



S A A R L O H A
ADVANCED MATERIALS

www.saarloha.com



PHILOSOPHY

“ To use our specialized skills and innovative technology to contribute to the welfare of society. It is our intention to grow along with our employees and to aid and encourage them to participate in our goals in order that they realize their full potential. ”

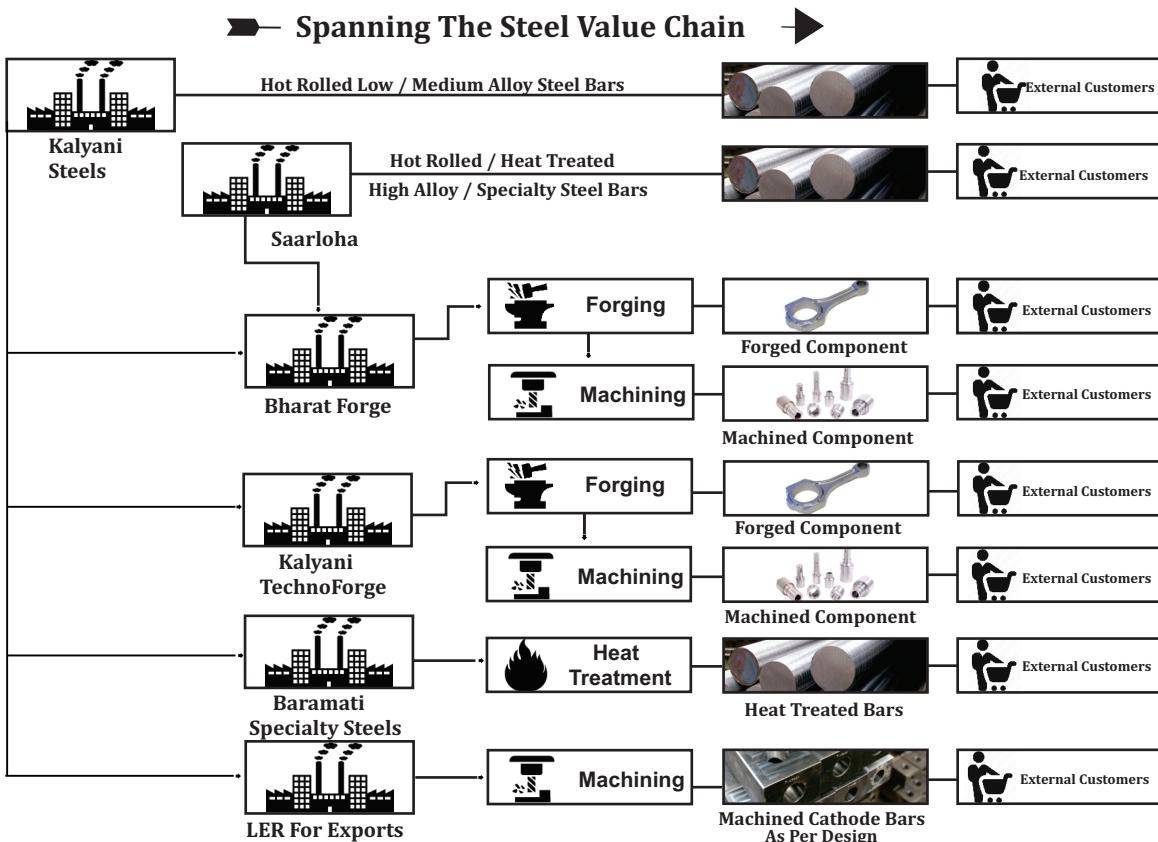
B. N. Kalyani
Group Chairman

Kalyani Steels was established in 1973 as a part of Kalyani Group.

With four decades of experience in Alloy Steels, we have acquired for ourselves, the status of preferred supplier for leading national and international OEMs in the space of Automotive, Engineering, Energy, Aluminium Smelting, Defence and so on.

Kalyani Group, established in mid 1960s, now stands strong and diversified across Speciality Steels, Automotive & Engineering forgings, Urban Infrastructure, Renewable Energy and Speciality Chemicals, with end-to-end capabilities and manufacturing footprint across India, Germany, Sweden and China. This \$ 3 Billion group has joint ventures with some of the world leaders such as Meritor (USA), Maxion Wheels (Brazil) and Alstom (France).

