



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
Authorized Stockist :



GRAPHITE INDIA LIMITED
(Powmex Steel Division)

Hitachi Metals, Ltd.



Schmiedewerke Gröditz
GmbH · seit 1779 · Edelstahl

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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Unit 2/3 Irungattukottai, Sriperumbudur. Ph : 98410 17263 Email : unit2@goelsteel.com/accounts2@goelsteel.com

Unit 4 Kundli, Sonapat. Ph : 91362 64467 / 91362 54968 Email : salesnorth@goelsteel.com / accountsnorth@goelsteel.com

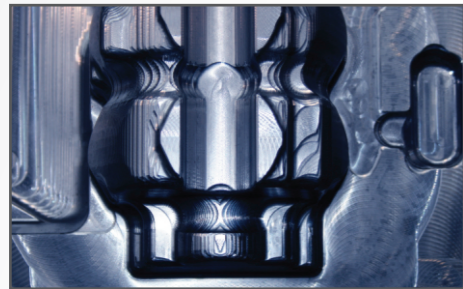
Unit 5 Talaja, Navi Mumbai. Ph : 022-32961359 Fax : 022-26730659 Email : saleswest@goelsteel.com

Unit 6 Sanjay Steel Syndicate, Tool Room & Heat Treatment Services, Irungattukottai, Sriperumbudur. Ph : 044-27156805 Email : production@goelsteel.com / pankaj@goelsteel.com





Our Special Steels for HPDC & LPDC

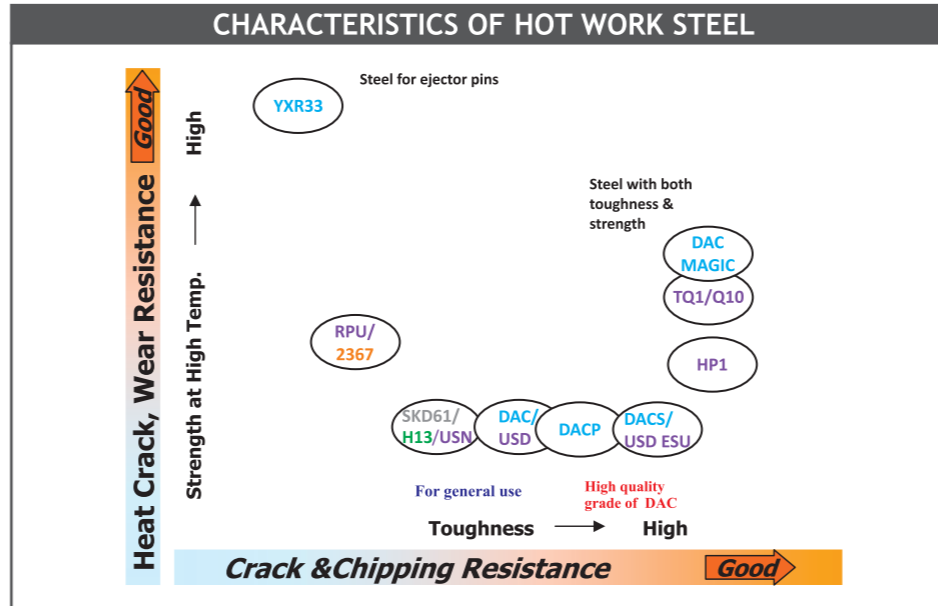


Hitachi Metals, Ltd.



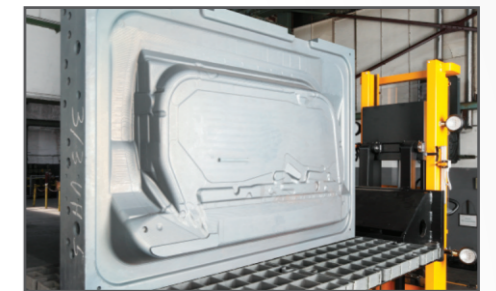
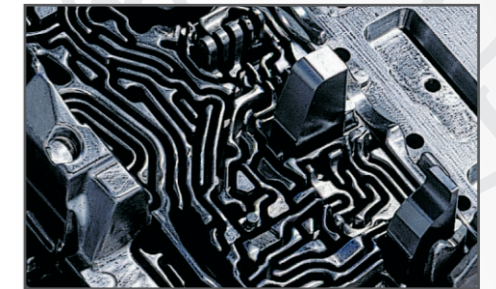
- DAC
- DAC-P
- DAC-S
- DAC MAGIC
- YXR33

