



Goel Steel Company

Sanjay Steel Syndicate

Tool Room & Vacuum Heat Treatment Services

SPECIAL STEELS - ENGINEERING SERVICES

Chennai / Mumbai / NCR (Sonapat)

www.goelsteel.com

Competence in Tool Steel

Our Partners for Tool Steels
Authorised Stockist :



GRAPHITE INDIA LIMITED
(Powmex Steel Division)

Hitachi Metals, Ltd.



sij metal
ravne



DEUTSCHE EDELSTAHLWERKE
Providing special steel solutions



- ISO 9001 : 2008 Certified
- India's Largest Infrastructures for tool and special steels
- Engineering services
- Steel/Saw, Machining / Tool room / Gas Nitriding/Vacuum heat treatment
- Single window for total tool steel solutions
- 7 service centres
- Technical support for steel and Engineering services from the world's best manufacturers
- Technical collaboration from Japan for Heat treatment
- NADCA and NADCAP compliant Vacuum heat treatment facilities
- Largest vacuum heat treatment facility in South India, maximum load weight 1.8tons
- Gas Nitriding surface treatment for your dies and components
- Machining/tool room/VMC's to handle upto 2.5tons weight
- Only company in India to have steel/tool room and vacuum and surface heat treatment services under one roof

Goel Steel Company

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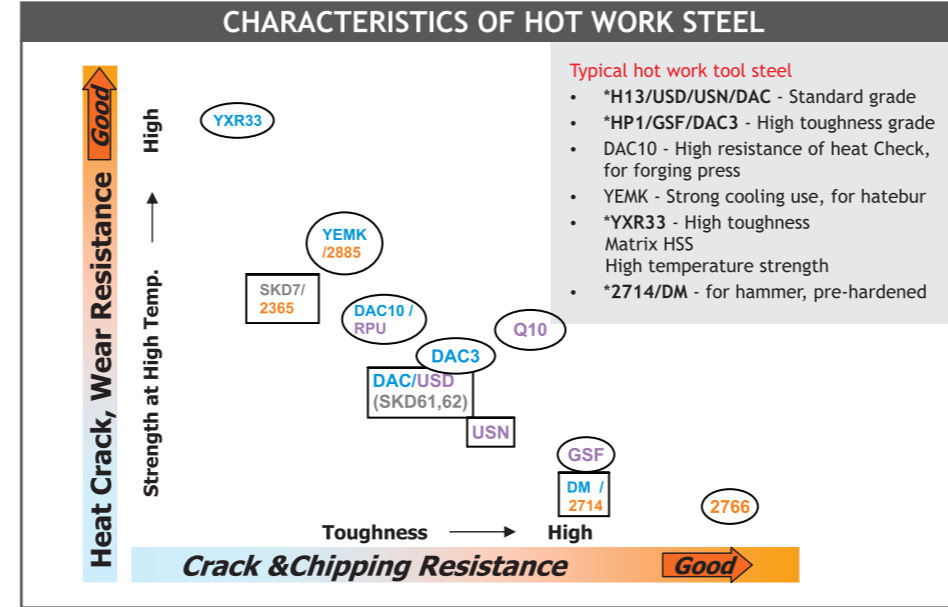
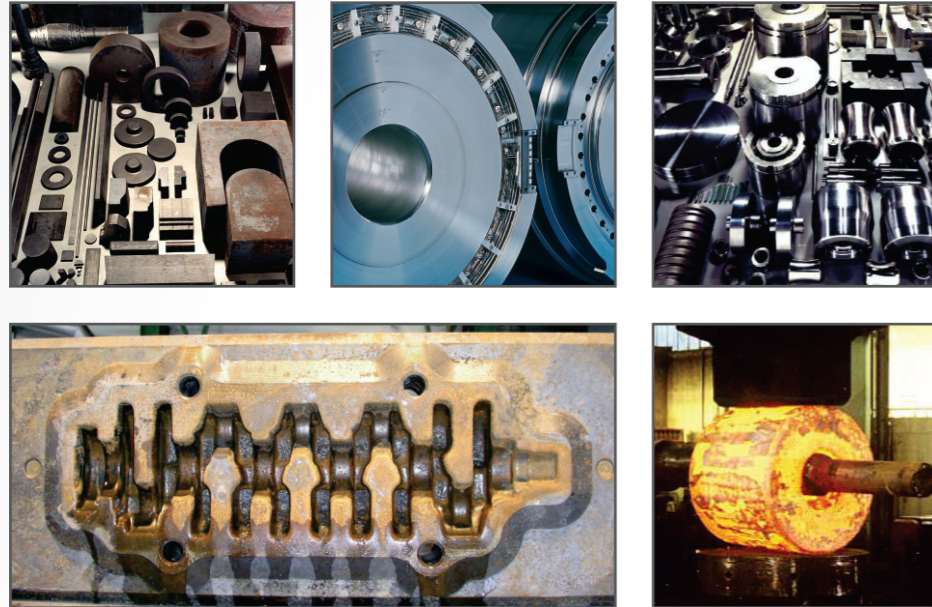
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Our Special Steels for Hot & Warm Forgings

