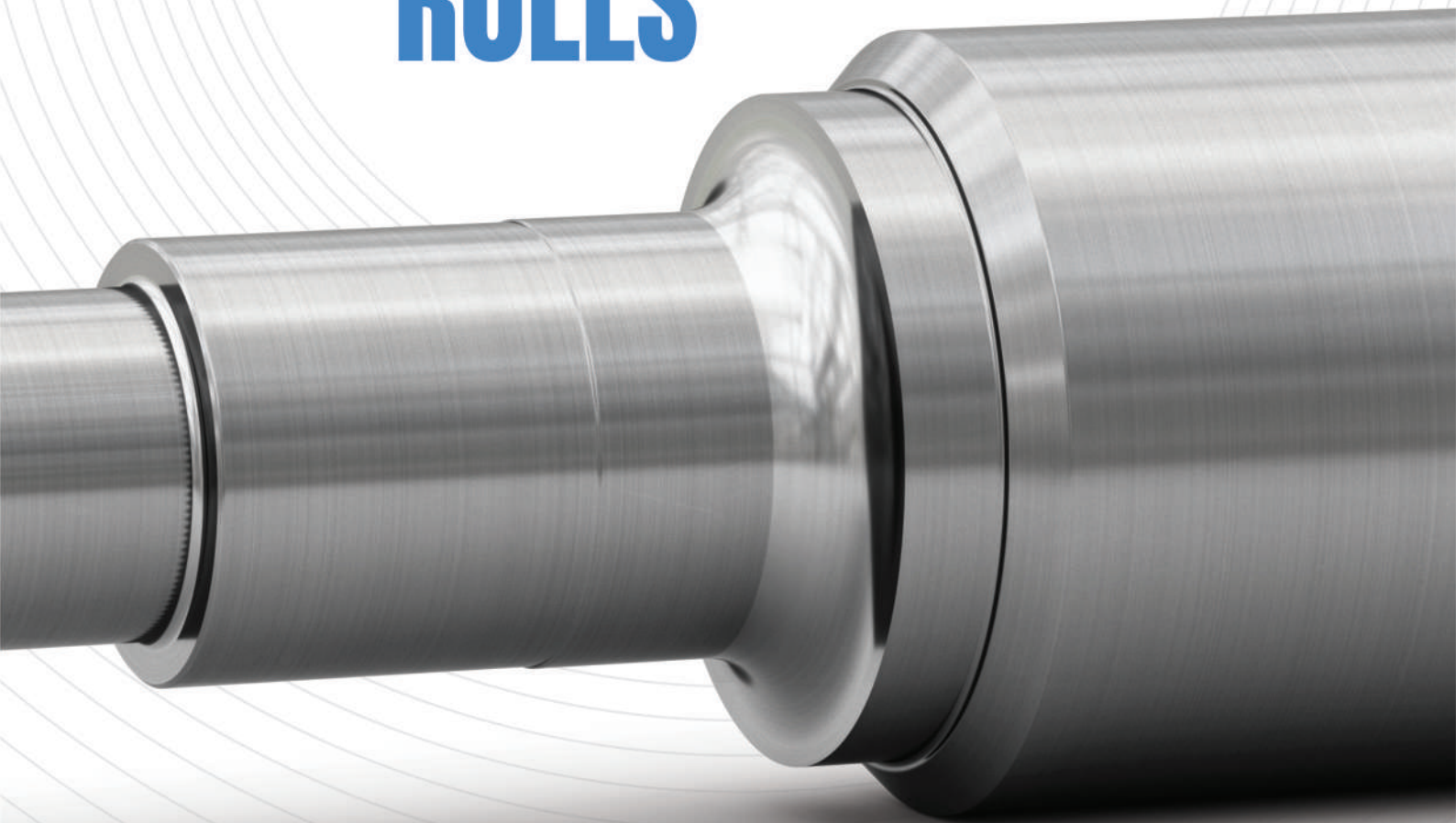


DEEM
ROLL-TECH
LIMITED

MASTERING THE ART OF ROLLING MILL ROLLS





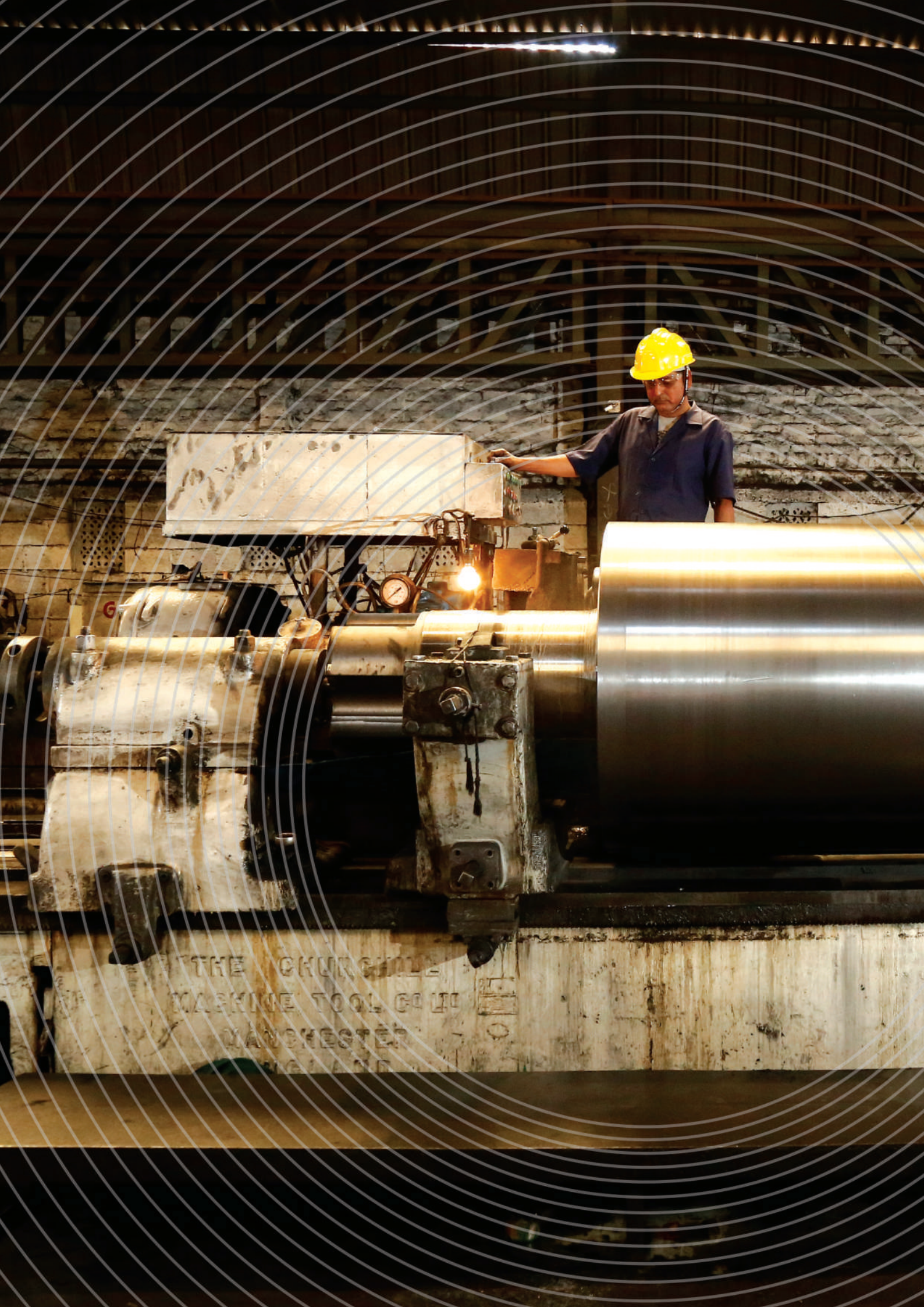
INDIA'S LEADING ROLL MANUFACTURER

We, at Deem Roll Tech Ltd., are one of India's leading roll manufacturers. Since our establishment in 2003, we have expanded to three fully integrated factories, complete with machine shops, foundries, & heat treatment furnaces. Our first factory is located in GIDC, Chhatral which spans an area of 4000 sq. metres. Our second factory is located in Ganeshpura village, covering an area of 20000 sq. metres, and our third factory located outside Kolkata in Hooghly spans over an area of 12000 sq. metres. Our total capacity stands at 8000 tons per annum, making us one of the largest manufacturers of rolls in India. We

utilise state-of-the-art equipment, machinery, and industry expertise to manufacture high-quality steel & iron rolls that are highly regarded across the world. Our range of materials includes spheroidal graphitic pearlitic, spheroidal graphite acicular, indefinite chill cast iron, & double-poured chilled cast iron. To provide better rolling solutions, we have established strategic partnerships with HSS Roll manufacturers and Tungsten Carbide rolls and ring manufacturers abroad. Our reputation for producing the finest quality rolls has earned us reputed rolling mills in India and abroad as our loyal customers.