DAC - Most popular die steel in Japan

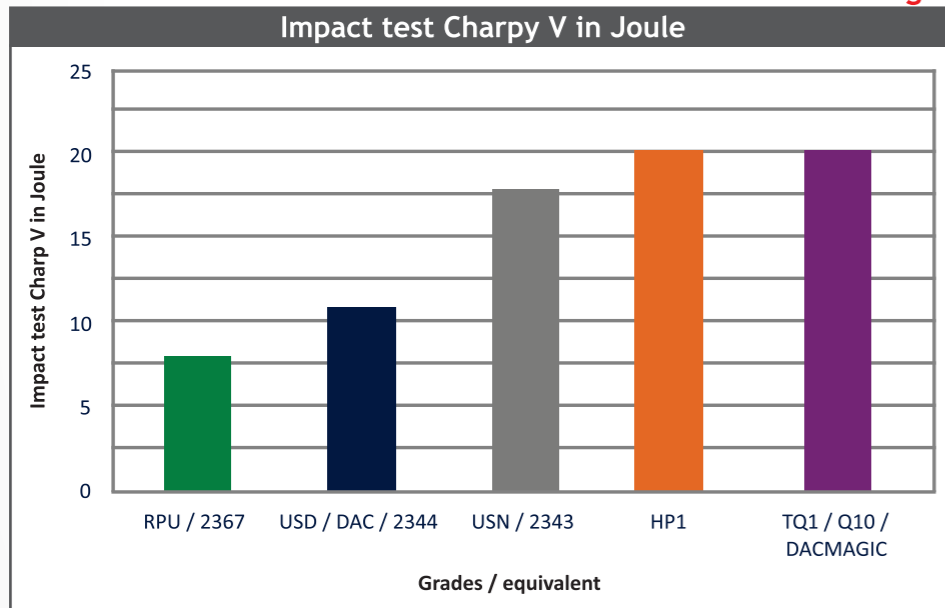


- USN ESU
- USD ESU
- HP1 ESU
- RPU ESU
- TQ1 ESU

KIND&Co - Largest supplier to PDC industry in Germany

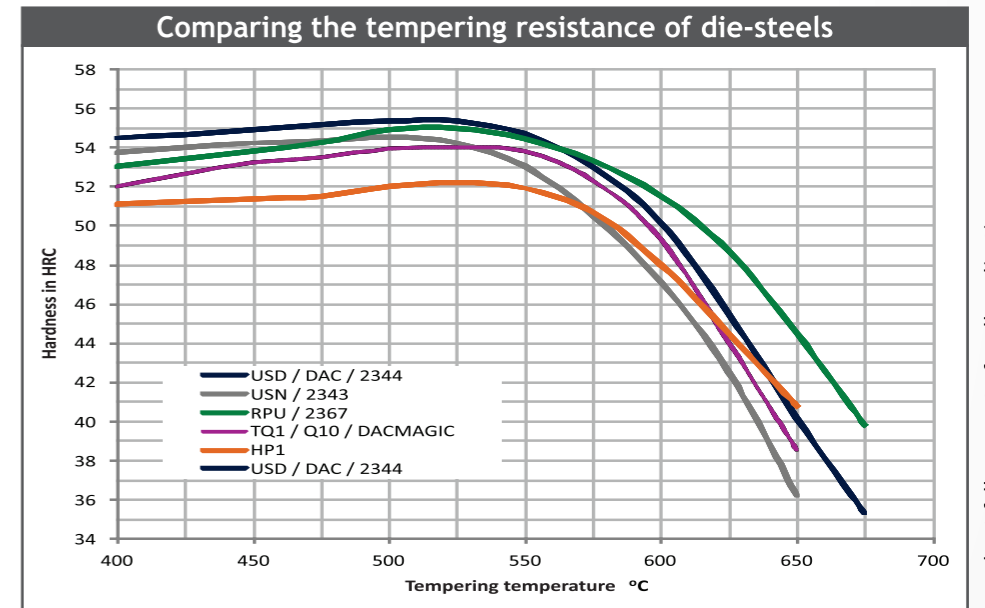


CHARACTERISTICS & APPLICATIONS - For Pressure Die Casting Applications



NADCA Specification		
NADCA : North American Die Cast Associate		
Grade	Premium H13	Superior H13
Acceptance criteria of charpy V-notch impact value	Average 8 ft.lbs. Minimum 6 ft.lbs.	Average 10 ft.lbs. Minimum 8 ft.lbs
Conformable steel	DAC-P	DAC-S / USD ESU

Applicable to NADCA High Quality Level



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, 5hear 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 cating mould, For processing heavy metal.	820-870	Oil	1030-1060	520-700	230	54					26	272		500 x 100
	Special			HP1	0.35	0.2	0.3	0.03	0.01	5.2		1.4		0.55 + Nb		High-Perfomance die casting moulds and inserts especially suited for large die casting moulds.	800-870	Oil/Air	1010-1030	540-680	230	52								820 x 260
			DAC MAGIC*	TQ1 / Q10					0.02							High performance die steel for PDC/Highest toughness/strength at elevated temperatures.	820-870	Oil/Air	1010-1030	550-610	229	>48								920 x 420
			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		