

# 9322

Sample Results

|                         |                               |                           |                         |                   |
|-------------------------|-------------------------------|---------------------------|-------------------------|-------------------|
| Sample Result Name      | Type                          | Measure Date Time         | Recalculation Date Time | Origin            |
| 9322(1615/c-05/2014)    | Unknown                       | Wednesday, March 19, 2014 | 10:53:37 AM             | Measured          |
| Method Name             | Method Version                | Operator Name             | Check Type              | Check Status      |
| Fe-30-MO                |                               | SARA SAE                  | None                    | Not Used          |
| Grade Verification Name | Grade Verification Similarity | Correction Type           | Type Corr Sample Name   | Grade Search Name |
|                         | 0                             | None                      |                         |                   |

|                         |      |          |                 |
|-------------------------|------|----------|-----------------|
| Grade Search Similarity | Type | Status   | Outlier Removal |
| 0                       | None | Not Used |                 |

Sample Name  
9322(1615/c-05/2014)

|         | C     | Si    | Mn    | P      | S      | Cr    | Mo    | Ni    | Al    | Co    | Cu    | Nb    | Ti     | V     | W      | Pb    | Sn    | As     | Zr     |
|---------|-------|-------|-------|--------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|-------|--------|--------|
|         | Conc  | Conc  | Conc  | Conc   | Conc   | Conc  | Conc  | Conc  | Conc  | Conc  | Conc  | Conc  | Conc   | Conc  | Conc   | Conc  | Conc  | Conc   | Conc   |
| 2       | 0.044 | 0.41  | 0.22  | <0.003 | <0.002 | 20.40 | 3.08  | 42.02 | 0.069 | 0.061 | 1.95  | 0.058 | 1.08   | 0.11  | <0.040 | 0.011 | 0.023 | 0.009  | <0.003 |
| 3       | 0.037 | 0.42  | 0.23  | <0.003 | <0.002 | 21.17 | 2.89  | 41.56 | 0.070 | 0.067 | 1.89  | 0.059 | 0.99   | 0.10  | <0.040 | 0.013 | 0.024 | 0.006  | <0.003 |
| 5       | 0.045 | 0.43  | 0.22  | <0.003 | <0.002 | 20.96 | 2.95  | 41.79 | 0.070 | 0.062 | 1.90  | 0.058 | 1.00   | 0.10  | <0.040 | 0.012 | 0.025 | <0.005 | <0.003 |
| Rep     | 0.042 | 0.42  | 0.22  | 0.003  | <0.002 | 20.84 | 2.97  | 41.79 | 0.070 | 0.063 | 1.91  | 0.058 | 1.02   | 0.10  | <0.040 | 0.012 | 0.024 | 0.007  | 0.003  |
| Min Cal | 0.006 | 0.005 | 0.004 | 0.003  | 0.002  | 0.005 | 0.003 | 0.005 | 0.003 | 0.005 | 0.002 | 0.005 | 0.0010 | 0.002 | 0.040  | 0.010 | 0.002 | 0.005  | 0.003  |
| Mean    | 0.042 | 0.42  | 0.22  | <0.002 | <0.003 | 20.84 | 2.97  | 41.79 | 0.070 | 0.063 | 1.91  | 0.058 | 1.02   | 0.10  | <0.13  | 0.012 | 0.024 | 0.006  | <0.003 |
| Max Cal | 3.00  | 5.04  | 18.12 | 0.18   | 0.30   | 36.00 | 10.20 | 55.2  | 6.24  | 21.60 | 7.44  | 3.60  | 3.60   | 12.00 | 7.32   | 0.13  | 0.27  | 0.13   | 0.19   |

|         | Ca     | B       | Fe    |
|---------|--------|---------|-------|
|         | Conc   | Conc    | Conc  |
| 2       | 0.002  | <0.0005 | 30.42 |
| 3       | 0.0009 | <0.0005 | 30.43 |
| 5       | 0.002  | <0.0005 | 30.33 |
| Rep     | 0.001  | <0.0005 | 30.39 |
| Min Cal | 0.0005 | 0.0005  |       |
| Mean    | 0.001  | <0.0001 | 30.57 |
| Max Cal | 0.016  | 0.025   |       |