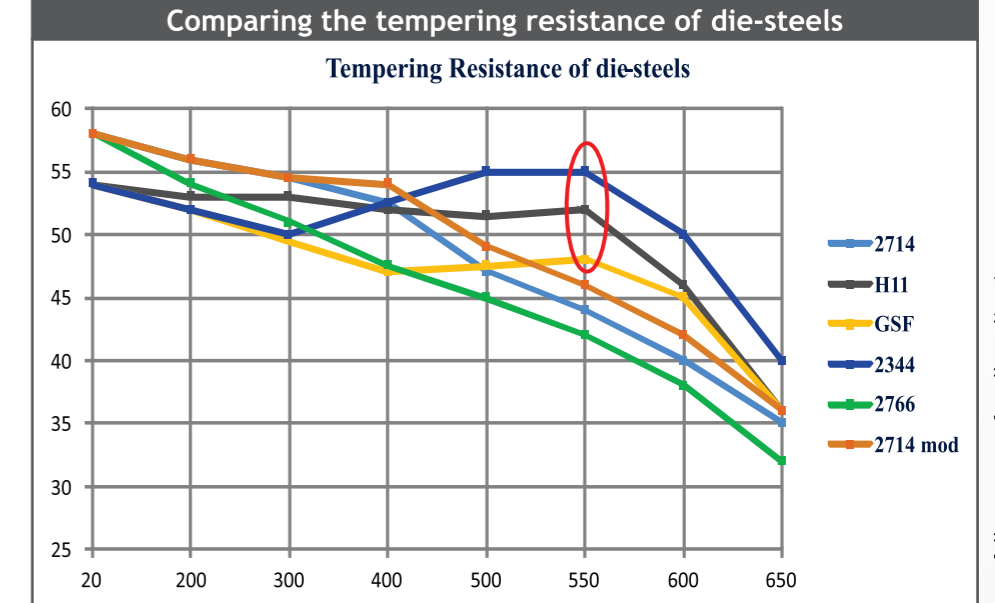
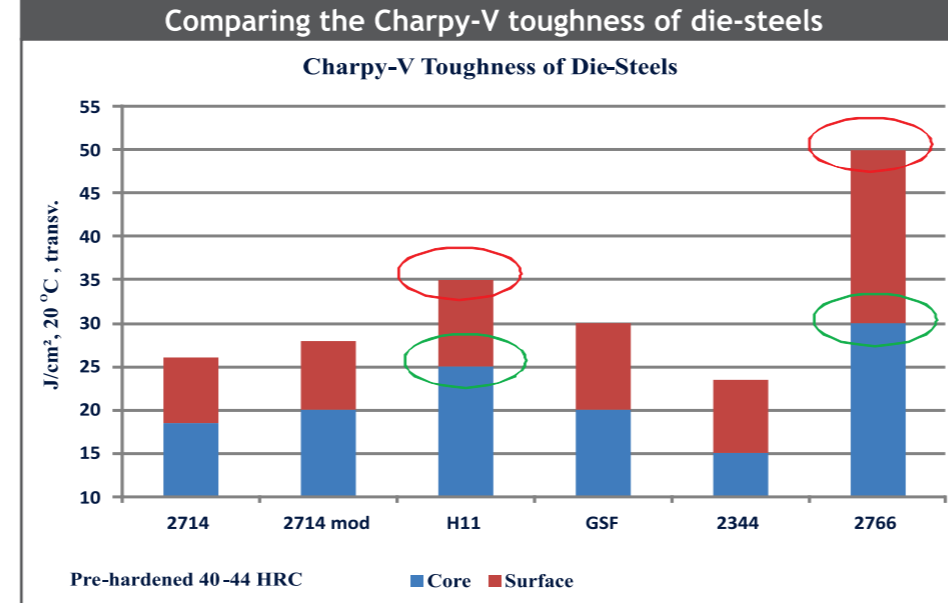


