

SUBJECT	BID SPECIFIC ATC - 20232281
----------------	------------------------------------

1.	BHEL Contact (Technical/Commercial):
	For any technical/commercial clarification , please contact Mr. Sandeep, Manager (PPX-TL). e-mail: kumar.sandeep@bhel.in and Mr. Manoj Gaurav , Sr. Manager (PPX-TL) Contact No. 01334-28-5182, e-mail : mgaurav@bhel.in
2.	Acceptance of Offer:
	<p>Bidder's offer shall be considered for evaluation based on Technical and other commercial documents submitted along with bid.</p> <p>Bidder's offer shall be acceptable subject to final acceptance of offer by Indenter. Price bid of those bidders shall be opened whose offer is techno-commercially is acceptable to BHEL (HEEP) Haridwar as per drawing/Specification.</p> <p>Note 01: PO No. &/OR Vendor's emblem/seal shall be clearly punch marked/ETCHED on each item.</p> <p>Note 02: The material is required for SUB/SUPER CRITICAL Projects.</p> <p>Note 03: These Tools will be used on Conventional Lathes, where only HP & IP Rotors will be machined. Hence, 02 different Tools (R2159-0054 & R2159-0098) are being considered for trial.</p> <p>Note 04: All items shall be procured as a whole package and from same source due to compatibility reasons.</p> <p>Note 05: In case, any other item/spare (If any) is required as per vendor's design. The same shall also be quoted included with the respective item of enquired item in sufficient quantity to ensure the compatible functioning at the time of end use.</p>
3.	Performance Parameter for Acceptance of Offer:
	<p>A. Cutting Speed (Vc) : 50 m/min</p> <p>B. Feed Rate (f) : 0.05-0.1 mm/rev</p> <p>C. Depth of Cut (Ap) : Finishing shall be done in one pass only. Stock will not be more than 0.5 mm on the tool point</p> <p>D. Coolant : With and Without Coolant Both</p> <p>E. These Tool Holders shall be suitable to hold the bit mentioned in drawing no. TL27018 (Reference Drawing is attached)</p> <p>F. Final SRV acceptance of tools of Lot-01 only after successful trial of tools R2159-0054 & R2159-0098 of Lot-01. Bidder[s] to submit Lot-01 tools for trial. 2Nd lot shall be delivered on intimation after successful trial/acceptance of Lot-01 of R2159-0054 & R2159-0098.</p>
4.	Splitting of Quantities:
	Not Applicable
5.	Inspection and Test Reports/Certificate
	NA
6.	Terms of Delivery:
	Vendor to quote best possible delivery. However, early delivery is also acceptable.
7.	Deviations:
	<p>a) Technical Deviation: No Technical Deviation is envisaged.</p> <p>b) Commercial Deviation: No Commercial Deviation is envisaged.</p> <p>Item are required as per item description/specification mentioned against item. In case of any deviation offer shall be rejected.</p>

SUBJECT	BID SPECIFIC ATC - 20232281
----------------	------------------------------------

8.	Terms of Payment:
	<p>“For Non MSEs bidder: 100% of payment along with taxes, freight & insurance shall be made after receipt and acceptance of material and within 90 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order.</p> <p>For Medium Enterprises bidder: 100% of payment along with taxes, freight & insurance shall be made after receipt and acceptance of material and within 60 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order.</p> <p>For MSEs bidder: For MSEs (covered under MSME Act) which are registered and periodically renewed with BHEL, the payment shall be made within 45 days or as prescribed in the relevant act. Benefits of MSE (such as EMD Waiver, Tender fee exemption, Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. MSE benefits shall not be provided to Agents / Stockists / Dealers / Traders etc. for the offered items if not manufactured by themselves.”</p> <p>Note 01:</p> <ul style="list-style-type: none"> • Bills shall be submitted to BHEL HEEP Haridwar office for processing along with billing checklist. • It should be ensured that Tax Invoice complies with statutory requirements under GST law to enable BHEL to avail Input Tax Credit. • Payment of GST component shall be made only if vendor has deposited the Tax and credit for the same is reflected in GSTN (GST Network). • Copy of GST Registration Certificate(s) shall be also be attached with Tax Invoice.
9.	Prices:
	The quoted prices shall be on Firm basis . Price to be quoted as inclusive of GST, i.e., Ex-works including Packing & Forwarding Charges + F&I + GST.
10.	Reverse Auction:
	Bid to RA is applicable.
11.	Liquidated Damage for delayed Delivery:
	If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract, the Buyer will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.
12.	Unpriced Bid:
	Vendor to furnish unpriced bid mentioning “Quoted” against each BOQ line item and % of GST quoted in tender as per Annexure-I .
13.	Details of Bidder:
	Bidder to submit their complete contact information details as per Annexure-II .
14.	Make in India:
	For this procurement, the local content to categorize a supplier as Class-I local supplier/ Class-II local supplier/ Non-local supplier and purchase preference to Class-I local supplier, is as defined in Public

SUBJECT	BID SPECIFIC ATC - 20232281
----------------	------------------------------------

	<p>Procurement (Preference to Make in India), Order 2017 Dtd. 04.06.2020, issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT but before opening of part-II bids against this NIT.</p> <p>“Bidder to specify the percentage of local content as per the format of self-declaration for local content” as per Annexure-III.</p>
15.	<p>Evaluation Criteria: Evaluation shall be done on total package wise.</p>
16.	<p>Conflict of Interest: “A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:</p> <ul style="list-style-type: none"> i) they have controlling partner (s) in common; or ii) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or iii) they have the same legal representative/agent for purposes of this bid; or iv) they have relationship with each other, directly or through common third parties, <u>that puts them in a position to have access to information about or influence on the bid of another Bidder;</u> or v) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. <u>However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from. one bidding manufacturer in more than one bid;</u> or vi) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following: <ul style="list-style-type: none"> 1. The principal manufacturer directly or through one Indian agent on his behalf; and 2. Indian/foreign agent on behalf of only one principal; or vii) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid; or viii) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business”.
17.	<p>Risk Purchase: In case of abnormal delays (beyond the maximum late delivery period as per LD clause) in supplies / defective supplies or non-fulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material</p>

from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law.

Action against Bidders / vendor / supplier / contractor in case of default:

In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.

Suspension of Business Dealings could be in the form of “Hold” or “Banning” a supplier/ contractor or a bidder and shall be as per “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” available at BHEL’s website “<https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors>”

"The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the firms debarred across BHEL, shall be rejected. The list of firms debarred across BHEL is available on BHEL web site www.bhel.com.

1.0 Integrity commitment, performance of the contract and punitive action thereof:

1.1. Commitment by BHEL: BHEL commits to take all measures necessary to prevent corruption in connection with the tender process and execution of the contract.

BHEL will during the tender process treat all Bidder(s) in a transparent and fair manner, and with equity.

1.2. Commitment by Bidder/ Supplier/ Contractor:

1.2.1. The bidder/ supplier/ contractor commits to take all measures to prevent corruption and will not directly or indirectly influence any decision or benefit which he is not legally entitled to nor will act or omit in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India.

1.2.2. The bidder/ supplier/ contractor will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract and shall adhere to relevant guidelines issued from time to time by Govt. of India/ BHEL.

1.2.3. The bidder/ supplier/ contractor will perform/ execute the contract as per the contract terms & conditions and will not default without any reasonable cause, which causes loss of business/ money/ reputation, to BHEL.

If any bidder/ supplier/ contractor during pre-tendering/ tendering/ post tendering/ award/ execution/ post-execution stage indulges in malpractices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860 or any other law in force in India, then, action may be taken against such bidder/ supplier/ contractor as per extant guidelines of the company available on [www. bhel.com](http://www.bhel.com) and/or under applicable legal provisions”.

18. RXIL (TReDS) Platform:

BHEL is registered with RXIL (TReDS) platform. MSME bidders are requested to get registered with RXIL (TReDS) platform to avail the facility as per GoI guidelines.

19. Bidder to submit **sealed and signed copy of the following while uploading bid in GeM portal:**

- a) Bid Specific ATC: This document.
- b) Annexure-I: Unpriced Bid
- c) Annexure-II: Contact Details of Bidder
- d) Annexure-III: Local Content Self-Certification
- e) Annexure-IV: Schedule of Commercial Deviation

SUBJECT	BID SPECIFIC ATC - 20232281
----------------	------------------------------------

	f) Annexure-V: Schedule of Technical Deviation g) Annexure-VI : Pre Qualifying Conditions Note: In case of non-receipt of above documents, the bidder is liable for rejection.
20.	All other terms & conditions shall be as per GTC of GeM.

Signature of the authorized representative of

Place :

Date :

Bidder's Name :

Designation :

Company Seal :

SUBJECT**BID SPECIFIC ATC - 20232281****ANNEXURE-I****UNPRICED BID**

Sl. No.	Item Description	Unit	Quantity	Item	GST
1.	AAB215900979 DRG: - REV:00 TOOL FOR THROAT AND NECK WITHOUT CARBIDE BIT DRG.NO.-R2159-0097 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%
2.	AAB215900987 DRG: - REV:00 TOOL FOR THROAT AND NECK WITHOUT CARBIDE BIT DRG.NO.-R2159-0098 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%
3.	AAB215900944 DRG: - REV:00 TOOL FOR THROAT AND NECK WITHOUT CARBIDE BIT DRG.NO.-R2159-0094 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%

SUBJECT	BID SPECIFIC ATC - 20232281				
----------------	------------------------------------	--	--	--	--

4.	AAB215901002 DRG: - REV:00 TOOL FOR THROAT AND NECK WITHOUT CARBIDE BIT DRG.NO.-R2159-0100 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%
5.	AAB215900472 DRG: - REV:00 SPL. TOOL HOLDER WITHOUT CARBIDE BIT DRG.NO.-R2159-0047 REV.-01 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%
6.	AAB215900235 DRG: - REV:00 SPL. TOOL HOLDER WITHOUT CARBIDE BIT DRG.NO.-R2159-0023 REV.-02 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%

SUBJECT	BID SPECIFIC ATC - 20232281
----------------	------------------------------------

7.	AAB215900545 DRG: - REV:00 MULTI TOOL HOLDER WITHOUT CARBIDE BIT DRG.NO.-R2159-0054 REV.-01 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS,SCREWS SUPPORTS,PINS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%
8.	AAB215900553 DRG: - REV:00 MULTI TOOL HOLDER WITHOUT CARBIDE BIT DRG.NO.-R2159-0055 REV.-01 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (CLAMPS, SCREWS SUPPORTS,PINS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%
9.	AAB215900243 DRG: - REV:00 SPL. TOOL HOLDER WITHOUT CARBIDE BIT DRG.NO.-R2159-0024 REV.-01 NOTE- 1 ST CONSISTS OF QTY OF ITEMS AS PER DRG. AND IN ADDITION SPARES (PRESSURE PLATES & SCREWS EACH TYPE AS PER DRG) QTY 10 NOS. EACH	ST	04	Quoted (Inclusive of GST and Freight & Insurance)	18%

Signature of the authorized representative of

Place :
 Date :

Bidder's Name :
 Designation :
 Company Seal :

SUBJECT	BID SPECIFIC ATC - 20232281
----------------	------------------------------------

ANNEXURE-II

CONTACT DETAILS OF BIDDER

Work Address	
Correspondence Address	
PAN NO.	
GST No.	
Details of contact person for clarification regarding bid:	
Contact Person Name	
Designation	
email ID	
Mobile No.	
Landline No.	

Signature of the authorized representative of

Place :
Date :

Bidder's Name :
Designation :
Company Seal :

Self-certification as per Government Public procurement order no. P-45021/2/2017-BE-II dt.15.06.2017 & P-45021/2/2017-PP(BE-II) dated 28.05.2018,29.5.2019 & 04.6.2020, it is hereby certifying that we

.....
(supplier name) are(Class-I/Class-II) local supplier and will meet the requirement of minimum local content of (50%/20%) as defined in public procurement order dated 04.6.2020 for material against Enquiry no.

..... Details of location at which local value addition will be made is as follows: -

.....
We also understand, false declarations will be in breach of the code of integrity under Rule 175(1) (i) (h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the general financial rules along with such other actions as may be permissible under law. Seal & Signature of Supplier

Seal & Signature of Supplier

SCHEDULE OF COMMERCIAL DEVIATION

The following are the deviations/ variations exception from the General Terms and Conditions:

Sl. No.	Clause No. of Terms and Conditions	Statement of Deviation
	Nil Deviation	Nil Deviation

In case, this schedule is not submitted, it will be presumed that the equipment/ material to be supplied under this contract is deemed to be in compliance with the latest General Terms and Conditions of GeM & Bid specific ATC.

If there is **Nil Deviation**, even then the format to be filled as **Nil Deviation**.

Note:

1. Continuation sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.
2. Deviation mentioned in this schedule shall only be considered.

Signature of the authorized representative of

Place :
Date :

Bidder's Name :
Designation :
Company Seal :

SCHEDULE OF TECHNICAL DEVIATION

The following are the deviations/ variations exception from the Technical Specifications:

Sl. No.	Clause No. of Technical Specifications	Statement of Deviation
	Nil Deviation	Nil Deviation

In case, this schedule is not submitted, it will be presumed that the equipment/ material to be supplied under this contract is deemed to be in compliance with the Technical Specifications.

If there is **Nil Deviation**, even then the format to be filled as **Nil Deviation**.

Note:

- Continuation sheets of like size and format may be used as per the Bidder's Requirement and shall be annexed to this schedule.
- Deviation mentioned in this schedule shall only be considered.

Signature of the authorized representative of

Place :

Date :

Bidder's Name :

Designation :

Company Seal :

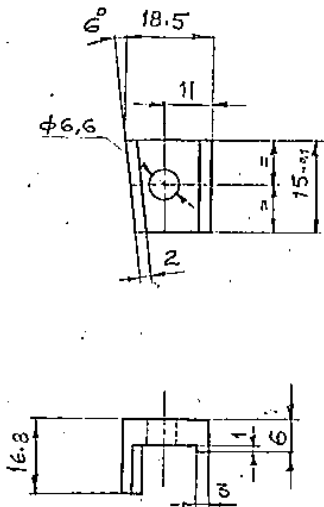
Indent No 20232281		
01.00	PRE QUALIFYING CONDITIONS	REQUIRED
01.01	<p>a). Only those vendors to quote who are Original Equipment Manufacturers of Indexable Tool Holders with matching Carbide insert. (Authorized channel partner/associates of above OEMs may also quote on their behalf. In such case, valid Authorization Certificate issued by OEM on their letter head is to be furnished with the offer)</p> <p>b.) Vendors to provide satisfactory documentary proof w.r.t experience as mentioned in point 01.01.a This is required from all the vendors for qualification of their offer.</p>	Vendor to accept/agree and provide details
01.02	Vendor to provide name, designation and contact details (phone number, email address etc.) of the customer for whom such items at Sl. No 01.01 (a) are supplied.	Vendor to accept/agree and provide details
01.03	BHEL reserves the right to verify the information provided by vendor. In case the information provided by vendor is found to be false/ incorrect, their offers shall be rejected.	Vendor to accept/agree
02.00	TECHNICAL SPECIFICATIONS	REQUIRED
02.01	Vendors to confirm that the items quoted shall be as per BHEL drawing only.	Vendor to confirm


 63/TR
 राजेश कुमार
 अधिकारी (एन.एम.)
 सी.एच.ई.एल.डीए, इंदौर

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED

R2159-0023/002



SHARP EDGES TO BE ROUNDED OFF.

C-40
MATL.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used, copied, or indirectly in anyway detrimental to the interest of the company.

