

CASTING SOLUTIONS. FORGING BONDS.







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WORLD CLASS INTEGRATION FOR NEXT LEVEL SOLUTIONS

With our 100% in-house testing facility and stringent compliance to quality at every step, we ensure all our products are of world class standards.

SOLUTIONS THAT MEET PRESENT REQUIREMENTS **AND KEEP INNOVATING FOR FUTURE ONES**

Wind energy, power, transmission, oil and gas, aerospace and machine tools – diverse industries and applications that have one need in common. Solutions. Cutting edge solutions that not only increase productivity and reduce wastage but are also environmentally conscious. Solutions that meet

present requirements and keep innovating for future requirements. At SEFORGE, we deliver perfect end-to-end solutions that not only meet but regularly exceed customer expectations... thus taking them to the next level every day.

Incorporated in the year 2006, we are a fully-fledged casting and forging company with in-house competence in pattern making, moulding, pouring, fettling, ring-rolling, heat treatment, machining, painting and packaging. This helps us meet customer requirements more efficiently through integrated process management and shorter lead times.

With our 100% in-house testing facility and stringent compliance to quality at every step, we ensure all our products are of world class standards. We thus establish next level precision and unchallenged quality.









END-TO-END SOLUTIONS



INTEGRATED PROCESS MANAGEMENT



STRINGENT QUALITY COMPLIANCES



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SHORTER LEAD TIMES



100% IN-HOUSE TESTING





OUR MISSION

05

Our Mission is to meet customer expectations by continuously improving our infrastructure, technologies, processes and fostering employee engagement.

日 OUR VISION

Our Vision is to be the preferred global supplier of large, high-precision castings and forgings by employing path-breaking technological innovation and environment friendly processes that contribute positively towards value enhancement of all stakeholders.

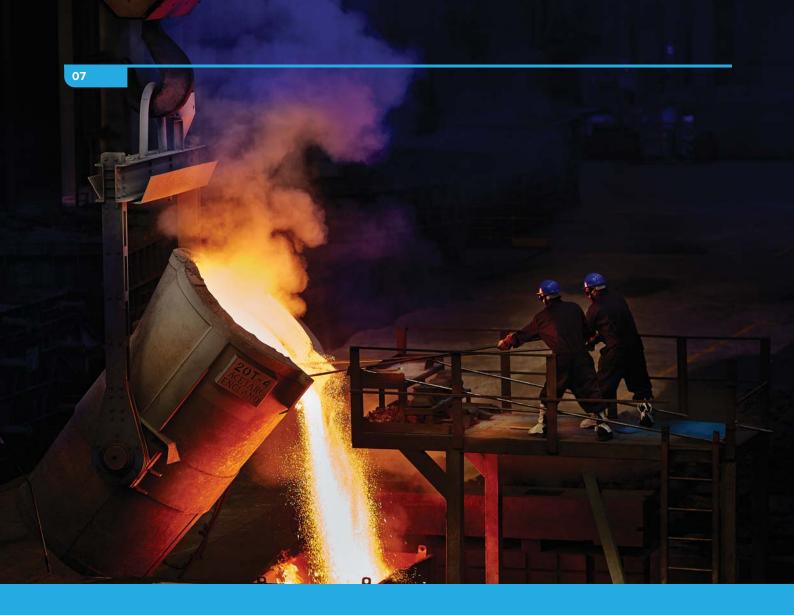




OUR VALUES

EXCELLENCE We excel in delivering superior performance which consistently surpasses all expectations.
CONTINUOUS IMPROVEMENT We bring continuous improvement in everything we do.
INNOVATION We are proactive in developing new and creative approaches and implementing them swiftly.
AGILITY We are prompt in taking decisions at the earliest, keeping all stakeholders in mind.
INTEGRITY We believe in upholding highest ethical standards and moral principles in all our actions.

06



CASTS THAT LAST

Our Casting Division sets a global benchmark for high-precision castings by harnessing the latest technology and efficient processes, while ensuring that all environmental norms and safety standards are met.

We make large, complex, ductile and grey iron castings – in the weight range of 5,000 kg to 25,000 kg – which are fully-machined, painted and delivered ready for assembly. Located in a Special Economic Zone (SEZ) in Coimbatore, India, and close to the Indian ports of Chennai and Tuticorin, the foundry is able to serve global customers efficiently.

