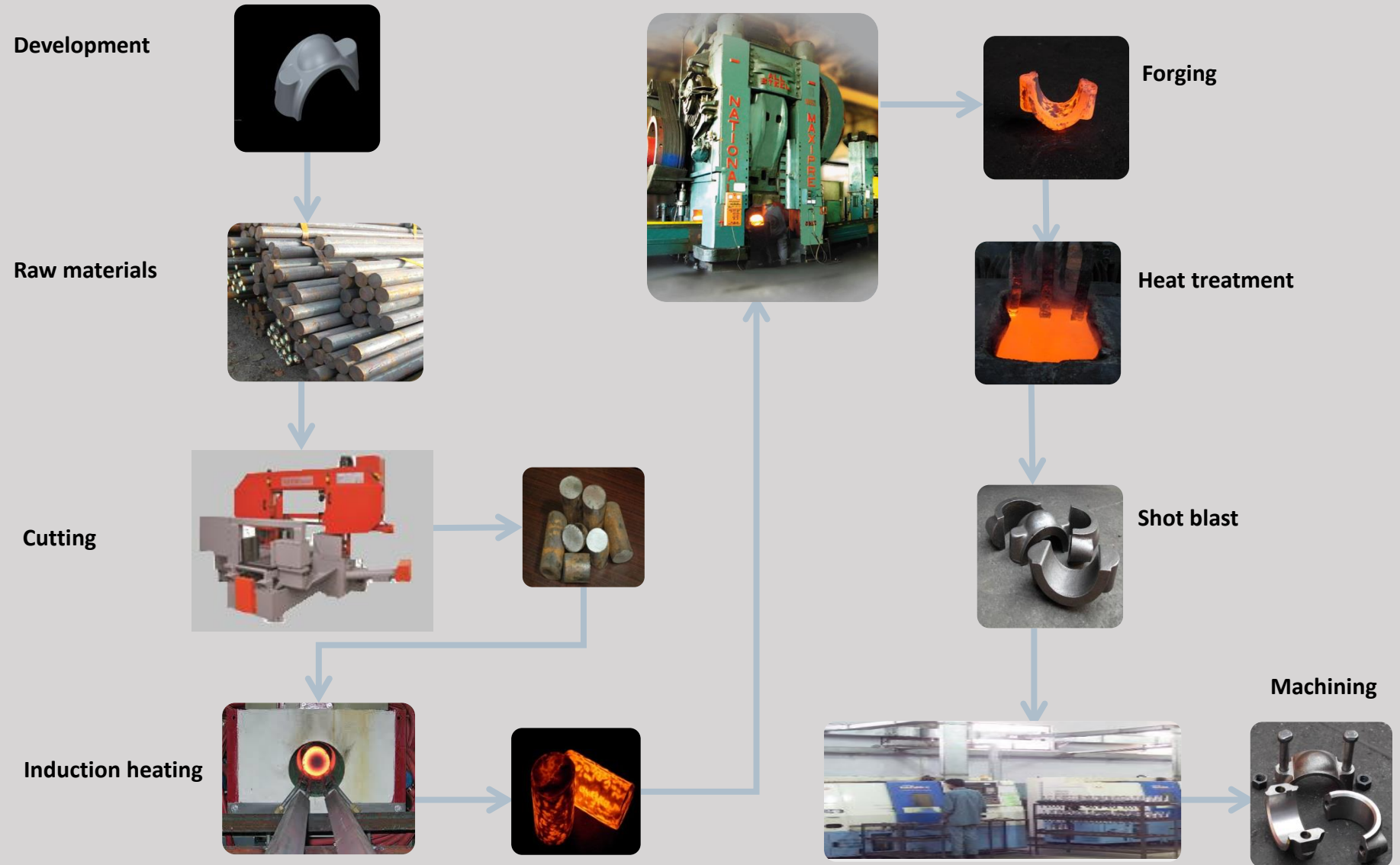




**Mannan Shahid Forgings Limited**



# MSF - A complete forging house





# Design & Development



- MSF is fully equipped to provide a range of services including:
  - Developing components according to prints
  - Reverse engineering components as per samples
  - Redesigning existing components
- All performance critical features of a component are discussed threadbare with customer to correctly understand their needs
- Fully equipped design section and independent tooling production facility enable quick service for our customers
- New technologies are continuously inducted to improve design and development capability
- Q-Form, Pro-E and Vera Cad are used to design tooling
- Component are developed at MSF risk – customer pays initial tooling cost only after approval of samples





