



BHARAT HEAVY ELECTRICALS LIMITED  
INDUSTRIAL VALVES PLANT  
433, INDUSTRIAL COMPLEX  
GOINDWAL SAHIB  
DISTT. TARN TARAN- PUNJAB – 143422

No.BHE:IVP:  
SC:WB:AD  
2015-16/02  
Dated  
18.01.2016

**NOTICE INVITING APPLICATIONS FOR REGISTRATION OF SUB CONTRACTORS**

BHARAT HEAVY ELECTRICALS LIMITED [BHEL] is manufacturing Industrial Valves and other Boiler accessories at its Industrial Valves Plant, Goindwal Sahib unit. App. Annual procurement value for year 2016-17: 10 Lakh.

Expression of interest and applications for registration are invited from sub-contractors (including MSE & MSE-SC/ST vendors) for doing the machining job of various components of Wall Blowers. Major areas, for which subcontractors are required, are gear/worm machining, press/die, CNC/VMC jobs etc.

Machining of Items for which vendors required immediately are:

**Wall Blower**

**Machining Sub Contractors for Wall Blower are required to machine various components of wall blower. Also, heat treatment/plating, wherever required, is to be arranged by the vendor. List of components, where machining vendors are required, is attached herewith as Annexure-V. Sample drawings of some components are also attached.**

**BHEL** is looking for prospective Sub Contractors for above detailed job work for BHEL.

**BHEL** shall evaluate the vendors as per its established vendor selection, evaluation and registration procedure. Supplier registration form can also be downloaded from our website [www.bhel.com](http://www.bhel.com) available as a downloadable link at [http://www.bhel.com/images/pdf/vendor/Guidelines\\_Indian\\_Suppliers\\_SEARP2010Amdt.02.pdf](http://www.bhel.com/images/pdf/vendor/Guidelines_Indian_Suppliers_SEARP2010Amdt.02.pdf)

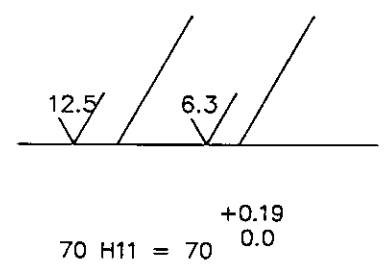
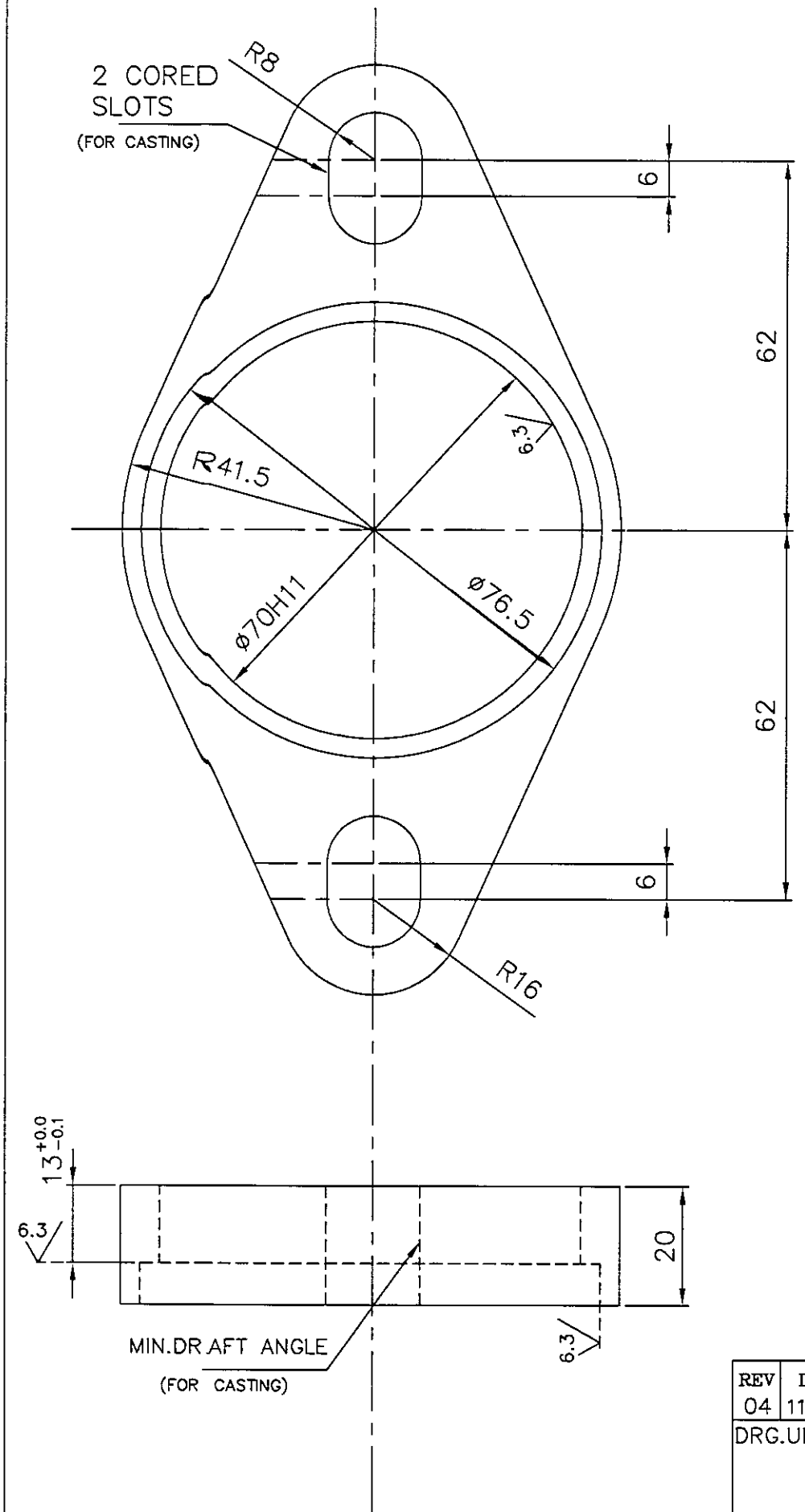
**BHEL** invites such vendors to visit its above located plant on any working day from Monday to Saturday between 0930 Hrs to 1730 Hrs and contact undersigned for any clarification regarding:

