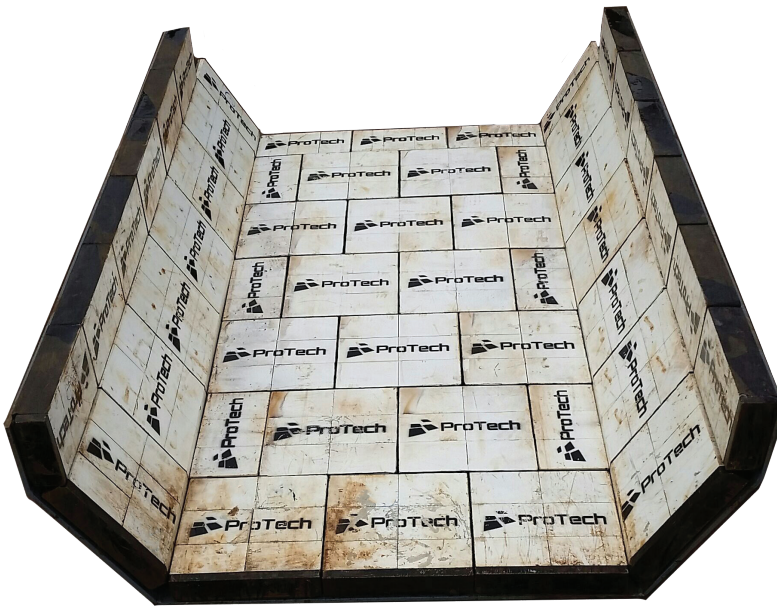
- Ultra Nut and Ultra Bolt mechanical locking system.
- Feed distributor and main shaft extension options, for both STD and SH arrangements, to suit Symons cone.
- Improved compatible replacement head design to suit Metso MP1000 cone.
- Heavy duty studded feed plates for all crushers.
- Mainframe liners with inserts.
- Studded torch rings.



# PROTECH™ WEAR LINERS

H-E Parts offers a full range of ProTech™ wear liners for both impact and sliding abrasion applications, enabling the company to offer a tailored solution based on the lowest total cost of ownership for our customers' specific applications.

Embracing this philosophy, H-E Parts offers a range of additional services to assist customers under its ChuteVision™ service, which aids condition monitoring, maintenance planning, wear product selection, inventory control, 'as built' drawings, installation, inspections and reporting. Additionally H-E Parts service division can fabricate chutes, hoppers and deflectors as required.



## CERAMIC LINERS

H-E Parts can offer an alternative solution to overlay, carbide, Q&T wear plates and other lining materials, particularly in highly abrasive applications. Ceramic solutions are becoming more common in iron ore and other hard rock applications because they have been proven to provide increased productivity, enhanced wear characteristics, improved flow efficiency, noise reduction and a lower total cost of ownership. H-E Parts is able to offer the full range of ProTech™ ceramics and ceramic cement to complement our ProTech™ wear plate range and suit site specific applications, with engineering and manufacturing provided by H-E Parts dedicated service division.

## WEARPLATE

H-E Parts are able to offer a full suite of ProTech™ wear plate products, to improve the likelihood of wear liners lasting to planned shutdowns. This is done by analyzing localized wear over a set of wear liners, and then selecting material grades and thicknesses based on actual wear rates and required life.

The result is a liner set that may contain a combination of the following materials:

- Chromium carbide overlay plate.
- Tungsten carbide overlay plate.
- Quenched and tempered plate.
- Rubber / polyurethane embeded ceramic liners.
- White iron wear bars, blocks and buttons.

Where this level of support is simply not required, H-E Parts can provide liners to customer drawings and material specifications.



# CME™ WEAR PARTS

H-E Parts specialize in wear management and can offer innovative solutions to many applications within the comminution process.