VISION

At Deem Roll Tech Ltd., our vision is to be the leading provider of high-quality and technologically advanced rolls, rings, sleeves, and arbours for a wide range of industries worldwide. We strive to continuously improve our processes, products, and services to meet and exceed the ever-changing demands of the market. Our goal is to build strong and long-lasting relationships with our customers, based on trust, reliability, and superior quality. Through innovation, research, & development, we aim to push the boundaries of metallurgical science and technology and set new standards for excellence in the industry.



THE CHURCHILL
MACHINE TOOL CO LTD
MANCHESTER



**TAILOR-MADE
PERFORMANCE**

OUR JOURNEY OVER THE YEARS

Started Production as a Machining workshop in **2003**

Started In-House Casting in **2007**

Set up Dhanali Factory in **2009**

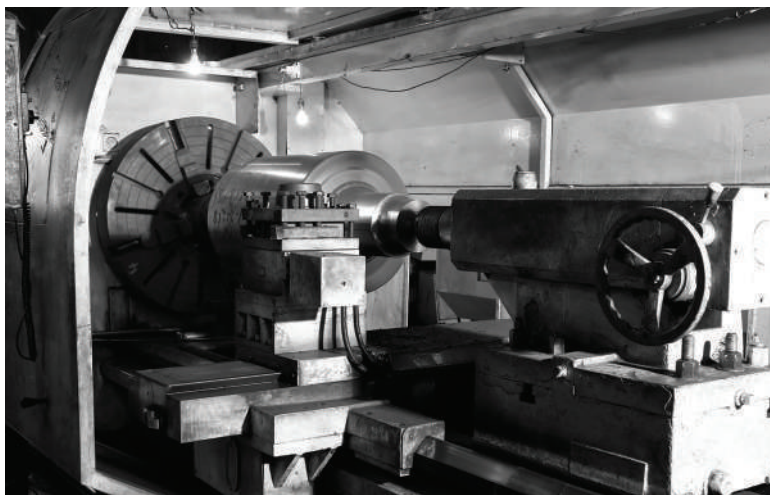
Set up Hooghly Factory in **2011**

Set up Centrifugal Casting in **2019**

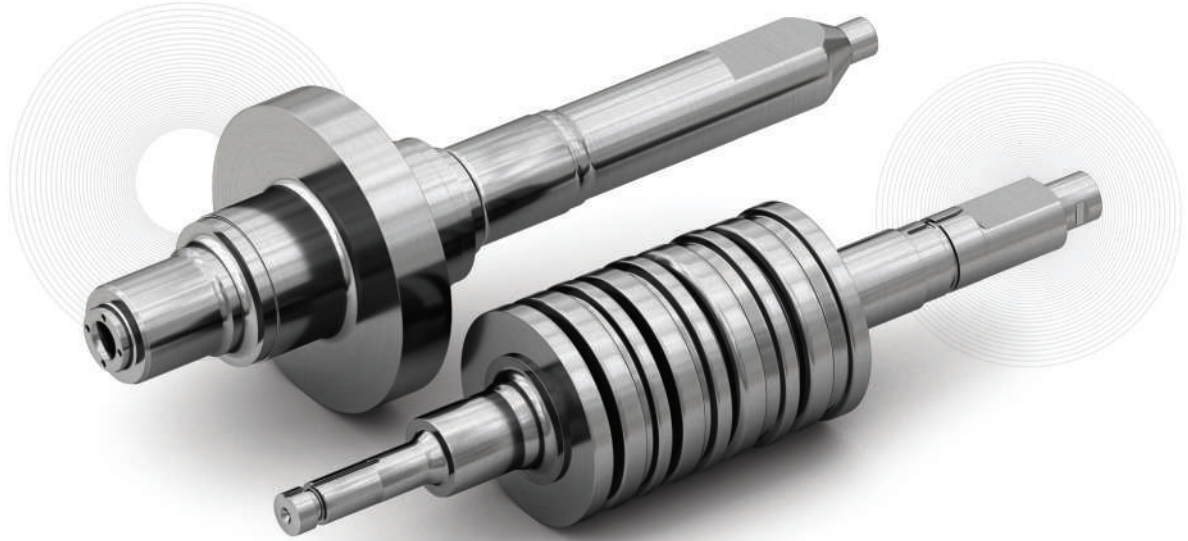
R&D Lab got DSIR accreditation in **2020**

Set up Rings as a permanent offering in **2021**

Entered the Flat Rolling Mill Rolls **2022**



VERSATILE MATERIALS TAILORED TO YOUR NEEDS



ALLOYED STEELS

- Adamite
- Graphitic Steel
- High-Speed Steel

SPHEROIDAL GRAPHITE CAST IRONS

- Pearlitic SG
- Bainitic Acicular SG
- Special Bainitic Acicular SG
- DG SG
- Ferritic SG

CHILLED CAST IRONS

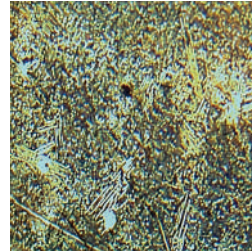
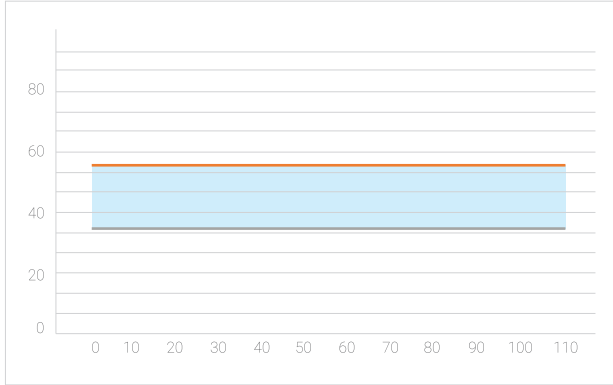
- Indefinite Chilled
- Double Poured Chilled
- ICDP
- ICDP-EC
- Core Materials

TUNGSTEN CARBIDE

ALLOYED STEELS

Highly Alloyed Cast Steels

Alloy Steel Base (ASB/ADAMITE)

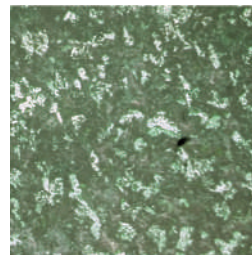
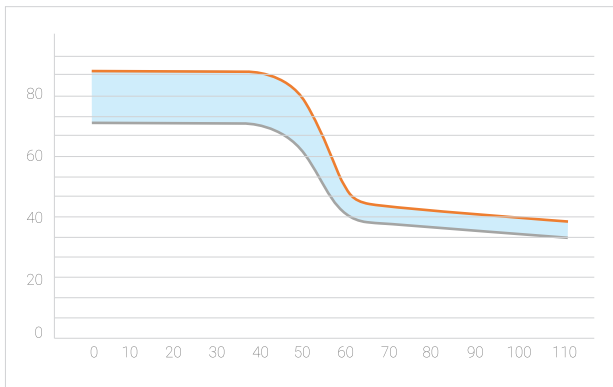


The Alloyed Steel Base **microstructure** consists of ferrite, pearlite and even some bainite for the higher carbon grades. These materials have no fall-off in hardness with increasing depth. This material has

improved toughness & is typically used in the breakdown, roughing & intermediate mills for bloom, billet & sections and for finishing heavy sections.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kg/mm ² |
|----------|-----|-----|-----|-----|-----|-----|-----|------------------------|
| 35-45 | Min | 0.8 | 0.6 | 0.3 | 0.2 | 0.8 | 0.2 | 35 |
| | Max | 1.5 | 0.9 | 0.6 | 1.0 | 1.2 | 0.5 | 70 |
| 45-55 | Min | 1.2 | 0.6 | 0.3 | 0.2 | 0.8 | 0.2 | 35 |
| | Max | 1.8 | 0.9 | 0.6 | 1.2 | 1.5 | 0.5 | 70 |

High Speed Steel (HSS)