Ref. Dwg. No.

Sign & Date



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DEPT JET	CODE 125	SCALE 1:1	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.
-------------	-------------	--------------	-------------	--------------------	----------

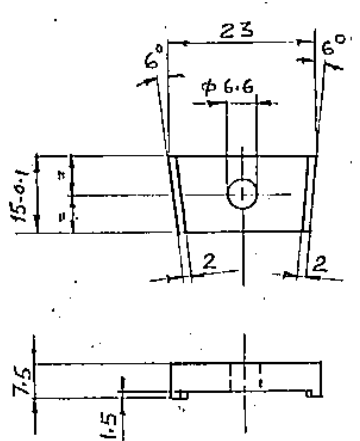
NAME	SIGN.	DATE
DRAWN RPSINGH	<i>[Signature]</i>	12/13/10
CHECKED NUKHAN	<i>[Signature]</i>	
APPROVED		

L.H. CLAMP

Dimensions to be Controlled Within Limits as Shown
Machining Tolerance $\pm .25$ mm Unless Otherwise
Shown. Non Machining Tolerance \pm

CARD CODE	DRAWING NO. R 2159-0023/002
SHEET NO.	NO. OF SHEETS.

2-5322
Inventory No.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)																									
REV	DATE	ALTERED		REV	DATE	ALTERED																			
		CHECKED				CHECKED																			
		R2159-0023/004																							
																									
SHARP EDGES TO BE ROUNDED OFF.																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;"></td> <td style="width: 20%;"></td> <td style="width: 20%; text-align: center;">C-40</td> <td style="width: 20%;"></td> <td style="width: 20%;"></td> </tr> <tr> <td></td> <td></td> <td style="text-align: center;">MATL.</td> <td></td> <td></td> </tr> </table>												C-40					MATL.								
		C-40																							
		MATL.																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; text-align: center;">Sign & Date</td> <td style="width: 10%; text-align: center;">DEPT</td> <td style="width: 10%; text-align: center;">CODE</td> <td style="width: 10%; text-align: center;">SCALE</td> <td style="width: 10%; text-align: center;">WEIGHT (KG)</td> <td style="width: 10%; text-align: center;">REF. TO ASSY. DRG.</td> <td style="width: 10%; text-align: center;">ITEM NO.</td> </tr> <tr> <td></td> <td style="text-align: center;">J&T</td> <td style="text-align: center;">125</td> <td style="text-align: center;">1:1</td> <td></td> <td></td> <td style="text-align: center;">5</td> </tr> </table>										Sign & Date	DEPT	CODE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.		J&T	125	1:1			5		
Sign & Date	DEPT	CODE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM NO.																			
	J&T	125	1:1			5																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"></td> <td style="width: 10%; text-align: center;">NAME</td> <td style="width: 10%; text-align: center;">SIGN.</td> <td style="width: 10%; text-align: center;">DATE</td> </tr> <tr> <td style="text-align: center;">DRAWN</td> <td style="text-align: center;">RPSINGH</td> <td style="text-align: center;">[Signature]</td> <td></td> </tr> <tr> <td style="text-align: center;">CHECKED</td> <td style="text-align: center;">MURPHYAN</td> <td style="text-align: center;">[Signature]</td> <td></td> </tr> <tr> <td style="text-align: center;">APPROVED</td> <td></td> <td></td> <td></td> </tr> </table>											NAME	SIGN.	DATE	DRAWN	RPSINGH	[Signature]		CHECKED	MURPHYAN	[Signature]		APPROVED			
	NAME	SIGN.	DATE																						
DRAWN	RPSINGH	[Signature]																							
CHECKED	MURPHYAN	[Signature]																							
APPROVED																									
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 10%; text-align: center;">DRAWING NO.</td> </tr> <tr> <td style="text-align: center;">CLAMP</td> <td style="text-align: center;">R2159-0023/004</td> </tr> <tr> <td style="text-align: center;">SHEET NO.</td> <td style="text-align: center;">NO. OF SHEETS.</td> </tr> </table>											DRAWING NO.	CLAMP	R2159-0023/004	SHEET NO.	NO. OF SHEETS.										
	DRAWING NO.																								
CLAMP	R2159-0023/004																								
SHEET NO.	NO. OF SHEETS.																								
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;"></td> <td style="width: 10%; text-align: center;">DIMS. TO BE CONTROLLED WITHIN LIMITS AS SHOWN</td> </tr> <tr> <td style="text-align: center;">Machining Tolerance ± 25 mm Unless Otherwise Shown. Non Machining Tolerance ±</td> <td style="text-align: center;">CARD CODE</td> </tr> </table>											DIMS. TO BE CONTROLLED WITHIN LIMITS AS SHOWN	Machining Tolerance ± 25 mm Unless Otherwise Shown. Non Machining Tolerance ±	CARD CODE												
	DIMS. TO BE CONTROLLED WITHIN LIMITS AS SHOWN																								
Machining Tolerance ± 25 mm Unless Otherwise Shown. Non Machining Tolerance ±	CARD CODE																								

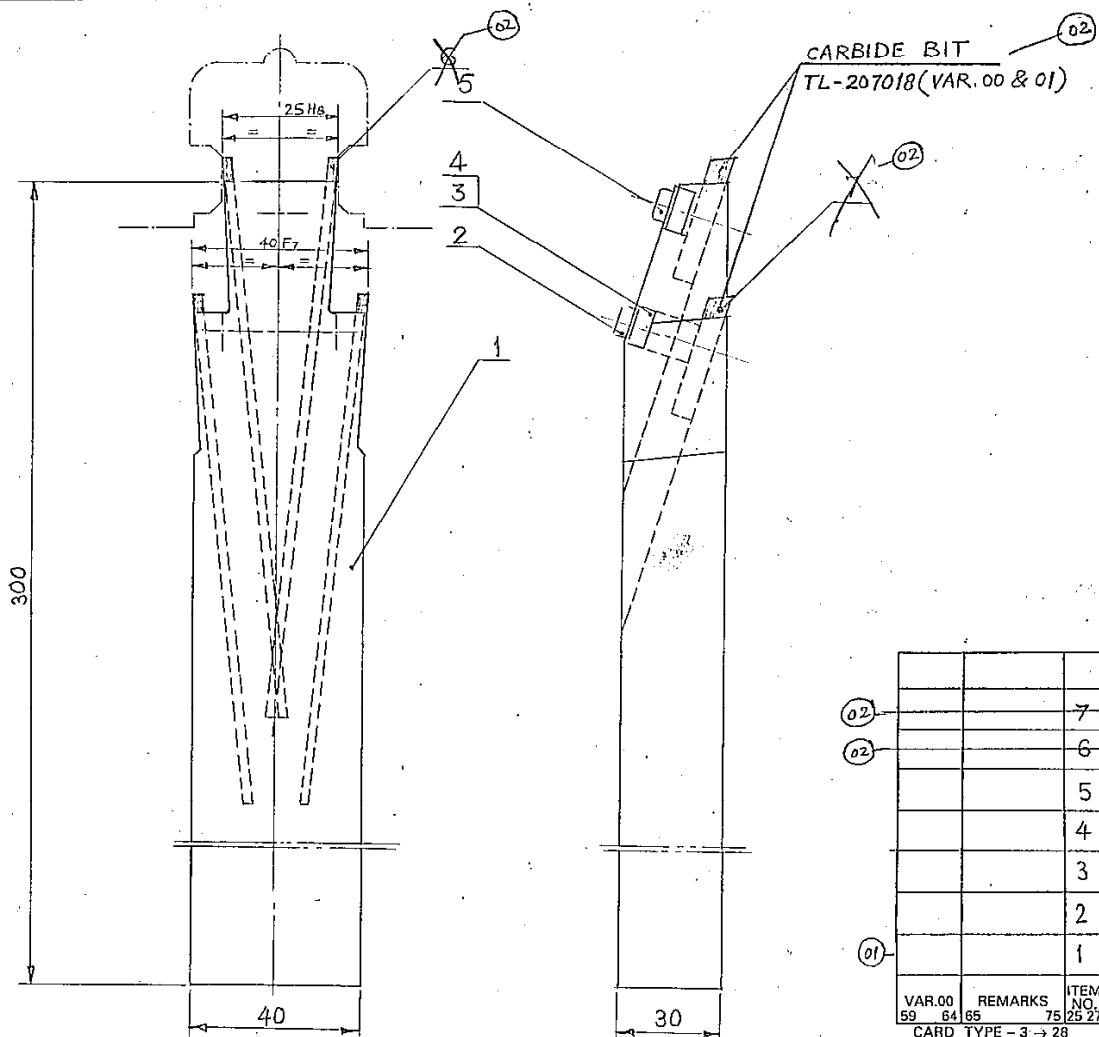
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

Inventory No. 2-5322

FIRST ANGLE PROJECTION (ALL DIMENSIONS IN mm)

FORM DG 44(B)

DRAWING NO. R2159-0023



RETRACED FROM ORIGINAL
19.12.14

◇ MARK
R2159-0023
25 H8/40F-7
6661150

COPYRIGHT AND CONFIDENTIAL THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

INVENTORY NO. 215322
SIGN & DATE REF. DRG. NO.

02	7	L.H. TOOL	R2159-0023/00E	CARBIDE K-10	2
02	6	R.H. TOOL	R2159-0023/005	CARBIDE K-10	2
	5	CLAMP	R2159-0023/001	C-40	2
	4	R.H. CLAMP	R2159-0023/003	C-40	1
	3	L.H. CLAMP	R2159-0023/002	C-40	1
	2	ALLEN SCREW M 6 X 20	63-8902-103	4-D	3
01	1	TOOL HOLDER	R2159-0023/001	C-40	1

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	MATERIAL CODE	UNIT WEIGHT
59	64	65	75	25	27	29
58	59	60	58	59	60	77
CARD TYPE - 3 → 28			28 → CARD TYPE - 1			28 → CARD TYPE - 2
GMS NO. / GR. SP. NO.		TYPE OF PRODUCT		COMP. DRG. NO.		M/C TOOL TRANS.
AGREED DEPT. NAME SIGN DATE		200 MW K.W.U. 129 MW (KAYAM KULAM)		S-10204330527 (S)		157
STT (MANCHAND)		Sd 20.3.77		DESIGN OR DER NO. S.T. 240106		MODEL NO. V-BORING M/C
GRADE OF UNTOL. DIM. :-		M / CG - C / M / F AA 0230208		BHRAT HEAVY ELECTRICALS LTD. HARDWAR		DRN
WELDING-A/B/C/D-AA 0621104		GAS CUTTING-T3' AA 0621101		REV. DATE ALTERED CHECKED		CHD N.U.KHAN Sd 23.7.77
REV. DATE ALTERED CHECKED		REV. DATE ALTERED CHECKED		DEPT. J.T.E. CODE 209		APD S.K. Gupta Sd 23.7.77
ZONE		REV. NOS. DOCU. NO. SIGN DATE		TITLE SPL. TOOL HOLDER WITH CARBIDE BIT FORMING WIDTH OF BLADE GROOVES (K.W.U. TURBINE)		REF. TO ASSY. DRG. ITEM NO. NO. OF ITEM
		02 5 JTE/st-04/050 mjs 23.04		DRAWING NO. R2159-0023		3 SHEET NO. 01 NO. OF SHEET 01

REVISION NO.
02 | 03 | 04 | 05 | 06

SIZE A2

SIZE: NO. OF SHEET: **R2159-0024**

DRAWING NO. **R2159-0024**

NON MACHINING TOLERANCE: DIMENSIONS TO BE CONTROLLED WITHIN LIMITS AS SHOWN, MACHINING TOLERANCE: 0.25 mm UNLESS OTHERWISE SHOWN.

APPROVED: **(Signature)**

CHECKED: **(Signature)**

DATE: **05/12/2018**

DOCU NO. **05**

REV. DATE: **05/12/2018**

REV. DATE: **05/12/2018**

REV. DATE: **05/12/2018**

TITLE: **SPECIAL TOOL HOLDER WITH CRIBBLE BITS FOR MACHINING NECK OF BLADE T-GROOVE (KNU MACHINING)**

DEPT. CODE: **11**

SCALE: **1:1**

WEIGHT (KG): **11**

MATERIAL: **HARDWARE**

BHARAT HEAVY ELECTRICALS LIMITED

DESIGN OFFICER: **MR. T. JAYANATHAN**

COMP. DSG. NO.: **WC-2-12-234**

REF. DSG. NO.: **ST-23000**

TYPE OF PRODUCT: **SPARE PARTS**

STATUS: **FOR DRAWING**

APPROVED: **(Signature)**

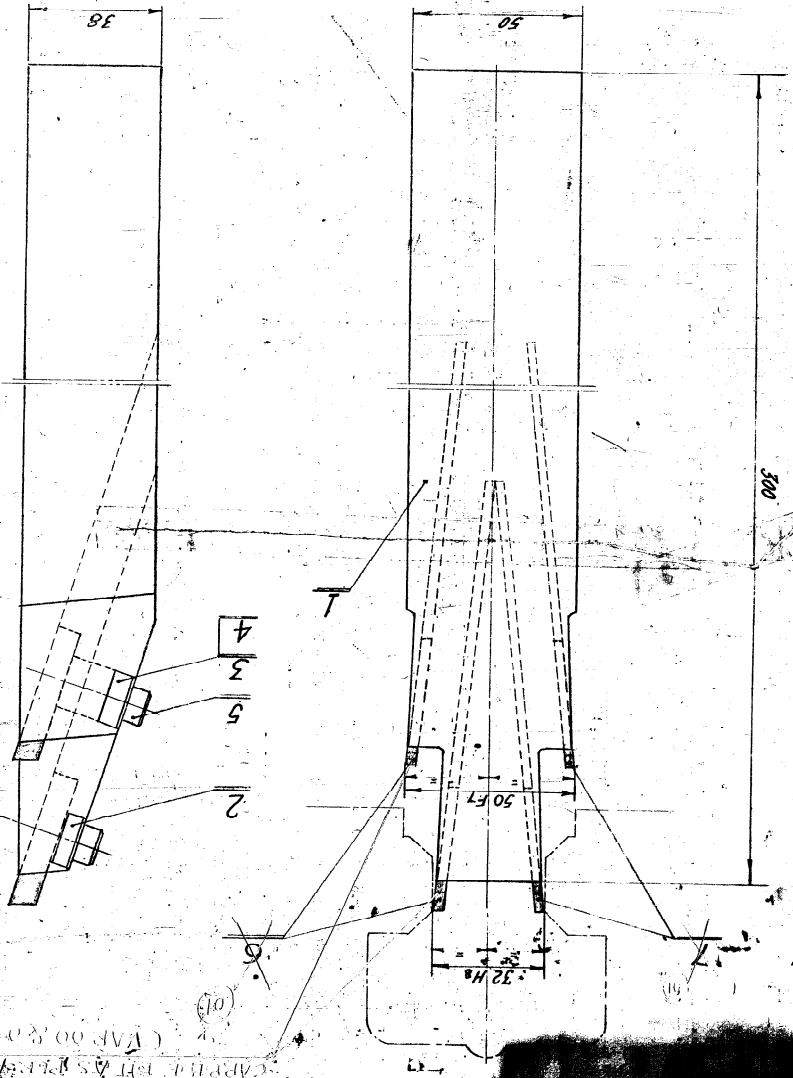
DATE: **05/12/2018**

NAME: **T. JAYANATHAN**

MANCHANDA: **(Signature)**

CARD TYPE 1		CARD TYPE 2	
ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
1	BODY	1	BODY
2	PRESSURE PLATE	2	PRESSURE PLATE
3	PRESSURE PLATE	3	PRESSURE PLATE
4	PRESSURE PLATE	4	PRESSURE PLATE
5	16x20 STEEL	5	16x20 STEEL
6	CRIBBLE BIT	6	CRIBBLE BIT
7	CRIBBLE BIT	7	CRIBBLE BIT

MARK
R2159-0024
32H8 E 50F7
6661160



CARRY OVER FROM PREVIOUS DRAWING (VAR 00.001)

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

R2159-0024

WARRANTY NO. **510**

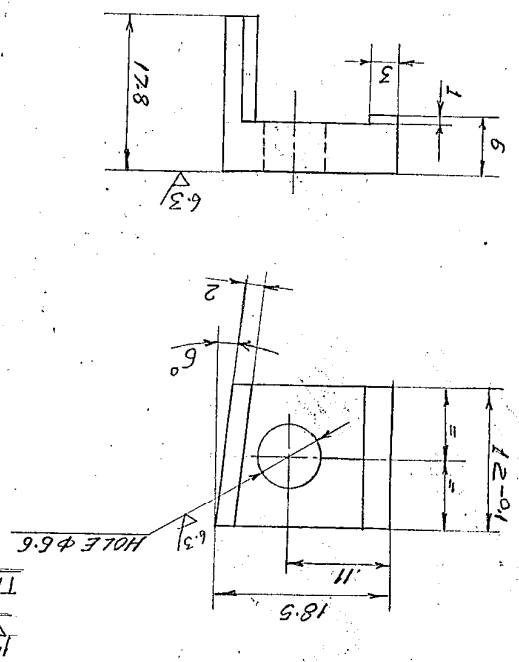
SIGNATURE DATE

REF. DSG. NO.

THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED, CHENNAI, INDIA. NO PART OF THIS DRAWING IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM THE COMPANY.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)		R2159-0041/002	
REV. DATE	ALTERED	REV. DATE	ALTERED
CHECKED	CHECKED	CHECKED	CHECKED
R2159-0041/002			
<p style="font-size: small;">The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.</p>			
Ref Dwg. No		DG-39 BHARAT HEAVY ELECTRICALS LTD. RANIPUR - HARDWAR.	
Sign & Date		DEPT. CODE 125 SCALE 2:1 WEIGHT (Kg) - REF. TO ASSY. DRG. R2159-0041 ITEM NO. 3	
Inventory No.		R.H. CLMP DRAWN P.D. Khosla CHECKED B.V.L. APPROVED DRAWING NO. R2159-0041/002 SHEET NO. NO. OF SHEETS.	
Dimensions to be Controlled Within Limits as Shown		Machining Tolerance \pm 25 mm Unless Otherwise Shown. Non Machining Tolerance \pm	
SIZE A4			

C-40
MNTL. CODE
MNTL. SPECN

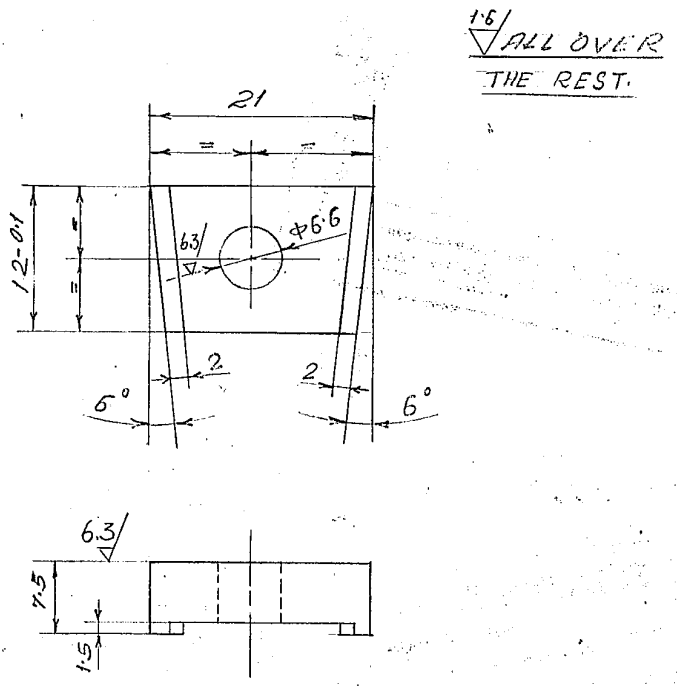


FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED

R2159-0047/003



C-40
MTRL. CODE
MTRL. SPECN.



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DEPT TLX	CODE 125	SCALE 2:1	WEIGHT (KG) -	REF. TO ASSY. DRG. R2159-0047	ITEM NO. 4
-------------	-------------	--------------	------------------	----------------------------------	---------------

2-7551
Inventory No.

CLAMP

NAME	SIGN.	DATE
DRAWN P.D. Khosla	[Signature]	
CHECKED B. n. jee	[Signature]	15.2.82
APPROVED		

Dimensions to be Controlled Within Limits as Shown Machining Tolerance \pm .25 mm Unless Otherwise Shown. Non Machining Tolerance \pm	CARD CODE	DRAWING NO. R2159-0047/003
	SHEET NO.	NO. OF SHEETS.

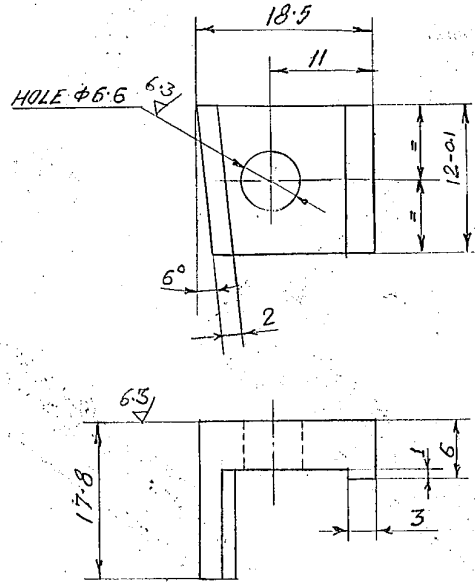
FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED

R2159-0047/006

16/ ALL OVER
THE REST



SHARP EDGES TO BE ROUNDED OFF

C-40

MATL. CODE
MATL. SPECN.

Ref. Drg. No.

Sign & Date



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR.

DEPT TZX	CODE 125		SCALE 2:1	WEIGHT (KG) -	REF. TO ASSY. DRG.	ITEM NO. 7	
<u>L.H. CLAMP</u>				NAME	SIGN.	DATE	
				DRAWN	P.D. Khosla		
				CHECKED	Banerjee		
				APPROVED			

2-7551 Inventory No.

Dimensions to be Controlled Within Limits as Shown
Machining Tolerance \pm .25 mm Unless Otherwise
Shown. Non Machining Tolerance \pm

CARD CODE	DRAWING NO. R2159-0047/006
SHEET NO.	NO. OF SHEETS.

INVENTORY NO.
27551

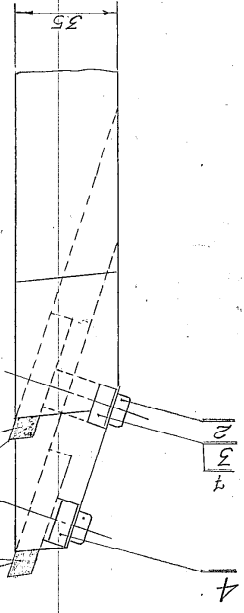
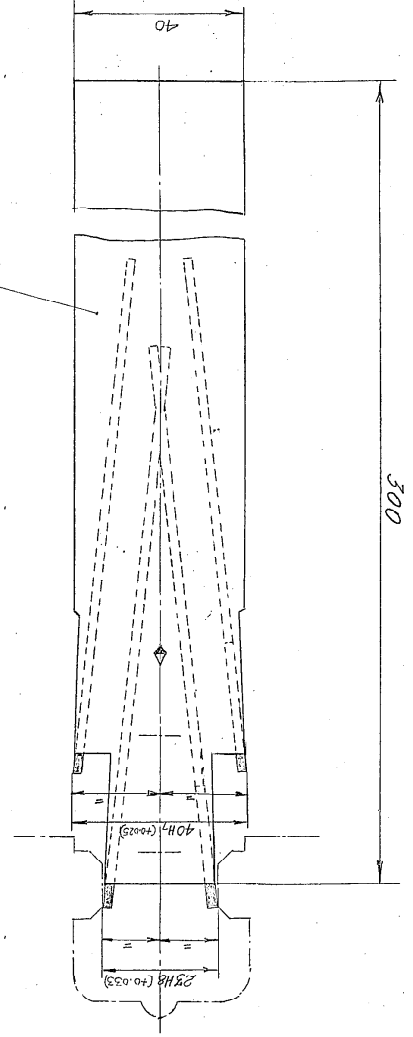
SIGN & DATE

REV. DRG. NO.

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IF IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

DRAWING NO.
R2159-0047

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)



VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)	CARD TYPE-1	CARD TYPE-2	CARD TYPE-3
1		1	SHANK	R2159-0047/001	1				
2		2	MLEN SCREW M6x20	53-8902-103	4				
3		3	CLAMP (L.H.)	R2159-0047/002	1				
4		4	CLAMP	R2159-0047/003	1				
5		5	CARBIDE BIT (R.H.)	R2159-0047/004	2				
6		6	CARBIDE BIT (L.H.)	R2159-0047/005	2				
7		7	CLAMP (P.H.)	R2159-0047/006	1				

MARK
R2159-0047
23HE/40H
GROOVE NO-6661152/57

GROOVE DRG. No 6661152/57

CARBIDE BIT AS PER 7L-207018 (VAR.00 & 01)

REV. DATE	ALTERED	CHECKED	DATE	REV. DATE	ALTERED	CHECKED	DATE
REV. DATE	ALTERED	CHECKED	DATE	REV. DATE	ALTERED	CHECKED	DATE
REV. DATE	ALTERED	CHECKED	DATE	REV. DATE	ALTERED	CHECKED	DATE

NAME	DATE	SIGN	NAME	DATE	SIGN
NAME	DATE	SIGN	NAME	DATE	SIGN

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	UNIT	UNIT WT. (KG)
--------	---------	----------	-------------	-------------	------	---------------

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)
Form DG-3

REV		DATE		ALTERED		CHECKED		R2159-0054/003	
REV		DATE		ALTERED		CHECKED		GMS NO./GR. SP. NO.	
STATU OF DRK		SIGN		NAME		DEPT.		AGREED	

1.6/ALLOVER

SHARP EDGES TO BE ROUNDED OFF.

REMARKS		ITEM NO.		DESCRIPTION		STD		VAR.		MATERIAL SPECN		UNIT WEIGHT	

CARD TYPE-3		CARD TYPE-1		CARD TYPE-2	

BHARAT HEAVY ELECTRICALS LTD.
HARDWAR

DRN.		NAME		SIGN		DATE		NO. OF VAR.	

DEPT.		GRADE OF		SCALE		WEIGHT (KG)		REF. TO ASSY DRG.	

CODE		C/M/F		N.T.S.	

TITLE		CARD CODE		DRAWING NO.		SHEET NO.		NO. OF SHEETS.	

CLAMP

Inventory No. 2-8230

Sign & Date

Ref. Drg. No.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)
Form DG-2

REV	DATE	ALTERED	REV	DATE	ALTERED	R2159-0054/006
STATU OF DRI	CHECKED	DATE	CHECKED	DATE	ALTERED	
GMS NO./GR. SP. NO.			AGREED			
NAME			DEPT.			
DATE			SIGN			

1.6 **ALLOWER**

SHARP EDGES TO BE ROUNDED OFF.

65	REMARKS	ITEM NO.	DESCRIPTION	UNIT WEIGHT	71
			EN-24		

28	27	26	25	24	23
CARD TYPE-3	CARD TYPE-1	CARD TYPE-2	VAR. A	MATERIAL SPECN	55 56 57 66

BHARAT HEAVY ELECTRICALS LTD.
HARDWAR

DRN.	NAME	SIGN	DATE	NO. OF VAR.

DEPT.	TLX	GRADE OF UNTOOLDIM.	C/M/F	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO. OF ITEMS

DEPT.	CODE	TITLE

NO. OF SHEETS.	SHEET NO.	NO. OF SHEETS.

2-81536
Inventory No.

2-81536
Sign & Date

Ref. Drg. No.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

R.H. SUPPORT
CARD CODE
R2159-0054/006
DRAWING NO.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)
Form DG-39

REV	DATE	ALTERED	DATE	REV	DATE	ALTERED	DATE
AGREED				AGREED			
NAME		NAME		SIGN		DATE	
DEPT.		DEPT.		SIGN		DATE	
GMS NO./GR. SP. NO.				R2159-0054/009			
CHECKED				R2159-0054/009			
ALTERED				R2159-0054/009			
STATUS OF DRG.				1-6/ ALLOWH			

SHARP EDGES TO BE ROUNDED OFF

REMARKS	ITEM NO.	DESCRIPTION	STD	VAR.	MATERIAL SPECN	UNIT WEIGHT
	29					
	31					
	34					
	45					
	54					
	55					
	56					

CARD TYPE-3	CARD TYPE-1	CARD TYPE-2
28 →	← 28	← 28
65	59	54
75	82	55
25	33	56
27	46	66

DEPT.	GRADE OF	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.
UNTO DIM.	C/M/F	N.T.S.			
TITLE	CODE	REV.	DRAWING NO.	SHEET NO.	NO. OF SHEETS.
L.H. SUPPORT	125	12	R2159-0054/009	7	24
DEPT.	UNTO DIM.	C/M/F	N.T.S.	WEIGHT (KG)	REF. TO ASSY DRG.

BHARAT HEAVY ELECTRICALS LTD.
HARDWAR

DRN.	NAME	SIGN	DATE	NO. OF	VAR.
CHD.	CHD.	CHD.	CHD.	CHD.	CHD.

2-8536
Inventory No.

Sign & Date

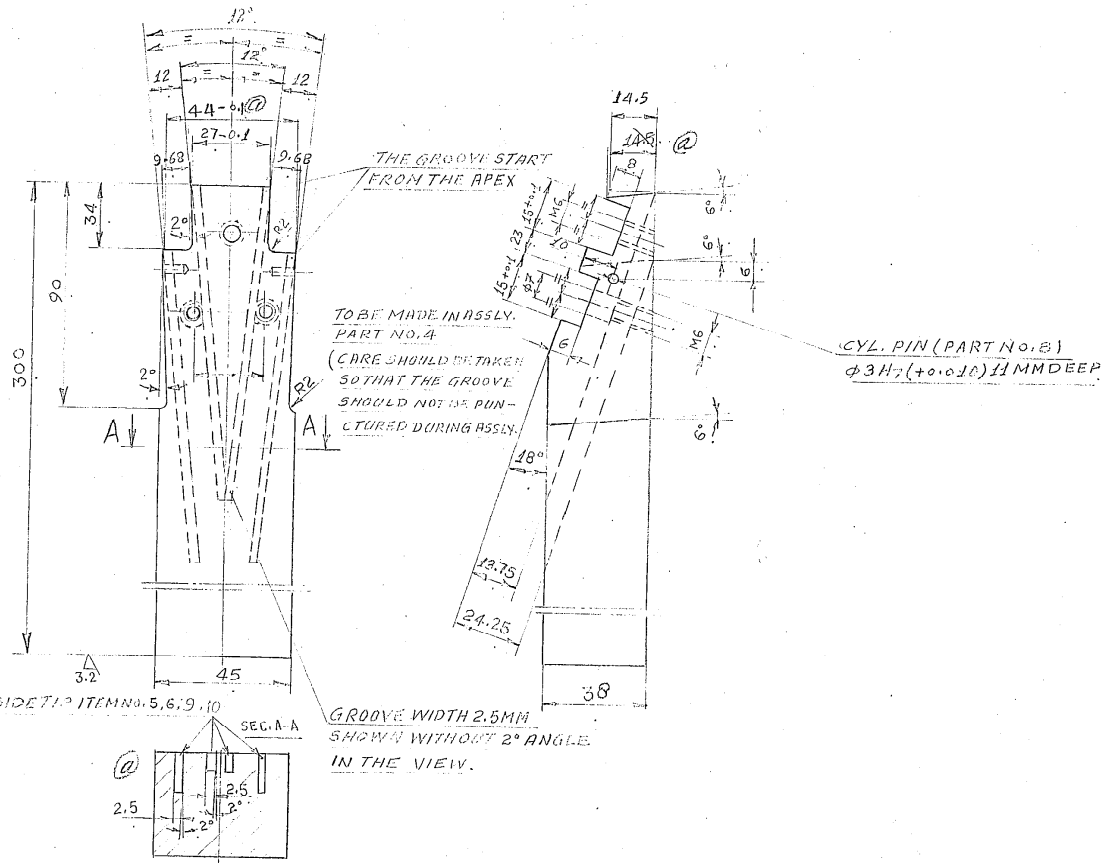
Ref. Drg. No.