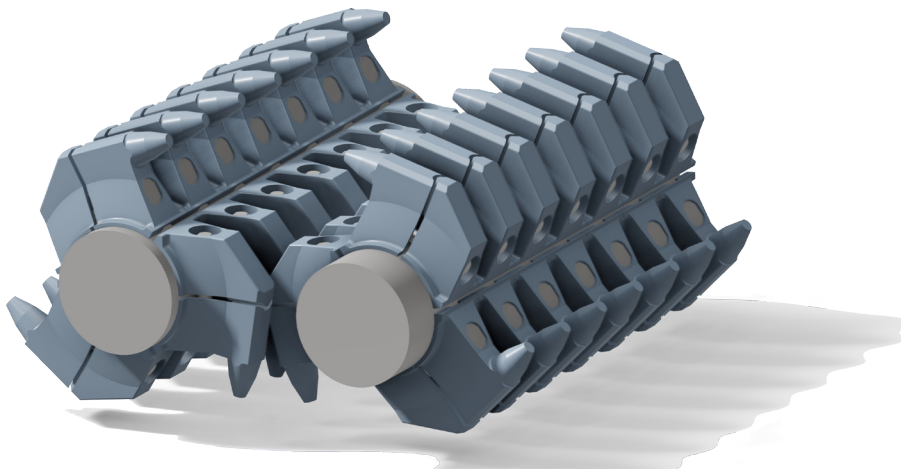
## MINERAL SIZER TEETH SEGMENTS

H-E Parts can supply a comprehensive range of sizer teeth segments and associated wear products to ensure our customers' mineral sizers stay productive for longer. Offering more than the supply of OEM equivalent sizer teeth segments and components,

H-E Parts specialize in:

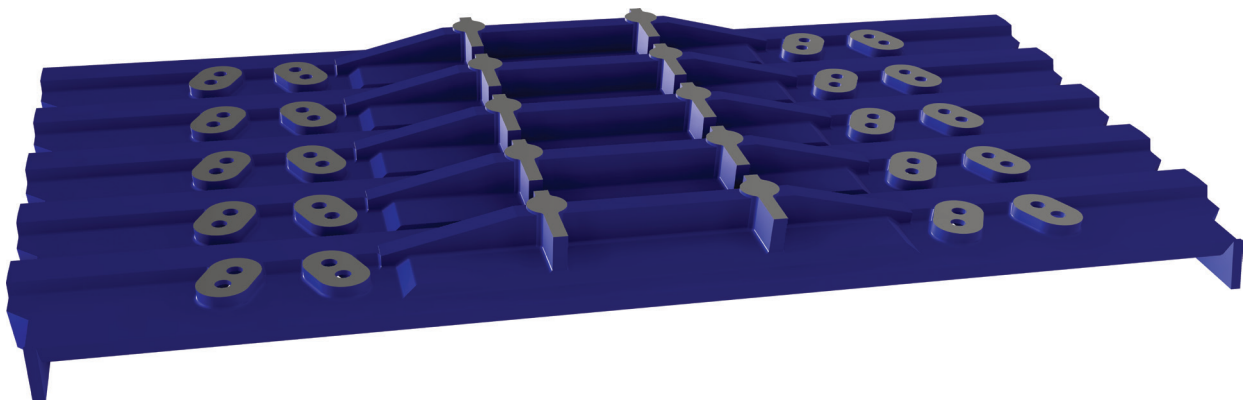
- Improved material composition for extended life.
- Enhanced design elements for increased productivity.
- Re-engineered arrangements for ease of service and change outs.
- Continual improvement through detailed analysis and design changes.

This allows H-E Parts to not only provide wear management solutions to our customers, but tangible total cost of ownership savings. H-E Parts can provide mineral sizer teeth segments and wear components for most makes and models of mineral sizers.



## APRON FEEDERS

H-E Parts can design and manufacture apron feeders and supplies a complete range of feeder pans and associated components for a wide range of applications. Both the design and metallurgy can be customized to suit site specific requirements to improve pan life and resolve common problems such as product leakage.







# PROCESSING EQUIPMENT

## AUSPACTOR

H-E Parts is able to supply a comprehensive range of solutions for most applications and stages of comminution, via its patented proprietary (Auspactor™ VSI, CME™ 1100HD Jaw).