CHARACTERISTICS & APPLICATIONS - For Hammer & Press Applications

Application of various die-steels for press & hammer closed dies

Steel Grade	Hammer Dies		Press Dies			
	Solid Die		Solid Die		Die Inserts	
	Small, flat	Large, deep	Small, flat	Large, deep	Wear sensitive	Crack sensitive
2714	X					
2714 mod		X	X	X		
H11			X	X		X
2367/RPU			X		X	
GSF			X	X	X	X
2344/USD/DAC			X	X	X	X
2766		X				
DACMAGIC			X	X	X	X
HP1				X	X	X

Pre-hardened 40-45 HRC



SPECIFICATION CHART

AISI/ASTM	MATERIAL (Closest corresponding grades)				CHEMISTRY										APPLICATION	HEAT TREATMENT DETAILS					PROPERTIES				STOCKING PROGRAM					
	EN/DIN	JIS	HITACHI	KIND	C	Si	Mn	P	S	Cr	W	Mo	Ni	V		Others	Annealing (Slow Cooling)	Quenchant (Hot Bath)	Quenching	Tempering (Air Cooling)	Annealed (hb)-max	Quenched & (hrc) Tempered	High Temperature Strength	High Temperature Toughness	High Temperature Wear Resistance	Machinability	Rounds(Dia)		Flats(WidthXTHICK)	
H11	X38CrMoV5-1 / 1.2343	SKD6		USN	38	1.1	0.4	0.03	0.01	5		1.25		0.45		Hot extrusion tools, tools for manufacture of screws, nuts, bolts etc	750-800	Oil/AIR	1000-1040	500-600	240	48					3	410	100 x 13	500 x 200
H13 (Esr & Non Esr)	X40CrMoV5-1 / 1.2344	SKD61	DAC**	USD	0.39	1.1	0.4	0.03	0.01	5.2		1.4		0.95		Die casting tool & extrusion tool for Al, Zn, Mg. Shear blade, plastic mould etc	800-850	Oil/AIR	1000-1050	500-600	230	52					3	612	100 x 13	1110 x 510
	32CrMoV12-28 / 1.2367		DAC10*	RPU	0.38	0.3	0.35			5		3		0.4		Hot forming (forging) dies, die casting mould, for processing heavy metal.	820-870	Oil	1030-1060	520-700	230	54					26	272		500 x 100
H10A	1.2885		YEMK		0.4	0.3	0.9			3.4	2	1.6	0.9	1.7	Co +	Tools with high toughness and strength at elevated temperatures	820-870	Oil/AIR	1000-1050	550-600	229	>46					25	162		
			YXR33	FTCO	0.5	0.2	0.5			4.2	1.6	2		1.2	Co +	HSS with very high toughness and strength and wear resistance at high temperatures for warm and precision forgings.	800-880	Oil/AIR	1080-1140	550-600	241	>54					10	255		
			DAC3	GSF	0.4	0.3	0.6			0.6	5.2	1.6	0.6	0.7		Higher toughness than H13 for hot forging and Al extrusion	820-870	Oil/AIR	1000-1050	550-600	229	>50								
L6	56NiCrMoV7 / 1.2714	SKT4	DM	PWM	0.55	0.25	0.8	0.03	0.02	1.2		0.4	1.7	0.15		Hammer dies, Press forging dies, Shear blade etc (Pre hardened on supply)	750-800	Oil	830-850	400-650	240	50					20	1010	30THK	1400 x 650