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

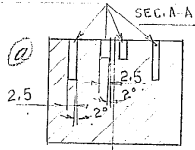
DRAWING NUMBER
R2159-0055/001

1.6 / THE BEST



SIZE 2.5 H7 (+0.010) TO SUIT CARBIDE TIP ITEM NO. 5, 6, 9, 10 FOR SLIDE FITTING.

GROOVE WIDTH 2.5MM SHOWN WITHOUT 2° ANGLE IN THE VIEW.



SHARP EDGES TO BE ROUNDED OFF

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

SIGN & DATE
REF. DRG. NO.
INVENTORY NO.

VAR.00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	MATERIAL CODE	UNIT WT. (Kg)
59		75		20	45	77
58		27		31	56	57
57		29		32	58	59
56		28		33	59	60
55		27		34	60	61
54		26		35	61	62
53		25		36	62	63
52		24		37	63	64
51		23		38	64	65
50		22		39	65	66
49		21		40	66	67
48		20		41	67	68
47		19		42	68	69
46		18		43	69	70
45		17		44	70	71
44		16		45	71	72
43		15		46	72	73
42		14		47	73	74
41		13		48	74	75
40		12		49	75	76
39		11		50	76	77
38		10		51	77	78
37		9		52	78	79
36		8		53	79	80
35		7		54	80	81
34		6		55	81	82
33		5		56	82	83
32		4		57	83	84
31		3		58	84	85
30		2		59	85	86
29		1		60	86	87
28		0		61	87	88
27				62	88	89
26				63	89	90
25				64	90	91
24				65	91	92
23				66	92	93
22				67	93	94
21				68	94	95
20				69	95	96
19				70	96	97
18				71	97	98
17				72	98	99
16				73	99	100
15				74	100	
14				75		
13				76		
12				77		
11				78		
10				79		
9				80		
8				81		
7				82		
6				83		
5				84		
4				85		
3				86		
2				87		
1				88		
0				89		
				90		

BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR

NAME: TIWARI
SIGN: [Signature]
DATE: [Date]
NO. VAR: []

DRN: []
CII: []
APPD: []

SCALE: []
WEIGHT (Kg): []

REF. TO ASSY. DRG. NO.: R2159-0055

DRAWING NO.: R2159-0055/001

SHEET NO.: []
NO. OF SHEETS: []

SIZE A2

REV.	DATE	ALTERED	REV.	DATE	ALTERED
ZONE		CHECKED	ZONE		CHECKED

STATUS OF DRG. []

AGREED DEPT. [] NAME [] SIGN. [] DATE []

DEPT. [] GRADE OF UNTOLED. [] SCALE [] WEIGHT (Kg) []

CODE [] TITLE []

NO CHANGE NO. []

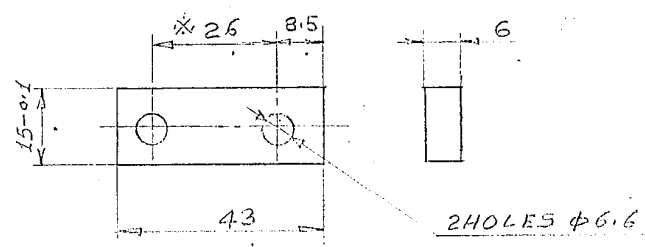
3 JTD/57/85/10A

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) Form DG-39

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED	GMS NO./GR. SP. NO.				STATUS OF DRG.
		CHECKED			CHECKED					
R2159-0055/002						AGRPED DEPT.	NAME	SIGN	DATE	

1.6 / ALLOWER



1. SHARP EDGES TO BE ROUNDED OFF
 2. HOLES TO BE DONE IN ASSY. WITH PART NO. 1
- DRG. NO. R2159-0055/001

Ref. Drg. No.		EN-24	
REMARKS	ITEM NO.	DESCRIPTION	UNIT WEIGHT
65	75 25 27 29	50 59 32 33 46	54 55 56 57 66 71

Sign & Date		NAME		SIGN		DATE		NO. OF VAR.	
DRN.		TIWARI		[Signature]					
CHD.									
APPD.		OMFRAKASH		[Signature]				73 74	

DEPT. JET	GRADE OF UNTOLDIM. C/M/F	SCALE 1:1	WEIGHT (KG)	REF. TO ASSY DRG. R2159-0055	ITEM NO.	NO. OF ITEMS
CODE 125						75 77

Inventory No. 2-9223	TITLE CLAM	CARD CODE	DRAWING NO. R2159-0055/002	REV.

SHEET NO.	NO. OF SHEETS.

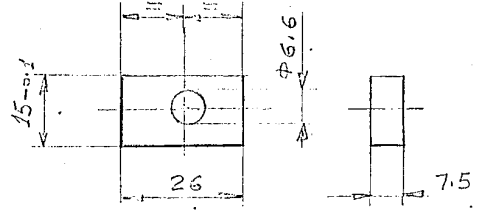
FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) Form DG-39

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED	GMS NO./GR. SP. NO.		STATUS OF DRG.	
		CHECKED			CHECKED	AGREED DEPT.	NAME	SIGN	DATE

R2159-0055/003

1.6 / ALL OVER



SHARP EDGES TO BE ROUNDED OFF

REMARKS		ITEM NO.	DESCRIPTION	EN-24	
65	75	25	27	29	58
59	32	33	46	54	55
56	57	66	71		

SIGN & DATE		DRN.	NAME	SIGN	DATE	NO. OF VAR.
Bharat Heavy Electricals Ltd. HARDWAR		71	Tiwari	Tiwari		
		CHD.				
		APPD.	OmPrakash			73

DEPT. JAT	GRADE OF UNTOLDIM. C/M/F	SCALE 1:1	WEIGHT (KG)	REF. TO ASSY DRG. R2159-0055	ITEM NO.	NO. OF ITEMS
CODE 125						75
TITLE CLAM						77

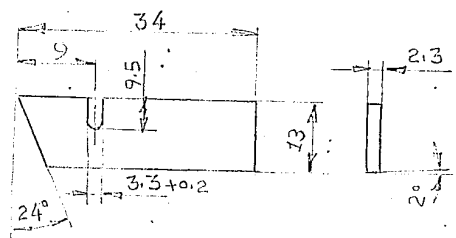
CARD CODE	DRAWING NO. R2159-0055/003	REV.
7		22
SHEET NO.	NO. OF SHEETS.	
	22	23

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) Form DG-39

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED	GMS NO./GR. SP. NO.	STATUS OF DRG.
		CHECKED			CHECKED		
R2159-0055/006						AGREED DEPT.	NAME
						SIGN	DATE

16/ ✓ ALLOVER



SHARP EDGES TO BE ROUNDED OFF

REMARKS		ITEM NO.	DESCRIPTION	20	31	MATERIAL CODE	45	A	UNIT WEIGHT
65		75 25 27 29		58	59	32 33 34 36	54	55 56 57	66 71
CARD TYPE-3		28	CARD TYPE-1	20	CARD TYPE-2				

EN-24

BHARAT HEAVY ELECTRICALS LTD. HARDWAR	DRN.	NAME	SIGN	DATE	NO. OF VAR.
	CHD.	TIWARI	[Signature]		
	APPD.	[Signature]			

DEPT.	GRADE OF UNTOOLDIM.	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.	NO. OF ITEMS
JET	C/M/F	NTS		R2159-0055		

INVENTORY NO.	TITLE	CARD CODE	DRAWING NO.	REV.
125	R. H. SUPPORT		R2159-0055/006	

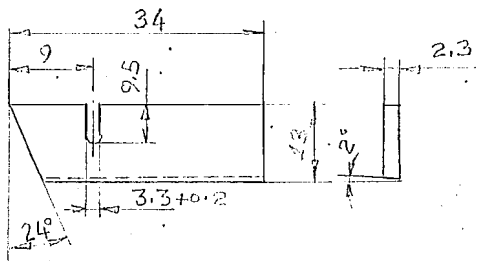
SHEET NO.	NO. OF SHEETS.

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) Form DG-39

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED. It must not be used directly or indirectly in anyway detrimental to the interest of the company.

REV	DATE	ALTERED	REV	DATE	ALTERED	GMS NO./GR. SP. NO.	STATUS OF DRG.
		CHECKED			CHECKED		
R2159-0055/009						AGREED DEP. F.	NAME
						SIGN	DATE

1.6 / ALL OVER



SHARP EDGES TO BE ROUNDED OFF

REMARKS	ITEM NO.	DESCRIPTION	STD	20	31	MATERIAL CODE	45	A	UNIT WEIGHT
65	75	25	27	29	50	59	32	33	46
CARD TYPE-3		28	→	28	CARD TYPE-1	→	20	CARD TYPE-2	

BHARAT HEAVY ELECTRICALS LTD. HARDWAR	DRN.	NAME	SIGN	DATE	NO. OF VAR.
	CHD.	TIWARI	JC		
	APPD.	OMPRAKASH			73 74

DEPT.	GRADE OF UNTO L.DIM.	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.	NO. OF ITEMS
JAT	C/M/F	NTS		R2159-0055		75 77

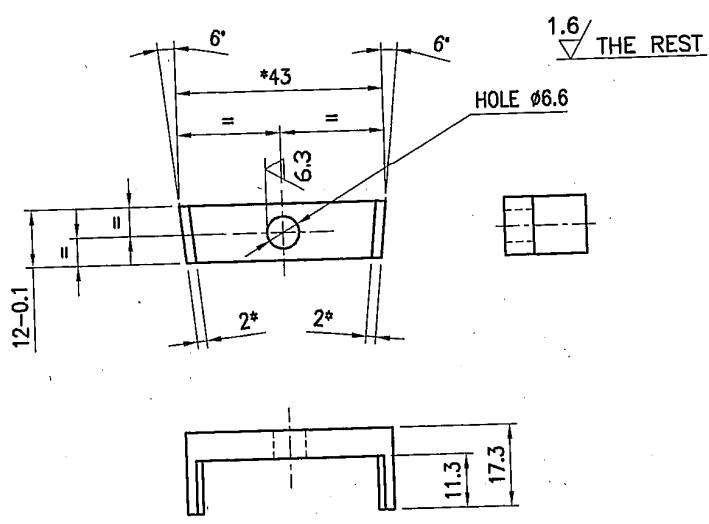
TITLE	CARD CODE	DRAWING NO.	REV.
L.H. SUPPORT		R2159-0055/009	009
		SHEET NO.	NO. OF

2-9723 Inventory No.

प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION सभी विमाएँ मिलीमीटर में हैं। / ALL DIMENSIONS ARE IN mm. फ़ॉर्म 39 (बी)
FORM 39 (B)

संशोधन REV.	दिनांक DATE	परिवर्तन ALTERED BY	संशोधन REV.	दिनांक DATE	परिवर्तन ALTERED BY	सी.बी.ओ.एम./C.B.O.M.	अवस्था का स्तर STATUS OF DRG.
		चक्रवर्ती CHD			चक्रवर्ती CHD		U
		अनुमोदित AGREED DEPTT.	नाम/NAME		हस्ताक्षर SIGN.	दिनांक/DATE	

GRADE OF UNTOL.DIM M/CG.-AA023020B *M/D/M/F* WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101



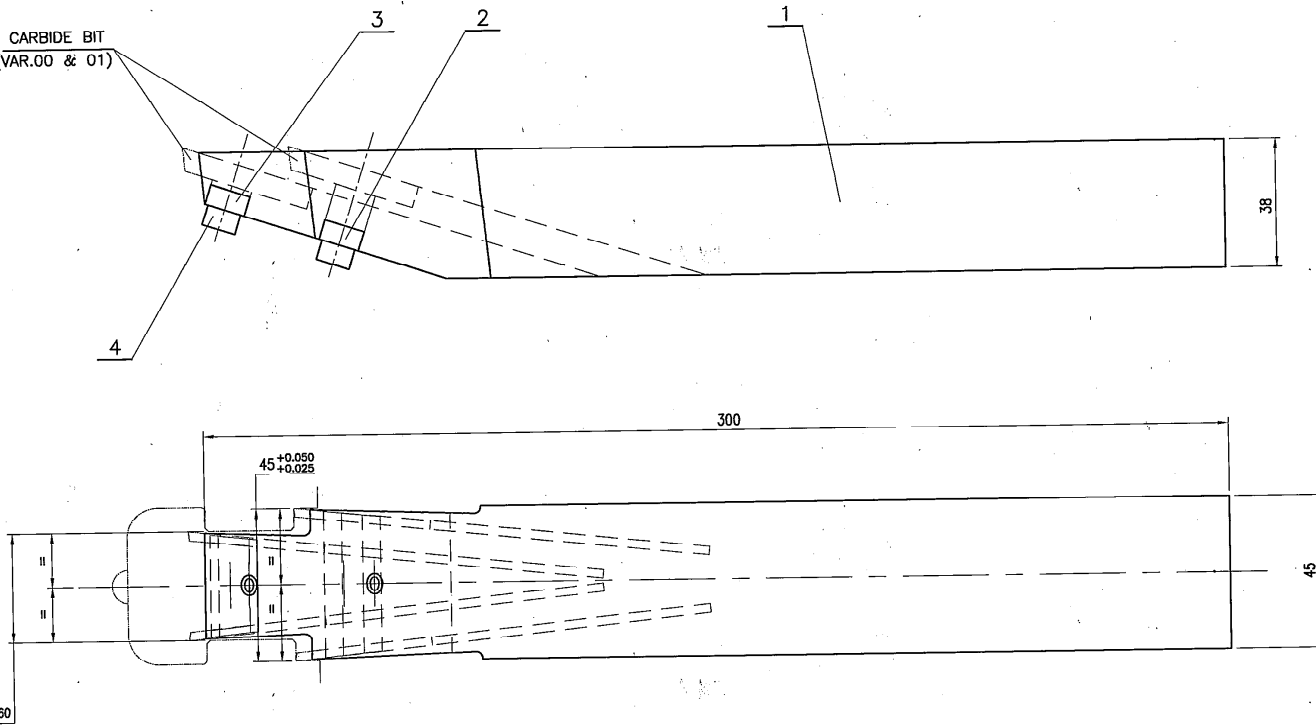
- 1-SHARP EDGES TO BE ROUNDED OFF.
- 2-HARDEN TO HRC 28-32 AS PER P.S. No. 0912-008.
- *3-DIMENSIONS TO MATCH SHANK DRG. No. R2159-0094/001.