FULLY-FINISHED, INNOVATIVE, NEXT LEVEL CASTING SOLUTIONS

Spread over an area of 2,40,000 sq. metres, our Casting Division is one of the largest, fully-integrated foundries in India with an annual pouring capacity of 80,000 tonnes of fully-machined and ready to assemble castings. Our advanced facilities impart to our products a definitive technological edge through the amalgamation of latest machineries, efficient and ergonomic processes, state-of-the-art software and in-depth human expertise. The usage of in-house machines ensures superior finished product quality and reduced cycle time.

We take pride in the fact that each section of our Casting Division – be it the machine shop, the moulding and core shop, the fettling and finishing shop or the quality testing – individually and collectively work towards fulfilling the company's promise of exceptional quality and on-time delivery. We work simultaneously with customers to provide end-to-end solutions including design and development of parts, pattern design, process and quality planning.

We adhere to highest health and safety standards stringently and meet our social responsibility by using environmental friendly processes.

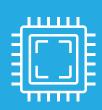


CORE INFRASTRUCTURE

MOULDING

MELTING & POURING

FETTLING



09



 Sand mixers: Movable and stationary PLC controlled continuous sand mixers ensure good quality of mixed sand.
 Capacity: 25 – 50 MT/hour

2. Sand reclamation plant: Our sand reclamation plant is environment friendly with the capacity to reclaim 90% of the used sand.

3. Mould shake-out machinesCapacity: 30 - 60 MT/hour

1. Melting furnaces: 3 pairs of dual track medium frequency induction furnaces consisting of 6 crucibles of 12 MT capacity each.

2. Melting process control

room: Spectrometers for testing chemical composition of molten metal, which can analyse 28 different elements.

3. Charging system: Individual charging system for each crucible for charging raw materials.

4. Ladles: Ladles of varying capacity with ladle pre-heaters.

• Capacity: 7 – 20 MT.

Shot blasting machinesCapacity: 7 – 30 MT/hour





CNC Double column vertical machining centre.

• Table size: 5,000 mm x 3,000 mm

CNC Floor type horizontal boring and milling centre.

• Table size: 2,000 mm x 2,000 mm

Facilities for washing, cleaning, grit blasting, painting and drying with motorized ground trolleys and an overhead electric monorail material handling system

Paint types: Thermal zinc spray, Epoxy and Polyurethane

Mechanical lab: UTM with 600KN capacity, impact testing machine and hardness testing machine

Metallography lab: Spectrometer (Spectro Max & Lab), Microscope (40 MAT) with camera and image analyser

Non-destructive testing: Ultrasonic testing equipment to find internal soundness of the castings (GE & OLYMBUS), magnetic particle inspection to find surface and sub surface defects (Yoke-Y7)

Portable CMM

EDGE faro arm: 12 Feet Arm Length, Scanner Attachment for 3D scanning. Accuracy – 64 microns

Laser tracker: Range – 70 m, Accuracy - 0.17 mm Novacast: ATAS – To predict and ensure tendency of shrinkage of metal in casting even before pouring.

Casting simulation software

Novacast: Novaflow & Solid-Metal Filling and Solidification Simulation Software. To simulate casting defects at tooling design stage itself

QUALITY ACCREDITATIONS ISO 9001:2008

Certificate

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ISO 9001:2008
01 100 096963
SEFORGE Limited Piot No: 1, 582 Unit in Bynefra Engineering & Construction Ltd., Kitaan pulayaen Village, Annur Road, Colimbatore – 641 659, India.
Manufacture of Gray and Ductile Iron Castings with Machining.
Proof has been furnished by means of an audit that the requirements of IBO 9001-2008 are met. The ilua date for all future audits is 11 - 08 (dd.mm)
The certificate is used from 2016-16-68 used 2018-08-22. First Certification 2009-15-12.
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ISO 14001:2004 + Cor. 1:2009

Certi	ficate	
Standard	ISO 14001:2004 + Co	or. 1:2009
Certificate Report: No	01 104 1434215	
Certificate Holder	SEFORGE LIMITED Plot No. 1, Aapen Engineer Kittampalayam, Colminitor	tog SEZ. e - 641 651, India.
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BS OHSAS 18001:2007







FORGING YOUR NEEDS

Spread over a vast expanse of 1,65,000 sq. metres, our Forging Division is fully equipped to meet the demands from diverse industries including wind energy, oil and gas, power, construction and heavy machinery, bearings, transportation, aerospace, mining and defence.