H-E Parts is capable of offering a full product life cycle and service solution from; products and parts supply, to engineered application design, manufacturing, assembly and installation, training, on-site service and off-site repair, workshop rebuilds and decommissioning. This expertise and level of support is what sets H-E Parts apart from the competition.

H-E Parts is able to provide tailored, specialized in-house engineering, drafting and project management services to the mining and quarrying industries globally. With vast project experience in a variety of global regions such as Australia, South East Asia, Africa and the Middle East, H-E Parts is positioned to provide engineering solutions to service all types of fixed or mobile mineral processing plants, materials handling and associated equipment. With this extensive experience across varying global site conditions, H-E Parts can offer a solution suited to most site conditions and applications.

## IMPACT TABLES

H-E Parts heavy-duty impact tables are designed to meet the extreme conditions associated with mining and quarrying conveyor applications. Each table is tailored to meet customer requirements, ensuring a perfect fit with the strength required to suit the application.



# ENGINEERING

## ENGINEERING INNOVATION

H-E Parts added value is achieved by providing fit-for-purpose design, innovation through engineering and quality through service performance. We have been reducing the risks associated with the installation, maintenance and servicing of mining, quarrying and processing equipment since our inception, and this can be demonstrated via our stringent liner development program;

- Customer target goals are defined.
- Specific site conditions/application is assessed and crusher parameters, feed data, current liner life etc. identified.
- 3D laser scanning on new and worn liners is conducted, with extracted data used with ChamberVision™ and CrusherVision™ software.
- ChamberVision simulation is conducted to predict wear on proposed new design and allow accurate benchmarking and performance estimates.
- CrusherVision™ simulation is conducted to predict throughput, power draw, crushed product distribution, scenario testing to estimate the effects of changing machine parameters such as speed and eccentric throw, and design-stage analysis tools to prevent issues such as chamber packing.
- Combining the outputs of CrusherVision™ and ChamberVision™ allows changes in performance to be predicted as liners wear.

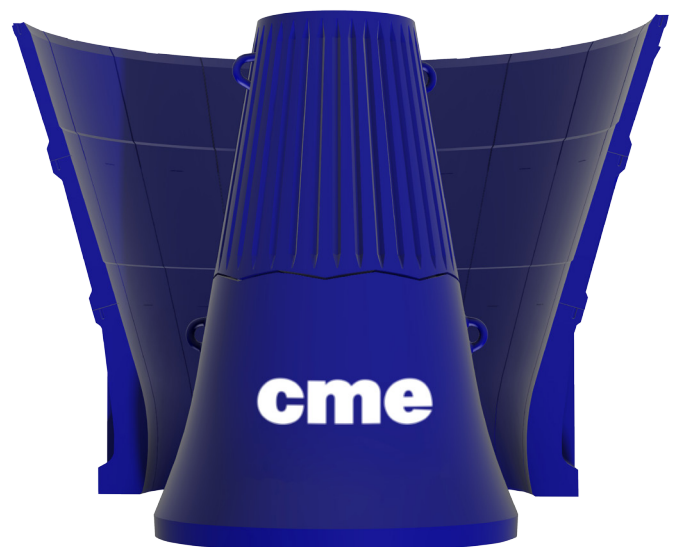
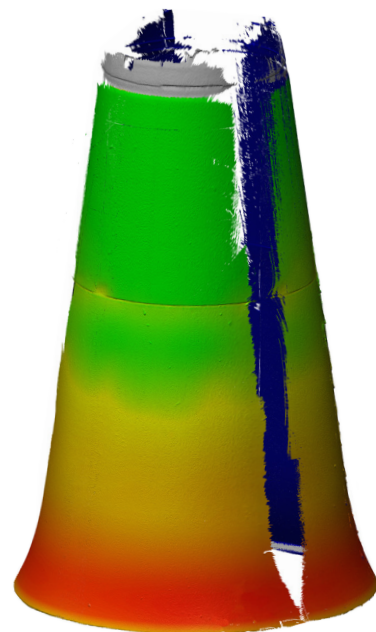
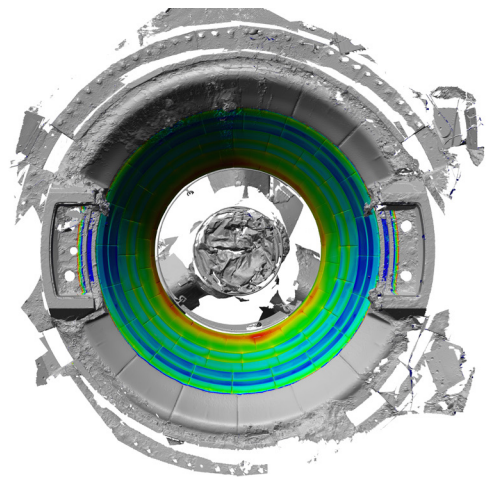
This results in first set liners performing as designed, expected and required.

