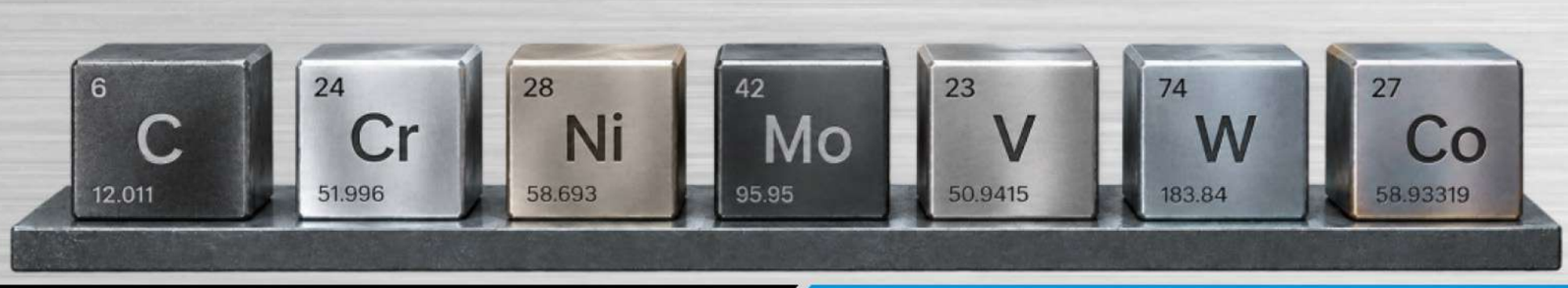
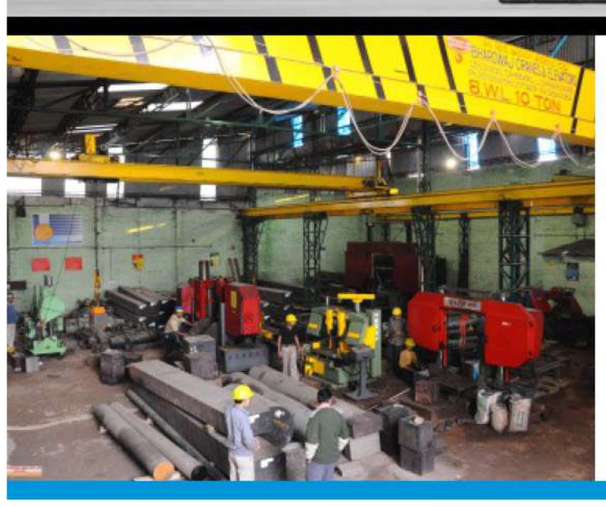
Download

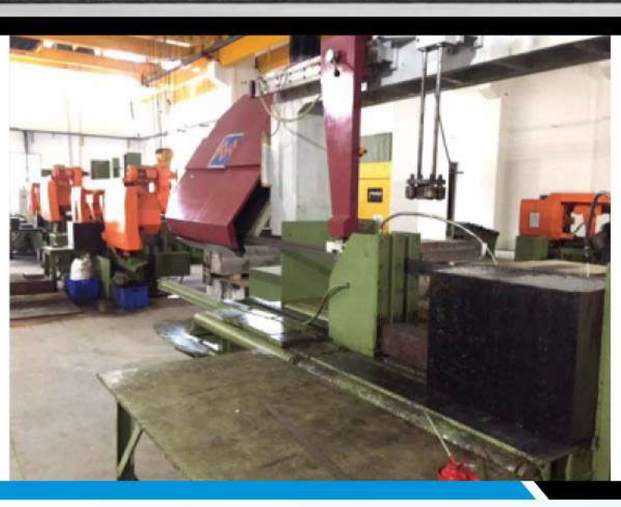
Providing Steels For Shaping.

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Ludhiana (Unit-I)



Gurgoan (Unit-II)



Forging Process



Car Bumper Block

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The leading company **VIRAT SPECIAL STEELS PVT. LTD**. is one of the largest Importers, Exporters, and Distributors of Tool Steel, Die Steel, Mould Steel, Alloy Steel, Etc.