COPYRIGHT AND CONFIDENTIAL
THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

संशोधन REV.	दिनांक DATE	परिवर्तन ALTERED BY	संशोधन REV.	दिनांक DATE	परिवर्तन ALTERED BY	सी.बी.ओ.एम./C.B.O.M.	अवस्था का स्तर STATUS OF DRG.
		चक्रवर्ती CHD			चक्रवर्ती CHD		U
		अनुमोदित AGREED DEPTT.	नाम/NAME		हस्ताक्षर SIGN.	दिनांक/DATE	
GRADE OF UNTOL.DIM M/CG.-AA023020B <i>M/D/M/F</i> WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101							
नम क्रमांक ITEM NO.	विवरण DESCRIPTION	अभिकल्प संख्या/DRAWING NO.	वैकल्प संख्या VAR.	सामग्री कूट/MAT.CODE	सामग्री वि/MAT. SPECN.	भार कि.ग्रा. UNIT WEIGHT	मात्रा /QTY.
				C-40			
				AA 10212			
विभाग DEPTT.	कूट/CODE	अनुपात/SCALE	भार कि.ग्रा. WEIGHT (KG)	असेम्बली अभिकल्प का संदर्भ REFER TO ASSLY. DRG.	नम क्रमांक ITEM NO.	मात्रा QTY.	संख्या का संघ No. of Var
हरिद्वार JTE	209	1:1	~0.024	R2159-0094	02	04	
सामग्री संख्या INVENTORY NO.	शीर्षक/TITLE	अभिकल्प संख्या/DRAWING NO.		अभिकल्प संख्या/DRAWING NO.		पृष्ठ संख्या/Sheets No.	
2/6757E	CLAMP	R2159-0094/002		R2159-0094/002		01 / 22 23 2	

R2159-0094

CARBIDE BIT
TL-207018 (VAR.00 & 01)



CONSERVATION IS TO BE DONE AS PER TL-30007.

◇ MARK

R2159-0094

32/45

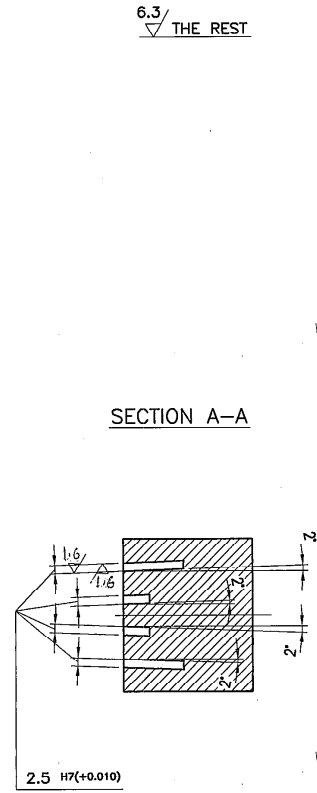
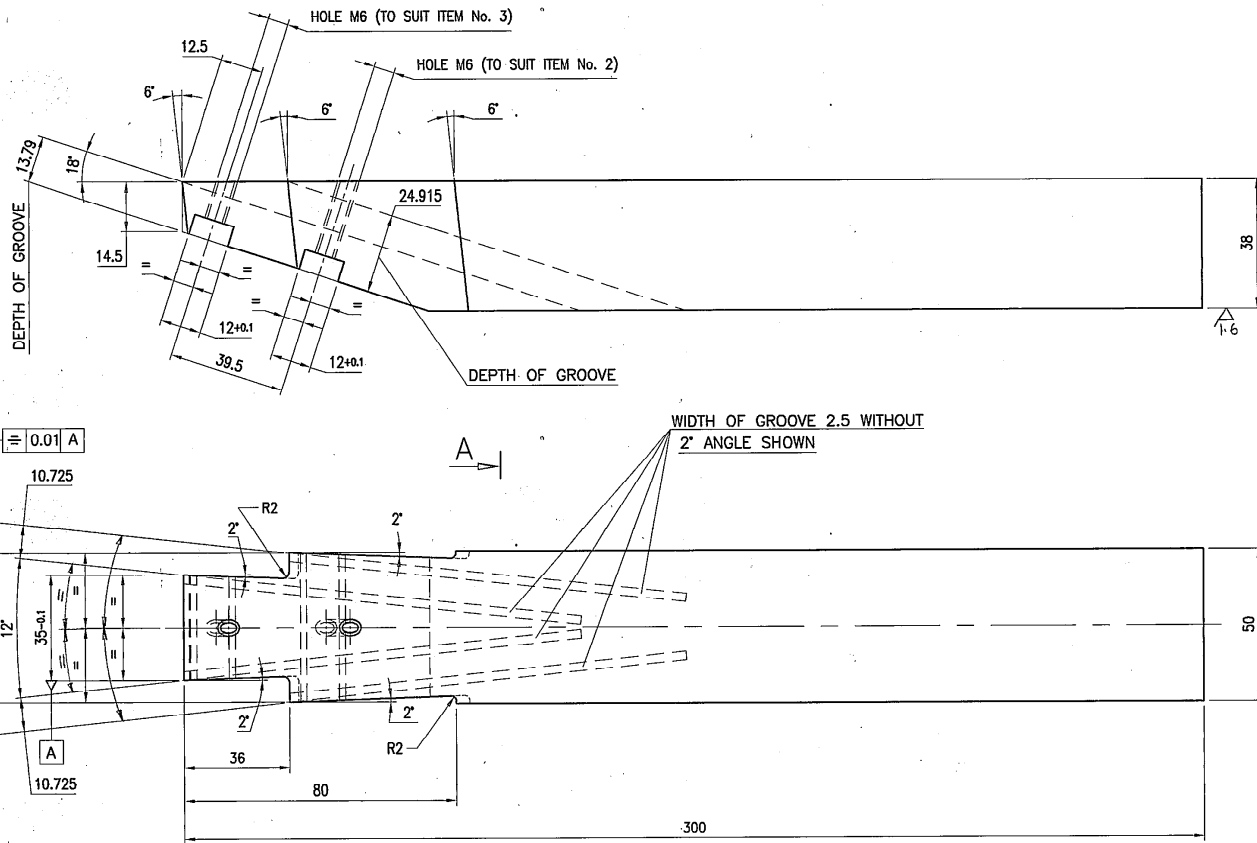
04	SCRU CAP SOC P M6 X 20 - ST	AA 712 31 23 034	STEEL CALSS 12.9 AA 712 31 23	0.006 02						
03	CLAMP	R2159-0094/003	C-40 AA 10212	0.017 01						
02	CLAMP	R2159-0094/002	C-40 AA 10212	0.024 01						
01	SHANK	R2159-0094/001	40Ni6Cr4Mo3 AA 10501	4.0 01						
शीट नं० VAR.00	टिप्पणी REMARKS	सं क्रमांक ITEM NO.	विवरण DESCRIPTION	ड्राइंग नं० DRAWING NO.	शीट नं० VAR.	कच्ची सूट/MAT.CODE RAW/MAT. SPECN.	ए A	ए A	भार कि.ग्रा. UNIT WEIGHT	ए A

सी.बी.ओ.एफ./C.B.O.M.	जत्याद का प्रकार TYPE OF PRODUCT	कम्प्यूट संख्या /COMP.DRG.No. 4-10204-46012 & 014	मशीन टूल संख्या / M/c No. 169	दर्जन संक्र. संख्या / REF.DRG.No. R2159-0055
आपका पता ADDRESS DPTL.	नाम/NAME S.T.T. Y.P.A.	कच्ची संख्या /W/O No. KP250ST3STC0015	मशीन मॉडल संख्या /M/c MODEL No. LATHE	
ग्रेड ऑफ उन्टोल. डिम M/CG.- AA0230208 B/M/F	वर्क/WORK WELDING-CLASS 'B' OF AA0621104	कंपनी का नाम Bharat Heavy Electricals Limited, RANIPUR, HARDWAR	डिजाइनर/SIGN M.P.S. B.K.R.	डिजाइन/DATE 12.02.04
गैस कटिंग-टेबल 3 ऑफ AA0621101	डिजाइन REV. DATE	डिप्टी JTE	अनुपात/SCALE 1:1	भार कि.ग्रा. WEIGHT (KG) ~4.0
शीट नं० REV.	डिप्टी JTE	कूट/कोड 209	शीट नं० REV.	असेम्बली अभिकल्प को संदर्भ REFER TO ASSLY. DRG.
शीट नं०/TITLE 7 TOOL FOR THROAT & NECK WIDTH (4 LEG TOOL) SIZE 32+0.160/45+0.050			शीट नं० REV.	अभिकल्प संख्या /DRAWING NO. R2159-0094
पृष्ठ संख्या/Sheets No. 01			पृष्ठों की संख्या/No. of Sheets	01

COPYRIGHT AND CONFIDENTIAL INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार
R2159-0094

R2159-0097/001



SHARP EDGES TO BE ROUNDED OFF.

वै.सं. संख्या VAR.00	टिप्पणी REMARKS	सं. क्रमांक ITEM NO.	विवरण DESCRIPTION	STD	अधिकृत संख्या/DRAWING NO.	40Ni6Cr4Mo3	AA 10501	भार. कि. मा. UNIT WEIGHT	भार. कि. मा. QTY.
-------------------------	--------------------	-------------------------	----------------------	-----	---------------------------	-------------	----------	-----------------------------	----------------------

सी.बी.ओ./एच./C.B.O.M.	उत्पाद का प्रकार TYPE OF PRODUCT	शुद्धता का स्तर STATUS OF DRG.	उत्पाद का प्रकार TYPE OF PRODUCT
सं. संख्या NO.	नाम/नाम NAME	वर्ग/सोल. GRY/SOL.	दिनांक/DATE
ग्रेड/कॉड M/CG.- AA0230208	वर्ग/सोल. WELDING-CLASS 'B' OF AA0621104	ग्रेड/कॉड GAS CUTTING-TABLE 3 OF AA0621101	दिनांक/DATE

सं. संख्या REV.	दिनांक DATE	अनुमोदित APPROVED BY	सं. संख्या REV.	दिनांक DATE	अनुमोदित APPROVED BY	विभाग DEPT.	वि.सं. संख्या ITEM NO.	अनुपात/SCALE N.T.S.	भा. कि. मा. WEIGHT (KG)	अपेक्षी अधिकृत संख्या REFER TO ASSLY. DRG.	सं. क्रमांक ITEM NO.	कुल संख्या NO. OF SHEETS
2	16/7/20					JIE	209		~4.4	R2159-0097	01	23, 24

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार
BHARAT HEAVY ELECTRICALS LIMITED,
RANIPUR, HARDWAR

शॉक/TITLE
SHANK

सं. संख्या REV.	दिनांक DATE	अनुमोदित APPROVED BY	सं. संख्या REV.	दिनांक DATE	अनुमोदित APPROVED BY
7					

THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

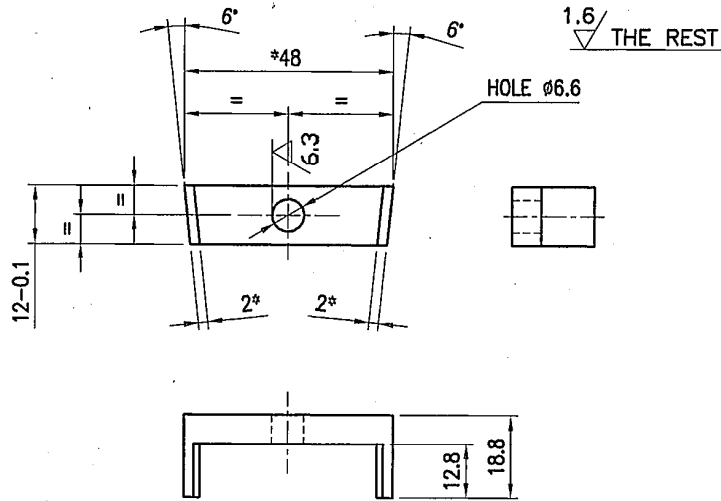
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार
BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR

प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION सभी विमाएँ मिलिमीटर में हैं। / ALL DIMENSIONS ARE IN mm.

फ़ॉर्म डीजी 30 (बी)
FORM 39 (B)

संशोधन REV.	दिनांक DATE	संशोधक/ALTERED BY ज.के.ए. / J.K.A.	संशोधन REV.	दिनांक DATE	संशोधक/ALTERED BY ज.के.ए. / J.K.A.	सी.बी.ओ.एम./C.B.O.M.	अधिकृत का हस्ताक्षर/STATUS OF DRG. U
						सहमत विभाग/AGREED DEPT.	नाम/NAME
						हस्ताक्षर/SIGN.	दिनांक/DATE

GRADE OF UNTOL.DIM M/CG.--AA0230208 *M/D/M/F* WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101



- 1—SHARP EDGES TO BE ROUNDED OFF.
- 2—HARDEN TO HRC 28-32 AS PER P.S. No. 0912-008.
- 3—DIMENSIONS TO MATCH SHANK DRG. No. R2159-0097/001.

संदर्भित अभिकल्प संख्या REFERENCE DRG. NO.	—		—	C-40	—	—
नाम क्रमांक ITEM NO.	विवरण DESCRIPTION	STP	अभिकल्प संख्या/DRAWING NO.	वैकल्प संख्या VAR.	सागरी कूट/MAT.CODE सागरी कि/MAT. SPECN.	भार कि.ग्रा. UNIT WEIGHT मात्रा /QTY.
1876	भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR				नाम/NAME: M.P.S. हस्ताक्षर/SIGN: <i>M.P.S.</i> दिनांक/DATE: 12.02.04 ज.के.ए. / J.K.A.: B.K.R. हस्ताक्षर/SIGN: <i>B.K.R.</i> दिनांक/DATE: 14.02.04	
विभाग DEPT.	जि.के.ए. अभि. JTE	अनुपात/SCALE N.T.S.	भार कि.ग्रा. WEIGHT (KG) ~0.027	असेम्बली अभिकल्प का संदर्भ REFER TO ASSLY. DRG. R2159-0097	नाम क्रमांक ITEM NO. 02	वैकल्प संख्या NO. OF VARS. 04
शीर्षक/TITLE	CLAMP		अभिकल्प संख्या/DRAWING NO. R2159-0097/002	पृष्ठ संख्या/Sheets No. 01	पृष्ठों की संख्या/No. of Sheets 22 23 24	01

COPYRIGHT AND CONFIDENTIAL

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY.

COPYRIGHT AND CONFIDENTIAL

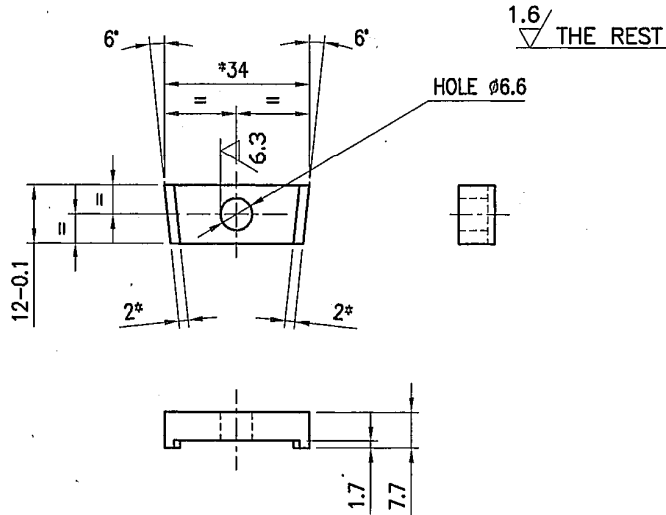
THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY.