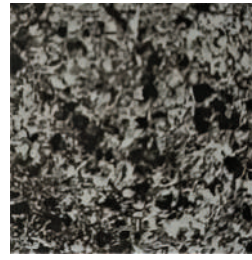
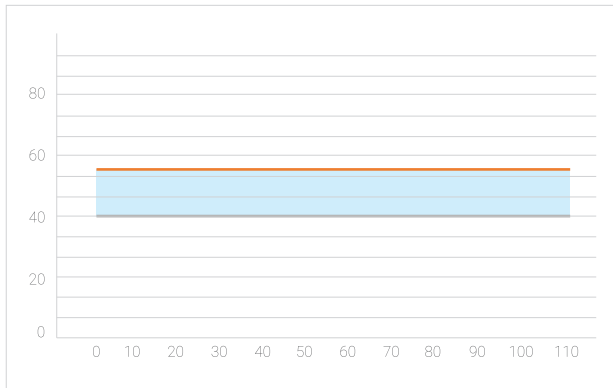
High Speed Steel (HSS) rolls are composed of high alloy and high carbon HSS outer shell with a nodular iron core. The HSS material's microstructure comprises a tempered martensitic matrix that contains finely

dispersed MC, M₂C, and M₆C carbides in significant amounts. They also provide exceptional features such as improved high-temperature strength, hot hardness, wear and oxidation resistance, excellent

smooth surface, high fire crack resistance, and a very fine fire crack pattern. Additionally, they can even sustain multiple campaigns without requiring regrinding under suitable testing conditions.

| Material | HS Range | | C | Mn | Si | Ni | Cr | Mo | V | W | UTS Kg/mm ² |
|----------|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------------------|
| HSS | 75-85 | Min | 1.5 | 0.3 | 0.4 | 0.0 | 3.0 | 2.0 | 2.0 | 0.0 | 71 |
| | | Max | 2.2 | 1.0 | 1.2 | 1.5 | 8.0 | 8.0 | 9.0 | 2.0 | 75 |
| Semi-HSS | 70-83 | Min | 0.6 | 0.8 | 0.5 | 0.2 | 3.0 | 2.0 | 0.4 | 0.0 | 41 |
| | | Max | 1.2 | 1.5 | 1.0 | 1.2 | 9.0 | 5.0 | 3.0 | 3.0 | 45 |

Graphitic Steel (GS)



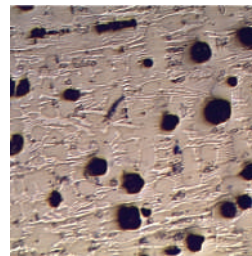
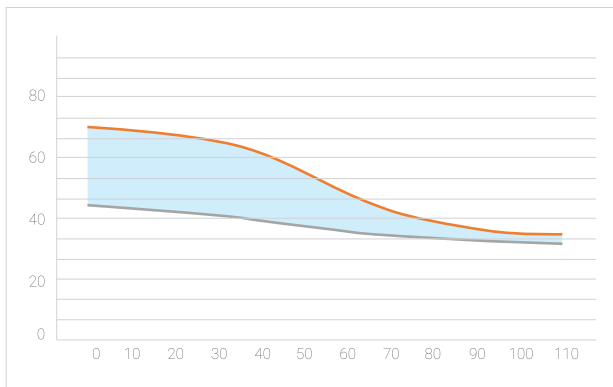
The Graphitic Steel consists of a controlled amount of fine flake graphite particles are dispersed throughout the structure. It has improved the fire-crack resistance as the free graphite reduces the impact of thermal shocks. It is mostly used for almost any size of section, especially in applications where wear resistance is required and fire-cracking is a problem.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kgf/mm2 |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------|
| 40-55 | Min | 1.4 | 0.6 | 1 | 1 | 0.9 | 0.3 | 60 |
| | Max | 2.2 | 0.9 | 1.6 | 1.5 | 1.5 | 0.5 | 80 |

SPHEROIDAL CAST IRONS

Cast Iron with Nodular or Spheroidal Graphite present.

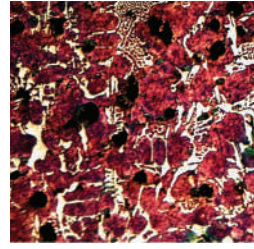
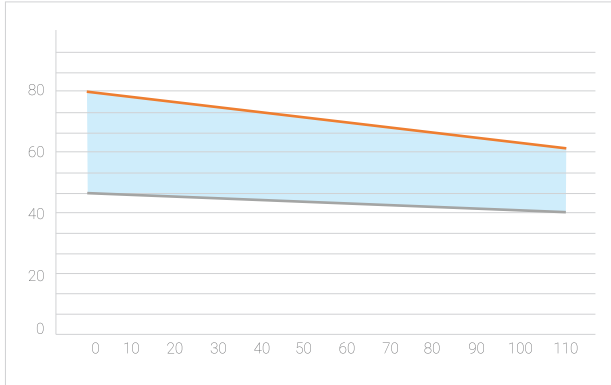
Pearlitic SG (SGP/NPCI)



Pearlitic Chill rolls are essentially an indefinite chill-type material. The **microstructure** constitutes nodular graphite and carbides in a pearlitic matrix. The resistance to fire-cracking is best when the softer grades are used. Its good hardness penetration makes it suitable for small to medium sections and billets although it can also give good results when rolling flat products.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kgf/mm ² |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------------------|
| 40-50 | Min | 3.0 | 0.3 | 1.5 | 1.5 | 0.2 | 0.2 | 40 |
| | Max | 3.5 | 0.6 | 2.3 | 2.0 | 0.5 | 0.4 | 60 |
| 50-60 | Min | 3.0 | 0.3 | 1.5 | 1.5 | 0.2 | 0.2 | 40 |
| | Max | 3.6 | 0.6 | 2.3 | 2.2 | 0.5 | 0.4 | 60 |
| 60-70 | Min | 3.1 | 0.5 | 1.2 | 1.5 | 0.3 | 0.2 | 40 |
| | Max | 3.6 | 1.0 | 1.7 | 2.4 | 0.7 | 0.6 | 60 |
| 70-80 | Min | 3.1 | 0.5 | 1.2 | 1.5 | 0.3 | 0.3 | 40 |
| | Max | 3.6 | 1.0 | 1.7 | 2.8 | 0.8 | 0.6 | 60 |

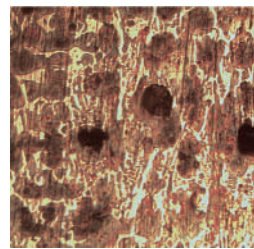
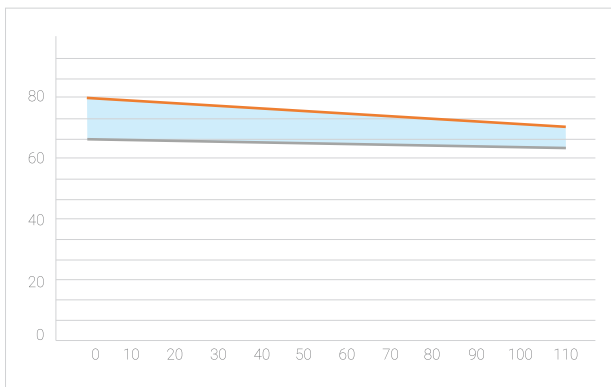
Bainitic Acicular SG (ACSG)



Bainitic Acicular SG has nodular graphite & carbides in an acicular (needle-like) bainitic matrix with increased carbide content & some martensite. This material has superior wear resistance & an excellent surface finish ideal for intermediate and finishing applications for rod & bar, sections & flats.

| Material | HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kgf/mm ² |
|-----------------------|----------|-----|-----|-----|-----|-----|-----|-----|-------------------------|
| Bainitic Acicular | 40-50 | Min | 3.0 | 0.3 | 1.6 | 1.5 | 0.2 | 0.4 | 60 |
| | | Max | 3.5 | 0.6 | 2.3 | 3.0 | 0.5 | 0.9 | 80 |
| Bainitic Acicular | 50-60 | Min | 3.0 | 0.3 | 1.4 | 1.6 | 0.2 | 0.4 | 55 |
| | | Max | 3.5 | 0.7 | 2.3 | 3.0 | 0.5 | 0.9 | 75 |
| Bainitic Acicular | 60-70 | Min | 3.1 | 0.5 | 1.2 | 2.0 | 0.3 | 0.4 | 50 |
| | | Max | 3.6 | 0.8 | 2.0 | 3.0 | 0.8 | 0.9 | 70 |
| Sp. Bainitic Acicular | 60-70 | Min | 3.1 | 0.5 | 1.2 | 3.0 | 0.4 | 0.6 | 50 |
| | | Max | 3.6 | 0.8 | 2.0 | 4.0 | 0.6 | 0.9 | 70 |
| Sp. Bainitic Acicular | 70-80 | Min | 3.1 | 0.5 | 1.2 | 3.5 | 0.4 | 0.6 | 50 |
| | | Max | 3.6 | 0.8 | 2.0 | 4.0 | 0.6 | 1.0 | 70 |