OK for 26-924  
19/02/14

3/19/2014

Sample Results





# M.D. Steels Pvt. Ltd.

Plot No. F- 669 , Phase - II

RIICO Industrial Area , Bhiwadi, Distt.- Alwar (Rajasthan) 301019

Phone +91 1493 512079/225495 Fax +91 01493 222483

Email: mdsteels@gmail.com Website : www.mdsteels.com

|                                                                                                                                             |                                        |                       |
|---------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------|
| Customer : M/s Sara Sae Pvt. Ltd. UNIT - II<br>A-2, Sara Industrial Estate Ltd.<br>Chakrata Road, Rampur<br>Dehradun - 248197 - Uttarakhand | T.C. No                                | : M- 1515             |
|                                                                                                                                             | Dated                                  | : 11.03.2014          |
|                                                                                                                                             | Heat No.                               | : 1615/ C - 05 / 2014 |
|                                                                                                                                             | Date                                   | : 05.03.2014          |
| Order dated 17.02.2014                                                                                                                      |                                        |                       |
| Specification : INC 825                                                                                                                     | Foundry identification :               | MD                    |
|                                                                                                                                             | Surface :                              | Proof Machine         |
|                                                                                                                                             | Casting Processed by Induction melting |                       |

Heat Treatment : Solution Annealed at 1060 °C, 1.30 Hours Soaking and Water Quenched

## CHEMICAL COMPOSITION %

| Element | C     | Si    | Mn    | Cr    | Ni     | Mo    | S     | Al    | Cu    | Ti   | P     |
|---------|-------|-------|-------|-------|--------|-------|-------|-------|-------|------|-------|
| Minimum |       |       |       | 19.50 | 38.000 | 2.500 |       |       | 1.500 | 0.60 |       |
| Maximum | 0.050 | 0.500 | 1.000 | 23.50 | 46.000 | 3.500 | 0.030 | 0.200 | 3.000 | 1.20 | 0.030 |
| Actual  | 0.040 | 0.460 | 0.251 | 20.60 | 40.800 | 3.000 | 0.018 | 0.065 | 1.840 | 1.10 | 0.014 |

## MECHANICAL PROPERTIES

|        | Y S | UTS | EL%      | Reduction of Area | Charpy At ambient | Bend Tes | Hardness |  |  |  |  |
|--------|-----|-----|----------|-------------------|-------------------|----------|----------|--|--|--|--|
|        | Mpa | Mpa | GI= 50mm | Area %            | Ambient temp.     |          | HRB      |  |  |  |  |
| Min    |     |     |          |                   |                   |          |          |  |  |  |  |
| Max    |     |     |          |                   |                   |          |          |  |  |  |  |
| Actual |     |     |          |                   |                   |          |          |  |  |  |  |

| S. No. | Description                                                                           | Item & Code      | Qty.                 |
|--------|---------------------------------------------------------------------------------------|------------------|----------------------|
| 1      | Centrifugally Casted Rings<br>Proof Machined Size<br>OD 213 mm X ID 163 mm X H- 31 mm | Bonnet & IX880-R | 24 Nos.<br>( 01- 24) |

Remarks: Visual Inspection Carried out and dimension checked and found Ok.

specification and was found to meet the requirements and also compliance to the purchase order

Checked by

Approved by

for M. D. Steels Pvt. Ltd.



Quality Control

**M. D. STEELS (P) LTD.**

F-669, Phase-II, Indl. Area

BHIWADI - 301 019.

☎ : 01493 - 222483, 512079



*OK in  
FV-806  
Dipali*