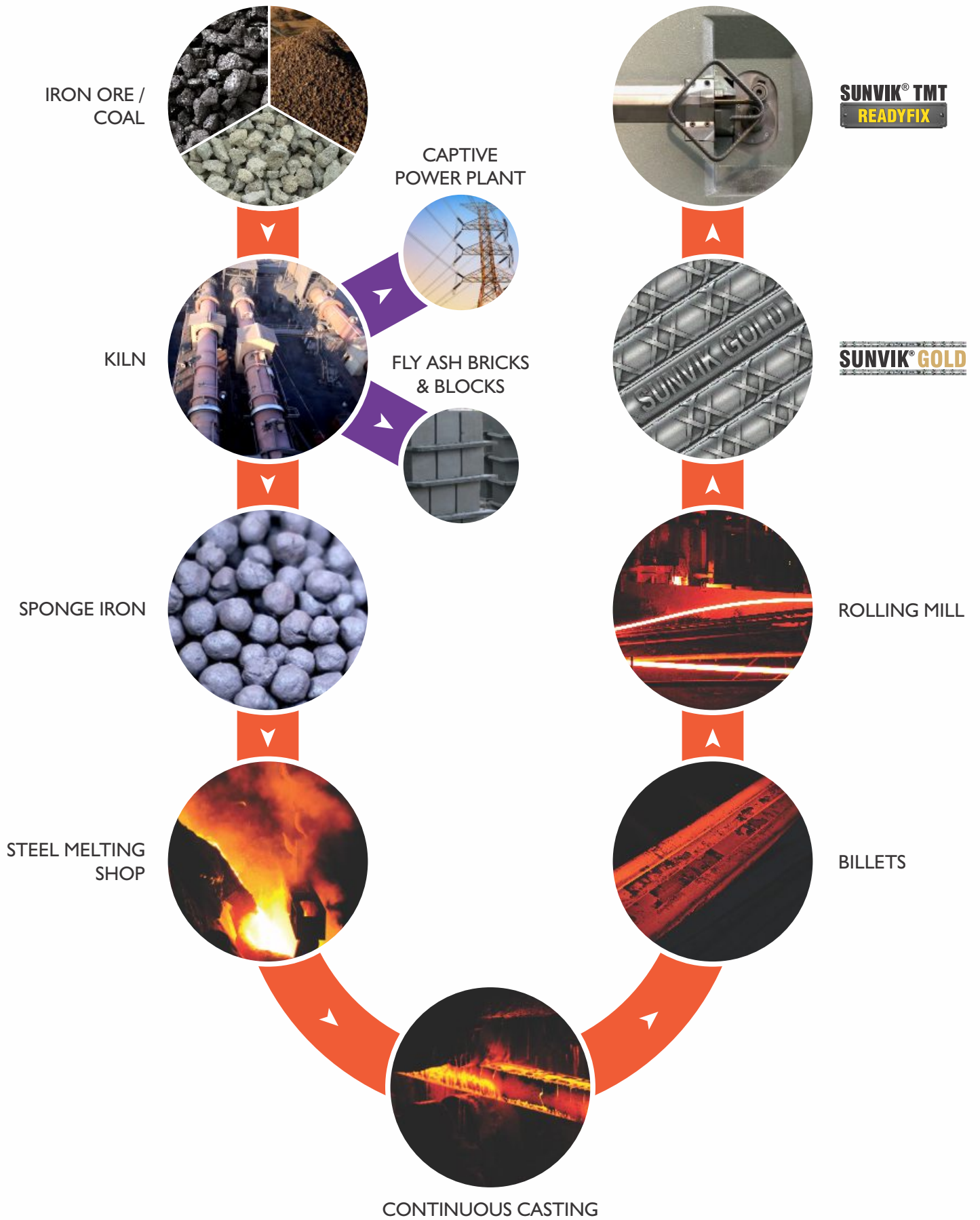


Process





QUALITY ASSURANCE

Perfection does not begin at the manufacturing plant. It begins in the mind. It is a challenge that Sunvik has overcome through diligence, discipline and by encouraging our employees to develop a sense of pride in their jobs. At Sunvik Steels quality is a self-imposed discipline, a challenge that is pursued with unswerving zeal.

