



**KALYANI**

DRIVING INNOVATION

**KALYANI STEELS LTD**



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DRIVING INNOVATION



**B. N. Kalyani**  
Group Chairman

### **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.





ISO/TS 16949 - SECOND EDITION



ISO 9001:2000



ISO 14001:2004



OHSAS 18001:2007



AWARD FOR TPM EXCELLENCE  
FIRST CATEGORY



**KALYANI**  
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## KALYANI STEELS LTD

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# COMPANY PROFILE

## THE GROUP

The Kalyani Group is one of the leading Industrial Houses in India, having diverse business interests in Engineering Steel, Forgings, Auto Components, Non Conventional Energy & Speciality Chemicals. The Group's Annual Turnover is over USD 2.4 billion and has joint ventures with some of the world leaders such as Arvin Meritor (USA), Carpenter Technology Corporation (USA), Hayes Lemmerz (USA), FAW Corporation (China) etc.

Bharat Forge Limited, the flagship company of the group is today among the largest and technologically most advanced manufacturer of Forged & Machined components for the automotive and non-automotive sector. Apart from Bharat Forge, the other major companies in the group are Kalyani Steels, Automotive Axles, Kenersys, BF Utilities, Kalyani Carpenter Special Steel, Kalyani Lemmerz, Kalyani Thermal Systems, Kalyani Global, Hikal Limited, Kalyani Infotech, Epicenter Technologies and Synise Technologies.

## ABOUT US

Kalyani Steels Ltd. was established in 1973 with its corporate office in Pune. Over the years, Kalyani Steels has been continuously upgrading its technology and infrastructure, resulting in manufacture of very high quality of final product. The facilities at KSL are at par with any sophisticated steel manufacturers in the world.

In 1997 the Kalyani Group set up a new plant at Ginigera near iron ore mines of Hospet-Bellary region of Karnataka state. This integrated steel complex has capacity of 650,000 tpa of carbon and alloy steels.

KSL has earned the status of preferred steel supplier for engineering, automotive, seamless tube and primary aluminium industry. Add to that a dynamic corporate vision towards global markets which is the most important factor that makes Kalyani Steels products compare favorably with the best steel makers in the world.