प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION सभी विमाएँ मिलिमीटर में हैं। / ALL DIMENSIONS ARE IN mm.

प्रपत्र डीजो 30 (बी)
FORM 39 (B)

संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	सी.बी.ओ.एम./C.B.O.M.	प्रतिस्थापक का नाम STATUS OF DRG.
		जकेल CHKD			जकेल CHKD		U
						हस्ताक्षर AGREED DEPTT.	नाम/NAME
						हस्ताक्षर/ SIGN.	दिनांक/DATE

GRADE OF UNTOL.DIM M/CG.-AA0230208 M/F/M/F WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101



1-SHARP EDGES TO BE ROUNDED OFF.

2-HARDEN TO HRC 28-32 AS PER P.S. No. 0912-008.

3-DIMENSIONS TO MATCH SHANK DRG. No. R2159-0097/001.

संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	सी.बी.ओ.एम./C.B.O.M.	प्रतिस्थापक का नाम STATUS OF DRG.
		जकेल CHKD			जकेल CHKD		U
						हस्ताक्षर AGREED DEPTT.	नाम/NAME
						हस्ताक्षर/ SIGN.	दिनांक/DATE
						हस्ताक्षर/ SIGN.	दिनांक/DATE

नग क्रमांक ITEM NO.	विवरण DESCRIPTION	अभिकल्प संख्या/DRAWING NO.	मैटेरियल कोड/MAT.CODE	भार कि.ग्रा. UNIT WEIGHT

विभाग DEPTT.	निगा एवं दून ऑफिस JTE	अनुपात/SCALE	भार कि.ग्रा. WEIGHT (KG)	असेम्बली अभिकल्प का संदर्भ REFER TO ASSLY. DRG.	नग क्रमांक ITEM NO.	सभी की संख्या NO. OF ITEMS
कूट/CODE	209	N.T.S.	~0.019	R2159-0097	03	04

शोर्षक/TITLE	अभिकल्प संख्या/DRAWING NO.
CLAMP	R2159-0097/003

पृष्ठ संख्या/Sheets No.	कुल पृष्ठों की संख्या/No. of Sheets
01	01

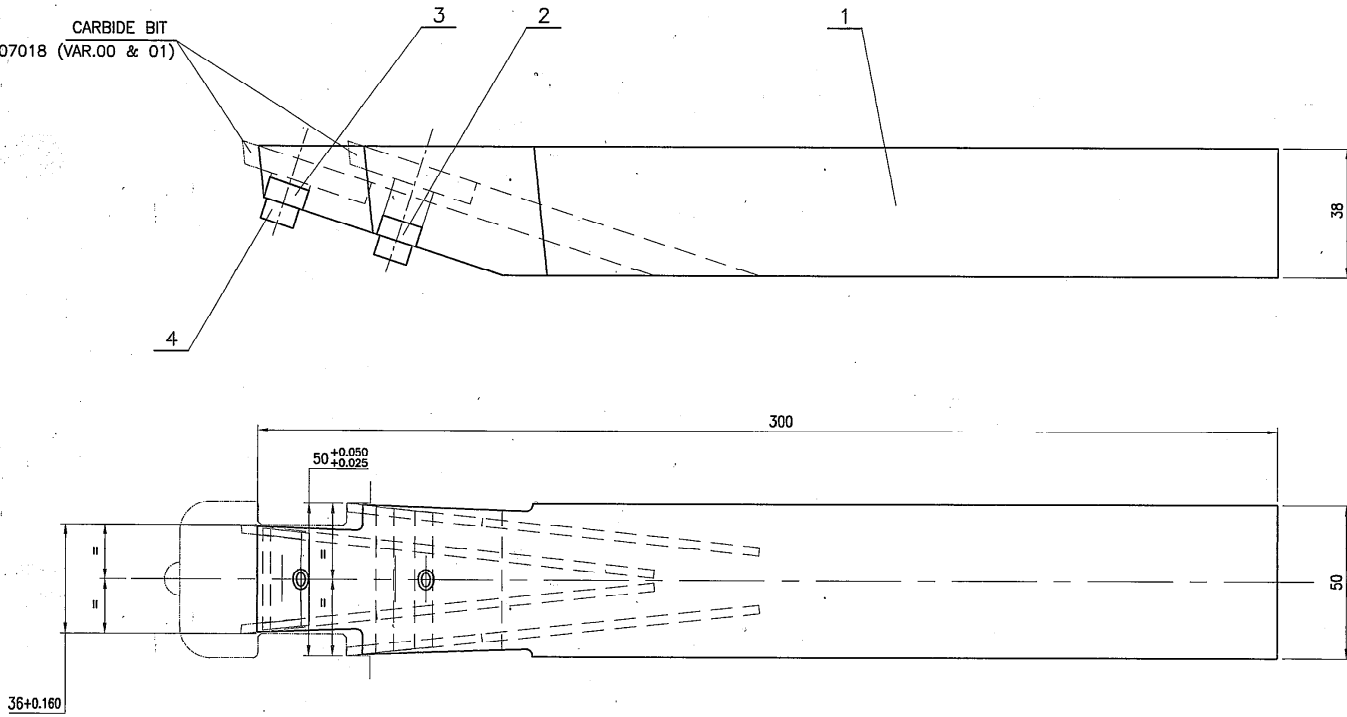
प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION

सभी विमाएँ मिलिमीटर में हैं / ALL DIMENSIONS ARE IN mm.

फॉर्म क्र. 44 (बी) / FORM 44 (B)

L600-651ZR

CARBIDE BIT
TL-207018 (VAR.00 & 01)



CONSERVATION IS TO BE DONE AS PER TL-30007.

◇ MARK
R2159-0097
36/50

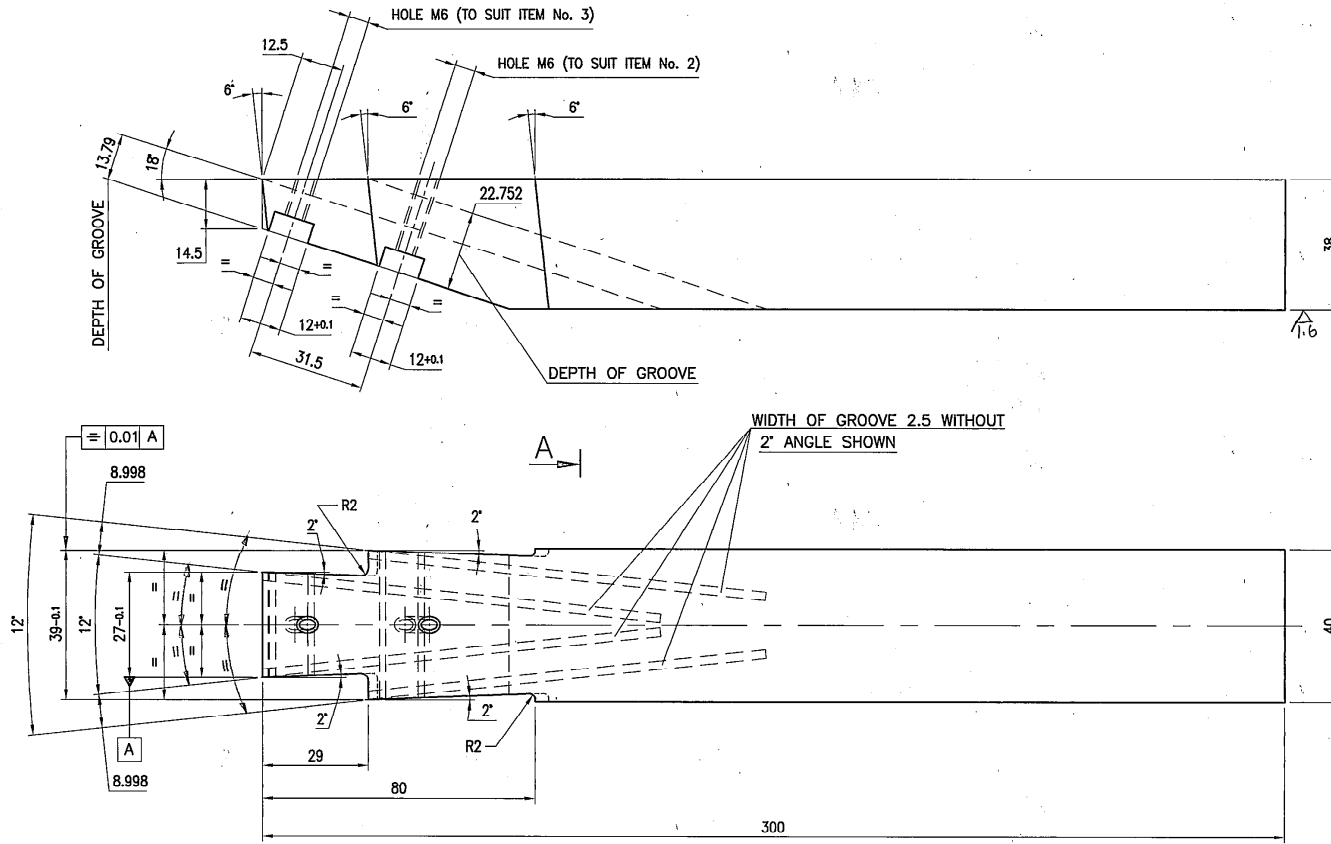
04	SCRU CAP SOC P M6 X 20 - ST	AA 712 31 23 034	STEEL CALSS 12.9	0.006
03	CLAMP	R2159-0097/003	AA 712 31 23 C-40	02 0.019
02	CLAMP	R2159-0097/002	AA 10212 C-40	01 0.027
01	SHANK	R2159-0097/001	40Ni6Cr4Mo3 AA 10501	4.4 01
वैकल्पिक संख्या VAR.00	टिप्पणी REMARKS	भाग क्रमांक ITEM NO.	विवरण DESCRIPTION	उत्प. C/S
			अभिकल्प संख्या/DRAWING NO. VAR.	शीट संख्या SHEET NO.
			सामग्री क्र./MAT.CODE SPECN.	आपूर्तिकर्ता SUPPLIER
				भारत हेवी इलेक्ट्रिकल्स लि. LIMIT WEIGHT
				मात्रा / QTY.

सी.बी.ओ.ए. / C.B.O.M.	उत्पाद का प्रकार TYPE OF PRODUCT	कम्प्यूटर अभि संख्या / COMP.DRG.No. 4-10204-46015	गोपनीय संख्या / M/c No. 169	दर्शन अभि संख्या / REF.DRG.No. R2159-0024
नाम / NAME	250 MW ST	कार्य आदेश संख्या / W/O No. KP250ST3STC0019	मशीन मॉडल संख्या / M/c MODEL No. LATHE	
नाम / NAME	भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR	निर्देशक / INSP.	मशीन / MACHINE	दिनांक / DATE
M/CG. - AA0230208	S.T.I. Y.P.A.	22/1/04	M.P.S.	12-02-04
WELDING-CLASS 'B' OF AA0621104			B.K.R.	14.7.04
GAS CUTTING-TABLE 3 OF AA0621101			A.P.A.	22/1/04
भाग / DEPT.	भाग / DEPT.	अनुपात / SCALE	भारत हेवी इलेक्ट्रिकल्स का संदर्भ REFER TO ASSLY. DRG.	भाग क्रमांक ITEM NO.
कूट/कोड 209	कूट/कोड 209	N.T.S.	भारत हेवी इलेक्ट्रिकल्स का संदर्भ REFER TO ASSLY. DRG.	भाग क्रमांक ITEM NO.
शीट संख्या / SHEET NO.	शीट संख्या / SHEET NO.	शीट संख्या / SHEET NO.	शीट संख्या / SHEET NO.	शीट संख्या / SHEET NO.
7	7	7	7	7
अभिकल्प संख्या / DRAWING NO. R2159-0097	अभिकल्प संख्या / DRAWING NO. R2159-0097	अभिकल्प संख्या / DRAWING NO. R2159-0097	अभिकल्प संख्या / DRAWING NO. R2159-0097	अभिकल्प संख्या / DRAWING NO. R2159-0097
22.23.24	22.23.24	22.23.24	22.23.24	22.23.24
22.23.24	22.23.24	22.23.24	22.23.24	22.23.24

COPYRIGHT AND CONFIDENTIAL INFORMATION OF BHARAT HEAVY ELECTRICALS LIMITED. THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERMINAL TO THE INTEREST OF THE COMPANY.

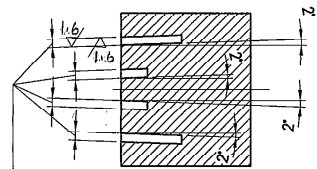
INVENTORY NO. 2-18755
 2-18755
 2-18755

R2159-0098/001



6.3 / THE REST

SECTION A-A



2.5 H7(+0.010)

SHARP EDGES TO BE ROUNDED OFF.

वै. सं. / VAR. NO.	टिप्पणी REMARKS	सं. क्रमंक ITEM NO.	विवरण DESCRIPTION	STANDARD	अभिकल्प संख्या / DRAWING NO.	40Ni6Cr4Mo3 AA 10501	सं. क्रमंक ITEM NO.	वै. सं. / VAR. NO.	सं. क्रमंक ITEM NO.	वै. सं. / VAR. NO.
-----------------------	--------------------	------------------------	----------------------	----------	------------------------------	-------------------------	------------------------	-----------------------	------------------------	-----------------------

सी.बी.ओ.ए. / C.B.O.M.	उत्पाद का प्रकार TYPE OF PRODUCT
-----------------------	-------------------------------------

ग्रेड / GRADE	उत्प. वि. / DIM.
M/CG. - AA0230208	Ø / M/F
WELDING - CLASS 'B' OF AA0621104	
GAS CUTTING - TABLE 3 OF AA0621101	



भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार
BHARAT HEAVY ELECTRICALS LIMITED,
RANIPUR, HARDWAR

सं. क्रमंक ITEM NO.	वै. सं. / VAR. NO.	सं. क्रमंक ITEM NO.	वै. सं. / VAR. NO.
M.P.S.	12.02.04	B.K.R.	14.02.04

सं. क्रमंक REV.	दिनांक DATE	सं. क्रमंक ALTERED BY	दिनांक DATE	सं. क्रमंक ALTERED BY	दिनांक DATE	भाग DEPT.	सं. क्रमंक JTE	अनुपात / SCALE N.T.S.	भार. वि. सं. WEIGHT (KG)	अनुपात / SCALE N.T.S.	भार. वि. सं. WEIGHT (KG)	अनुपात / SCALE N.T.S.	भार. वि. सं. WEIGHT (KG)	अनुपात / SCALE N.T.S.	भार. वि. सं. WEIGHT (KG)	अनुपात / SCALE N.T.S.	भार. वि. सं. WEIGHT (KG)	अनुपात / SCALE N.T.S.	भार. वि. सं. WEIGHT (KG)	अनुपात / SCALE N.T.S.
									~ 3.5											

SHANK

आभिकल्प संख्या / DRAWING NO.
R2159-0098/001

22 23 24

01 01

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY.