# Production facilities



4000 Ton Forging Press



CMM

- 13 forging press lines (300 to 4000 MT) provides flexibility to forge components of various weights (0.1kg to 25.0kg) and sizes (max dia 350mm)
- Fully dedicate ring rolling facilities
- Magnetic Particle Inspection (MPI) or Crack detection facility
- Complete range of heat treatment (including induction hardening) and hardness testing
- CNC machining and turning centers
- State of the art inspection and measuring equipment – including Coordinates Measuring Machine (CMM)

*A comprehensive equipment list and range of products is available at the next slide*



# Product / Services Information and Client Base

<p><b>Forging Services</b></p> <p><b>Product weight and dia</b></p> <p>Forgings in carbon and alloy steel:</p> <ul style="list-style-type: none"><li>• Max. weight: 25.00 kg</li><li>• Min. weight: 00.10 kg</li><li>• Max. dia – forged part: 350.0 mm</li><li>• Max. dia – rolled rings 500.0 mm</li></ul>	<p><b>Post Forging Services</b></p> <ul style="list-style-type: none"><li>• Heat treatment<ul style="list-style-type: none"><li>▪ Hardening and Tempering</li><li>▪ Isothermal annealing</li><li>▪ Normalizing</li><li>▪ Liquid Carburizing/Nitriding</li><li>▪ Induction Hardening</li></ul></li><li>• Rockwell &amp; Brinell hardness testing</li><li>• Shot Blasting</li><li>• Cold Coining</li><li>• Magnetic/Ultrasonic crack detection</li><li>• Machining and CNC CMM - Inspection</li><li>• Dynamic Balancing</li></ul>
<p><b>Minimum Lot Size</b></p> <ul style="list-style-type: none"><li>• 1000 - 5,000 pieces (Depends on the size of the and weight of the component)</li></ul> <p><b>Average Development Time</b></p> <ul style="list-style-type: none"><li>• 10 – 12 weeks</li></ul> <p><b>Production Capacity</b></p> <ul style="list-style-type: none"><li>• 15,000 MT/Year</li></ul>	<p><b>Local Customers</b></p> <ul style="list-style-type: none"><li>• Massey Ferguson Tractors</li><li>• Honda Motorcycles</li><li>• Perkins Engines</li></ul> <p><b>Exports to</b></p> <ul style="list-style-type: none"><li>• Europe(Germany, Italy, France, UK)</li><li>• USA</li><li>• Brazil</li><li>• South Africa</li></ul>