Items details and requirement		Vendor registration form/procedure
Sumeet Bansal Dy. Manager (Sub-Contracting)	Gaurav Gangwar Sr. Engineer (Sub-Contracting)	Prikshit Ravesh Sr. Engineer (Sub-Contracting)
Phone: 01859-224647	01859-224643	01859-224654
Mobile: 098780 06105	08427001944	098880 62649
E-mail: <a href="mailto:sb@bhelivp.in">sb@bhelivp.in</a>	<a href="mailto:gsg@bhelivp.in">gsg@bhelivp.in</a>	<a href="mailto:prikshit@bhelivp.in">prikshit@bhelivp.in</a>

Fax: 01859-222061

BHARAT HEAVY ELECTRICALS LIMITED  
INDUSTRIAL VALVES PLANT  
433, INDUSTRIAL COMPLEX, GOINDWAL SAHIB, DISTT. TARN TARAN, PUNJAB – 143 422

3-20-001-00145  
DRAWING NO.



NOTES:-

1. FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURES.

PART CODE : 842000102400

01	PLATE 25X93X156	15 011 081	IS2062Fe410w			0.73			1
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No

TYPE OF PRODUCT  
OR NAME OF  
CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI-620014. 365-121	DRN	V.ARUMUGAM	SIGN	DATE	NO. OF VAR.
	CHD	K.SRIDHARAN			
	APPD	S.NATARAJAN			

DEPT VL	SCALE NTS	WEIGHT (KG.)	REFERENCE INFORMATION	NO. OF ITEMS
CODE 330			T-18929 (3-20-001-00043)	