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार
BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR

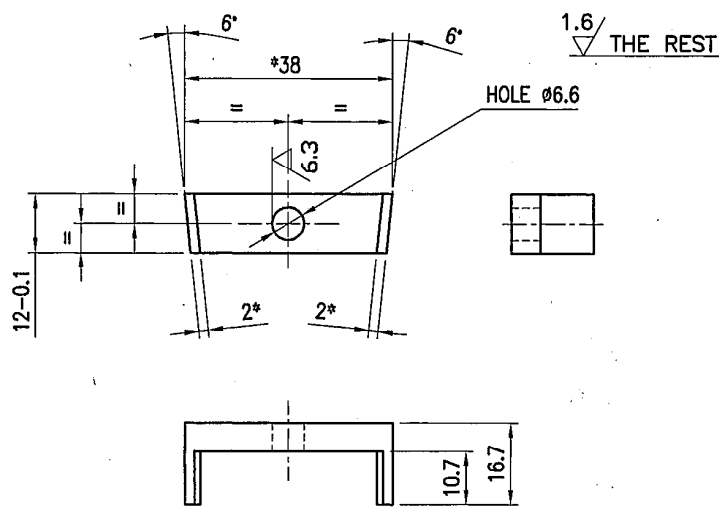
COPYRIGHT AND CONFIDENTIAL

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY.

प्रथम कोण प्रक्षेपण/FIRST ANGLE PROJECTION सभी विमाएँ मिलिमीटर में हैं।/ALL DIMENSIONS ARE IN mm. प्रश्न शीट 39 (बी) FORM 39 (B)

संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	सो.वी.ओ.एम्./C.B.O.M.	अंशकृत वा न STATUS OF DRG.
		जदकन CHD			जदकन CHD		U
						कर्म विभाग AGREED DEPTT.	नाम/NAME
							हस्ताक्षर/ SIGN.
							दिनांक/DATE

GRADE OF UNTOL.DIM M/CG.-AA0230208 $\sqrt{1.6}/M/F$ WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101



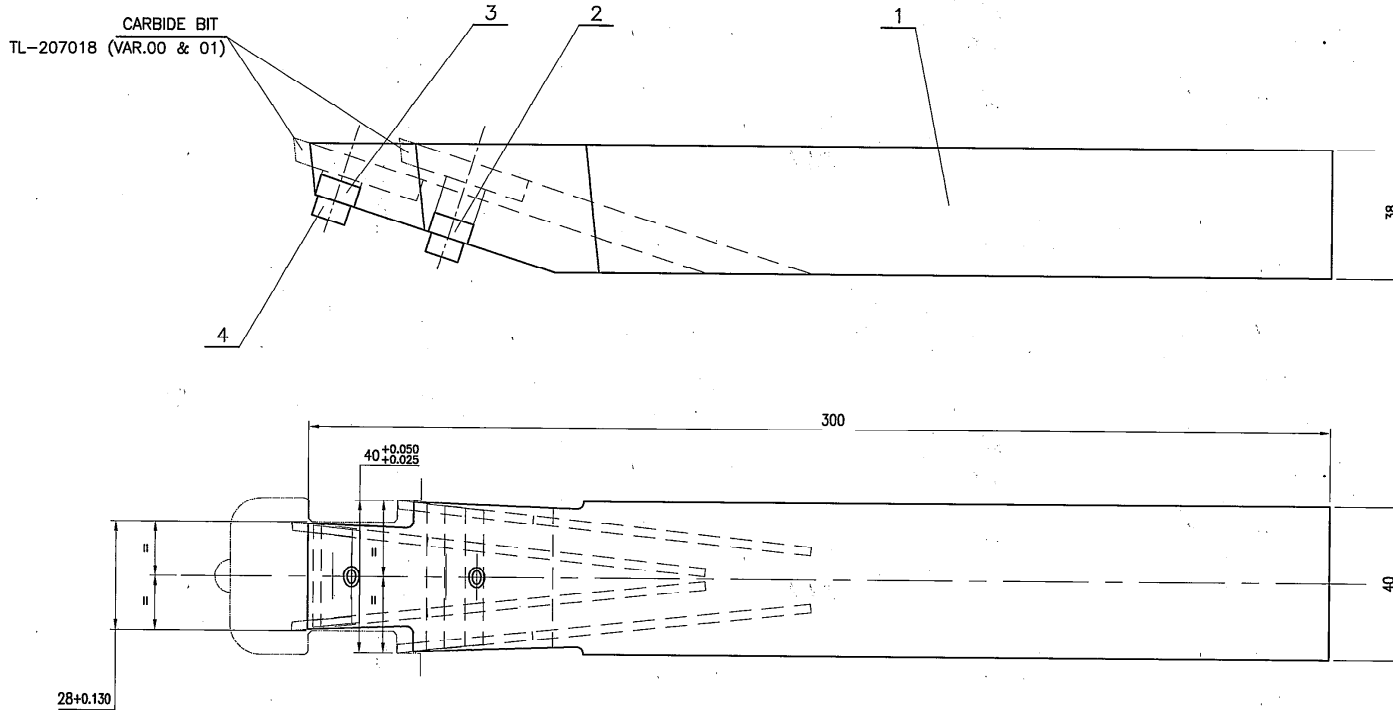
- 1-SHARP EDGES TO BE ROUNDED OFF.
- 2-HARDEN TO HRc 28-32 AS PER P.S. No. 0912-008.
- *3-DIMENSIONS TO MATCH SHANK DRG. No. R2159-0098/001.

संशोधन और दिनांक/SIGN & DATE		संशोधक/ALTERED BY		संशोधन/REVISED		संशोधन/REVISED		संशोधन/REVISED	
C-40		AA 10212							
नग क्रमांक ITEM NO.	विवरण DESCRIPTION	STD	अभिकल्प संख्या/DRAWING NO.	भेद्य संख्या VAR.	सामग्री कूट/MAT.CODE	कूट/UNIT	भार कि.ग्रा. UNIT WEIGHT		
					सामग्री वि/MAT. SPECN.		मात्रा /QTY.		
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR				नाम/NAME	हस्ताक्षर/SIGN	दिनांक/DATE	संशोधक संख्या No. of Vrs.		
				संशोधक DRN.	M.P.S.	12.02.04			
				जदकन CHD	B.K.R.	14.02.04			
विभाग DEPTT.	निग एवं दूत अभि. JTE	अनुपात/SCALE	भार कि.ग्रा. WEIGHT (KG)	असेम्बली अभिकल्प का संदर्भ REFER TO ASSLY. DRG.		नग क्रमांक ITEM NO.	नगों की संख्या NO. OF ITEMS		
कूट/CODE	209	N.T.S.	~0.021	R2159-0098		02	04		
शीर्षक/TITLE				अभिकल्प संख्या/DRAWING NO.					
CLAMP				R2159-0098/002					
				7	22	23	24		
				वृत्त संख्या/Sheets No.	01	वृत्तों की संख्या/No. of Sheets	01		

A4 साइज़/A4 SIZE

8600-651 R2159-0098

CARBIDE BIT
TL-207018 (VAR.00 & 01)



28+0.130

300

40+0.050
-0.025

38

40

CONSERVATION IS TO BE DONE AS PER TL-30007.

MARK

R2159-0098

28/40

04	SCRU CAP SOC P M6 X 20 - ST	AA 712 31 23 034	STEEL CALSS 12.9	0.006
03	CLAMP	R2159-0098/003	AA 712 31 23	02
02	CLAMP	R2159-0098/002	C-40	0.015
01	SHANK	R2159-0098/001	AA 10212	01
			C-40	0.021
			AA 10212	01
			40Ni6Cr4Mo3	3.5
			AA 10501	01

सी.सी.ओ.एम./C.B.O.M.	उत्पाद को प्रकार	कम्प्यूट जॉब संख्या /COMP DRG.No.	मशीन यूनिट संख्या / M/c No.	हार्न अपि संख्या /REF.DRG.No.
नाम/NAME	TYPE OF PRODUCT	4-10204-46013	169	R2159-0023
नाम/NAME	250 MW ST	कार्ड ऑर्डर संख्या /W/O No.	मशीन गौल संख्या /M/c MODEL No.	
		KP250ST3STC0020	LATHE	
ग्राहक/CUSTOMER	भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार	डिज़ाइन/DESIGN	संख्या/SIGN	दिनांक/DATE
		M.P.S.		12.02.04
		B.K.R.		14.07.04
		A.P.A.		
ड्राफ्ट/SCALE	अनुपात/SCALE	भार कि.ग्रा. WEIGHT (KG)	ऑर्डर संख्या/ORDER NO.	मशीन नं. NO. OF MACH.
209	N.T.S.	3.55	REFER TO ASSLY. DRG.	
शीर्षक/TITLE	TOOL FOR THROAT & NECK	कार्ड नंबर/CARD CODE	अधिकृत संख्या/DRAWING NO.	मशीन नं. NO. OF MACH.
WIDTH (4 LEG TOOL) SIZE 28+0.130/40+0.025			R2159-0098	22 23 24
			पृष्ठ संख्या/Sheets No.	पृष्ठों की संख्या/No. of Sheets
			01	01

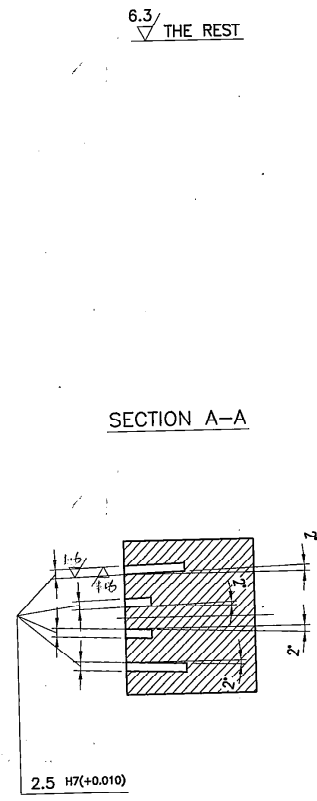
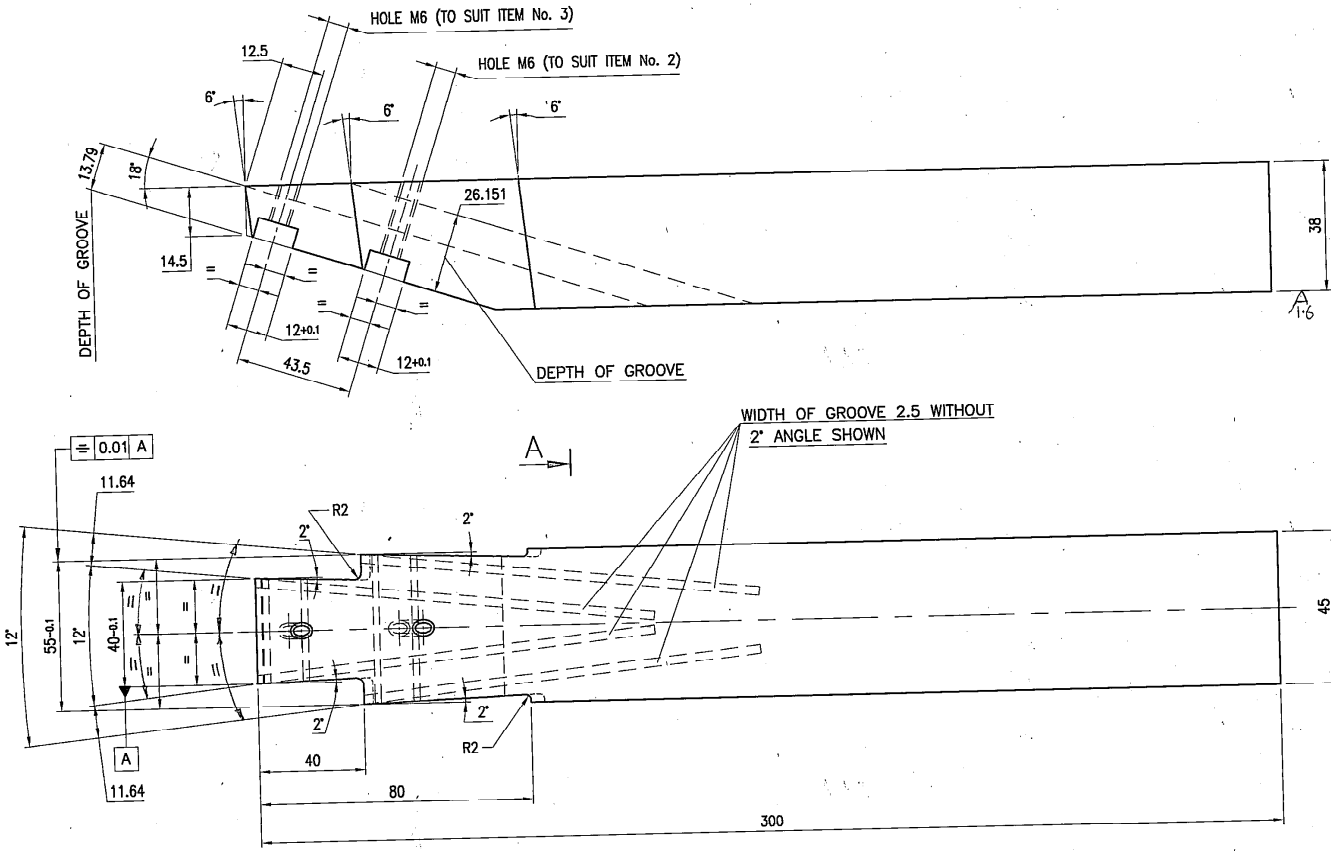
COPYRIGHT AND CONFIDENTIAL THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार, उत्तरांचल प्रदेश, भारत

भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार, उत्तरांचल प्रदेश, भारत

R2159-0100/001

COPYRIGHT AND CONFIDENTIAL INFORMATION OF BHARAT HEAVY ELECTRICALS LIMITED. THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.



SHARP EDGES TO BE ROUNDED OFF.

वै. सं. / VAR. NO.	टिप्पणी / REMARKS	सं. क्रमांक / ITEM NO.	विवरण / DESCRIPTION	सं. / C.D.	अधिकृत संख्या / DRAWING NO.	40Ni6Cr4Mo3 AA 10501	सं. क्रमांक / ITEM NO.	वजन / WEIGHT

सी.बी.ओ.एन./C.B.O.M.		उत्पाद का प्रकार / TYPE OF PRODUCT		ग्राहक का नाम / CUSTOMER NAME		सं. क्रमांक / ITEM NO.		वजन / WEIGHT	
सं. क्रमांक / AGREED DEPT.	नाम / NAME	सं. क्रमांक / SGN.	दिनांक / DATE	भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार / BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR		सं. क्रमांक / M.P.S.		वजन / B.K.R.	
ग्रेड / GRADE OF UNTOL. DIM				सं. क्रमांक / M/C.G.		सं. क्रमांक / WELDING		सं. क्रमांक / GAS CUTTING	
M/CG. - AA0230208 E/M/F				WELDING - CLASS 'B' OF AA0621104		GAS CUTTING - TABLE 3 OF AA0621101			
सं. क्रमांक / REV.	दिनांक / DATE	परिवर्तित / ALTERED BY	सं. क्रमांक / SGN.	दिनांक / DATE	सं. क्रमांक / REV.	दिनांक / DATE	सं. क्रमांक / REV.	दिनांक / DATE	सं. क्रमांक / REV.