The company was incorporated in 1957 as Dhingra Mill Store and now as Virat Special Steels Pvt. Ltd. in 1994, with its Headquarters in Gurgaon (Delhi - NCR) and global footprints in various countries.

The company maintain biggest steel yards with hi-tech facilities and holds a high level of inventory of Special steels with association of Domestic and Overseas Business Partners.

We have been in business for the last about Seven Decades and have been dealing with a large number of Forging Companies, Automotive, Mining, Power Generation, Petrochemical, Aviation, Railways, Oil & Gas, Agricultural, Hand Tools, and Bulk Material Handling Industries, Etc. The products we deal engineered to extend life service, save time, and provide optimal performance to our Customers. You can rely on us for accurate and timely services on our part to process and execute orders to match your satisfaction.





OUR PRODUCTS

- DIE BLOCKS (DIN-1.2714 , DB6, L6, SKT4)
- HCHCR (D-2, D-3 / 2379 , 2080)
- HOT DIE STEELS (H-11,H-13 / 2343, 2344)
- HIGH SPEED STEELS (M-2, M-35, T-1)
- PLASTIC MOULD STEELS (P-20 / 2738, 2311)
- CHIPPER KNIFE STEELS
- ALLOY STEELS, EN-SERIES ETC.

STATISTICS

1957	3500 Tons	35+	9001:2008	1800+
Existence	Stock	Grades	Accreditation	Customers