Kalyani Group As One Stop Shop



Our Strengths



- State of Art Equipment's and Facilities.
- Highly qualified and Experienced manpower
- Wide Range of Products & Sizes from Concast & Ingot routes
- Clean Steel through VD & ESR routes.
- Largest ESR & Second largest Auto Valve Steel producer in India.
- New facilities for Inert ESR & VAR

Contribution to Indian : Space, Defense, Nuclear & Railways “Make in India”



- We have successfully developed & supplied Critical application Steels to:
- Nuclear Power Corporation Ltd
- Nuclear Fuel Complex
- BHAVINI (IGCAR-Kalapakkam)
- BARC .
- Vikram Sarabhai Space Research Center
- Liquid Propulsion Space Research Centre
- Ordnance Factories – Ambajhari / Avadi
- Advance System Labs
- Bharat Dynamics

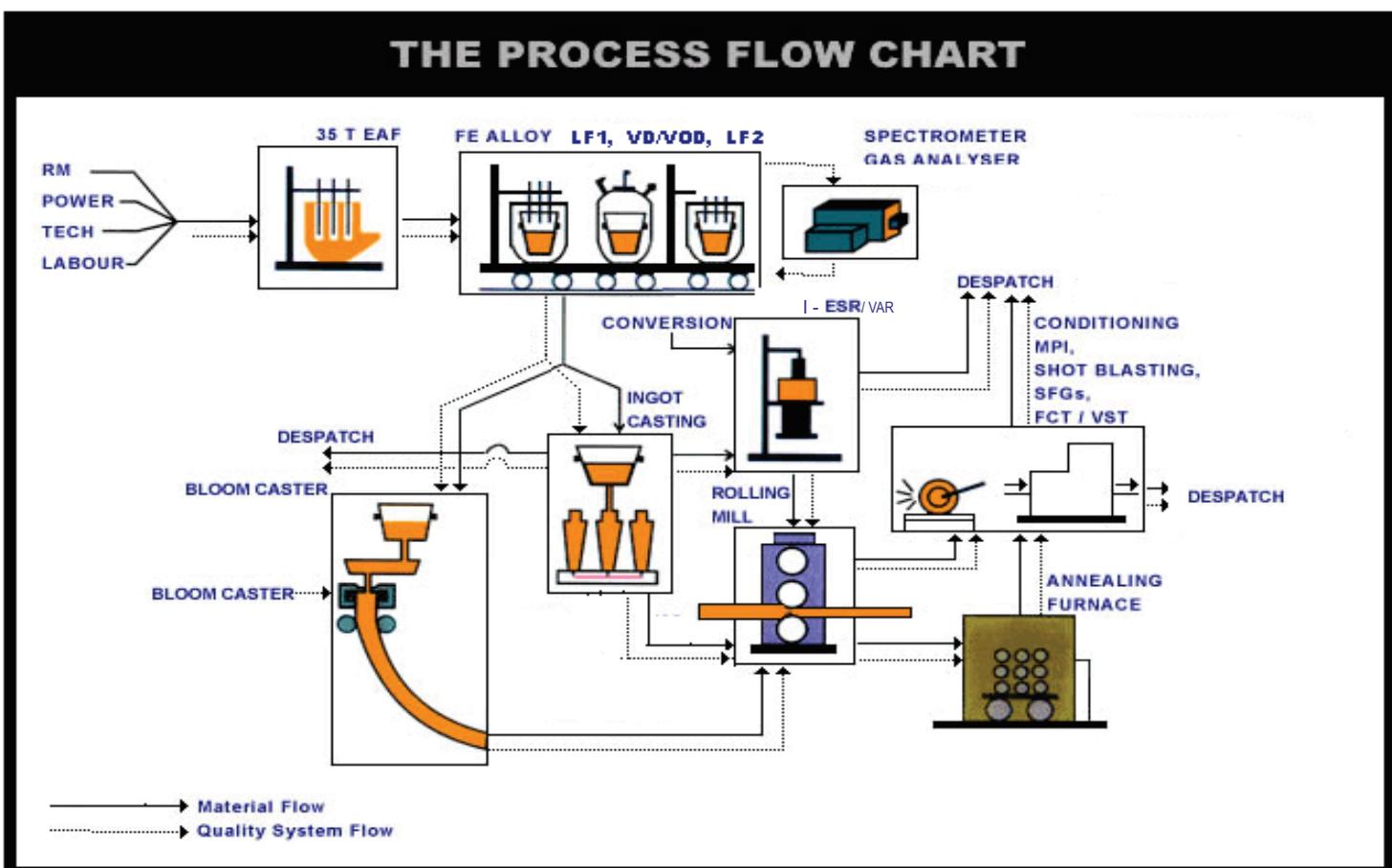
Product Range

- Carbon & Alloy Steels for Oil & Gas, Aerospace, Automotive, Defense & Nuclear Engineering .
- Electro Slag Remelted Steel - SS 316LN, SS321, SS304L, 15-5PH, 17-4PH, 15CDV6, SAE4140, SAE4340, CUSTOM 450 etc
- Tool & Die Steel - H11, H 13, A2, SXI 99, S1, S7, 01.
- Valve Steels - En 52, 21-4N, SUH 3, SUH 11
- Stainless Steels - AISI 304/304L, 316/316L, 403, 410, 17-4PH, Custom 450, 9Cr1Mo
- Micro Alloyed Steels
- Customer Specific Steel Development

◆ Specialities

- Manufacturing Flexibility
- Customized Product Development
- Clean Steel Technology
- Wide Range of Grades
- Wide Range of Sizes

◆ Process Flow (Steel Plant)



◆ Facilities

Electric Arc Furnace :

- 35 MT Capacity, ABB Make,
- Transformer Capacity – 20/22 MV
- Slide Gate Assembly for Slag Free Tapping,
- VLB (Virtual Lance Burners)



Ladle Furnace :

- 35 MT Capacity
- VD/VOD (MAN GHH – Germany)

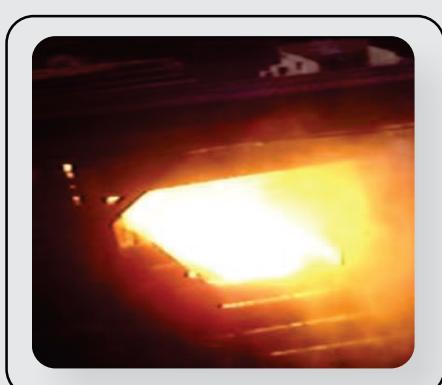
Bloom Caster :

- Concast Technology / CLECIM Make & Automation by L&T
- C Type Twin Strand Caster
- Casting Radius 12 / 18 m