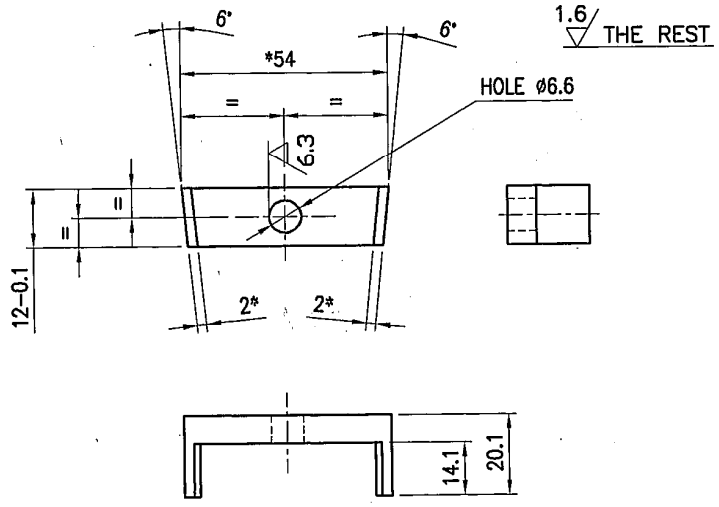
SHANK

R2159-0100/001

प्रथम कोण प्रक्षेपण / FIRST ANGLE PROJECTION सभी विमाएँ मिलिमीटर में हैं। / ALL DIMENSIONS ARE IN mm. फ़ॉर्म 39 (बी) FORM 39 (B)

संशोधन REV.	दिनांक DATE	संशोधन ALTERED BY	संशोधन REV.	दिनांक DATE	संशोधन ALTERED BY	सी.बी.ओ./C.B.O.M.	अधिकृत का स्तर STATUS OF DRG. U
		अहंकारा CHD			अहंकारा CHD		
		हस्ताक्षर/नाम AGREED DEPTT.	नाम/NAME	हस्ताक्षर/SIGN.	दिनांक/DATE		

GRADE OF UNTOL.DIM M/CG.-AA023020B *M/F* WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101



- 1-SHARP EDGES TO BE ROUNDED OFF.
- 2-HARDEN TO HRC 28-32 AS PER P.S. No. 0912-008.
- *3-DIMENSIONS TO MATCH SHANK DRG. No. R2159-0100/001.

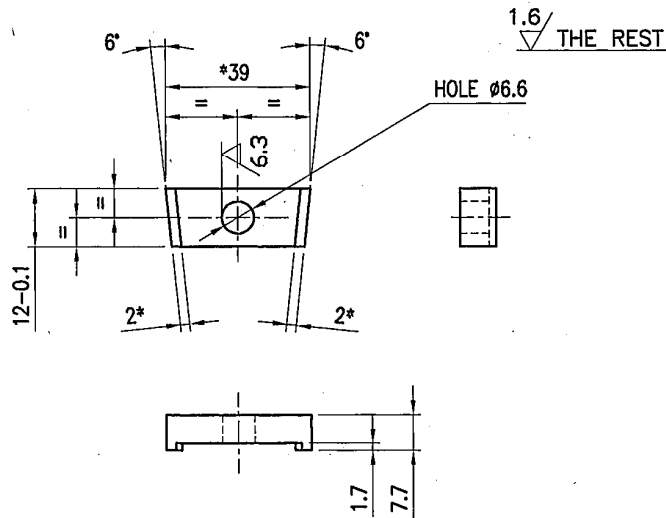
COPYRIGHT AND CONFIDENTIAL THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERMINANTAL TO THE INTEREST OF THE COMPANY.

संशोधन/REV.	दिनांक/DATE	संशोधन/ALTERED BY	संशोधन/REV.	दिनांक/DATE	संशोधन/ALTERED BY	सी.बी.ओ./C.B.O.M.	अधिकृत का स्तर/STATUS OF DRG. U
		अहंकारा/CHD			अहंकारा/CHD		
नग क्रमांक/ITEM NO.		विवरण/DESCRIPTION	STD	अभिकल्प संख्या/DRAWING NO.	वैकल्पिक संख्या/VAR.	सामग्री कूट/MAT.CODE	भार कि.ग्रा./UNIT WEIGHT
						सामग्री वि/MAT. SPECN.	मात्रा/QTY.
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR		नाम/NAME	हस्ताक्षर/SIGN.	दिनांक/DATE	वैकल्पिक संख्या/VAR.	सामग्री कूट/MAT.CODE	भार कि.ग्रा./UNIT WEIGHT
		M.P.S.		12.02.04			
		B.K.R.		14.02.04			
विभाग/DEPTT.	नग एच डब्लू अवि./JIE	अनुपात/SCALE	भार कि.ग्रा./WEIGHT (KG)	असेम्बली अभिकल्प का संदर्भ/REFER TO ASSLY. DRG.	नग क्रमांक/ITEM NO.	संख्या/NO. OF ITEMS	
कूट/CODE	209	N:7.5	~0.030	R2159-0100	02	04	
शीर्षक/TITLE	CLAMP		अभिकल्प संख्या/DRAWING NO.		22 23 24		
			R2159-0100/002				
पृष्ठ संख्या/Sheets No.			01		पृष्ठों की संख्या/No. of Sheets		01

प्रथम कोण प्रक्षेपण/FIRST ANGLE PROJECTION सभी विमाएँ मिलिमीटर में हैं।/ALL DIMENSIONS ARE IN mm. प्रपत्र फॉर्म 39 (बी) FORM 39 (B)

संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	संशोधन REV.	दिनांक DATE	संशोधक ALTERED BY	सी.बी.ओ./C.B.O.M.	अभिकल्प का स्तर STATUS OF DRG.
		उपरोक्त CHD			उपरोक्त CHD		U
						हस्ताक्षर AGREED DEPTT.	नाम/NAME
						हस्ताक्षर SIGN.	दिनांक/DATE

GRADE OF UNTOL.DIM M/CG.-AA0230208 $\times/\theta/\times/F$ WELDING-CLASS 'B' OF AA0621104 GAS CUTTING-TABLE 3 OF AA0621101



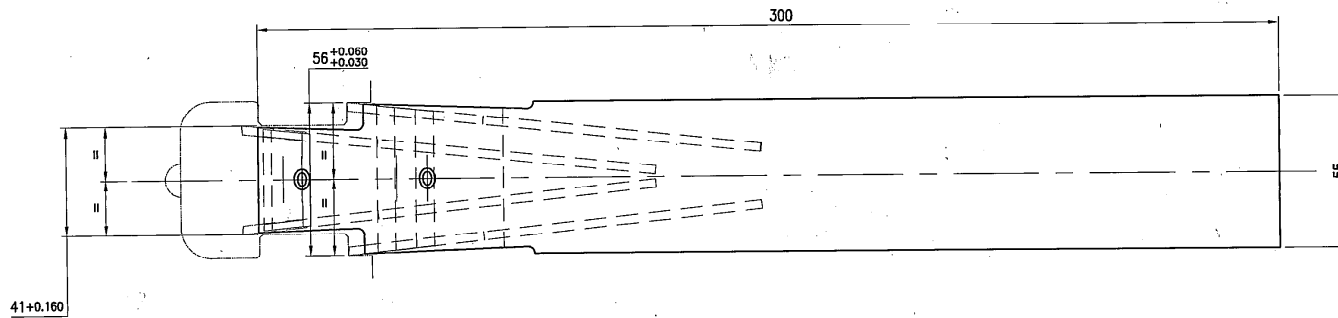
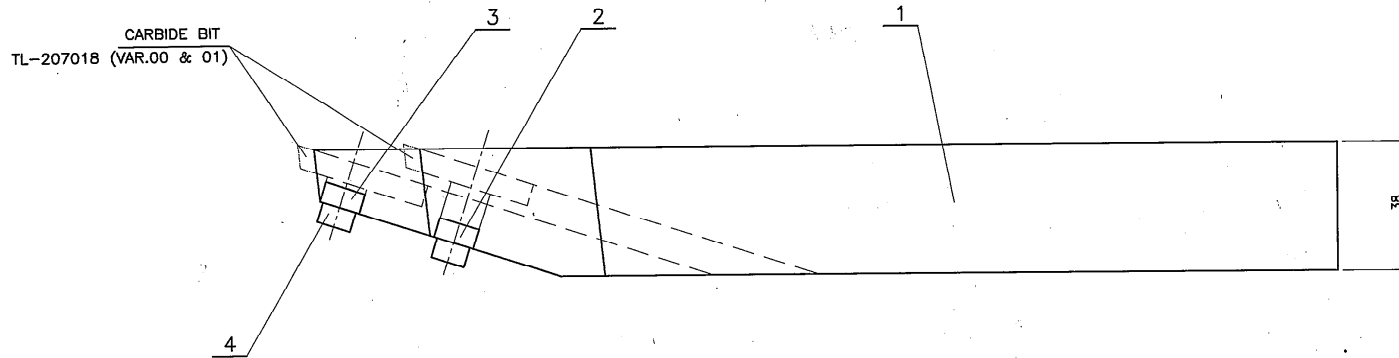
- 1-SHARP EDGES TO BE ROUNDED OFF.
- 2-HARDEN TO HRc 28-32 AS PER P.S. No. 0912-008.
- *3-DIMENSIONS TO MATCH SHANK DRG. No. R2159-0100/001.

COPYRIGHT AND CONFIDENTIAL
THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

संशोधन और दिनांक/SCN & DATE		संदर्भ अभिकल्प संख्या REFERENCE DRG. NO.		C-40		—	
—		—		AA 10212		—	
नग क्रमांक ITEM NO.	विवरण DESCRIPTION	STP	अभिकल्प संख्या/DRAWING NO.	संदर्भ संख्या VAR.	सामग्री कूट/MAT.CODE सामग्री वि./MAT. SPECN.	भाग/UNIT C	भार कि.ग्रा. UNIT WEIGHT मात्रा /QTY.
भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR				नाम/NAME	हस्ताक्षर/SIGN	दिनांक/DATE	संदर्भ संख्या No. of Var.
				मि.पी.एस. M.P.S.		12.02.04	
				बी.के.ए. B.K.R.		14.02.04	
विभाग DEPTT.	निग एच यू.ओ. ऑफि. JTE	कूट/CODE	209	अनुपात/SCALE N.T.S.	भार कि.ग्रा. WEIGHT (KG)	~0.022	असेम्बली अभिकल्प का संदर्भ REFER TO ASSLY. DRG.
शीर्षक/TITLE				अभिकल्प संख्या/DRAWING NO.	नग क्रमांक ITEM NO.	03	नगों की संख्या NO. OF ITEMS
CLAMP				7 R2159-0100/003	22	23	24
				पृष्ठ संख्या/Sheets No.	01	पृष्ठों की संख्या/No. of Sheets	01

0010-6512N

CARBIDE BIT
TL-207018 (VAR.00 & 01)



CONSERVATION IS TO BE DONE AS PER TL-30007.

MARK
R2159-0100
41/56

04	SCRU CAP SOC P MG X 20 - ST	AA 712 31 23 034	STEEL CALSS 12.9 AA 712 31 23	0.006 02							
03	CLAMP	R2159-0100/003	C-40 AA 10212	0.022 01							
02	CLAMP	R2159-0100/002	C-40 AA 10212	0.030 01							
01	SHANK	R2159-0100/001	40Ni6Cr4Mo3 AA 10501	4.0 01							
वॉल्यूम संख्या VAR.00	टिप्पणी REMARKS	नम क्रमांक ITEM NO.	विवरण DESCRIPTION	स्टैंड	अधिकृत संख्या/DRAWING NO.	वॉल्यूम संख्या VAR.	सामग्री वि./MAT. SPECN.	A/C	प्र./UNIT	मात. कि.ज. UNIT WEIGHT	मात. QTY.

श्री.सी.ओ.एम्./C.B.O.M.	अनुमोदित या न STATUS OF DRG.	उत्पाद का प्रकार TYPE OF PRODUCT	कम्प्यूट जॉब संख्या /COMP.DRG.No.	मशीन टूल संख्या / M/c No.	संख्या ऑफ. संख्या /REF.DRG.No.
अनुमोदित ACCTD DEPT.	नाम/NAME	रजि.सं./SOUL	दिनांक/DATE	4-10107-41011	169
ग्रेड ऑफ़ उन्टोल. डिम M/CG.- AA0230208 E/M/F	S.T.T.	Y.P.A.	22/7/04	कॉपी ऑफ़िस संख्या /W/O No. KP250ST3STC0028	मशीन मॉडल संख्या /M/c MODEL No. LATHE
WELDING-CLASS 'B' OF AA0621104				भारत हेवी इलेक्ट्रिकल्स लिमिटेड, रानीपुर, हरिद्वार BHARAT HEAVY ELECTRICALS LIMITED, RANIPUR, HARDWAR	नाम/NAME
GAS CUTTING-TABLE 3 OF AA0621101				अनुपात/SCALE	मात. कि.ज. WEIGHT (KG)
किसी भी संशोधन REV. DATE	द्वारा ALTERED BY	दिनांक DATE	संशोधन BY	N.T.S.	~4.06
				शोषक/TITLE	कार्ड नंबर CARD CODE
				TOOL FOR THROAT & NECK WIDTH (4 LEG TOOL) SIZE 41+0.160/56+0.060	R2159-0100
				अधिकृत संख्या/DRAWING NO.	मात. कि.ज. ITEM NO.
				R2159-0100	22 23 24
				पृष्ठ संख्या/Sheets No. 01	कुल संख्या/No. of Sheets 01

COPYRIGHT AND CONFIDENTIAL INFORMATION ON THIS DRAWING IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETERIMENTAL TO THE INTEREST OF THE COMPANY

आपका नाम/INVENTOR/NO. 2-18762
आपका पता/ADD & DATE
आपका डिपार्टमेंट/DEPT/REFERENCE DRG. NO.

SUPPLIES
INVENTORY No.
SIGN.&DATE

JT_05



TOOL STANDARD JIG AND TOOL ENGINEERING

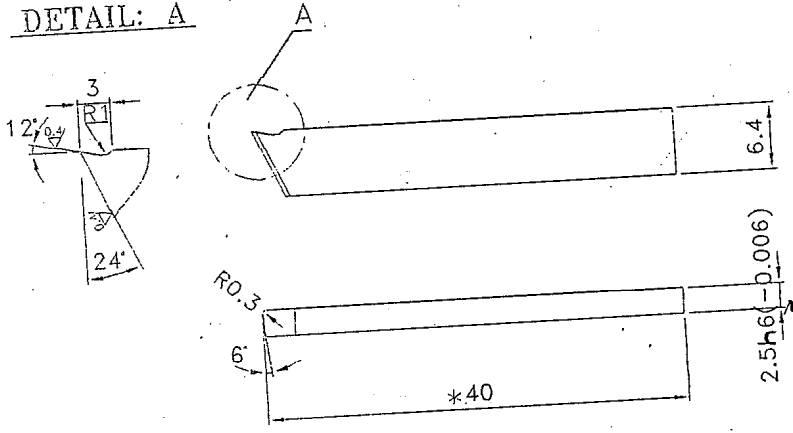
TL-207018

PAGE OF

COPYRIGHT AND CONFIDENTIAL.
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.

SET OF CARBIDE BIT

DETAIL: A



01	MIRROR IMAGE
00	AS SHOWN
VAR.	REMARKS

- * 1- NON CUTTING PORTION SHARP EDGES TO BE ROUNDED OFF.
- * 2- DIMENSION 40 SHOULD BE SAME WITH IN ± 0.02 FOR ONE SET OF CORBIDE BIT.(VAR. 00 AND 01)

CARBIDE K-10
-
MAT CODE
MAT SPECN

SIGN.&DATE

[Signature]

INVENTORY No.
C4-2018

REVISION

WORKED BY	R ADHAR	<i>[Signature]</i>	
CHECKED BY	BK ROY	<i>[Signature]</i>	11.3.99
APPROVED BY	OP/APA	<i>[Signature]</i>	13.3.99