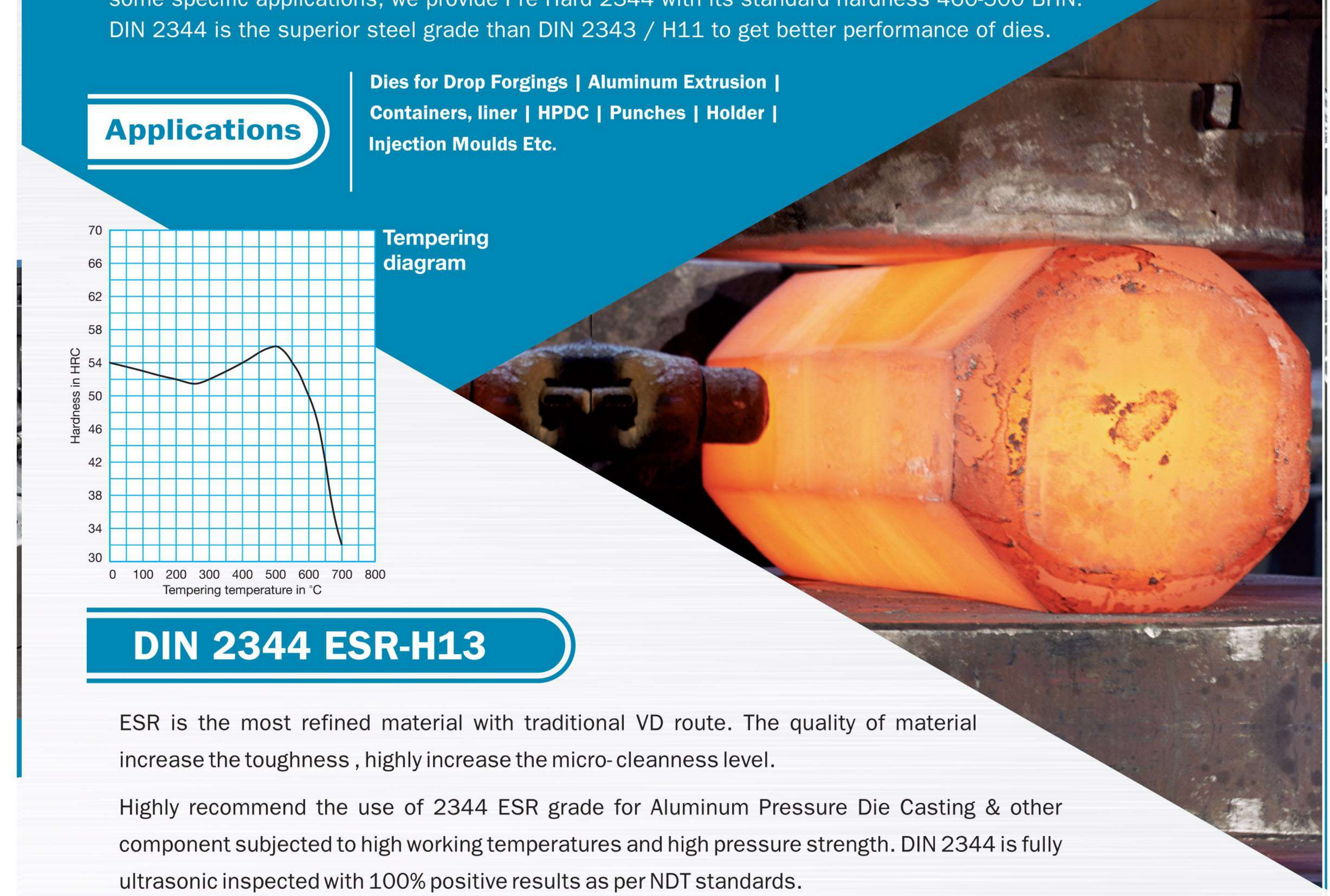
DIN 2344 EFS - H13

DIN 1.2344 is the most popular steel grade for various Industries. The main features of high alloyed Cr-Mo-V Hot Work tool steel is high wear resistance to thermal shock and to heat cracking, good mechanical characteristics & toughness in hot condition. DIN 2344 appears excellent machinability with constant hardness during production activities.

The equivalent steel grade H-13 / SKD61 / AISI H13 normally available in annealed condition but in some specific applications, we provide Pre Hard 2344 with its standard hardness 460-500 BHN. DIN 2344 is the superior steel grade than DIN 2343 / H11 to get better performance of dies.

Applications

Dies for Drop Forgings | Aluminum Extrusion | Containers, liner | HPDC | Punches | Holder | Injection Moulds Etc.