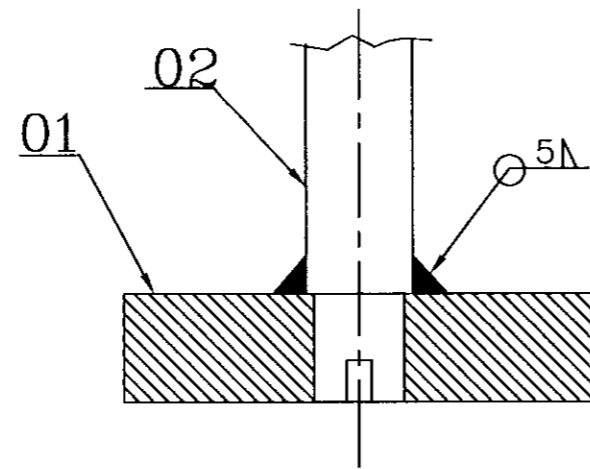
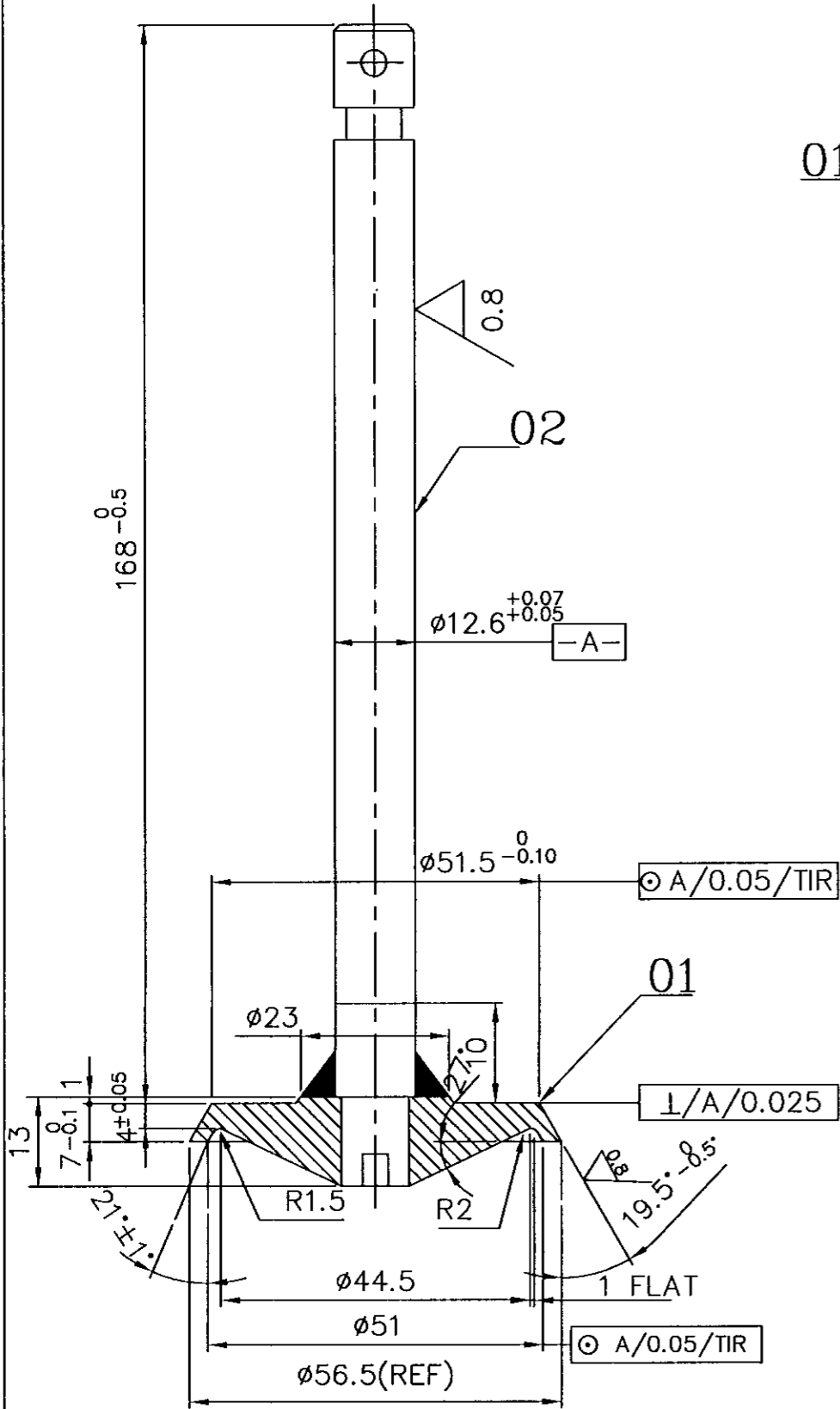
TITLE <b>GLAND FOLLOWER</b> FOR: T-30MARK IE : TRAVELLING CARRIAGE	CARD CODE U 01	DRAWING NO. <b>3-20-001-00145</b>	REV 04
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REV	DATE	ALTERED
04	11.06.01	CHD & APPD
DRG.UPDATED AND REDRAWN.		
DCN: SB: 1298		

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

3-20-001-00687  
DRAWING NO.