## QUALITY ACCREDITATIONS

|| ISO/TS 16949: Second edition

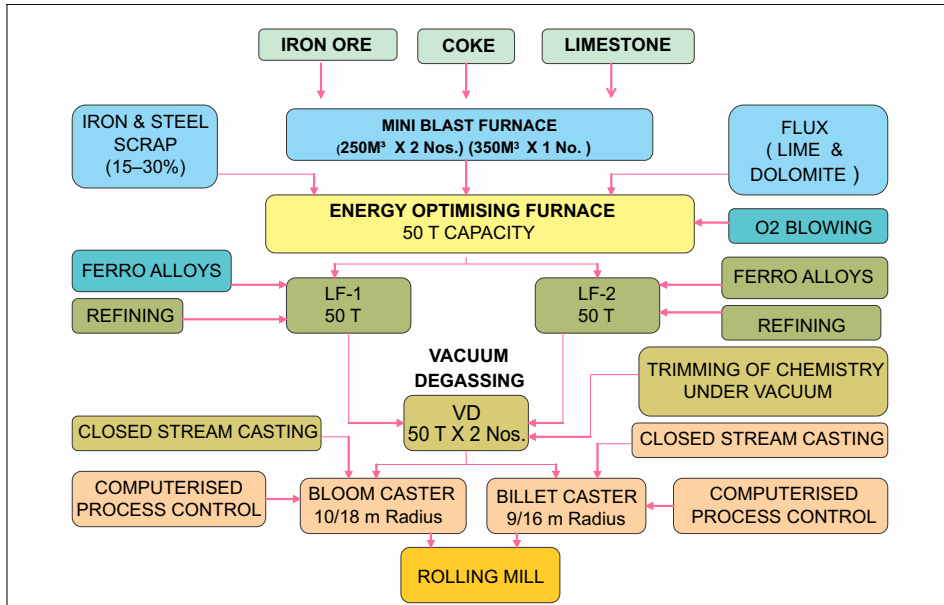
# COMPANY PROFILE



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# COMPANY PROFILE

## FLOW CHART



## QUALITY ASSURANCE

Kalyani Steels takes utmost pride in a well-earned record for supply of clean steels and reliable deliveries. Use of captive iron ore and coke enables to achieve low levels of tramp elements, resulting in clean steel, necessary for various critical applications in automotive and engineering industries. Computerized control at various stages in steel making gives an assurance of consistent product quality.

Every customer order is first evaluated by a Technical Service Cell. This cell sets the production standard after considering the technical parameters. This detailed well-documented production quality standard is scrupulously followed at every stage of manufacturing. Further it is coupled with process control as well as level 2 Automated Production Facilities. Special requirements can also be tailor made.

Quality testing system comprises modern equipment such as Metallographic microscope with image analyzer, X-ray fluorescence instrument, Electron emission spectrometer, Gas analyzers, Ultrasonic testing machine, Magnetic particle inspection and Mechanical & Chemical testing.

## KALYANI STEELS ADVANTAGE

# COMPANY PROFILE



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# WIRE RODS

## GRADES MANUFACTURED AND THEIR STANDARD CHEMICAL COMPOSITION

STANDARD	GRADES	C	Mn	Si	P	S	Cr	Mo	Ni	V	B	Ti	Al	Pb
American Standard (CHQ)	SAE 1010	0.08	0.30	0.10	0.040	0.050	-	-	-	-	-	-	-	-
		0.13	0.60	Max	Max	Max	-	-	-	-	-	-	-	-
	SAE 1015	0.13	0.30	0.20	0.040	0.050	-	-	-	-	-	-	-	-
		0.18	0.60	Max	Max	Max	-	-	-	-	-	-	-	-
	SAE 1018	0.15	0.60	0.20	0.040	0.050	-	-	-	-	-	-	-	-
		0.20	0.90	Max	Max	Max	-	-	-	-	-	-	-	-
	SAE 1541	0.36	1.35	0.15	0.040	0.050	-	-	-	-	-	-	-	-
		0.44	1.65	0.30	Max	Max	-	-	-	-	-	-	-	-
	SAE 8620	0.38	0.75	0.15	0.035	0.040	0.80	0.15	-	-	-	-	-	-
		0.43	1.00	0.30	Max	Max	1.10	0.25	-	-	-	-	-	-
10B21	0.18	0.70	0.20	0.040	0.040	0.40	0.15	0.40	-	-	-	-	-	
	0.23	0.90	0.35	Max	Max	0.60	0.25	0.70	-	-	-	-	-	
15B25	0.18	0.80	0.15	0.030	0.030	0.20	-	-	-	0.0005	-	0.020	-	
	0.23	1.20	0.35	Max	Max	Max	-	-	-	0.0050	-	0.040	-	
American Standard (Bearing Steel)	SAE 52100	0.23	0.90	0.15	0.030	0.030	0.20	-	-	-	0.0005	-	0.020	-
		0.23	0.90	0.15	0.030	0.030	0.20	-	-	-	0.0005	-	0.020	-
American Standard (Welding Rods)	ER70S6	0.28	1.20	0.35	Max	Max	Max	-	-	-	0.0050	-	0.040	-
British Standard En Series (Free Cutting)	En 1A	0.36	1.35	0.15	0.040	0.050	-	-	-	-	0.0005	-	-	-
		0.44	1.65	0.30	Max	Max	-	-	-	-	0.0050	-	-	-
En 1A(L)	0.98	0.25	0.15	0.025	0.025	1.30	-	-	-	-	0.0030	-	-	
	1.10	0.45	0.30	Max	Max	1.60	-	-	-	-	-	Max	-	
British Standard En Series	En 8	0.07	1.40	0.80	0.025	0.035	-	-	-	-	-	-	-	
		0.15	1.85	1.15	Max	Max	-	-	-	-	-	-	-	
	En 8M	0.08	0.80	0.10	0.07	0.20	-	-	-	-	-	-	-	
		0.18	1.20	Max	Max	0.30	-	-	-	-	-	-	-	
	En 9	0.08	0.80	0.10	0.07	0.20	-	-	-	-	-	-	-	
		0.18	1.20	Max	Max	0.30	-	-	-	-	-	-	-	
	En 19	0.35	0.60	0.05	0.060	0.060	-	-	-	-	-	-	-	
0.45		1.00	0.35	Max	Max	-	-	-	-	-	-	-		
DIN Standard (CHQ)	16MnCr5	0.40	0.70	0.05	0.060	0.060	-	-	-	-	-	-	-	
		0.45	0.90	0.35	Max	Max	-	-	-	-	-	-	-	
20MnCr5	0.35	1.00	0.25	0.06	0.12	-	-	-	-	-	-	-		
	0.45	1.30	Max	Max	0.20	-	-	-	-	-	-	-		
DIN Standard (NON CHQ)	CK-45													