The stringent process control ensures consistent levels of quality while reducing production cycle time and eliminating human error.

This plant has an installed annual capacity to manufacture 42,000 large and high-precision fully machined rings of different material grades up to a diameter of 5 metres.

Raw material grades:

- All carbon steel grades
- All bearing steel grades
- All stainless steel grades
- Major alloy steel grades

Located in a Special Economic Zone (SEZ) in Vadodara, India, and close to the Indian ports of Mumbai, Kandla and Mundra, the forging unit is able to serve global customers efficiently.



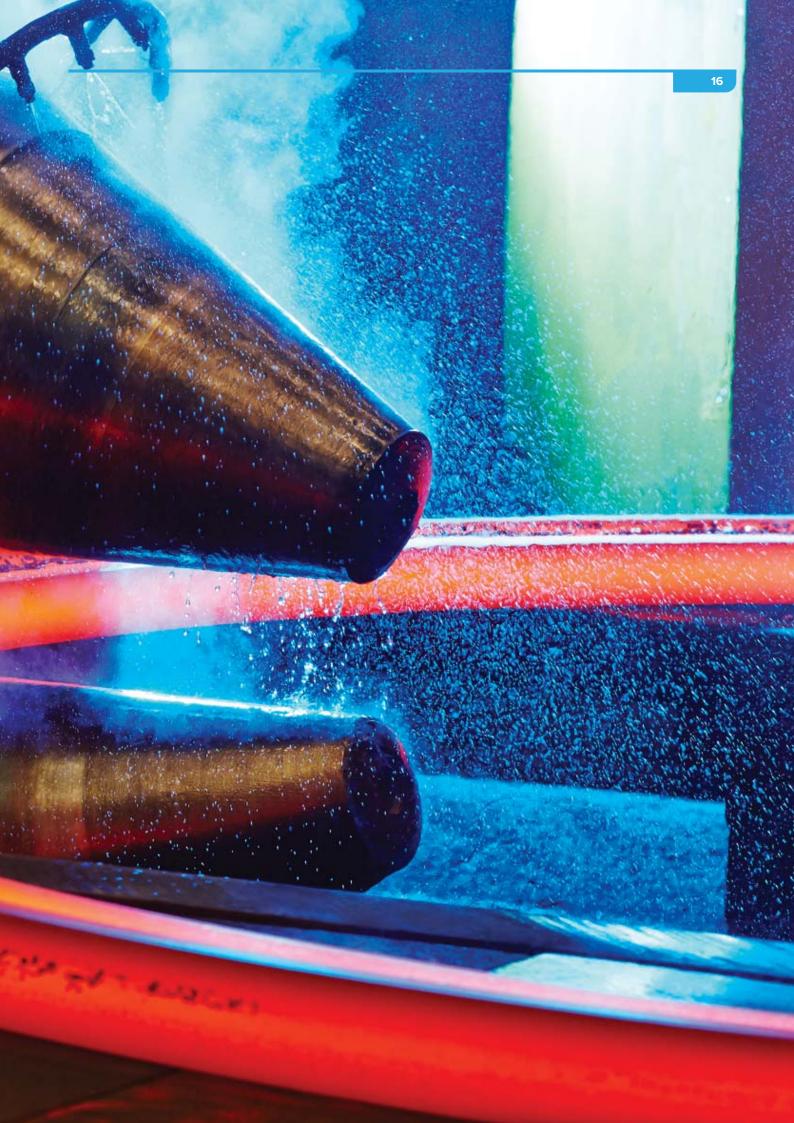


AXIAL PROFILING FOR NEAR NET SHAPE FORGING SOLUTIONS

Equipped with state-of-the-art infrastructure and modern technology, our Forging Division ensures that all products are fully- finished and consistently meet global quality standards. The fully-integrated ring-rolling facility with rotary hearth furnace having auto indexing system ensures uniform and consistent heating. In addition, the automatic process control from billet cutting to the heat treatment shop ensures consistent levels of quality, efficiency and productivity while reducing production cycle time and eliminating human error.