3.2 / (0.8)



**NOTES:**

- 1.. FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURES
2. REFER WPS FOR WELDING.

PART CODE : 842000166500

NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No
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TYPE OF PRODUCT  
OR NAME OF  
CUSTOMER/PROJECT

	BHARAT HEAVY ELECTRICALS LTD.,		DRN	V.ARUMUGAM	SIGN	DATE	NO.OF VAR.
	UNIT: HIGH PRESSURE BOILER PLANT.		CHD	K.SRIDHARAN			
	TIRUCHIRAPALLI-620014.		APPD	S.NATARAJAN			

DEPT	SB		SCALE	WEIGHT (KG).	REFERENCE INFORMATION	NO. OF ITEMS
CODE	330		NTS	0.570		

TITLE	CARD CODE	DRAWING NO.	REV
VALVE STEM ASSY	U 01	3-20-001-00687	05

REV	DATE	ALTERED
05	11.06.01	CHD & APPD

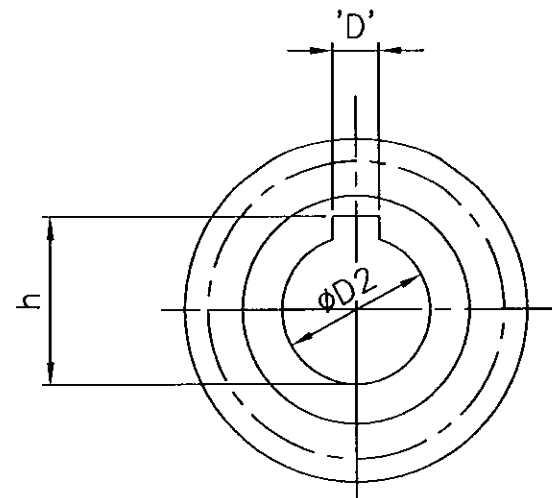
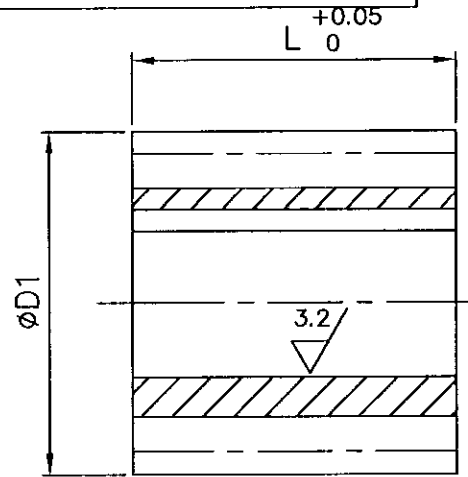
ORG.UPDATED AND REDRAWN.

DCN: SB: 1298

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3-20-201-00119  
DRAWING NO.

0.8 / (3.2)



NOTES

1. THREADS GROUND AND POLISHED
2. TO BE CASE HARDENED TO A DEPTH OF 0.8MM TO 1MM TO A HARDNESS RC 60-66 FOR STYLES 01 & 02 ONLY

3. TOLERANCE ON GEAR.	10DP	12DP
	1. RADIAL RUNOUT ON PCD (TIR)	0 -0.018mm
2. CHORDAL TOOTH THICKNESS AT ADDENDUM	3.99 <sup>-0.16</sup> -0.235 mm	3.32 <sup>-0.105</sup> -0.18 mm
3. AXIAL PITCH ERROR	±0.011mm	±0.011mm
4. MIN BACKLASH WHEN TEETH ARE IN CONTRACT	0.095mm	—