Quality Commitment Encompasses:

- Products of the highest standard
- Continuous business improvement
- Environment, systems and training

Certification:

- ISO 9001:2008
- Evcon Turbo Technology
- Bureau of Indian Standards (ISI)



State-of-the-art Quality Lab



Universal Testing machine



Satmagan



Bomb Calorie Meter



Spectrometer



Compression Testing Machine



Sartorius Moisture Analyser



Bend and Rebend machine

TESTING

Elaborate and exhaustive quality assurance systems have been implemented at every juncture of the manufacturing process:

Direct Reduction Plant

Incoming Material Inspection:

- Iron ore is tested for Fe (T), LOI, SiO₂, Al₂O₃, Mn, S, P, CaO, MgO, Tumbler and Abrasion
- Coal is tested to determine Fixed Carbon, Gross Calorific Value and Moisture Content
- Dolomite is tested for LOI, CaO, MgO, SiO₂ and screen analysis

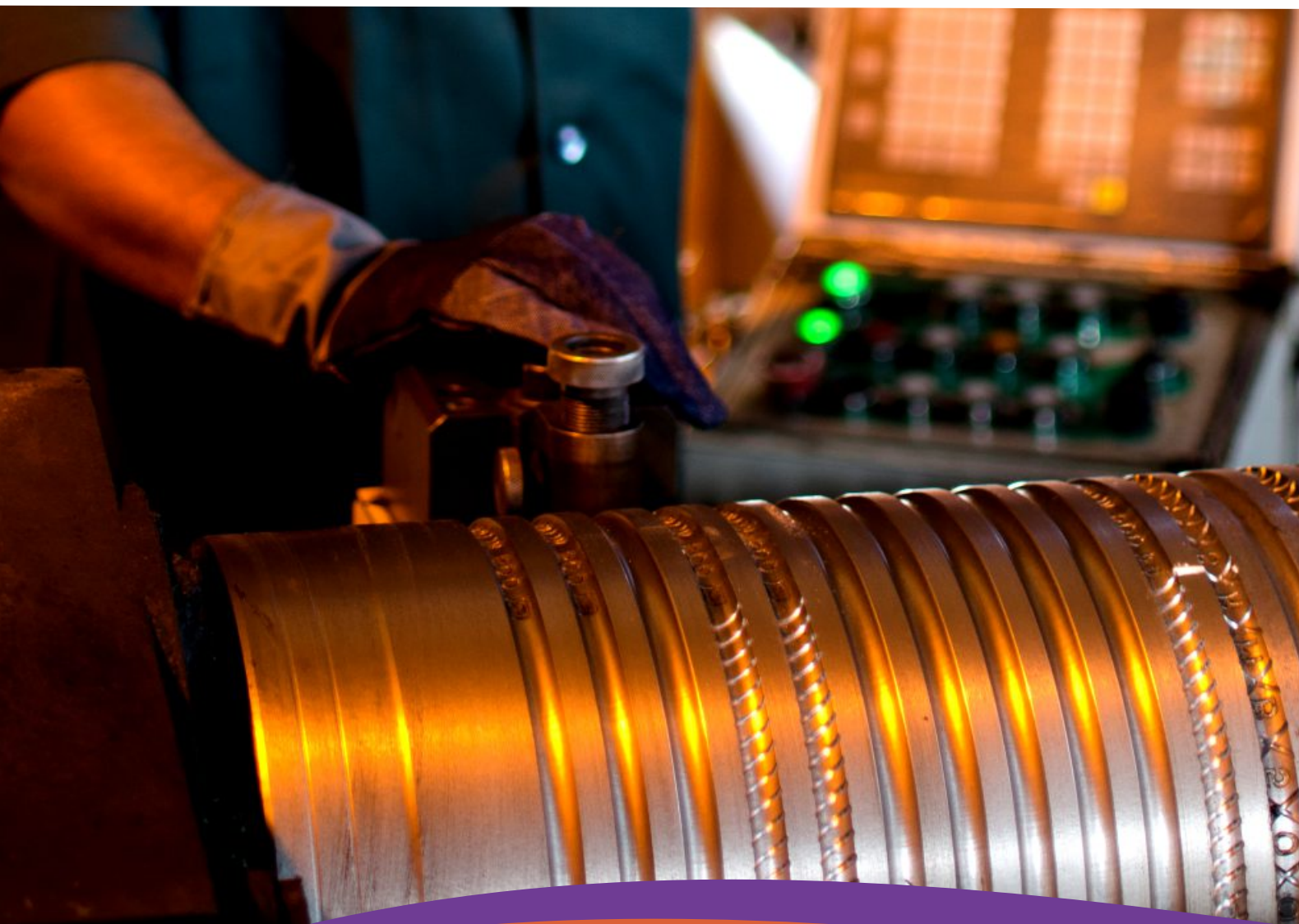
In Process Inspection:

- During production every hour the DRI is tested for Fe (M), Fe (T), C, S and feedback given to operations department
- Samples are drawn frequently and tested for non-mag contamination

Finished Product Inspection:

- Before the melting process, the sponge iron is checked for Fe (M), C, S and non-mag contents

SUNVIK TMT is CNC notched for high accuracy and uniformity in rib pattern to achieve high bond with the concrete.



The core of our strength

Pure Steel to TMT Steel - "The Evcon Turbo Process" from 'Germany'.

Sunvik Steels has a fully Integrated Steel Plant that can manufacture up to 32 mm TMT Steel Bars conforming to IS:1786 Fe 500 and 550 Grades. With end-to-end processing carried out at the integrated facility, Sunvik ensures its TMT bars have the distinct edge of a premier product range to provide affordable and durable Steel.