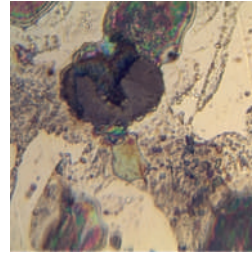
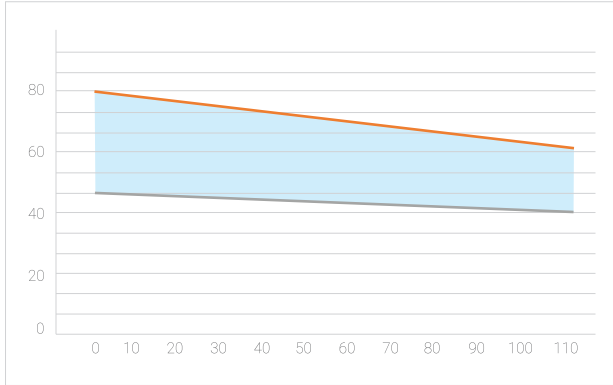
Deep Groove SG (DGSG)



Deep Groove SG has nodular graphite. This material has superior wear resistance at high depth ideal for large sections with deep grooves or seamless tubes.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kgf/mm ² |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------------------|
| 60-70 | Min | 3.0 | 0.3 | 1.5 | 2.0 | 0.6 | 0.3 | 60 |
| | Max | 3.5 | 0.6 | 2.2 | 3.0 | 0.9 | 0.5 | 80 |
| 70-80 | Min | 3.0 | 0.3 | 1.5 | 2.2 | 0.6 | 0.3 | 55 |
| | Max | 3.5 | 0.7 | 2.0 | 3.0 | 0.9 | 0.5 | 75 |

Ferritic SG (SGF)



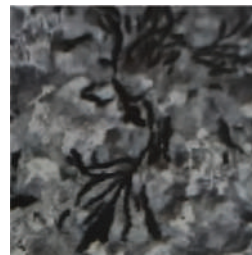
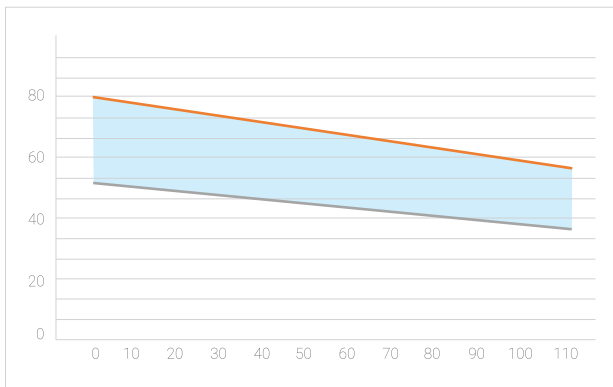
The microstructure of Ferritic Bainite SG ranges from mostly pearlitic to bainitic with graphite nodules that are surrounded by a layer of ferrite giving a characteristic "bull's eye" effect. No significant hardness drop; excellent hardness penetration. Highly fire-crack resistant and suitable for severe thermal duty in Breakdown and Roughing applications.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kg/mm ² |
|----------|-----|-----|------|-----|-----|-----|-----|------------------------|
| 60-70 | Min | 2.8 | 0.4 | 1.5 | 1.5 | 0.3 | 0.5 | 45 |
| | Max | 3.5 | 0.65 | 2.5 | 2.8 | ≤2 | 1 | 70 |

CAST IRONS

Chilled Cast Irons with Flake Graphite

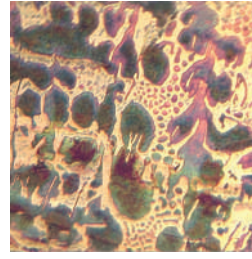
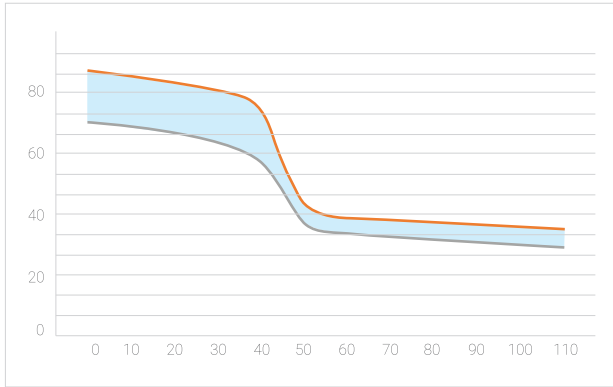
Indefinite Chilled (ICCI)



The microstructure of Indefinite Chilled Cast Irons has a carbide-rich yet tough material. The presence of flake graphite enhances chipping resistance and fire-cracking resistance, making Indefinite Chilled Cast Irons suitable for products that require an excellent surface finish. The material is ideal for rolling flats, sections, and similar products with deeper grooves.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kg/mm ² |
|----------|-----|-----|-----|-----|-----|-----|-----|------------------------|
| 50-60 | Min | 3.0 | 0.6 | 1.0 | 1.5 | 0.7 | 0.2 | 35 |
| | Max | 3.5 | 0.9 | 1.5 | 2.0 | 1.2 | 0.4 | 45 |
| 60-70 | Min | 3.0 | 0.6 | 1.0 | 1.5 | 0.8 | 0.2 | 35 |
| | Max | 3.5 | 0.9 | 1.5 | 2.5 | 1.2 | 0.4 | 45 |
| 70-80 | Min | 3.1 | 0.6 | 0.9 | 1.5 | 0.8 | 0.2 | 35 |
| | Max | 3.6 | 0.9 | 1.5 | 2.5 | 1.2 | 0.4 | 45 |

Double Poured Chilled (DPIC)

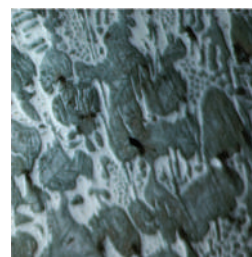
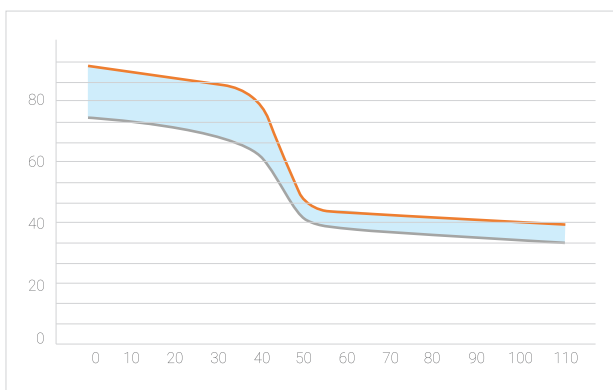


The microstructure of DPIC has a gradual transition from a carbide-rich surface containing a small amount of graphite to a grey core. The surface is intermediate between white & grey iron, with the amount of graphite reducing in harder grades towards the centre of the roll. The presence of flake graphite enhances chipping resistance and fire-cracking resistance, making DPIC suitable for

products that require an excellent surface finish. The material is ideal for rolling flats, sections, and similar products with deeper grooves.

| HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kgf/mm ² |
|----------|-----|-----|-----|-----|-----|-----|-----|-------------------------|
| 70-75 | Min | 3.1 | 0.6 | 0.7 | 2.2 | 1.2 | 0.2 | 38 |
| | Max | 3.6 | 0.9 | 1.1 | 3.0 | 1.6 | 0.4 | 43 |
| 75-80 | Min | 3.1 | 0.6 | 0.7 | 2.2 | 1.2 | 0.2 | 38 |
| | Max | 3.6 | 0.9 | 1.1 | 3.0 | 1.8 | 0.4 | 43 |
| 80-85 | Min | 3.2 | 0.6 | 0.7 | 2.5 | 1.3 | 0.2 | 38 |
| | Max | 3.6 | 0.9 | 1.0 | 3.5 | 1.9 | 0.4 | 43 |

Indefinite Chilled Double Poured (ICDP)

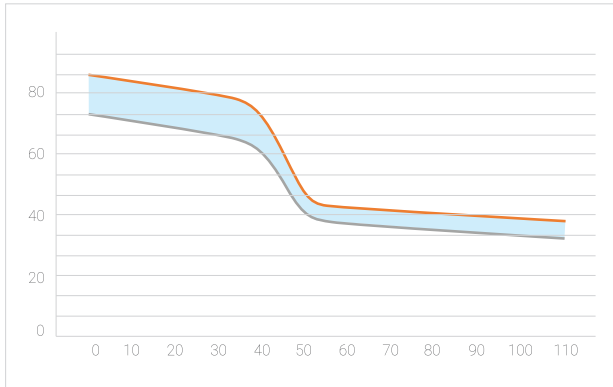


Our standard ICDP made specifically for hot strip mills has a microstructure that includes M3C type eutectic carbides and free graphite embedded in a tempered bainitic martensitic matrix, providing excellent resistance to wear and mill accidents. The work rolls for the late finishing stands of conventional HSM or Steckel mills are made of double-poured indefinite chill iron with carbide

additions, manufactured through horizontal spin casting. The microstructure of the roll consists of homogeneously dispersed MC-carbides, Fe₃C-carbides, and free graphite flakes embedded in a bainitic/martensitic matrix. The rolls are heat-treated at low temperatures to ensure favourable stress levels and the required hardness range.