Tempering diagram

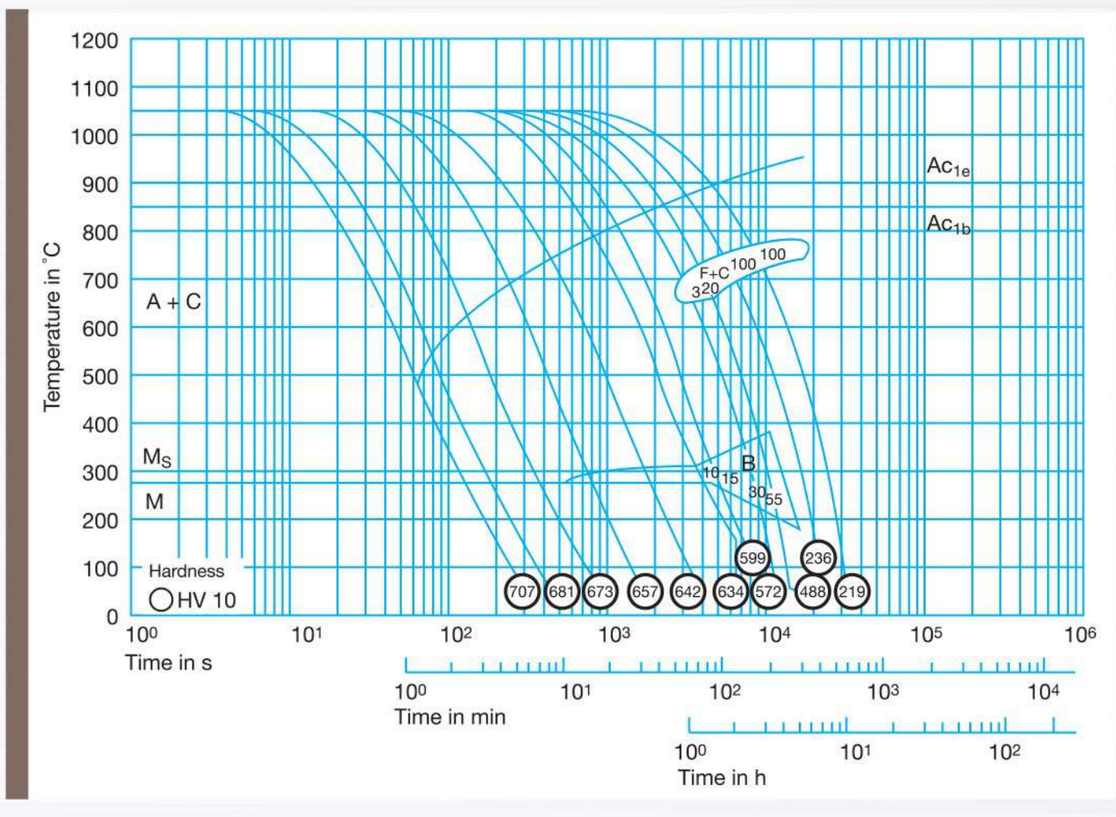
DIN 2344 ESR-H13

ESR is the most refined material with traditional VD route. The quality of material increase the toughness , highly increase the micro- cleanness level.

Highly recommend the use of 2344 ESR grade for Aluminum Pressure Die Casting & other component subjected to high working temperatures and high pressure strength. DIN 2344 is fully ultrasonic inspected with 100% positive results as per NDT standards.

