

<div><div>बी एच ई एल</div><div>BHEL</div></div>	<div>CORPORATE STANDARD</div>	<div>AA6312211</div> <div>Rev. No. 02</div> <div>PAGE 1 of 3</div>
<div>TWIST DRILL, MORSE TAPER SHANK, EXTRA LONG SERIES, HSS TOOL TYPE-N (UPTO 13 mm DIA.)</div> <div>1SCOPE</div> <div>This standard covers the dimensions and other requirements for Morse taper shank extra long series twist drill, HSS, Tool type-N for sizes up to and including 13 mm diameter.</div> <div>2DESIGNATION</div> <div>A Morse taper shank twist drill of extra long series having diameter $d = 9$ mm, Flute length $l_1 = 175$ mm and overall length $l = 275$ mm of tool type-N for right hand cutting and made of high speed steel shall be designated as</div> <div>2.1On indents</div> <div>MT shank twist drill, extra-long HSS - 9 x 175 x 275: AA6312211.</div> <div>2.2For issuing enquiries and on purchase orders</div> <div>Delete BHEL standard number from the above designation and add the following given information under clause 5.</div> <div>2.3Abbreviated Description</div> <div>DRILL XTRLG MTSHK – 9 x 175 x 275</div> <div>3MATERIAL</div> <div>3.1One piece construction</div> <div>High speed steel.</div> <div>3.2Two piece construction</div> <div>3.2.1Cutting portion</div> <div>High speed steel</div> <div>3.2.2Shank Portion</div> <div>Carbon steel with tensile strength not less than 700 MPa (before construction).</div> <div>4HARDNESS</div> <div>4.1Cutting portion</div> <div>760 – 900 HV (62 – 67 HRC)</div> <div>4.2Shank portion</div> <div>185 HV, min (after construction)</div>		
<div>Revisions:</div> <div>As per clause 36.1.A) of MOM of MRC-Tools</div>		<div>APPROVED:</div> <div>INTERPLANT MATERIAL RATIONALISATION COMMITTEE – MRC (T)</div>
<div>Rev. No. 02</div> <div>Dt: 15-12-2005</div>	<div>Amd. No.</div> <div>Dt:</div>	<div>Reaffirmed</div> <div>Year: 2016</div>
		<div>Prepared</div> <div>HEEP, Haridwar</div>
		<div>Issued</div> <div>Corp. R&D</div>
		<div>Dt. of 1st Issue</div> <div>01-04-1978</div>

**5 COMPLIANCE WITH STANDARDS****5.1 Dimensions Tolerances**

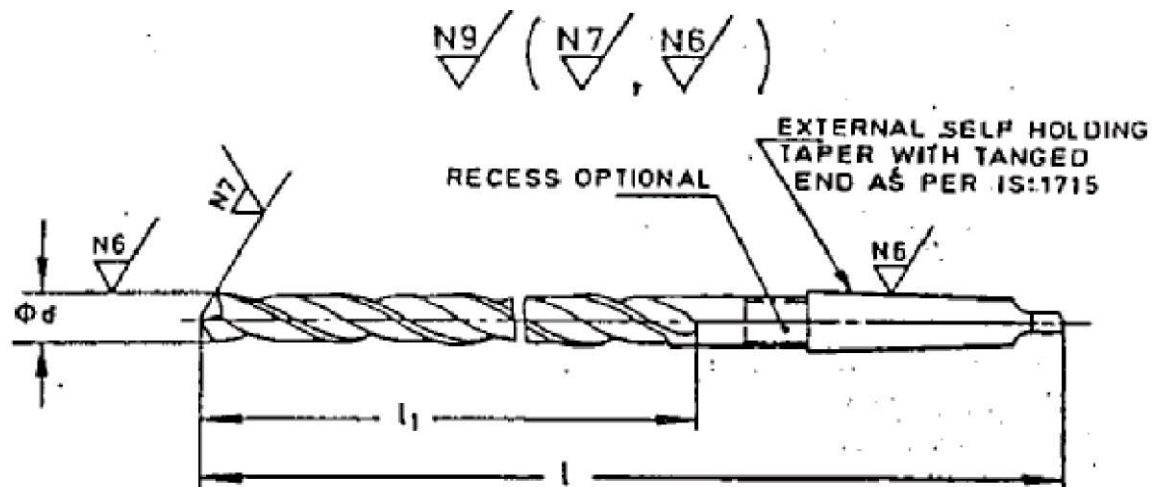
Shall conform to IS 7822-1983.

5.2 Material, Hardness, Marking and Packing etc.

Shall conform to IS 5099.

6 REFERRED STANDARDS (Latest Publications Including Amendments)

- 1) IS 5099



All dimensions in 'mm'

Nominal Dia. d h8	Length		Morse Taper	Sub - code
	Flute l_1 (min)	Overall l		
3.0*	125	200	1	231
4.0 *	125	200	1	240
4.0 *	200	300	1	258
4.0 *	450	550	1	266
5.0 *	125	200	1	274
5.0*	200	315	1	282
6.0 *	125	200	1	010
6.0 *	235	350	1	290
7.0 *	235	350	1	304
7.0 *	315	500	1	061
7.0 *	150	250	1	312
8.0	165	265	1	320
8.0 *	200	315	1	088
8.0 *	250	400	1	096
8.0 *	450	550	1	339
8.0 *	160	250	1	070
9.0 *	300	450	1	347
9.5 *	160	250	1	355

Nominal Dia. d h8	Length		Morse Taper	Sub - code
	Flute l_1 (min)	Overall l		
10.0 *	150	250	1	363
10.0 *	250	400	1	150
10.0 *	350	440	1	371
10.5 *	200	315	1	177
11.0 *	110	200	1	380
11.0 *	195	300	1	398
11.0 *	270	400	1	401
11.0 *	450	550	1	410
11.5 *	195	300	1	428
12.0	205	310	1	436
12.0 *	365	550	1	444
12.0 *	500	625	1	452
12.5	205	310	1	460
13.0 *	150	250	1	479
13.0 *	350	450	1	487
13.0 *	450	550	1	495
13.0 *	550	650	1	503

Note

- 1) Sizes marked with * are not as per IS 7822
- 2) Details of sizes standardized at the corp. level only are shown in the Table.