

DRG.No.  
0 RGB 060 1 181 0

REV  
0

**TRADE ACTION**

A

Ø180

83+0.5

⊥ 0.5 A

ISSUED BY  
**STANDARD CELL**  
HIS NO. - 220201 dtd: 21/01/22  
DATE: 19/9/22 SIGNATURE: *[Signature]*

Note:

1. Material to be supplied in hardened & tempered to 'U' condition.
2. Ultrasonically tested as per IS 8791-98 Class 'A' in longitudinal & transverse direction.
3. Surface should be smooth and free from burrs, cavities, cracks, scratches, foreign inclusion & dent marks.
4. Suitable rust prevention medium to be applied to avoid rusting of material.

ALL DIMENSIONS IN mm  
REMOVE ALL SHARP EDGES

MATERIAL				LATEST REF./DC NO.:	
BS 970 Pt -3:91 817M40(En24)					
HARDNESS				DRAWN	
269 to 331 HB				CHECK	
PROTECTIVE FINISH		ALTERATIONS		USER SEC.	
---		DATE		CHECK	
ROUGHNESS		TITLE :		HOS/SC	
---		BLANK FOR ADAPTER (RGB-60)		APPRD.	
EST.MASS		HIGH ENERGY PROJECTILE FACTORY		DATE	
PRO/FINAL		TRICHY		24.05.22	
---				SCALE	
				NTS	
				DRG. NO:	
				0 RGB 060 1 181 0	
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SHEET  
1 OF 1



Table 16 — Chemical composition: alloy direct hardening steels

Steel	C	Si	Mn	P	S	Cr	Mo	Ni
	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)
530M40	0.36 to 0.44	0.10 to 0.40	0.60 to 0.90	0.035 max.	0.040 max.	0.90 to 1.20	—	—
605M36	0.32 to 0.40	0.10 to 0.40	1.30 to 1.70	0.035 max.	0.040 max.	—	0.22 to 0.32	—
606M36	0.32 to 0.40	0.10 to 0.40	1.30 to 1.70	0.035 max.	0.15 to 0.25	—	0.22 to 0.32	—
708M40	0.36 to 0.44	0.10 to 0.40	0.70 to 1.00	0.035 max.	0.040 max.	0.90 to 1.20	0.15 to 0.25	—
709M40	0.36 to 0.44	0.10 to 0.40	0.70 to 1.00	0.035 max.	0.040 max.	0.90 to 1.20	0.25 to 0.35	—
722M24	0.20 to 0.28	0.10 to 0.40	0.45 to 0.70	0.035 max.	0.040 max.	3.00 to 3.50	0.45 to 0.65	—
817M40	0.36 to 0.44	0.10 to 0.40	0.45 to 0.70	0.035 max.	0.040 max.	1.00 to 1.40	0.20 to 0.35	—
826M31	0.27 to 0.35	0.10 to 0.40	0.45 to 0.70	0.035 max.	0.040 max.	0.50 to 0.80	0.45 to 0.65	1.30 to 1.70
826M40	0.36 to 0.44	0.10 to 0.40	0.45 to 0.70	0.035 max.	0.040 max.	0.50 to 0.80	0.45 to 0.65	2.30 to 2.80
945M38	0.34 to 0.42	0.10 to 0.40	1.20 to 1.60	0.035 max.	0.040 max.	0.40 to 0.60	0.15 to 0.25	2.30 to 2.80 0.60 to 0.90

NOTE See also 3.3 c), 3.3 i) and options A.2 and A.5.