DIN 2344	C	0.35-0.42
	Si	0.90-1.20
	Mn	0.30-0.50
	P	<0.030
SKD61	S	<0.004
AISI H13	Cr	4.75-5.40
X40CrMoV5	Mo	1.10-1.40
	V	0.80-1.10

Time-temperature-transformation diagram



Our Products

DIN 2714 (MOD)-DB6

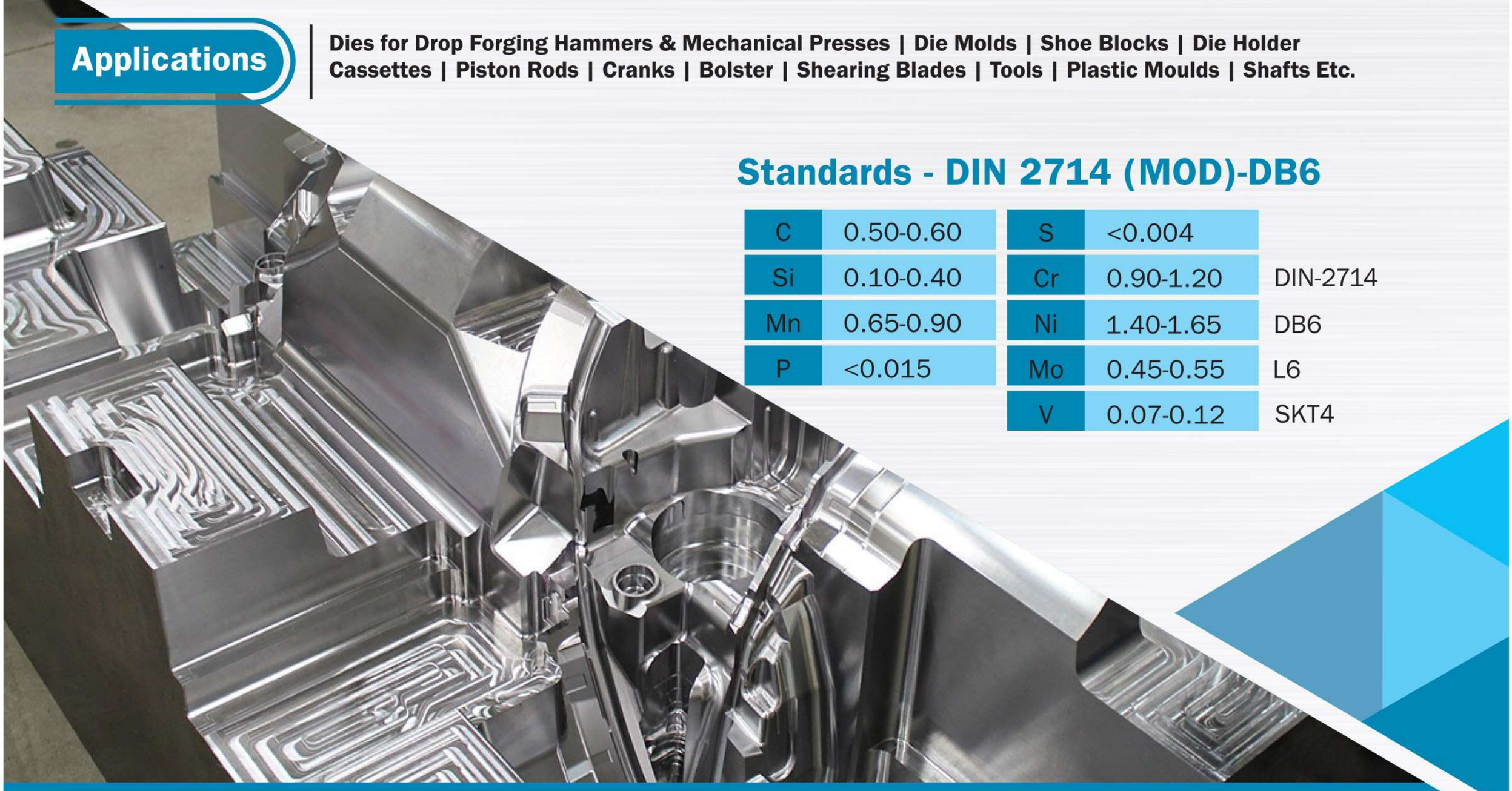
DIN 1.2714 is highly recommendable for Close Die Forgings due to its characteristics of high ware-resistance, extra toughness , high hardness which is achieved with Cr-Ni-Mo-V high graded alloys.