| Material | HS Range | C | Mn | Si | Ni | Cr | Mo | V | W | NB | UTS Kgf/mm ² |
|----------|----------|-----|-----|-----|-----|-----|-----|-----|---|----|-------------------------|
| ICDP | 70-83 | Min | 3 | 0.6 | 0.8 | 4 | 1.3 | 0.2 | | | 41 |
| | | Max | 3.6 | 1.3 | 1.2 | 4.9 | 2 | 0.5 | | | 45 |

ICDP-Enhanced Carbide (ICDP-EC)

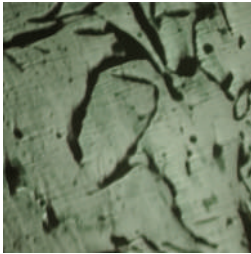


ICDP-EC's superior wear resistance & uniform surface finish are achieved through a controlled microstructure comprising small, well-distributed, and harder carbide reinforcement throughout the roll's life. This unique microstructure comprises a balance of primary M3C carbide & graphite within a matrix of fine-tempered martensite and bainite, with the addition of small niobium carbides throughout the structure. Moreover, the controlled spherical graphite morphology ensures even distribution & prevents differential wear & improves crack propagation resistance, making ICDP-EC ideal for rolling operations.

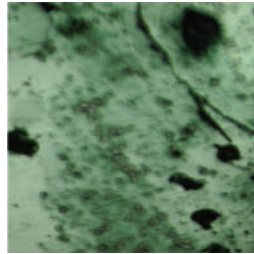
| Material | HS Range | | C | Mn | Si | Ni | Cr | Mo | V | W | NB | UTS Kgf/mm ² |
|----------|----------|-----|-----|-----|-----|-----|----|-----|-----|---|----|----------------------------|
| ICDP-EC | 75-85 | Min | 3.2 | 1 | 0.7 | 1.5 | 4 | 0.2 | 0.1 | 0 | 0 | 41 |
| | | Max | 3.6 | 1.7 | 1.5 | 3 | 6 | 3 | 3 | 1 | 1 | 45 |

Core Materials

Lamellar Core



Nodular Core



The microstructure of Indefinite Chilled Cast Irons has a carbide-rich yet tough material. The presence of flake graphite enhances chipping resistance and fire-cracking resistance, making Indefinite Chilled Cast Irons suitable for products that require an excellent surface finish. The material is ideal for rolling flats, sections, and similar products with deeper grooves.

| Material | HS Range | | C | Mn | Si | Ni | Cr | Mo | UTS Kgf/mm ² |
|---------------|----------|-----|-----|-----|-----|-----|-----|-----|-------------------------|
| Lamellar Core | 36-44 | Min | 2.5 | 0.4 | 1.2 | 0.2 | 0.3 | 0.1 | 18 |
| | | Max | 3.4 | 1.0 | 2.9 | 2.0 | 1.3 | 0.3 | 20 |
| Nodular Core | 36-44 | Min | 2.6 | 0.3 | 2.0 | 0.0 | 0.0 | 0.0 | 36 |
| | | Max | 3.5 | 1.1 | 3.0 | 1.5 | 0.6 | 0.3 | 40 |

TUNGSTEN CARBIDE (TC)

Tungsten Carbide rolls are used in the manufacture of mill rolls for extended life in applications where long rolling campaigns are required. Their extreme hardness makes them suitable for wire rods, finishing blocks and some shaping applications.

The cemented carbide rolls are divided into the conventional WC-Co alloys and the corrosion-resistant alloys with a mixed binder Co-Ni-Cr. The binder contents vary according to the specific requirements of the rolling mill. We also offer composite roll rings that are a combination of cemented carbide and steel. Unlike the relatively brittle cemented carbide rings, these composite rings open up a wide range of applications. These roll rings can be shrunk on the shaft without any clearance between the shaft and the ring, leading to increased stiffness of the roll shaft

and higher rigidity of the system. For the transmission of higher torques, keyways can be machined in the faces or in the inner diameter of these roll rings. These rings are used in the intermediate stands and blocks with a 3-ring layout as well as stretch-reducing tube mills.

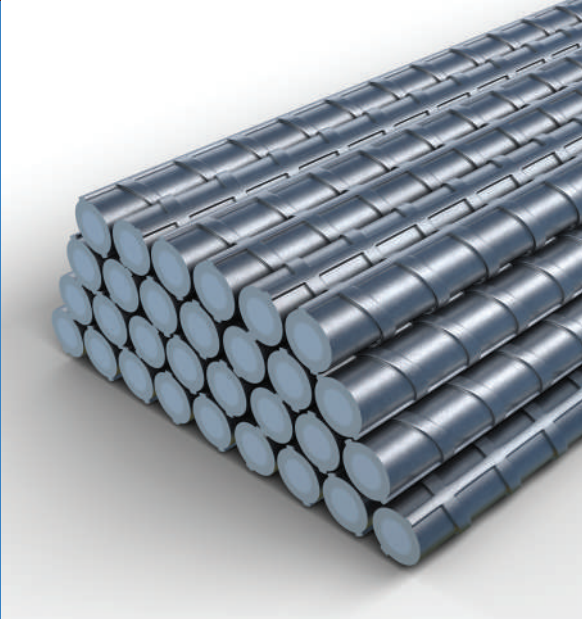
For intermediate stands of bar and wire rod mills, and finishing stands of bar mills, we have Combi-rolls. This consists of a composite roll ring with a mechanical clamping system, providing a high wear-resistant layout that allows for the utilisation of the full width of the roll table. Combi-rolls are provided with a maintenance-free clamping system that does not need to be re-tightened. Additionally, the roll shaft can be equipped at different times with new roll rings.

| Grade | WC | Co | Co Ni Cr | Density/cm ³ |
|-------|------|------|----------|-------------------------|
| VG 07 | 93,0 | 7,0 | / | 14,8 |
| VG 30 | 90,5 | 9,5 | / | 14,6 |
| VG 50 | 86,5 | 13,5 | / | 14,2 |
| VG 53 | 83,0 | 17,0 | / | 13,8 |
| VG 56 | 77,5 | 22,5 | / | 13,1 |
| VG 61 | 75,0 | 25,0 | / | 12,7 |
| VG 62 | 70,0 | 30,0 | / | 13,9 |
| VG 40 | 84,2 | / | 15,8 | 13,6 |
| VG 45 | 81,0 | / | 19,0 | 13,6 |
| VG 50 | 80,0 | / | 20,0 | 13,5 |
| VG 70 | 75,0 | / | 25,0 | 13,1 |
| VG 76 | 70,0 | / | 30,0 | 12,7 |
| VG 77 | 70,0 | / | 30,0 | 12,7 |



APPLICATIONS

Solutions designed for you



LONG PRODUCT MILLS

- Rebar Mills
- Light Section Mill
- Heavy Section Mill
- Rail Mill
- Universal Rolling Mill

FLAT PRODUCT MILLS

- Plate/Steckel Mill
- Continuous Strip Mill
- Narrow Strip Mill

SEAMLESS TUBE ROLLING MILL

- MPM Mills
- PQF Mills

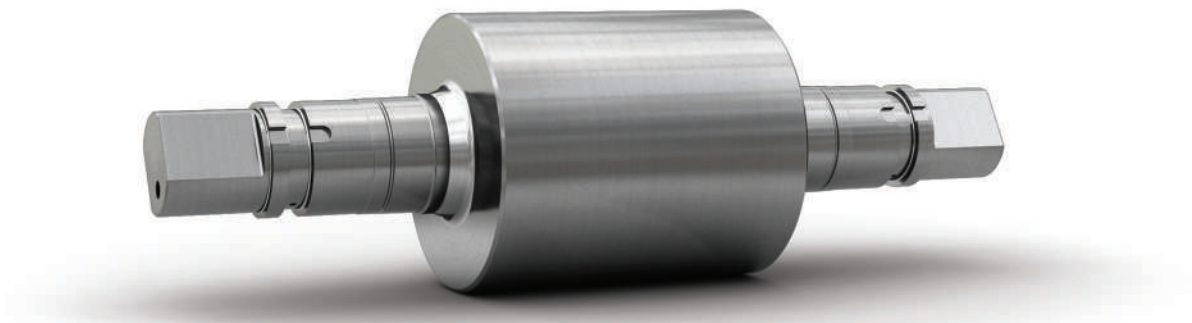
Rebar Mills



Wire-Rods, Rebars, Alloy Steels, Bars and Rounds.