# Product references

Gears



Yokes



Conveyors





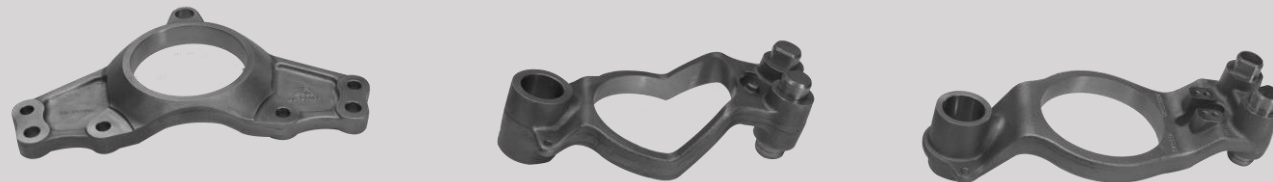
# Product references

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Fifth Wheel



Brake Spyder



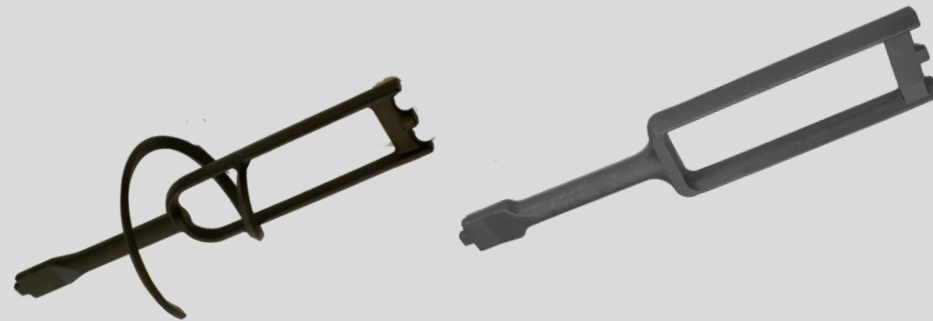


# Product references

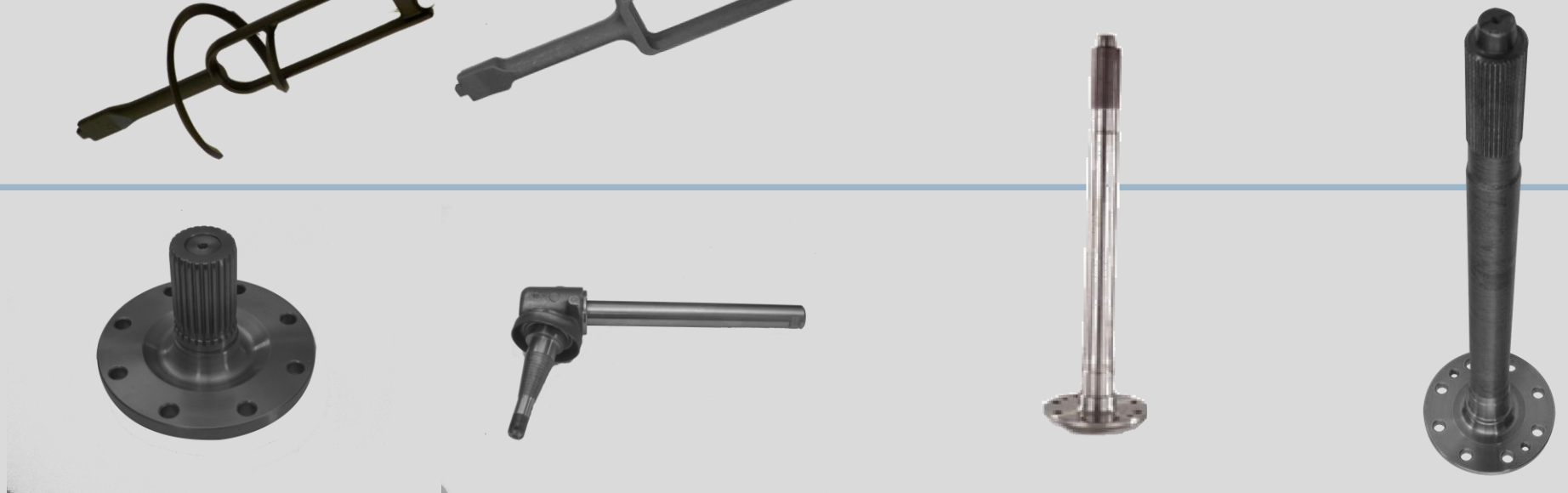
Engine parts



Mischwendles



Axles





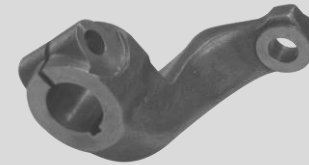


# Product references

Trailer parts



Steering parts



Gear shifters





# Quality certifications

- MSF implements a quality management system that is IATF 16949:2016
- Certification Audit and Reviews are conducted by United Registrar Systems under license from UKAS Management Systems
- The current certificates are valid till January 23<sup>rd</sup> 2021