The equivalent grade DB6 / L6 / SKT4 normally used as a pre hardened condition. The standard hardness is 360 to 420 BHN. DIN 2714 is the upgraded version of DIN 2713 for better performance of dies.

The main quality features of our products are Extra Forging Reduction & Upsetting with Double Tempered to achieve to toughness and better Ultrasonic quality.SEP1921,Group3,Class D/d, E/e.

Applications

Dies for Drop Forging Hammers & Mechanical Presses | Die Molds | Shoe Blocks | Die Holder Cassettes | Piston Rods | Cranks | Bolster | Shearing Blades | Tools | Plastic Moulds | Shafts Etc.



Standards - DIN 2714 (MOD)-DB6

C	0.50-0.60	S	<0.004	
Si	0.10-0.40	Cr	0.90-1.20	DIN-2714
Mn	0.65-0.90	Ni	1.40-1.65	DB6
P	<0.015	Mo	0.45-0.55	L6
		V	0.07-0.12	SKT4

DIN 2738 (MOD)-P20 (HH)

DIN 1.2738 is specially used for Plastic injection die moulds. The characteristics of a material are right sharpening, photo-etching properties with high purity and good homogeneity. DIN 2738 is upgraded version of plastic mold steel 0f 2311, which normally supply in Pre hardened condition. Hardness in as supplied condition 280-320 HB with having uniform hardness. The additional nickel content of 1 % increases through hardening. It has good machinability, suitable for texturing, fine polishability, adequate corrosion resistance, vacuum-degassed steel.

DIN 2738-P20 High Hard (HXM 24)

The modified version of 2738 is with High Hardness 360-400 BHN and increase alloy elements to get extra life and outstanding polishing.

C	0.35-0.45	
Si	0.20-0.40	
Mn	1.30-1.60	DIN 2738
P	<0.015	P20+Ni
S	<0.004	AISI P20
Cr	1.70-2.20	NAK80
Ni	0.80-1.10	
Mo	0.15-0.30	

Applications

P20 is the equivalent grade of DIN 2738 which is applicable for large & small plastic mould dies for Automotive Industries, Mould for Bumpers, Crates, Plastic Furniture, Dashboard, Television Cabinets, Boaster Plates of Presses, Die Holders & Shoe blocks for Drop Hammers, Press Cassettes , Upsetter Blocker, Forging Dies, Different Dies & Mould for Plastic products Etc.