Table 17 — Chemical composition: ferritic and martensitic stainless and heat resisting steels

Steel	Chemical composition (maximum unless range stated)								
	C	Si	Mn	P	S	Cr	Mo	Ni	Se
<i>Ferritic steels</i>									
	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)	%(m/m)
403S17	0.08	1.0	1.0	0.040	0.030	12.0 to 14.0	—	0.50	—
430S17	0.08	1.0	1.0	0.040	0.030	16.0 to 18.0	—	0.50	—
<i>Martensitic steels</i>									
410S21	0.09 to 0.15	1.0	1.0	0.040	0.030	11.5 to 13.5	—	1.00	—
416S21	0.09 to 0.15	1.0	1.5	0.060	0.15 to 0.35	11.5 to 13.5	0.60	1.00	—
416S29	0.14 to 0.20	1.0	1.5	0.060	0.15 to 0.35	11.5 to 13.5	0.60	1.00	—
416S37	0.20 to 0.28	1.0	1.5	0.060	0.15 to 0.35	12.0 to 14.0	0.60	1.00	—
416S41	0.09 to 0.15	1.0	1.5	0.060	0.060	11.5 to 13.5	0.60	1.00	0.15 to 0.35
420S29	0.14 to 0.20	1.0	1.0	0.040	0.030	11.5 to 13.5	—	1.00	—
420S37	0.20 to 0.28	1.0	1.0	0.040	0.030	12.0 to 14.0	—	1.00	—
431S29	0.12 to 0.20	1.0	1.0	0.040	0.030	15.0 to 18.0	—	2.0 to 3.0	—

Table 21 — Mechanical properties for alloy steels (18)

Steel	Condition (2)	Size (1) (diameter across flats, or thickness) mm	R <sub>m</sub> N/mm <sup>2</sup>	R <sub>e</sub> min. N/mm <sup>2</sup>	A min. on 5.65 S <sub>0</sub> %	Impact <sup>a</sup>		R <sub>p0.2</sub> (3) min. N/mm <sup>2</sup>	HB (13)	
						Izod min.	KCV min.			
722M24	Hardened and tempered + turned or ground	T > 150 ≤ 250	850 to 1 000	650	13	40	35	635	248 to 302	
		T ≥ 6 ≤ 150	850 to 1 000	680	13	54	50	665	248 to 302	
		U ≥ 6 ≤ 150	925 to 1 075	755	12	47	42	740	269 to 331	
817M40	Hardened and tempered + turned or ground	T ≥ 6 ≤ 150	850 to 1 000	700	9	54	—	680	248 to 302	
		U ≥ 6 ≤ 150	925 to 1 075	770	9	47	—	755	269 to 331	
		Turned, ground or cold drawn and finally softened							269 max.	
817M40	Hardened and tempered + turned or ground	T > 150 ≤ 250	850 to 1 000	650	13	40	35	635	248 to 302	
		T > 63 ≤ 150	850 to 1 000	680	13	54	50	665	248 to 302	
		U > 29 ≤ 100	925 to 1 075	755	12	47	42	740	269 to 331	
		V > 13 ≤ 63	1 000 to 1 150	850	12	47	42	835	293 to 352	
		(6) W ≥ 6 ≤ 29	1 075 to 1 225	940	11	40	35	925	311 to 375	
		(1)(6) X ≥ 6 ≤ 29	1 150 to 1 300	1 020	10	34	28	1 005	341 to 401	
		(1)(6) Z ≥ 6 ≤ 29	1 550 min.	1 235	5	10	9	1 125	444 min.	
		Hardened and tempered + cold drawn or hardened and tempered + cold drawn + ground	T > 63 ≤ 150	850 to 1 000	700	9	54	—	680	248 to 302
		U > 29 ≤ 100	925 to 1 075	770	9	47	—	755	269 to 331	
		V > 13 ≤ 63	1 000 to 1 150	865	9	47	—	850	293 to 352	
W ≥ 6 ≤ 29	1 075 to 1 225	955	8	40	—	940	311 to 375			
(4)(6)(7) X ≥ 6 ≤ 29	1 150 to 1 300	1 035	7	34	—	1 020	341 to 401			
(4)(6)(7) Z ≥ 6 ≤ 29	1 550 min.	1 250	3	11	—	1 235	444 min.			
Turned, ground or cold drawn and finally softened								277 max.		

<sup>a</sup> See also option A.3.