- Ceramic Shroud from Ladle to Tundish
- Bloom Sizes : C1-160x160, C2-210x230, C3-240x280, C4-320x400 mm



Ingot Casting Facilities :

- Cast Iron and Spheroidal Graphite Iron Moulds
- Bottom Pouring and Uphill Teeming
- Wide End Up Moulds
- Mould Sizes M4, M5, HAS3, 790, 994, M9, M13, M17 up to M70
- Ingot Weight 4 MT to 70 MT
- Load Cell to monitor Rate of Liquid Metal Flow
- Argon / Nitrogen Shrouding with failure Alarm System
- Facilities to cast ingots under vacuum



◆ Rolling Facilities

Blooming Mill :

- 925mm 2 High Reversible Mill, Morgardshamer (MH, Sweden)
- Soaking Pit for Heating Ingots upto 5MT
- Continuous Oxygen monitoring system in the reheating furnaces

Rolling Mill (22") :

- 550 mm DIA 3 High Twin stand Rolling Mill
- Continuous Oxygen monitoring system in reheating furnace
- Size Range : 80 mm to 200 mm Rounds ; 80mm to 340mm RCS



◆ Finishing Facilities

Heat Treatment Facilities

- Bogie hearth oil fired annealing Furnaces
 - 15 MT batch size
 - 30 MT batch size
- Bogie hearth Electric Annealing Furnaces
 - 15 MT batch size



Conditioning Facilities

- Shot Blasting Machine
- Swing Frame Grinders
- Band saw – (20mm to 400 mm dia)
- Roller straightening machine – (up to 125 mm dia)
- Press straightening machine – (sizes above 125 dia)
- Magnetic Particle Inspection Equipment



◆ Features of inert ESR

- Inert atmosphere “NO” gas pick up from atmosphere”
- One furnace head and two melt stations
- Accurate and precise load cells for better melt rate control
- Automatic melt rate control system with auto slag addition



◆ Features of inert VAR

- One Furnace Head two melt station
- Start up and hot topping in auto mode – less centerline segregation
- Auto melt control system
- Vacuum level upto - 1 X 10 Mbar
- Arc voltage control for homogeneous melt rate- No segregation



◆ Quality Assurance Facilities (NABL Accredited Lab)