STEEL COMPARISON CHART

AISI/SAE	JIS	ASSAB	BOHLER	C	SI	MN	CR	MO	NI	V	W	OTHERS
MOULD AND DIE STEELS												
VS 1.2311	(P20)*	...	(UHB 2311)*	M 201	0.4	...	1.5	2.00	0.20	...		...	...
VS 1.2312	P20+S	...	HOLDAX	M 200	0.4	...	1.5	2.00	0.20	...		...	S 0.07
VS 1.2738	P20+Ni	...	IMP.SUPREME	M 238	0.4	...	1.5	2.00	0.20	1.00		...	...
VS 1.2083	(420mod)*	SUS420.J2	STAVAX	M 310	0.4	...	...	13.00	..	...		...	...
VS 1.2083 ESR	420ESR	...	...	...	0.4	...	...	13.00	..	...		...	...
VS 1.2316	...	...	RAMAX S	M 300	0.4	...	...	16.00	1.20	0.30		...	...
VS 1.2316 ESR	420ESR MOD	...	...	...	0.4	...	...	16.00	1.20	0.30		...	...
VS 1.2767	...	...	GRANE	K 600	0.45	...	...	1.40	0.30	4.10		...	...
VS 1.2714	L6	(SKT 4)*	ALVAR 14	W 500	0.55	...	...	1.10	0.50	1.70	0.10	...	...
VS 1.4028	(420)*	...	...	M 330VMR	0.3	1.00	1.00	13.00	...	...		...	...
Hot Work Tool Steels													
VS 1.2343	H 11	SKD 6	VIDAR Supreme	W300VMR	0.38	...	...	5.00	1.10	...	0.40	...	...
VS 1.2344 Std.	H 13	SKD 61	8407 Supreme	W 302	0.4	1.00	...	5.00	1.30	...	1.00	...	...
VS 1.2344 Prm.	H 13	...	...	...	0.4	1.00	...	5.00	1.30	...	1.00	...	...
VS 1.2344 V.ESR	H 13	...	...	...	0.4	1.00	...	5.00	1.30	...	1.00	...	...
VS 1.2347	H 13 + S	...	...	...	0.4	1.00	...	5.00	1.30	...	1.00	...	SO.10
VS 1.2367	...	...	ORD 90	W 303	0.4	...	...	5.00	3.00	...	0.60	...	...
VS 1.2767	...	...	(GRANE)*	K 600	0.45	...	...	1.40	0.35	4.00	...	...	...
VS 1.2606	H 12	SKD 62	UHB 2606	W 304	0.37	1.00	...	5.20	1.50	...	0.30	...	...
VS 1.2885	H 10 A	...	...	W 321	0.39	...	...	2.80	2.80	...	0.50	1.30	Co 2.80
COLD WORK TOOL STEELS													
VS 1.1545	W110	SK 3	UHB 20	K 990	1.00	...	...	...	...	...	...	...	...
VS 1.2080	D3	SKD 1	XW 5	K 100	2.00	...	...	12.00	...	...	...	...	...
VS 1.2363	A2	SKD 12	XW 10	K 305	1.00	...	...	5.00	1.00	...	0.20	...	...
VS 1.2365	H 10	...	...	...	0.30	...	...	3.00	2.80	...	0.55	...	...
VS 1.2379	D2	(SKD 11)*	XW 42	K 110	1.55	...	...	12.00	0.70	...	1.00	...	...
VS 1.2601	(D2)*	(SKD 11)*	XW 42	K105	1.65	...	...	11.50	0.60	...	0.30	0.50	...
VS 1.2436	D6	...	XW 5	K 107	2.10	...	...	12.00	...	...	...	0.70	...
VS 1.2510	01	SKS 3	DF 3	K 460	1.00	...	1.00	0.60	...	...	...	0.30	...
VS 1.2550	S1	(SKS 41)*	M 4	K 455	0.60	...	...	1.10	...	...	0.20	2.00	...
VS 1.2842	02	...	AROS	K720	0.90	...	2.00	0.35	...	...	0.10	...	...
HIGH SPEED STEELS													
VS 1.3243	M 35	SKH 55	...	S 705	0.90	0.30	0.30	4.00	5.00	...	1.90	6.30	Co 5.00
VS 1.3247	M 42	SKH 59	...	S 500	1.09	...	...	3.90	9.40	...	1.20	1.50	Co 7.80
ANTI-COERSIVE STEELS													
VS 1.4006	(410)*	SUS 410	UHB 4006	N 100	0.11	...	...	13.00	...	...	...	...	...
VS 1.4021	420	SUS 420J1	UHB 4021	N 320	0.20	...	...	13.00	...	...	...	...	...
VS 1.4057	431	SUS 431	UHB 4057	N 350	0.17	...	...	16.50	...	2.00	...	...	...
VS 1.4313	F6NM	SCS 5	...	...	<0.05	...	...	13.50	0.60	4.00	...	...	...
VS 1.4462 Dpx	(BS318s13)*	...	UHB 4462	A 903	<0.03	...	...	22.00	2.60	5.50	...	...	No.12
VS 1.4542	630 (15.5 PH)	SCS 24	...	...	<0.07	...	...	16.00	...	4.00	...	...	Cu4.00
MACHINERY STEEL													
VS 1.6523	8620	SNCM 220	...	E 116	0.20	...	0.80	0.60	0.20	0.60	...	...	...
VS 1.5752	3310/3415	SNC 815 N	UHB 5752	E 200	0.14	...	...	0.70	...	3.50	...	...	...
VS 1.5860	...	..	UHB 5860	Bohler G	0.14	...	...	1.10	...	4.50	...	...	...
VS 1.5919	3115	...	UHB 5919	E 230	0.17	...	...	1.55	...	1.55	...	...	...
VS 1.7147	5120	SMnC 420	UHB 7147	E 400	0.20	...	1.30	1.20	...	...	...	...	...
VS 1.5920	...	...	UHB 5920	E 220	0.17	...	...	1.95	...	1.95	...	...	...
VS 1.7176	5160	SUP 9	...	F 300	0.56	...	0.65	0.90	...	...	...	...	...
VS 1.8159	6145/6150	SUP 10	UHB 8159	F 530	0.51	...	0.90	1.10	...	...	0.10	...	...
VS 1.7220	4130	SCM 435	...	...	0.38	...	0.80	1.00	0.25	...	...	...	...
VS 1.7225	4140	SCM 440	UHB 709	V 320	0.40	...	0.80	1.00	0.25	...	...	...	...