# WIRE RODS



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# FORGINGS

## STEELS COMMONLY MANUFACTURED FOR FORGING APPLICATIONS

CATEGORY	SPECIFICATION				GENERAL APPLICATION
	AISI/SAE	DIN	B.S.	JIS	
Plain Carbon Steel	1010	CK10	En 2A	S10C	Gears, Hub front, Front axle beam, Spindle wheel, Spindle, Spindle housing, R.A. Shaft, Camshaft
	1015	CK15	En 32B	S15C	
	1025	CK25	En 33B	S25C	
	1035	CK35	En 8, En 8A	S35C	
	1045	CK45	En 43B		
Carbon + Manganese Steel	S45C/S48C				Steering knuckle, Crankshaft, Front axle beam, Axle arm
Semi Free Cutting & Free Cutting Steels	1055	CK55	En 9	S55C	Fasteners
	1065	CK65	En 43D	S58C	
Carbon + Manganese + Titanium Steel	1541, 1548, 1043M SMn420H/SM	28Mn6/30Mn 5/40Mn4	En 15/A	n443H	R.A. Tubes
Chrome + Manganese Steel					Stub axle, Axle arm, Transmission gears
Chrome + Nickel Steel	1137, 1141, 1212	45M5BTUA2	En 15AM		
Low Carbon Chrome + Nickel Moly Steel				SS4510	Differential bevel gear, Crown Wheel/ Pinion, Drill bits, Piston pins
		16MnCr5		SCR415, SUM420	
Chrome Steel		20MnCr5			Front axle beam, Crank shaft, Steering knuckle, Connecting rod
	1320	15CrNi6	En 352		
	8822H				
Chrome + Moly Steel		21NiCrMoV5H	En 353, En 354		Crankshaft, Steering knuckle, MCA Knuckle, Stub axle, Rocker lever forging, Spigot
	8620				
	SNM420H				
Medium Carbon Chrome + Nickel + Moly Steel	8622		En 355		Input shaft
	4320	17CrNiMo6	En 361, En 362		
Ball Bearing Steel			En 36C		Input shaft
			En 363		
Ball Bearing Steel	5130	34Cr4, 40Cr4B/ C, 41Cr4	En 18A, En 18C	SCR435	Bearing races and Rolling elements
Spring Steel	5137H				Leaf spring, Helical springs
Boron Steel		39Cr5			Crown wheel & Pinion, Links, Bushes, Pins
	5140	41Cr4		SCR440	
Micro Alloyed Steel	V2904, V2903, 38MnVs6Ti, 38MnSiVs5, SHAEM105, C38+N2, 46Mn5, 38MnS6, 15V24, C70S6				Front axle beams, Crank shaft, Connecting rods, Case differential

# FORGINGS