**CERTIFIED  
AUTOMOTIVE  
QUALITY  
MANAGEMENT  
SYSTEM**



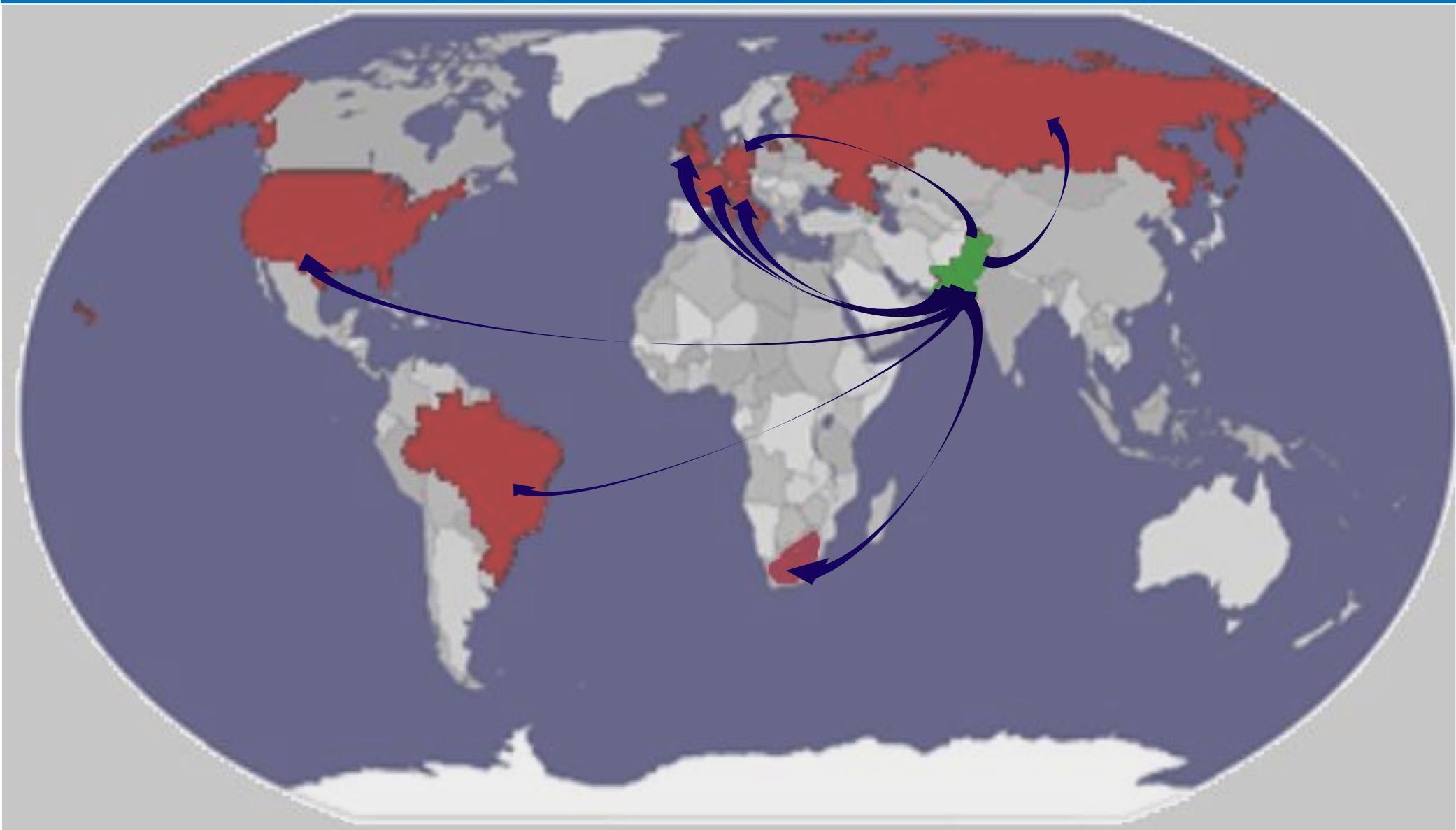
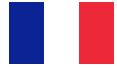
# Credit Rating

- Our current Credit Ratings are as follows:
- Short Term                      A minus
- Long Term                        A-2
- Outlook                            Stable
- Ratings published                18 April 2019
- Rating Agency :                  VIS Credit Rating Company Limited

VIS Credit Rating Company Limited



# Geographical reach and customer reference





## Robust Global Value Chain

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- Competitive Prices
- Consistent Quality
- On time Delivery
- World-Class Customer Support





Thank you