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Hardness Comparision Table Tensile Strength , Brinell , Vickers and Rockwell Hardness

TENSILE STRENGTH R	Brinell hardness Ball Indentation mm		Vickers hardness		Rockwell Hardness		TENSILE STRENGTH R	Brinell hardness Ball Indentation mm		Vickers hardness		Rockwell Hardness	
N/mm	d	HB	HV	HRB	HRC	HR30N	N/mm	d	HB	HV	HRB	HRC	HR30N
255	6.63	76.0	80	...	...	...	1125	3.34	333	350		35.5	55.4
270	6.45	80.7	85	41.0	...	...	1155	3.29	342	360		36.6	56.4
285	6.30	85.5	90	48.0	...	...	1190	3.25	352	370		37.7	57.4
305	6.16	90.2	95	52.0	...	...	1220	3.21	361	380		38.8	58.4
320	6.01	95.0	100	56.2	...	...	1255	3.17	371	390		39.9	59.3
335	5.90	90.8	105	...	...	...	1290	3.13	380	400		40.8	60.2
350	5.75	105	110	62.3	...	...	1320	3.09	390	410		41.8	61.1
370	5.64	109	115	...	...	...	1350	3.06	399	420		42.7	61.9
385	5.54	114	120	66.7	...	...	1385	3.02	409	430		43.6	62.7
400	5.43	119	125	..	...	...	1420	2.99	18	440		44.5	63.5
415	5.33	124	130	71.2	...	...	1455	2.95	428	450		45.3	64.3
430	5.26	128	135	..	...	...	1485	2.92	437	460		46.1	64.9
450	5.16	133	140	75.0	...	...	1520	2.89	447	470		46.9	65.7
465	5.08	138	145	...	...	...	1555	2.86	456	480		47.7	66.4
480	4.99	143	150	78.7	...	...	1595	2.83	466	490		48.4	67.1
495	4.93	147	155	...	...	...	1630	2.81	475	500		49.1	67.7
510	4.85	152	160	81.7	...	...	1665	2.78	485	510		49.8	68.3
530	4.79	156	165	...	...	...	1700	2.75	494	520		50.5	69
545	4.71	162	170	85.0	...	...	1740	2.73	504	530		51.1	69.5
560	4.66	166	175	...	...	...	1775	2.70	513	540		51.7	70
575	4.59	171	180	87.1	...	...	1810	2.68	543	550		52.3	70.5
595	4.53	176	185	...	...	...	1845	2.66	532	560		53.0	71.2
610	4.47	181	190	89.5	...	...	1880	2.63	542	570		53.6	71.7
625	4.43	185	195	...	...	...	1920	2.6	551	580		54.1	72.1
640	4.37	190	200	91.5	...	...	1955	2.59	561	590		54.7	72.7
660	4.32	195	205	92.5	...	...	1995	2.57	570	600		55.2	73.2
675	4.27	199	210	93.5	...	...	2030	2.54	580	610		55.7	73.7
690	4.22	204	215	94.0	...	...	2070	2.52	589	620		56.3	74.2
705	4.18	209	220	95.0	...	...	2105	2.51	599	630		56.8	74.6
720	4.13	214	225	96.0	...	...	2145	2.49	608	640		57.3	75.1
740	4.08	219	230	96.7	...	...	2180	2.47	618	650		57.8	75.5
755	4.05	223	235	...	...	...	...	...	...	660		58.3	75.9
770	4.01	228	240	98.1	20.3	41.7	...	...	...	670		58.8	76.4
785	3.97	233	245	...	21.3	42.5	...	...	...	680		59.2	76.8
800	3.92	238	250	99.5	22.2	43.4	...	...	...	690		59.7	77.2
820	3.89	242	255	...	23.1	44.2	...	...	...	700		60.1	77.6
835	3.86	247	260	101	24	45	...	...	...	720		61.0	78.4
850	3.82	252	265	...	24.8	45.7	...	...	...	740		61.8	79.1
865	3.78	257	270	102	25.6	46.4	...	...	...	760		62.5	79.7
880	3.75	261	275	...	26.4	47.2	...	...	...	780		63.3	80.4
900	3.72	266	280	104	27.1	47.8	...	...	...	800		64.0	81.1
915	3.69	271	285	...	27.8	48.4	...	...	...	820		64.7	81.7
930	3.66	276	290	105	28.5	49.0	...	...	...	840		65.3	82.2
950	3.63	280	295	...	29.2	49.7	...	...	...	860		65.9	82.7
965	3.6	285	300	...	29.8	50.2	...	...	...	880		66.4	83.1
995	3.54	295	310	...	31	51.3	...	...	...	900		67.0	83.6
1030	3.49	304	320	...	32.2	52.3	...	...	...	920		67.5	84.0
1060	3.43	314	330	...	33.3	53.6	...	...	...	940		68.0	84.4
1095	3.39	323	340	...	34.4	54.4	...	...	...	...			

CONVERSION OF HARDNESS VALUES USING THIS CONVERSION TABLE ARE ONLY APPROXIMATE , SEE DIN 50 150 , DECEMBER 1976

TENSILE STRENGTH	N/mm2	Rs
Brinell hardness Calculate from: HB=0.95 HV (0.102 F/D=30) D=10	diameter of the bal indentation in mm Hardness value $= \frac{0.102 \cdot 2F}{D\,(D.D.d)}$	d HB
Vickers hardness		HV
Rockwell hardness	Diameter Pyramid Test force>50 N Ball 1.588 mm(1/6*) Total test force =98 N Diamond Pyramid Total test force=1471 N Diamond Pyramid Total test force=294 N	HRB HRC HR 30 N

VIRAT | Special Steels

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GURGAON | LUDHIANA | CHENNAI | PUNE

