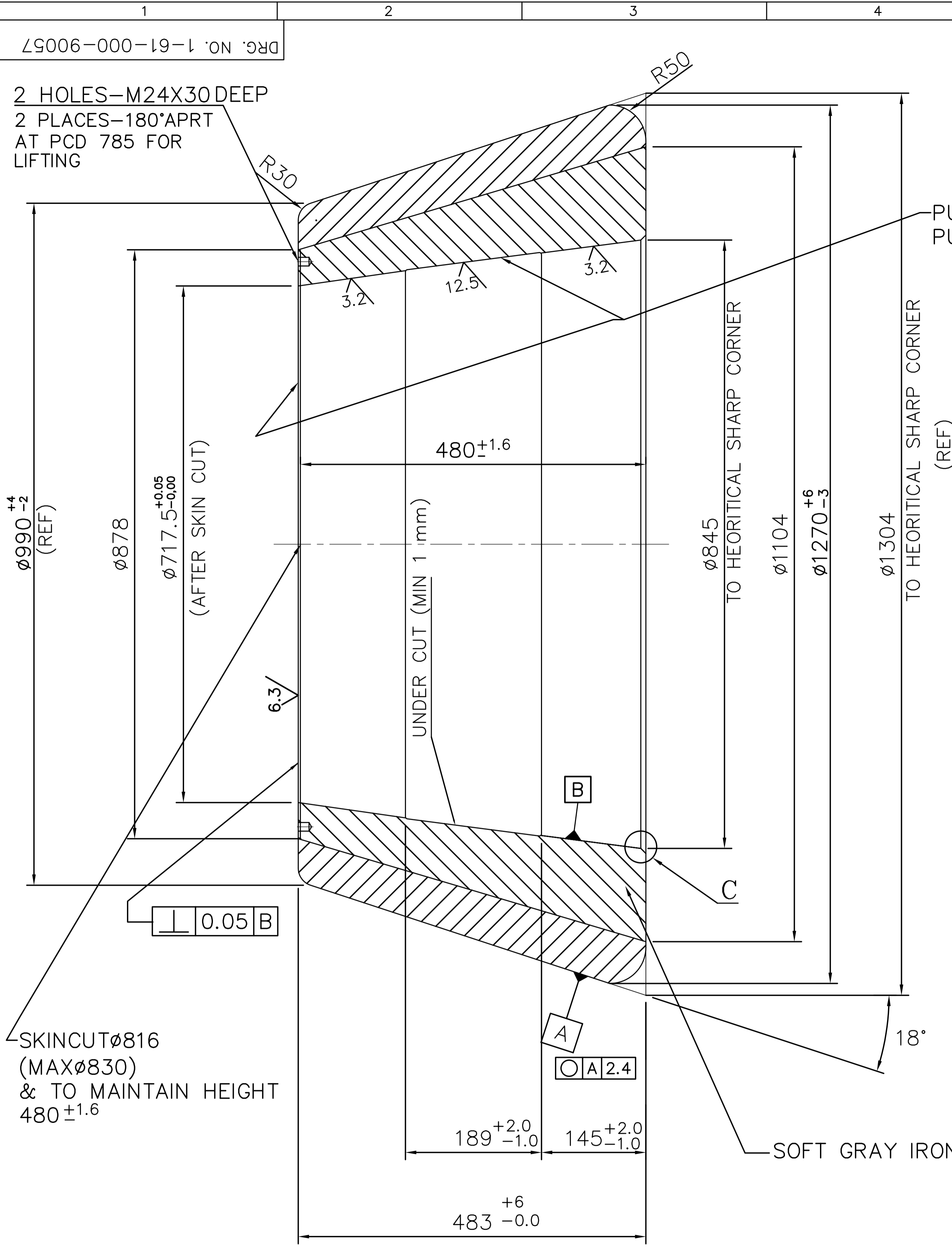
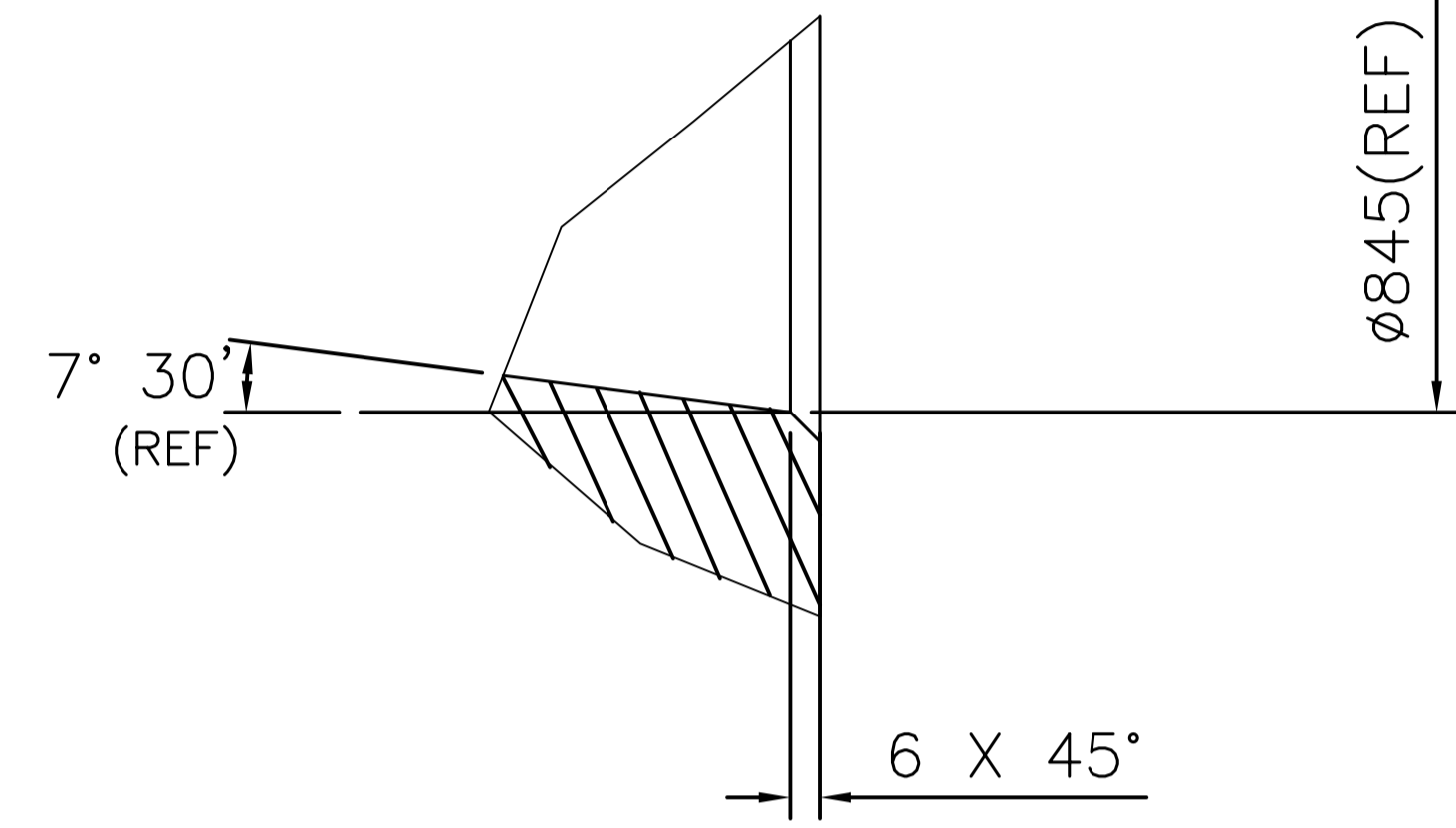