4. TOLERANCE ON GEAR BLANK

TIP DIA 0  
-0.039  
RADIAL RUNOUT OF THE CYLINDER 0.016  
RADIAL AXIAL RUN OUT OF THE REF SURFACE 0.0125

5. FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURES.

TOLERANCE	VALUE
5JS9	±0.015
4JS9	±0.015
12H8	+0.027 0
15H8	+0.027 0
16H8	+0.027 0

DESCRIPTION	VARIANT NO.1 CASE HARDENED WORM 10	VARIANT NO.2 CASE HARDENED WORM 12	VARIANT NO.3 SOFT WORM 10
O D	1.45"	1.1666"	1.45"
WHETHER L.H- OR RH.	R.H	L.H	RH
KEY WAY WIDTH 'D'	5JS9	4JS9	5JS9
HEIGHT 'h'	18.3 <sup>+0.1</sup> 0	13.8 <sup>+0.1</sup> 0	17.3 <sup>+0.1</sup> 0
FACE 'L'	35mm	22mm	35mm
LEAD ANGLE 'Y'	4° 34'	4° 45'	4° 34'
LEAD	0.3142"	0.2618"	0.3142"
PRESSURE ANGLE	14 1/2°	14 1/2°	14 1/2°
NO.OF STARTS 'Z'	1	1	1
DIAMETRAL PITCH	10	12	10
HOLE DIA D2	16H8	12H8	15H8
PITCH CIRCLE DIA D1	1.25"	1"	1.25"
PART CODE	842020112200	842020113600	842020113500

NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No
01	WORM 10 D 40	15-039-116	A 193 B7			0.150			3
01	WORM 12 D 50	15-027-142	IS157013Ni3Cr			0.100			2
01	WORM 10 D 50	15-027-142	IS157013Ni3Cr			0.150			1

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										BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI-620014.					DRN	NAME		SIGN	DATE	NO.OF VAR.
															CHD	V.ARUMUGAM				
															APPD	S.NATARAJAN				
DEPT	VL	SCALE NTS		WEIGHT (KG).		REFERENCE INFORMATION				NO. OF ITEMS										
CODE	330					DRAWING NO.				REV										
TITLE					CARD CODE		DRAWING NO.				REV									
WORM					U 01		3-20-201-00119				09									

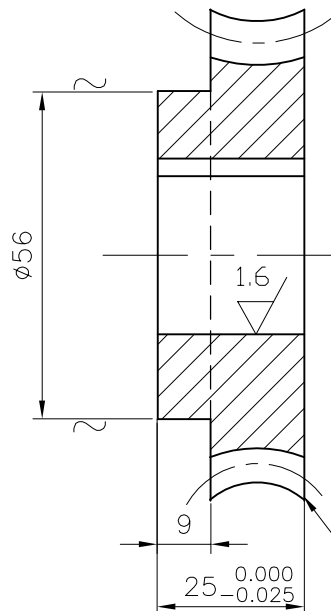
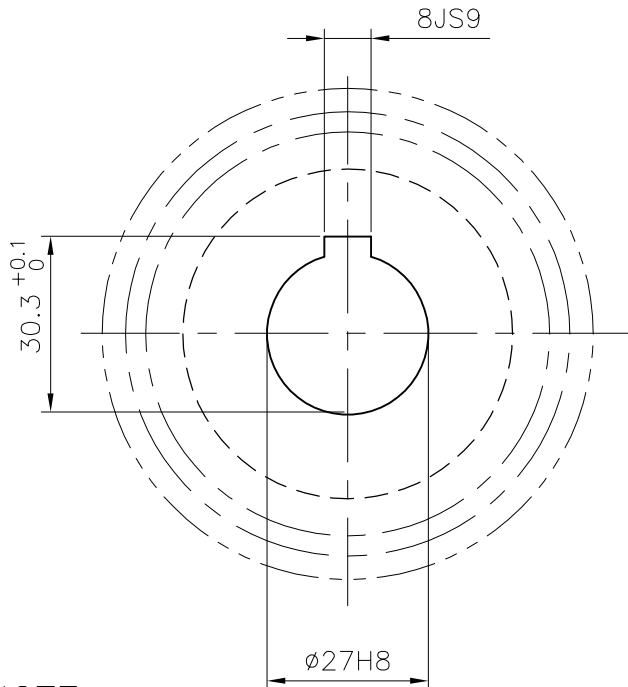
REV	DATE	ALTERED
09	11.06.01	CHD & APPD
DRG.UPDATED AND REDRAWN.		
DCN: SB: 1298		

ALL DIMENSIONS ARE IN MILLIMETRES.