We take pride in the precision of all our processes including ring-rolling, heat treatment, CNC machining, painting and export worthy packaging. With our superior Axial profiling capabilities, we can roll the rings with weld neck profile directly in forge shape. Due to this, yield is improved to 7 % and machining time is reduced by 15 to 20 % based on the depth of profiling.

Comprehensive in-house testing facilities ensure our products meet international quality standards. All aspects of the product cycle, from engineering to process planning, quality management and manufacturing, come together seamlessly to develop the right products the very first time.

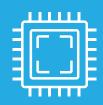


CORE INFRASTRUCTURE

SCALING

HYDRAULIC PRESS

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1. High speed sawing centre: Billets range:

- Diameter: 250 700 mm
- Weight: 200 4,500 Kgs

2. Rotary hearth furnace:

Natural gas fired furnace with heating capacity of 30 MT/hour with auto indexing system.

3. Material handling robot:

Automatic handling of billets up to 4,500 Kgs capacity from rotary hearth furnace to ring-rolling machine.

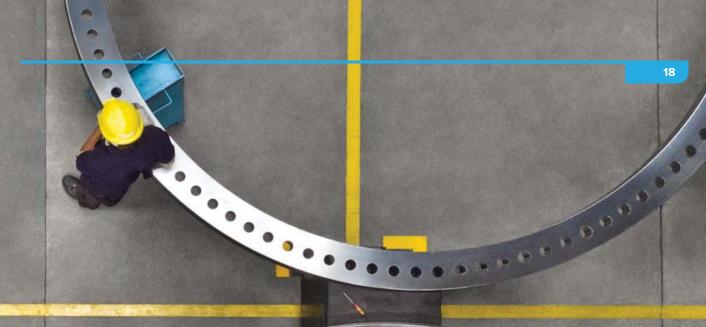
4. Hydraulic Press: 5,000 MT hydraulic press for upsetting and piercing billets.

5. Ring-rolling machine:

Rolling of near net shape forged rings from 500 to 5000 mm OD and 30 to 550 mm height.

6. Ring expander:

Ensures concentricity of rings after rolling process. Natural gas/LPG fired furnaces with automatic material-handling system for normalizing, hardening and tempering processes.

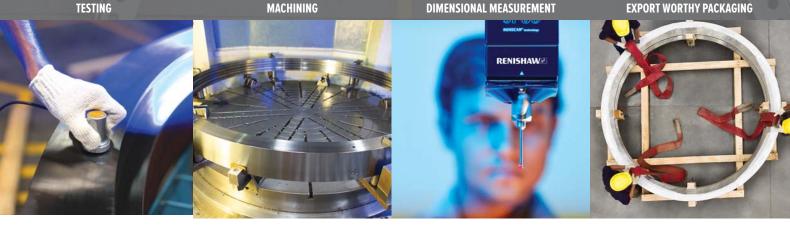




MACHINING

DIMENSIONAL MEASUREMENT

EXPORT WORTHY PACKAGING



1. Mechanical testing:

The fully-equipped metallurgical lab for testing various mechanical properties like UTS, tensile strength and impact testing for -70°, jominy testing and other ambient conditions.

2. Micro-structure analysis:

The spectrometer to analyse and ensure micro-structure, grain size and purity as per design specifications.

3. Ultrasonic testing:

UT testing by qualified level-II operators under the supervision of an NDT level-III expert.

1. Machining line for forged rings/flanges:

CNC controlled VTL and Drilling machines for rings/flanges up to 5000 mm OD

2. Machining line for bearings rings:

CNC controlled VTL and Drilling machines for rings up to 2500 mm OD

- In-process dimensional measurements by mobile FARO equipment
- 3D CMM machine (size-4x3x1.6 m) with profile tracing facility
- Packaging processes that protect dimensional integrity and prevent corrosion



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QUALITY ACCREDITATIONS ISO 9001:2008 ISO 14001:2004 + Cor. 1:2009

Conformity of the factory production control

Conformity of the factory production control according Regulation 305/2011/EU: System 2+ 9356-CPR-4270

In compliance with Regulation 305/2011/EU of the European Performent and of the Council of 9 March 2011 (the Construction Products Regulation - CPR), this certificate applies to the construction reduct:

verse, rasser Waghoda Vidodana 391 760, Guganat, India This certificaala albias bat all provisions concerning the assessment and verification of constainey of performance described in Annes ZA of the standard(s).