## WEAR MANAGEMENT SOLUTIONS

H-E Parts wear management solutions were created in response to inefficient, unproductive minerals processing practices. Because H-E Parts aren't limited to a single wear material type, our certified engineers are able to evaluate individual applications and select the best combination of materials for a given area and perform financial modelling to ensure that the most cost-effective solution is obtained.

## ENGINEERED SITE-SPECIFIC LINER DESIGNS

H-E Parts liner development program goes above and beyond the normal industry practice of simply trialling a given set of liners, and instead uses all available information to provide a customised solution that will normally achieve targets on the first run, and provide added value for any given operation.



# SERVICE

H-E Parts service division comprising of workshop, fabrication, manufacturing, engineering, off-site repairs (OSR) and on-site service (OSS) functions, specialize in minerals processing and handling applications and is dedicated to increased safety, efficiency and risk prevention in the mining, quarrying and minerals handling industries. Combined with best in class practices and experienced technicians, H-E Parts services utilize in-house engineering knowledge, custom-design tooling and learned expertise to not only deliver exceptional service to their customers, but often provide innovative solutions to reduce total cost of ownership for their plant.

H-E Parts is capable of offering a full product life cycle and service solution from; products and parts supply, to engineered application design, manufacturing, assembly and installation, training, on-site and off-site repair, workshop rebuilds and decommissioning.

## ON-SITE SERVICE

H-E Parts can offer fixed and mobile minerals processing plant asset management for the entire scope of on-site maintenance support work; from assembly to installation, to commissioning, diagnostics, shutdowns, breakdowns and plant upgrades. Planning, support, drafting and applications engineering are also conducted in-house and allows H-E Parts to provide a full service support package for the entire asset lifecycle.

## OFF-SITE SERVICE

H-E Parts off-site service division is able to offer a tailored repair and maintenance service, and in conjunction with in-house engineering; provide clients with best practice service that provides added value by extending service intervals, improved plant performance and productivity, whilst reducing downtime and associated capital costs. Maintenance regimes can be tailored to suit the individual client requirement or conform to industry standard specifications. This enables H-E Parts to provide the client with failure analysis reports, preventative maintenance recommendations, continuous improvement proposals and ongoing product and maintenance wear management strategies.

# CUSTOMER EXPERIENCE

H-E Parts provides the same responsive service to all customers, whether it's a small contract or a large multinational company. This ensures our clients know what to expect from us, and can rely on quality products with unrivalled service support to get the job done - on time, on budget and with zero harm.

With a large client base over a variety of industries, it is our ability to deliver on our promise to work with suppliers and customers to extend service life, reduce downtime, and work to a high standard that sees our customer base grow exponentially every year.







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# H-E PARTS, GLOBAL LOCATIONS, FOR GLOBAL SOLUTIONS.



H-E Parts International replacement parts are compatible with the makes and/or models of the third-party equipment described. H-E Parts International is not an authorized repair facility of these third parties and it does not have an affiliation with any manufacturers of these third-party products. All brands, original equipment manufacturer (OEM) part numbers or references are owned by the respective OEM entities or their affiliates. These terms are used by H-E Parts International for identification and cross reference purposes only and are not intended to indicate affiliation with, or approval by the OEM, of H-E Parts International or its products. All parts are manufactured by, for and warranted by H-E Parts International and are not manufactured by, purchased from or warranted by the OEM.



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