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP

REV	DATE	ALTERED	K.S
08	9.11.04	CHD & APPD	S.N
DRAWING REDRAWN.			
DCN.NO: 800386			

3.2/ (1.6/ , ~)



2X45°  
CHAMFERS ON  
BOTH SIDES

**NOTE:—**

FOR QUALITY REQUIREMENTS REFER LATEST APPLICABLE QUALITY PROCEDURES.

ACTUAL CENTRE DISTANCE PROVIDED ON THE HOUSING =  $54^{+0.1}_0$

WORM GEAR TO RUN WITH WORM STYLE NO. 01

DRG. NO. 3-20-201-00119 SINGLE THREAD.

**TOLERANCE ON. GEAR BLANK**

TIP DIA  $\begin{matrix} +0.0 \\ -0.046 \end{matrix}$ MM

RADIAL AND AXIAL RUNOUT OF REF SURFACE =  $\pm 0.017$ MM

GEAR DATA.

30 TEETH; 10DP (NORMAL); SINGLE THREAD;

3" PITCH DIA. 14 1/2° PRESSURE ANGLE;

THROAT DIA = 3.2". OUTER DIA=3.3".

THROAT RADIUS = 0.525"

RADIAL RUN OUT (TIR) = 0.042MM

MINIMUM PRESCRIBED BACKLASH

WHEN TEETH ARE IN CONTACT


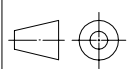
**CONTACT AREA**

x2h MINIMUM - 60%

x2b MINIMUM - 65%

LEAD ANGLE = 4°34'

**PART CODE: 842020112300**

	GEAR BLANK CASTING	160134140000	IS305 GrA1			0.63				
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No	
 365-122	<b>BHARAT HEAVY ELECTRICALS LTD.,</b> UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.			DRN	S.NAPPI	SIGN	S.N	DATE	9.11.04	NO. OF VAR
				CHD	K.SRIDHARAN		K.S	9.11.04		
				APPD	S.NATARAJAN		S.N	9.11.04		
DEPT SB			SCALE	WEIGHT (KG).	REFERENCE INFORMATIONS				NO. OF ITEMS	
CODE	330		1:1	0.63						
TITLE				CARD CODE	DRAWING NO.				REV	
WORM GEAR				U 01	4-20-201-00183				08	

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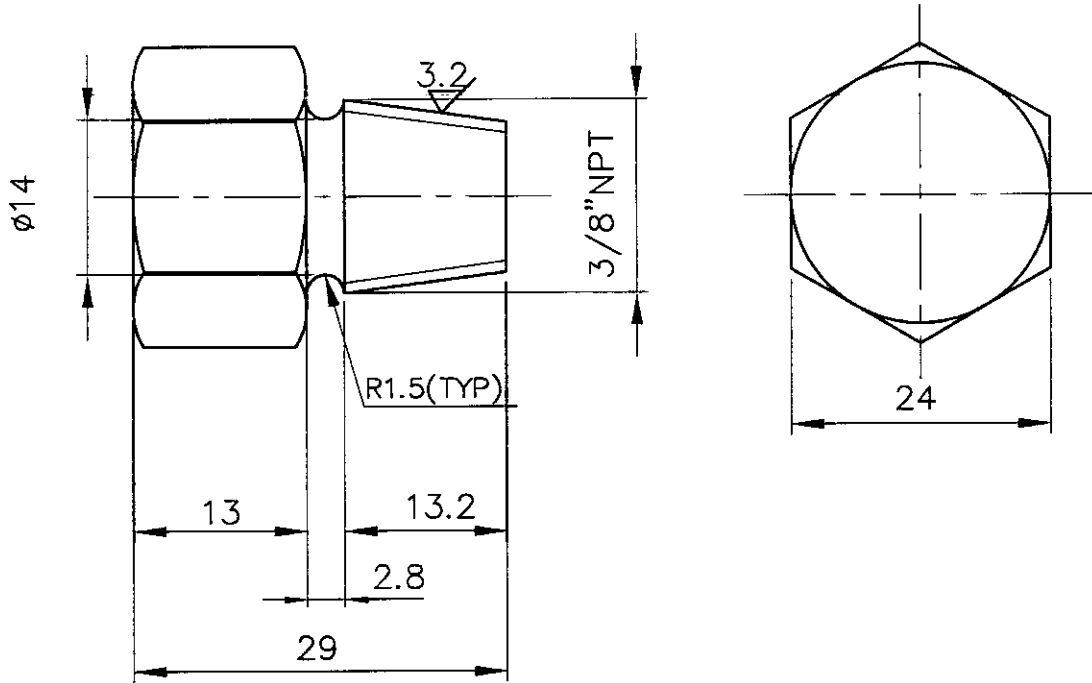
ALL DIMENSIONS ARE IN MILLIMETRES.