| Stand | Material |
|-------------------------------|--|
| Reversing Stands | ASB, GS |
| Roughing Stands | ASB, GS, SGF |
| Intermediate Stands | SGP, SGF, ICCI |
| Finishing Stands | ACSG, Spl. ACSG, DGSG, DPIC, HSS |
| Cantilever/ Block Mill Stands | GS, SGP, ACSG, Spl. ACSG, SGF, ICCI, HSS, TC |

Light Section Mills



Angles, Channels, Beams, Flats, Special Profiles and Sections.

| Stand | Material |
|----------------------------|--------------------------------------|
| Reversing Stands | ASB, GS |
| Roughing Stands | ASB, GS, SGF |
| Intermediate Stands | GS, SGP, DGSG, ICCI |
| Finishing Stands | GS, SGP, ACSG, DGSG, ICCI, DPIC, HSS |
| Sleeves & Cantilever Rings | ASB, GS, SGP, ACSG, DGSG, SGF, ICCI |

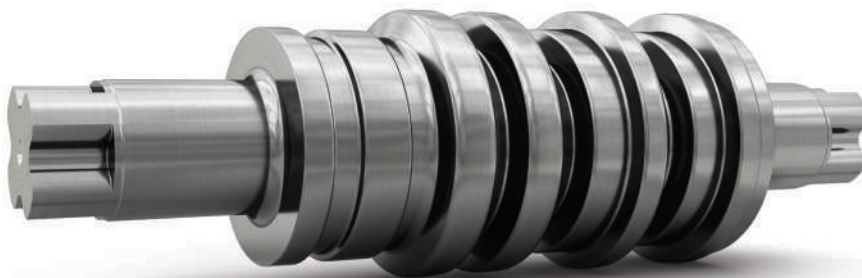
Cogging, Blooming & Heavy Section Mills



Large Bars, Rounds, Beams, Track Shoes, etc.

| Stand | Material |
|---------------------|--------------------------|
| Reversing Stands | ASB, GS |
| Roughing Stands | ASB, GS, SGF |
| Intermediate Stands | GS, SGP, DGSG, SGF, ICCI |
| Finishing Stands | GS, SGP, DGSG, ICCI |
| Sleeves & Rings | SGP, DGSG, SGF, ICCI |

Universal & Rail Mills



Rails and Special Profiles made with Universal Mills.

| Stand | Material |
|---------------------------|--|
| Reversing/Roughing Stands | ASB, GS, SGF |
| Intermediate Stands | ASB, GS, SGP, SGF, ICCI |
| Finishing Stands | GS, SGP, DGSG |
| Sleeves & Rings | ASB, GS, SGP, ACSR, Spl. ACSR, DGSG, SGF, ICCI |

Plate / Steckel Mills

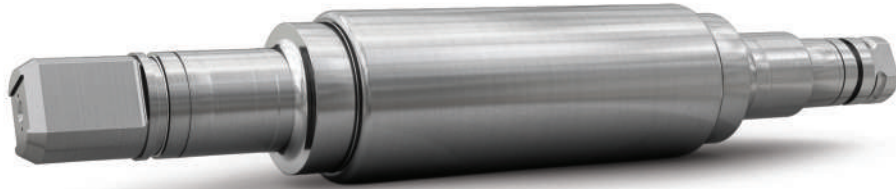


Plate or Steckel mills with reversing roughing mills.

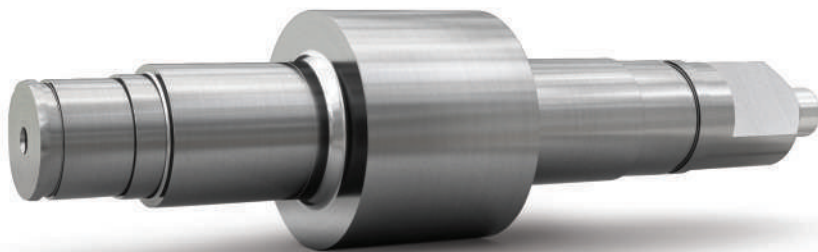
Plate Mill Stands

| Stand | Material |
|------------------|--|
| Roughing Stands | HSS, Semi-HSS, Hi-Cr Iron, Hi-Cr Steel |
| Finishing Stands | ICDP, ICDP-EC |

Steckel Mill Stands

| Stand | Material |
|------------------|---------------------------|
| Roughing Stands | HSS, Semi-HSS, HiCr Steel |
| Finishing Stands | ICDP, ICDP-EC |

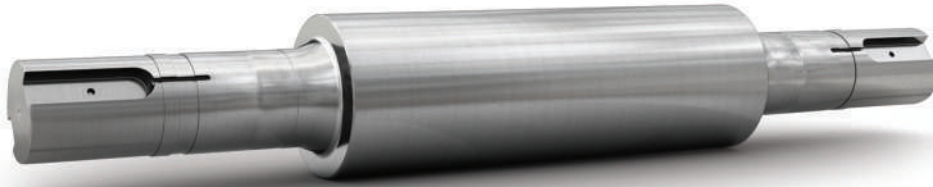
Narrow Strip Mills



Narrow Strip Mills

| Stand | Material |
|------------------------|---------------------|
| Early Finishing Stands | SGP |
| Final Finishing Stands | ICDP, ICDP-EC, ACSG |

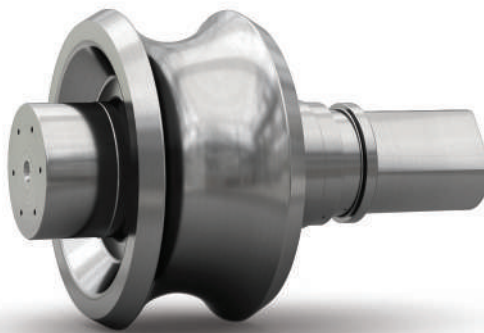
Continuous Strip Mills



High-Speed Continuous Strip Mills:

| Stand | Material |
|-------------------------|-----------------------|
| Two-high roughing mill | Semi-HSS, Hi-Cr Steel |
| Four-high roughing mill | Semi-HSS, Hi-Cr Steel |
| Edger | ASB, GS |
| Early Finishing Stands | ICDP, HSS, Hi-Cr Iron |
| Final Finishing Stands | ICDP, ICDP-EC |

Seamless Tube Rolling Mills

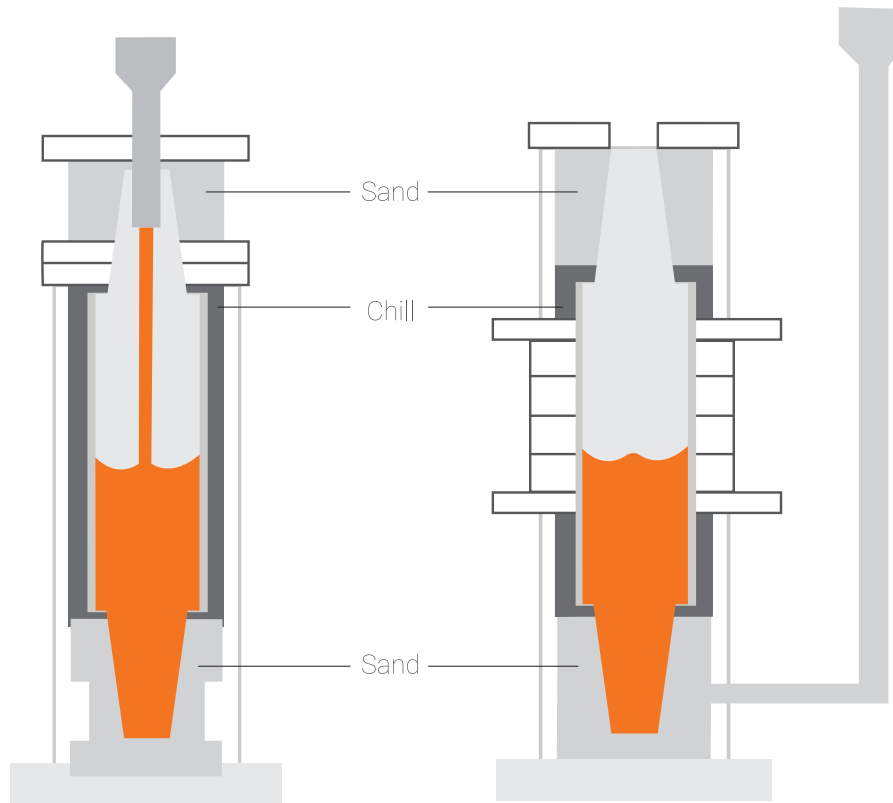


From MPM, PQF to FQM, we cater to all seamless tube mills.

| Stand | Material |
|------------------------------|--------------------------|
| MPM Rolls | GS, SGP, ACSG, SGF, ICCI |
| PQF Rolls | GS, SGP, ACSG, SGF, ICCI |
| Calibrator Rings | SGP, ACSG |
| Extractor Rings | SGP, ACSG |
| Sizing (Re-Calibrator) Rings | SGP, ACSG, ICCI |
| Stretch Reducing Rings | SGP, ACSG, ICCI |

PROCESSES

Static Cast



The Static Casting process is used to cast the whole roll in one go so the chemical properties are the same throughout the roll. By employing cooling speed and heat treatment techniques, we are able to manipulate the performance of the roll neck and shell to meet specific requirements. Our static casting process is

utilised for a variety of rolling mills, including roughing mills, section mills, rail and beam mills, universal mills, edge mills, wire mills, and rod mills. To produce our rolls, we utilise both top-pour and bottom-pour casting methods.