- Direct reading emission spectrometers (48 channels)
- Mobile Spectrometers
- LECO Carbon & Sulphur Determinator.
- LECO Hydrogen Analyzer & Nitrogen/Oxygen Analyzer
- Magnetic Particle Inspection machines & Eddy current testing machine
- Structures Metallographic Polishing machines
- Metallurgical microscopes with photography capabilities
- Carl Zeiss microscope (HD-100) with image projection facilities
- Ultrasonic portable flaw detectors
- Online Ultrasonic Testing machine for 40-150 mm dia size range.
- Universal Tensile testing machine (UTM – 40 T)
- Impact at subzero temperature
- Jominy end quench equipment
- Wet analysis lab
- Rockwell, Brinell and Vickers hardness testing machines

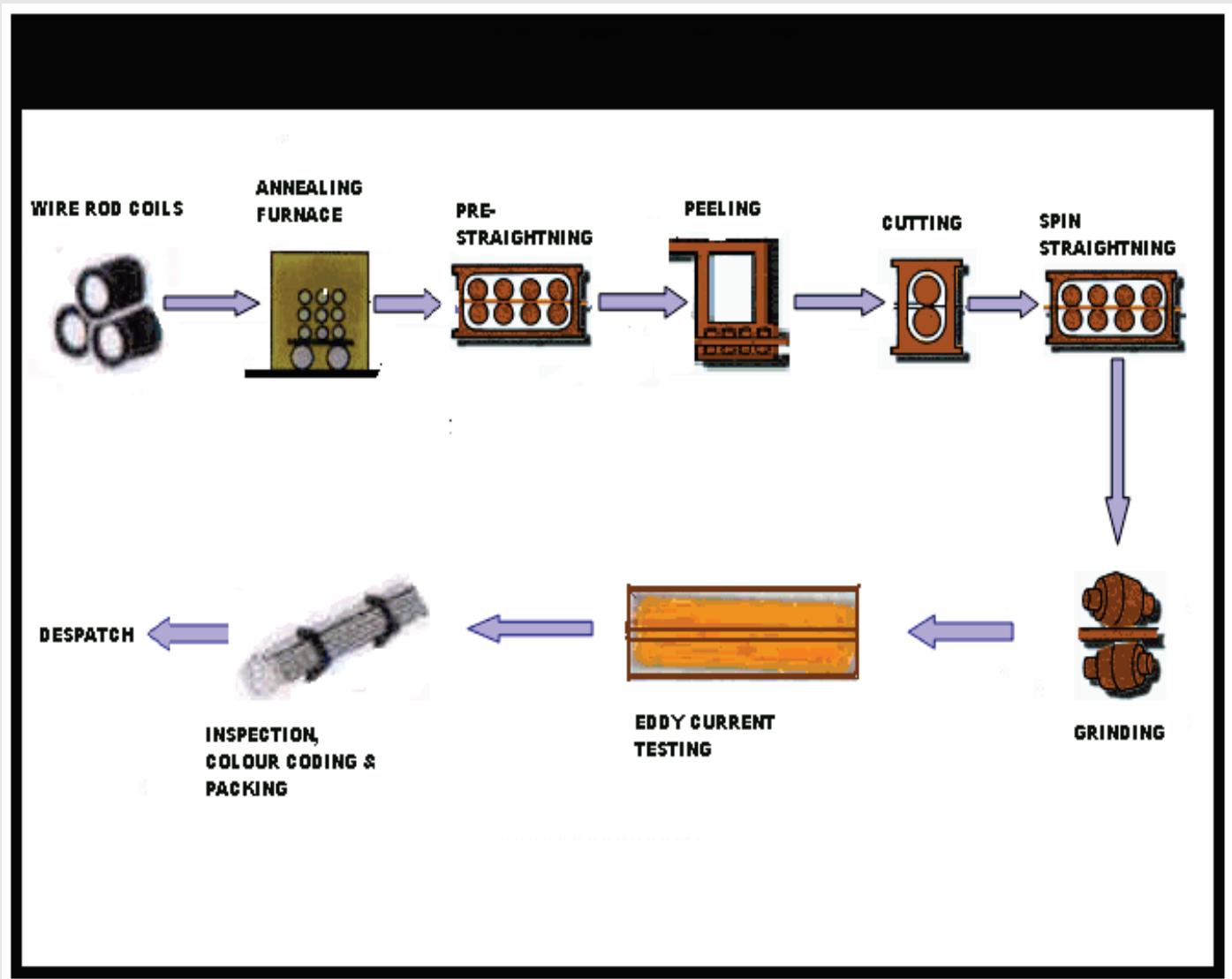


- We have access to the Group Technology & Innovation centre. (KCTI) which has State of the Art Facilities.
- R&D centre of KCSSL is approved from DSIR-GOI.

