

# Indiana Gratings Pvt. Ltd.

Indiana House, P. B. No. 7409, Marol Naka, Andheri (E), Mumbai - 400 059, India  
 Phone : + 91 22 2850 4743, 2850 5611 Fax : +91 22 2850 5154, 2850 5721  
 Email : service@indianagroup.com Website : www.indianagroup.com



## MILL TEST CERTIFICATE

[ SSIPL/069/2016 : SSIPL/070/2016 : SSIPL/073/2016 : SSIPL/071/2016 : SSIPL/322/2015 : SSIPL/824/2015 ]

[ SSIPL/0827/2015 : PLS\_09D16\_102/1 ]

[ Heat no. - SB/C/034/16 : SB/C/76/15 : SB/C/268/15 : SB/C/269/15 ]

|           |                    |
|-----------|--------------------|
| MTC NO. & | : MT - 08/ 2016-17 |
| DATE      | : 13.06.2016       |

Page no : 02 of 02

**IMPORTER** : NIPPON STEEL & SUMIKIN BUSSAN AMERICAS , INC.  
 200 N MARTINGALE ROAD, SUITE 801, SCHAUMBURG, IL 60173, USA  
**P.O. NO. & DATED** : 800555/P0167082-11 Dated - 07.05.2016  
**LC NO.** :  
**EXPORTER** : Indiana Overseas Pvt. Ltd., MUMBAI [ Invoice no : IOPL / 0317 :: 17.06.2016 ]  
**JOB NO. & DATE** : L-16/101  
**PACKING LIST NO.** : 08 / 16 - 17

### SPECIFICATION'S :

**PRODUCT : ELECTROFORGE GRATINGS**

| PRODUCT DETAILS | BEARING BAR             | CROSS BAR       | FRAME BAR | MESH         | QTY.      | SIZE       | FINISH      |
|-----------------|-------------------------|-----------------|-----------|--------------|-----------|------------|-------------|
|                 | 1-1/2" X 3/16" Serrated | 7 mm sq. twist. | Open end  | 1-3/16" X 4" | 500 no's. | 36" X 240" | GALVANIZED  |
|                 | 1" X 3/16" Serrated     | 7 mm sq. twist. | Open end  | 1-3/16" X 4" | 100 no's. | 36" X 240" | SELF COLOUR |
|                 | 1-1/4" X 3/16" Serrated | 7 mm sq. twist. | Open end  | 1-3/16" X 4" | 96 no's.  | 36" X 288" | SELF COLOUR |

### CHEMICAL ANALYSIS :

|                | 1-1/2" X 3/16"(Sr.) | 1-1/2" X 3/16"(Sr.) | 1" X 3/16"(Sr.) | 1-1/4" X 3/16"(Sr.) | 7 MM <sup>2</sup> Twisted |
|----------------|---------------------|---------------------|-----------------|---------------------|---------------------------|
| CARBON :       | 0.19%               | 0.18%               | 0.18%           | 0.17%               | 0.14%                     |
| SULPHUR :      | 0.031%              | 0.026%              | 0.029%          | 0.027%              | 0.025%                    |
| PHOSPHORUS :   | 0.036%              | 0.037%              | 0.031%          | 0.032%              | 0.036%                    |
| SILICON :      | 0.19%               | 0.13%               | 0.16%           | 0.17%               | 0.14%                     |
| MANGANESE :    | 0.64%               | 0.59%               | 0.62%           | 0.60%               | 0.41%                     |
| CARBON EQUI. : | 0.30%               | 0.28%               | 0.28%           | 0.27%               | Cu - 0.003%               |

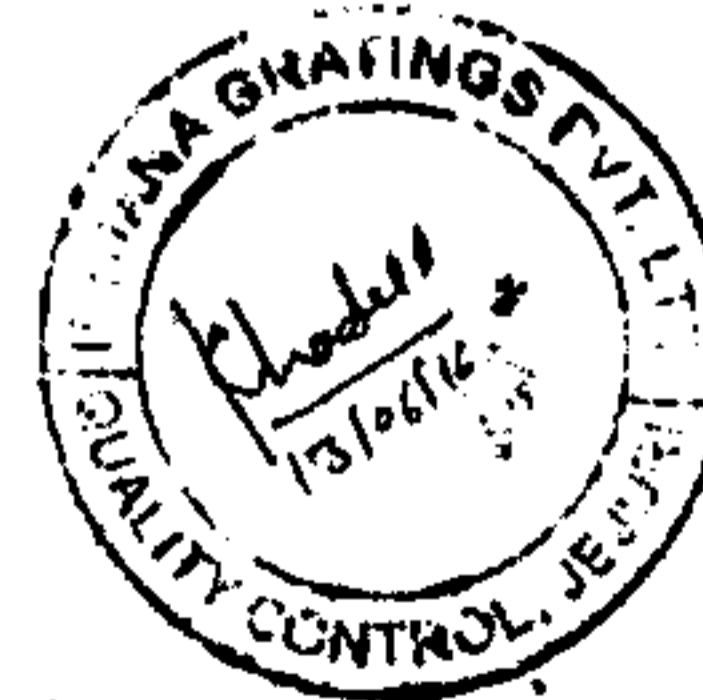
### MECHANICAL PROPERTIES :

|                                   | 1-1/2" X 3/16"(Sr.) | 1-1/2" X 3/16"(Sr.) | 1" X 3/16"(Sr.) | 1-1/4" X 3/16"(Sr.) | 7 MM <sup>2</sup> Twisted |
|-----------------------------------|---------------------|---------------------|-----------------|---------------------|---------------------------|
| Gauge Width :                     | 1-1/2"              | 1-1/2"              | 1"              | 1-1/4"              | 7 mm                      |
| Thickness :                       | 3/16"               | 3/16"               | 3/16"           | 3/16"               | 7 mm                      |
| Yield Stress [Mpa] :              | 315                 | 331                 | 309             | 312                 | 444.79                    |
| Ultimate Tensile Strength [Mpa] : | 509                 | 510                 | 498             | 499                 | 521.47                    |
| Elongation :                      | 29.8%               | 29.8%               | 31.4%           | 30.4%               | 23.50%                    |
| Former Diameter for Bend :        | 1.5T = 7.1 mm       | 1.5T = 7.1 mm       | 1.5T = 7.1 mm   | 1.5T = 7.1 mm       | 21 mm                     |
| Bend test :                       | 180 DEG.            | 180 DEG.            | 180 DEG.        | 180 DEG.            | 180 DEG.                  |

Material confirms to ASTM A 36

Hot Dip Galvanising confirms to ASTM A 123

Gratings Manufactured as per NAAMM MBG-531-00



For - IGPL Q.C.

FORM NO. : QC/17/10

FACTORY: Plot No. D-5, D-7, D-9, MIDC, Jejuri 412 303, Dist. Pune, Maharashtra, India.