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER RELEVANT QCP/QP

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

REV	DATE	ALTERED
04	11.06.01	CHD & APPD
DRG.UPDATAED AND REDRAWN.		
DCN:SB:1298		


12.5/ (3.2/)



NOTES:-

1. FOR QUALITY REQUIREMENTS REFER APPLICABLE LATEST QUALITY PROCEDURE.

PART CODE : 842020130700

01	ROUND DIA 32 L = 30	150390870000	A193 B7			0.320			01	
NO OFF	DESCRIPTION	MATL CODE	MATL SPECN	HEAT TREATMENT	SCRAP SORT	NET WT (kg)	GROSS WT (kg)	DRAWING No	ITEM No	
 BHARAT HEAVY ELECTRICALS LTD., UNIT: HIGH PRESSURE BOILER PLANT. TIRUCHIRAPALLI 620014.					DRN	NAME V.ARUMUGAM		SIGN	DATE	NO.OF VAR
					CHD	K.SRIDHARAN				
					APPD	S.NATARAJAN				
DEPT SB			SCALE	WEIGHT (KG).	REFERENCE INFORMATIONS				NO. OF ITEMS	
CODE			NTS	0.320						
330										
TITLE					CARD CODE	DRAWING NO.			REV	
3/8" NPT. PLUG					U 01	4-20-201-00199			04	

**Annexure-V****List of Wall Blower items in which machining Sources are required on Job work basis**

<b>S. No</b>	<b>Gr. No</b>	<b>Product Area</b>	<b>Description</b>
1	G2173	WB	GLAND FOLLOWER-30014502
2	G2174	WB	VALVE STEM ASSY-30068702
3	G2176	WB	VALVE STEM
4	G2177	WB	VALVE BLANK
5	G2179	WB	WORM-30011901
6	G2181	WB	WORM L.H-30011902
7	G2184(a)	WB	RACK SQ MILL-30013800
8	G2187	WB	SPUR GEAR SHAFT-30015300
9	G2203	WB	COVER-40001600
10	G2205	WB	COVER-40012500
11	G2211	WB	LOCK NUT M20X1.5-40016600
12	G2218	WB	WORM GEAR 30T-40018300
13	G2220	WB	WORM GEAR LH-40018500
14	G2223	WB	SPRING RETAINER-40019300
15	G2227	WB	PLUG 3/8INCH NPT-40019900
16	G2228	WB	AIR VENT (R1/4")
17	G2230	WB	PIN-40023500
18	G2238	WB	FLAT WASHER-40013000
19	G2248	WB	SIN BRZ BUSH-40154800
20	G2331	WB	RACK COVER W/O PAINT-20024300
21	G2334	WB	MOUNTING ADAPTER-20003000
22	G2336	WB	GUSSET PLATE-40015100
23	G2337	WB	ALIGNMENT PLATE-40015200
24	G2338	WB	SLEEVE TUBE
25	G2342	WB	BOTTOM COVER W/O PAINT-20025700
26	G2343	WB	PIN-40159700
27	G2344	WB	BASE PLATE-40159600
28	G2443	WB	SPECIAL KEY-40114100
29	G2493	WB	Orifice Plate
30	G2495	WB	NIPPLE 1 1/2" NPT
31	G2496	WB	NIPPLE G 1 1/2"
32	G2498	WB	SLEEVE TUBE W/O NIPPLE
33	G2499	WB	T-PIECE 3/8IN NPT-40065500
34	G2500	WB	U-clamps