INVENTORY NO. 16190057.DWG  
SIGN. AND DATE REF. DRG. NO. 16190057.DWG  
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PUNCH ROLL WITH 10 mm PUNCH AT 2 PLACES.



DETAIL-C

NOTES:

1. TOLERANCE FOR UNTOLERENCED DIM FOR CASTING AA0230402 - CLASS3
2. FOR MACHINED DIMENSION AA 0230208 MEDIUM CLASS
3. TAPER MUST BE CHECKED WITH PLATE GUAGE WITH MINIMUM 80% OF ITS CONTACT AREA. CHECKED AT 3 PLACES 120°APART.
4. FOR NIHARD, MINIMUM HARDNESS IS 550 BHN
5. MANUFACTURE AS PER CUSTOMERS / BHEL APPROVED QP.
6. COAT THE MACHINED BORE SURFACE WITH BLUE LACQUER AND REMOVE THE BLUE LACQUER BEFORE ASSY.

| ITEM NO. | DESCRIPTION      | DRAWING NO.      | VAR. NO. | RAW MATERIAL SIZE OR CASTING DRG. NO. OR FORGING DRG. NO. | MATERIAL SPECN. | NET WT. | GROSS WT. |
|----------|------------------|------------------|----------|---|-----------------|---------|-----------|
|          | INSERTS TYPE     | PATTERN M-67-497 | 02       |   | BA9116811011    | 1880.00 | 2180.00   |
|          | CASTING - NIHARD | PATTERN M-67-425 | 01       |   | BA9116850084    | 1880.00 | 2180.00   |
|          |                  |                  |          |   | HY19768         | 1       |           |
|          |                  |                  |          |   |                 |         |           |

THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED.

1. REF. TO HY0230261 FOR UNSPECIFIED TOLERANCES.
2. CHAMFER M/CD. SHARP EDGES 1.2 TO 1.0 AT 45°.
3. INTERNAL M/CD. CORNER RADII 1 TO 0.7
4. THE SURFACE ROUGHNESS WHERE-EVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE THE BACK SLASH GIVEN OR THE TOP MOST RIGHT CORNER OF THE DRG.

|                          |                    |  |                     |                       |              |
|--------------------------|--------------------|--|---------------------|-----------------------|--------------|
| TYPE OF PRODUCT          |                    | XRP 1003                                   |                     |                       |              |
| NAME OF CUSTOMER/PROJECT |                    | BHARAT HEAVY ELECTRICALS LIMITED HYDERABAD |                     |                       |              |
| DRN.                     | NAME               | SIGN.                                      | DATE                | NO.OF VAR.            |              |
| CHD.                     | E.M.A.K.           |  | 15-07-02            |                       |              |
| APPD.                    | S.GHATGE           |  | 15-07-02            |                       |              |
| APPD.                    | RAMANNA            |  | 15-07-02            |                       |              |
| DEPT. 446                | UNTOL. DIMS. C/M/F | SCALE 1:2                                  | WEIGHT (KG) 1880.00 | REF. TO ASSY DRG. --- | ITEM NO. --- |
| CODE PULV.               |                    |  |                     |                       |              |
| TITLE                    |                    | DRAWING NO.                                |                     | REV.                  |              |
| GRINDING ROLL 50"        |                    | 1-61-000-90057                             |                     | 04                    |              |
| SHEET NO.                |                    | NO OF SHEETS                               |                     |                       |              |

| REV. | DATE     | ALTERED CHD./APPD. | REV. | DATE | ALTERED CHD./APPD. | REV. | DATE | ALTERED CHD./APPD. | ZONE |
|------|----------|--------------------|------|------|--------------------|------|------|--------------------|------|
| 04   | 15-07-02 |                    |      |      |                    |      |      |                    |      |

DRG. REDRAWN