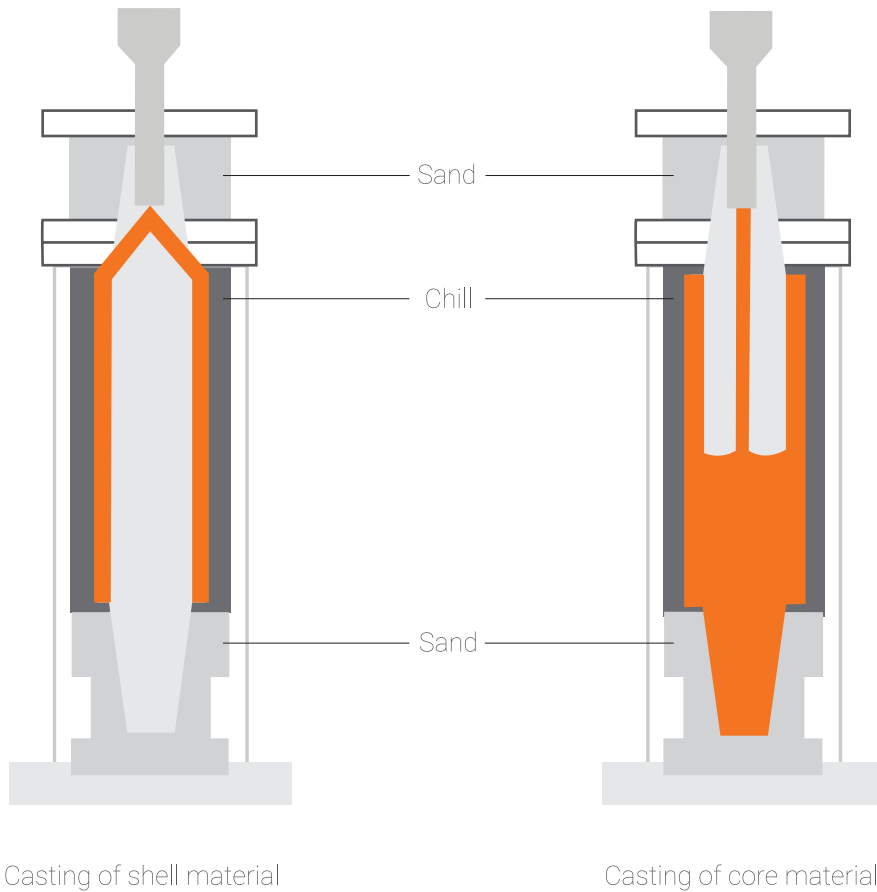
Heat Treatment



Our company has advanced domestic heat treatment furnaces that are equipped with natural gas-fired units and fans, which improve furnace atmosphere circulation. These furnaces are necessary to address the residual stress caused by heat and structural stress in cast iron rolls. Residual stress

can cause changes in shape and size during machining and negatively affect roll performance. To relieve stress, an annealing treatment is required for all cast iron rolls, and some require normalisation treatment. We ensure uniform hardness by carefully maintaining the furnaces, with accuracy within 10°C.

Centrifugally Cast



With centrifugal casting, we are able to create rolls consisting of two distinct materials. The surface portion of the barrel is composed of a material that is both heat-resistant and highly resistant to wear, while the core is made up of a material that boasts excel-

lent mechanical strength. The upper and lower ends of the layer exhibit almost uniform thickness and the structure of it is more compact, making it perform better than static rolls where high-heat performance is required.







**PERFORMANCE
WHERE IT COUNTS**

QUALITY

At our metallurgical company, we place a great emphasis on maintaining metallurgical quality throughout all stages of production. To achieve this, we utilise a range of advanced equipment such as spectrometers, microscopes, and ultrasonic testing equipment. These tools allow us to analyse and test the composition and properties of our materials and products, ensuring that they meet the required specifications and standards. The spectrometer helps us

to identify the elemental composition of our alloys, while the microscope allows us to examine their microstructures for defects or anomalies. Ultrasonic testing equipment allows us to detect any hidden flaws or discontinuities within our products, providing us with valuable information for improving our manufacturing processes. With these tools at our disposal, we can maintain the highest level of metallurgical quality and ensure the satisfaction of our customers.

Metallurgical Quality

At Deem Roll Tech Ltd., we place a great emphasis on maintaining metallurgical quality throughout all stages of production. To achieve this, we utilise a range of advanced equipment such as spectrometers, microscopes, and ultrasonic testing equipment. These tools allow us to analyse and test the composition and properties of our materials and products, ensuring that they meet the required specifications and standards.

identify the elemental composition of our alloys, while the Metallurgical Microscope allows us to examine their microstructures for defects or anomalies.

Ultrasonic testing equipment allows us to detect any hidden flaws or discontinuities within our products, providing us with valuable information for improving our manufacturing processes. With these tools at our disposal, we can maintain the highest level of metallurgical quality and ensure the satisfaction of our customers.

The Optical Emission Spectrometer helps us to





Mechanical Quality

To ensure consistent machining quality, metallurgical companies utilise state-of-the-art equipment such as Computer Numerical Control (CNC) machines & micrometres. These machines are critical in maintaining precision during the manufacturing process of various products such as rolls, rings, sleeves, and arbours. CNC machines are highly automated and are capable of producing highly accurate and complex shapes with tight tolerances, making them ideal for metallurgical applications. Micrometres, on the other hand, are used to accurately measure the dimensions of machined parts & ensure that they are within the required specifications. This precision measuring tool allows the metallurgical company to maintain tight tolerances & ensures that the final product meets the customer's requirements. Together, these tools help to maintain machining quality, ultimately resulting in high-quality metallurgical products.

ISO Accreditation
We are an ISO 9001:2015 Accredited Firm



Certificate of Registration

This is to certify that the Management System of:

DEEM ROLL-TECH LIMITED

Survey No. 110/1 & 110/2 (New No. 202), Dhanali Road, Ganeshpura, Taluka Kadi, District Mehsana, Gujarat, India

has been approved by Alcumus ISOQAR and is compliant with the requirements of:

ISO 9001: 2015

| | |
|--|--|
|  | Certificate Number: 7799-Q15-001 |
| | Initial Registration Date: 06 August 2009 |
| | Previous Expiry Date: 06 August 2021 |
| | Recertification Date: 12 June 2021 |
| | Re-issue Date: 23 June 2021 |
| | Current Expiry Date: 06 August 2024 |