EN 10025-1:3994 under system 2+ are applied and that the factory prod fulfils all the prescribed requirements set out above

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certificate was first issued on 02.07.2014 and will in ong as the lifet methods and/or factory product interests included in the harmonized standard interthe performance of the dealared characteristics, do not charge, and the performance of the dealared characteristics, do not charge, and the product, and the menutexharing conditions in the plant are not modified significantly, but not longer than 31.07.2517.

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Krüger-Führ

Not Rolled Products of Structural Steels for matal atructures or in composite metal and concrete structures (see Annes)

SEFORCE LTD. Plot No. 1 SEZ Unit in Synefra Engineering & Construction Ltd. Piperin: Tatuka: Waghodia Vadodara 391 763, Gujarat, India

SEFORGE LTD Plot No. 1 SEZ Unit in Synafra Engineering & Construction Ltd. Posiria: Tatulox: Waghoote Vadoctara 391 760, Guparat, India

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Centrone Report No.	01 100 058992
Certificate Hotter	SE Forge Ltd. Works: Plot No. 1, SEZ Unit in Aspon Infrastructures Limited Piperin, Tarka Waghedia, Vadodare 391 766, Gujarat, India
Bonper .	Forging and Machineng Of Rings Ranging up to 5000 mm OD , upto 600 mm Height and Weight upto 4500 Kg / Piece.
	Proof has been furnished by means of an audit that the requirements of ISO 9001 2008 are met.
	The due date for all future audits is 25 - 02 (85 mm).
namy:	The certificative is valid from 2016-03-02 until 2016-03-02. First Certificative 2006-03-02.
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Certificate ISO 14001:2004 + Cor. 1:2009 - 01 104 110336 SEFORGE LIMITED Works: Piet Na. 01, 3EZ Unit in Aspen Infordsoutcares Lumbed, Village: Pipertys, Taluka: Waghodia, Vadodare - 381 760, Guperst, India. Forging and Machining of Rings up to 5000 mm OD, up to 600 mm Height and Weight up to 4500 kgs per Piece. Proof has been furnished by means of an audit that the requirements of ISO 14001-2004 + Car. 1 2005 are met.

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Certificate

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BS OHSAS 18001:2007

BS OHSAS 18001:2007

SEFORGE LIMITED Works: Piot No. 51, SEZ Unit In Aspen Infrastructures Limited, Village: Pipentys, Taluka: Weghedia, Vadodra - 311 760, Gugard, Inita.

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BONDS FORGED SERVICE DELIVERED

With our capability of meeting customer needs across various sectors, we take pride in our long term association with some of the leading global players.



CASTINGS

WIND GE (India & USA), Vestas, Gamesa, Suzlon, Senvion, Wind World and ZF

POWER GE Jenbacher

FORGINGS

WIND OEM'S GE, Vestas, Gamesa, Suzlon, Regen, Wind World

WIND TOWER MANUFACTURERS Gestamp, Windar, GWPL; Eurpoe: Max Boegl, KGW, SIAG; Australia: Ottoway

BEARING OEM'S SKF, Rothe Erde, IMO, Laulagun, ABC Bearing

OIL & GAS GE, IPI, Cameron through IPI

POWER & INDUSTRIAL GE Alstom, VOITH

DEFENCE MIDHANI, DRDO, ASL





- Certified with the highest international standards and quality accreditations
- Audited and certified by major global customers
- End to end capability in providing finished products
- 100% in-house testing facilities to ensure quality compliance from raw material to finished goods

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ACCURATE

- A skilled, trained and dedicated workforce committed to delivering superior solutions
- Excellent track record in on-time delivery
- Sourcing of con-cast raw material from reputed global steel mills
- Complete adherence to highest levels of environment, health and safety standards

SEFORGE LIMITED

FORGING DIVISION

Vadodara

Plot No.1, SEZ Unit in ASPEN Infrastructures Ltd, Village: Piparia, Taluka: Waghodia District: Vadodara 391 760, Gujarat, India. Phone: +91 2668 245086 – 89

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SEFORGE LIMITED

CASTING DIVISION

Coimbatore

Plot No. 1, SEZ Unit in ASPEN Infrastructures Ltd, Kittampalayam Village, Annur Road, Karumathampatty, Coimbatore 641 659, Tamilnadu, India. Phone: +91 421 3990000 – 03 E-mail: marketing@SEForge.com

