



## COMPANY PROFILE

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voestalpine High Performance Metals Africa  
<https://www.voestalpine.com/highperformancemetals/za/en/>

**voestalpine**

ONE STEP AHEAD.

# YOUR ONE-STOP SOLUTION

Voestalpine High Performance Metals Africa (PTY) Ltd is a steel company with a Global footprint, headquartered in Austria. Our company is part of a Global technology group that offers top-quality products & system solutions in the steel industry. But we are not just an ordinary steel company, we supply high-quality steels, more specifically tool steels, high speed steels and even powder metallurgical steels.



voestalpine High Performance Metals Africa (PTY) Ltd, is able to meet the most challenging requirements! We offer optimum customer solutions that are made possible with:

- » Integrated manufacturing,
- » Value-added services,
- » After sales service,
- » Technical expertise to offer our customers the best steel for their application

Our offering includes:

- » Tool steels,
- » High speed steels,
- » Powder metallurgical steels
- » Heat Treatment
- » Machining

Our steel are of the highest quality and standards resulting in steel with low distortion and dimensional stability. These steels are used in different industries where our steel is made into “tools” that are used to punch, press, or form components for the automotive, plastic injection moulding, and the punching and forming industries.

Our ultimate goal though is to provide value for our customers by increasing tool life, thereby saving time and money, and improving business processes and profits.



# HEAT TREATMENT SERVICES

## » CASE HARDENING

**Case Hardening:** Case hardening is a heat treatment process that involves introducing a high-carbon outer layer to the surface of a metal component while maintaining a tough, low-carbon core. This treatment enhances the wear resistance and hardness of the material, making it suitable for applications requiring both strength and durability.

## » NITRIDING

**Nitriding** is a surface hardening process where nitrogen atoms are diffused into the surface layer of a metal. This treatment forms a hard nitride layer, increasing the material's hardness, wear resistance, and fatigue strength. Nitriding is commonly used for components subjected to high temperatures and heavy loads.

## » STRESS RELIEVING

**Stress relieving** is a heat treatment technique employed to reduce internal residual stresses in metals. By heating the material to a specific temperature and holding it there for a certain duration, stress relieving helps minimize distortion and improve dimensional stability. This process is crucial for enhancing the mechanical properties and preventing premature failure of components.

## » VACUUM HEAT TREATMENT

**Vacuum heat treatment** is performed in a controlled, oxygen-free environment. This process ensures the absence of contaminants and oxidation, allowing for precise control over the material's properties. Vacuum heat treatment is commonly used for achieving high-quality results, such as precise hardness, improved mechanical properties, and excellent surface finish.

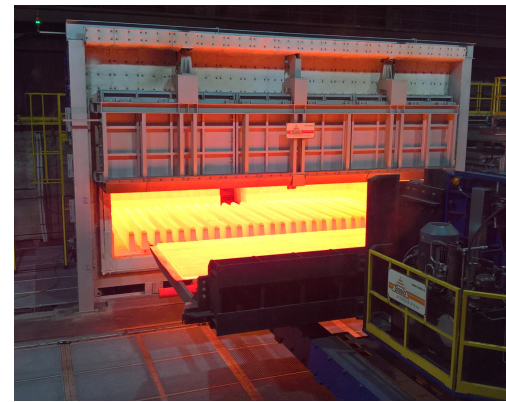
## » PLASMA NITRIDING

**Plasma nitriding** is a specialized nitriding technique that involves the use of plasma discharges to introduce nitrogen into the surface of a metal. The plasma activates the nitrogen, allowing for efficient diffusion and the formation of a hard, wear-resistant layer. Plasma nitriding offers excellent control over the nitride layer's thickness and composition, resulting in enhanced surface properties.

## » ANNEALING & PRECIPITATION HARDENING

**Annealing** is a heat treatment process that involves heating a metal to a specific temperature and then gradually cooling it. This treatment aims to soften the material, relieve internal stresses, and improve its machinability. Annealing can also refine the grain structure, enhance ductility, and facilitate further processing or shaping of the metal.

**Precipitation hardening**, also known as age hardening is a technique used to strengthen certain alloys. By heating the alloy to a specific temperature range and then rapidly cooling it, followed by a precipitation heat treatment, fine precipitates form within the material's microstructure.





# MACHINING SERVICES

Our Machining services include but are not limited to:

## » ECONOMY DIE SETS

A cost-effective and versatile tooling solutions used in die-cutting and metal stamping operations.

## » PROFILING & GRINDING

These services involve precision shaping and finishing of metal components using advanced machining techniques.

## » PINS & BUSHES

Play a crucial role in industrial machinery and equipment, requiring high wear resistance and dimensional precision.

## » MOULDS

Sets and individual plates are essential components used in plastic moulding processes to create various plastic parts and products.

## » MILD STEEL

The supply of mild steel plates and rounds involves providing a range of low-carbon steel products in plate and round bar forms.

We offer customized machining services to meet all of your specific machining needs.

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