CHEMICAL PROPERTIES

| PARAMETER | FE 500 (Mandatory as per IS 1786:2008) | SUNVIK GOLD XX 500 | FE 550 (Mandatory as per IS 1786:2008) | SUNVIK GOLD XX 550 |
|--------------------------|--|--------------------------|--|--------------------------|
| Carbon (max) | 0.30 | 0.25 | 0.30 | 0.25 |
| Silicon(max) | - | 0.30 | - | 0.30 |
| Manganese(min) | - | 0.55 | - | 0.55 |
| Sulphur (max) | 0.055 | 0.05 | 0.055 | 0.05 |
| Phosphorus (max) | 0.055 | 0.05 | 0.050 | 0.05 |
| Sulphur+Phosphorus (max) | 0.105 | 0.10 | 0.100 | 0.10 |

PHYSICAL PROPERTIES

| PARAMETER | FE 500 (Mandatory as per IS 1786:2008) | SUNVIK GOLD XX 500 | FE 550 (Mandatory as per IS 1786:2008) | SUNVIK GOLD XX 550 |
|---|--|--------------------------|--|--------------------------|
| Yield Stress (N/mm ²) min | 500 | 520 | 550 | 570 |
| Tensile Strength (N/mm ²) min | 545 | 600 | 585 | 640 |
| UTS/YS (Ratio) | 1.08 | 1.15 | 1.06 | 1.12 |
| Elongation (min) | 12 | 18 | 10 | 16 |
| Bend - Upto 20mm | 4D | 4D | 5D | 4D |
| Above 20mm | 5D | 5D | 6D | 5D |
| Rebend - Upto 10mm | 5D | 5D | 7D | 6D |
| - Above 10mm | 7D | 7D | 8D | 7D |

Finest TMT

WELDABILITY

Low carbon content ensures optimal strength of welded joints, without requiring any additional pre or post welding treatment.

DUCTILITY

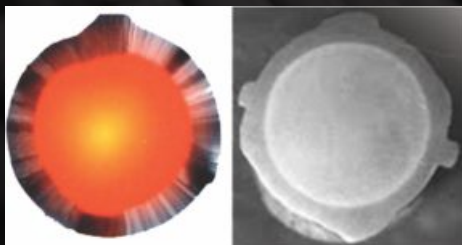
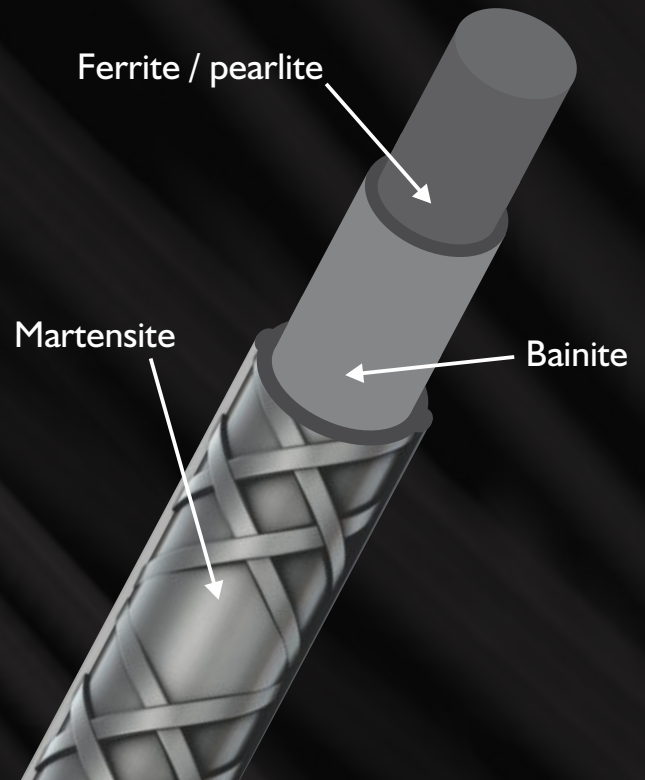
Excellent ductility due to strict control over the chemical composition and quenching.

BENDABILITY

Superior bendability achieved with the unique combination of a tough outer core and softer inner core structure.

HIGH STRENGTH

Specially selected raw material and high manganese additives gives very high strength.



(a)

(b)

Cross-section of TMT steel bar just after (a) water quenching and (b) after final cooling

SEISMIC RESISTANCE

High elongation of Sunvik TMT bars display excellent strength in the event of earth quake, thus acting as a safety shield against any mishaps.

CORROSION RESISTANCE

Thanks to unique micro-structure and flawless manufacturing methods, that ensures that Sunvik TMT bars do not corrode even when embedded in concrete for long time.

SUPERIOR RIB DESIGN

Superior 'XX' rib design for excellent bonding between cement and steel.