◆ Valve Steel Facilities at Ranjangaon

- Coil Annealing Furnaces with Inert Atmosphere 150 t/m
- Coil to Coil Line: Peeling
- Input Range: 6 mm to 20 mm Dia ; Finished Product
- 5.0mm to 16.5 mm dia
- Coil to Bar Line: Peeling, Cold Drawing, Burnishing, Belt Polishing
- Center less Grinders
- Drawing Line: Shot Blasting & Cold Drawing
- Surface Inspection: Eddy Current Testing
- Capacity : 400 ton/ month

Process Flow (Ranjangaon)



◆ Rolling-Rounds,Squares and Flats at Baramati Speciality Steel Pvt. Ltd. (BSSL)

- 510 Roughing Mill : Reversible
- 380 4 Stand Finishing Mill
- 310 4 Stand Continuous Mill
- For Sections below 20mm
- 10 TPH Fully Automated
- Reheating Furnace.

Sizes:

Rounds : 20mm to 75mm
 Squares: 25mm to 80mm
 Flats : 40X25mm to 95X50mm

◆ Heat Treatment

Installed Capacity & Capability

- 2250 TPM
- (Size 6m X 750mm – 5T Per Batch) Electrically Operated
- SCADA Controlled Real Time TT monitoring (+/-5°C Temp
- Control) With Water/Polymer/Oil Quenching & Auto Load
- Unload Facility



Heat Treatment Processes

- Hardening & Tempering.
- Annealing – Iso & Solution
- Normalising
- Furnaces 5 For Hardening / Normalising & 7 For
- Tempering / Annealing. Max Temp 1100°C



◆ Bright Bar Products

Installed Capacity & Capability 1" Peeling Line

- Straightner, Peeler,
- Burnisher, Centreless Grinder & ECT
- Size Range 20mm to 45mm
- Capacity : 600 TPM
- Capability : Tolerance -H9/H11,
- Surface Finish - RA 0.8 µm or better ,
- Straightness 0.75mm/m

8" Peeling Line

- Burnisher – 20-160mm Dia.
- Centerless Grinding 20-50mm Dia
- Belt Polishing upto 90mm Dia.
- Size Range : 46mm to 200mm
- Capacity: 1000TPM
- Capability : Tolerance -H9/H11, Surface
- Finish - RA 0.8 µm or better , Straightness 1.0 mm/m

◆ Testing Lab and Quality Control

- Eddy Current Testing Machine
- (Techno-four)
- M.P.I Testing Machine
- Ultrasonic Testing
- Rockwell Hardness Tester
- Brinell Hardness Tester
- Profile Projector
- Impact Testing Machine Universal Testing Machine
- Microscope With Image Analyser
- Mobile Spectrometer

Product and Services

- Hot Rolled Bars / Square / Flats Supplied in As Rolled / Heat treated / Bright Condition.
- Valve Steel 8mm to 25mm As rolled and in Bright Condition.
- Service Support For Heat Treatment Processes for Long Products upto 6m Length & 500 Dia.
- Service Support for Bright Bars.
- Service Support For Mechanical Testing Of Steel.

◆ Accreditations

Certifying Agency	Certification For
Govt.of India	Well known steel maker.
	Approval of manufacturer of materials
	ISO 14001:2015

Certifying Agency	Certification For
 Lloyd's Register Marine	Steel making semifinished products and bars.
 NABL Accredited Laboratory C-1512, C-1513	ISO/IEC 1705:2005
 KOREAN REGISTER	Certificate for manufacturing process
 CHINA CLASSIFICATION SOCIETY	Certification for work approval.
 NIPPON KAIJI KYODAI Painted Class NK 1899	Approval of manufacturing process
	ISO 9001:2008
	Verified material manufacturing according to Ad2000-Merkblattw WO
	ISO/TS 16949:2009
 DNV-GL	Approval of manufacturing
 ABS	Steel casting components for machine applications.



SAARLOHA

Regd. & Marketing Office :

Mundhwa, Pune 411036, India

Tel. : 91-20 6621 5000

Fax : 91-20 6621 1124

Email :@saarloha.com