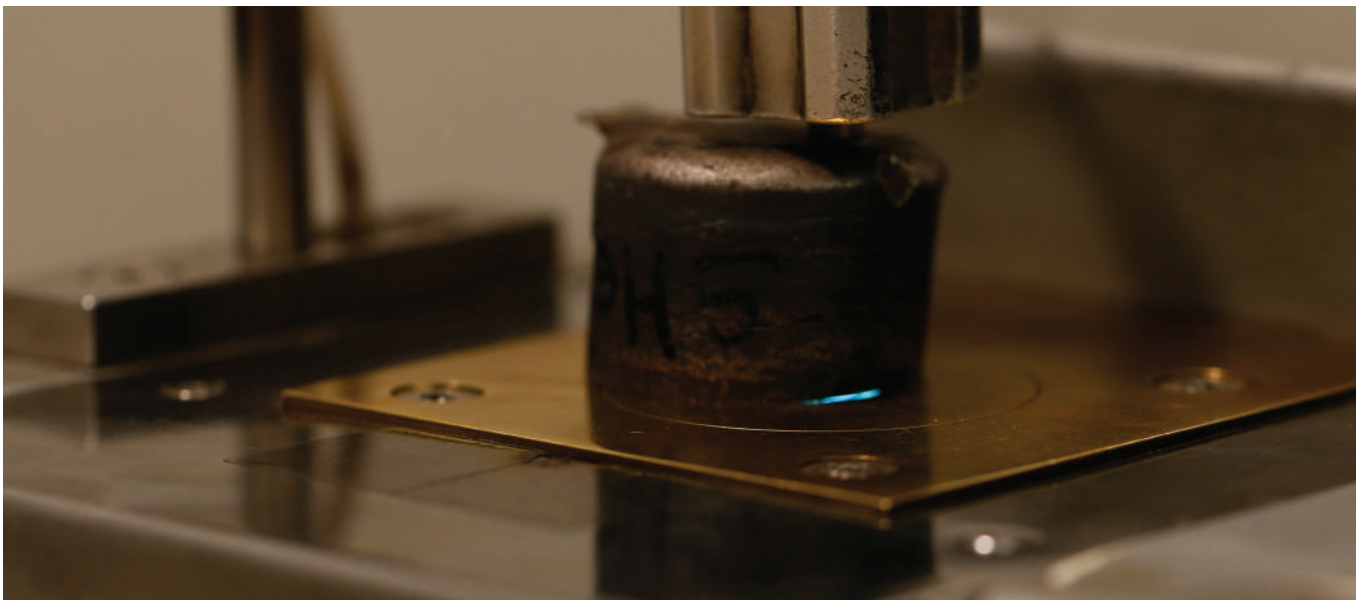
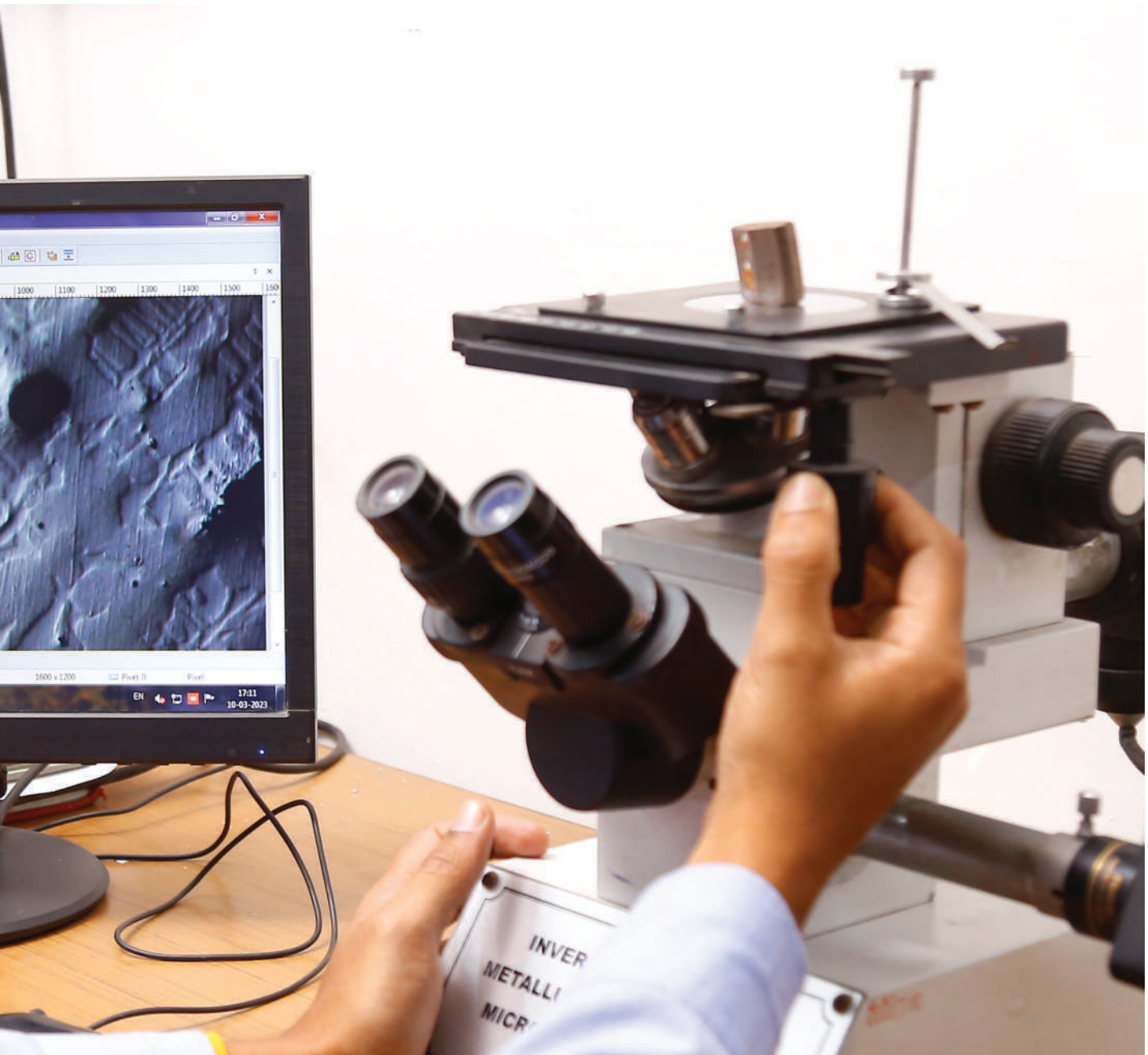
Scope of Registration:
Manufacture and Supply of Metal Rolls

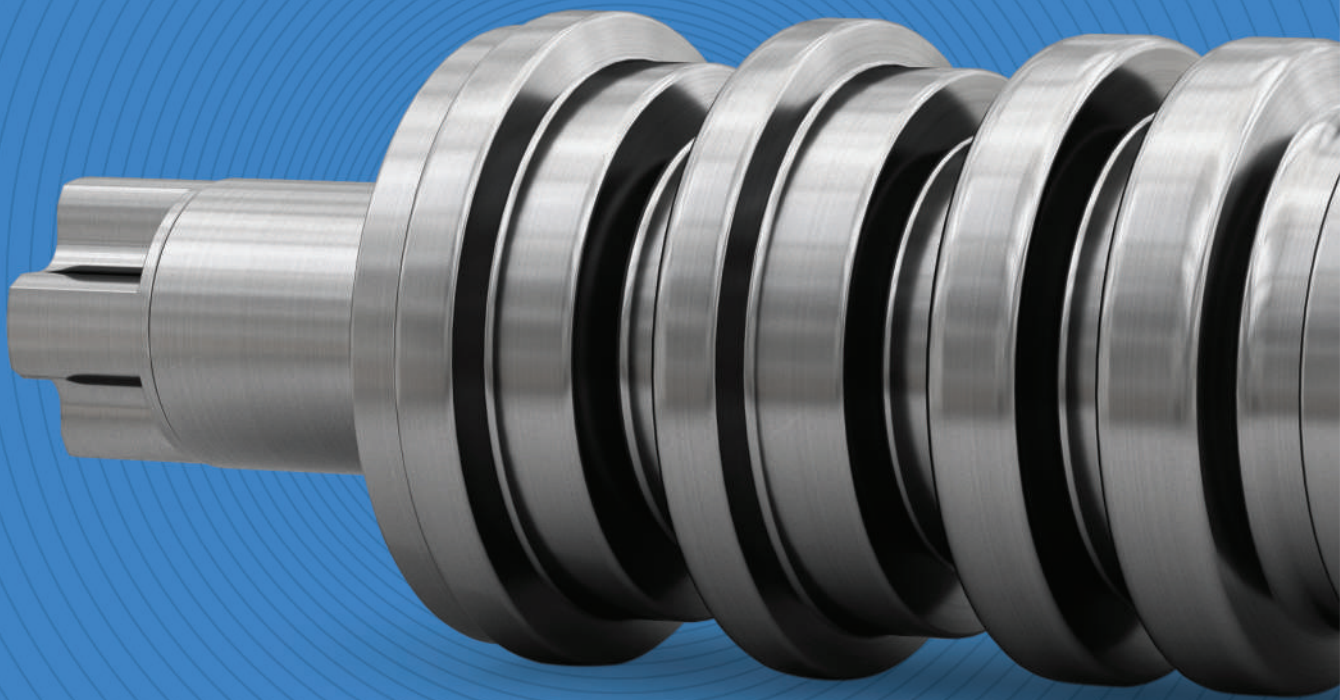
Signed: 
Steve Stubley, Technical Director
(on behalf of Alcumus ISOQAR)

This certificate will remain current subject to the company maintaining its system to the required standard. This will be monitored regularly by Alcumus ISOQAR. Further clarification regarding the scope of this certificate and the applicability of the relevant standards' requirement may be obtained by consulting Alcumus ISOQAR.




Alcumus ISOQAR Limited, Alcumus Certification, Cobro Court, 1 Blackmore Road, Salford, Manchester M10 5DQ.
T: 0161 885 3889 F: 0161 885 3885 E: accreditation@alcumusgroup.com W: www.alcumusgroup.com/footer
This certificate is the property of Alcumus ISOQAR and must be returned on request.





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Fax: +91-02764-232199

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New survey No-202,
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Mehsana District- Gujarat
Phone: +91-92280 08692

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Hoogly District - West Bengal
Phone: +91-032103250416