Old circular no. 538(b)/ New No. **868(a)** Date: 18.01.2010

Subject: Details for use and purchase of MS items for fabrication.

This is the revised circular giving details of use of MS items for several different uses. All project managers and site engineers must understand this circular and issue requisitions as per details specified herein.

1. MS items are made from Coils (better quality) or Patti / scrap (lesser quality)
2. Wherever possible coil material must be used.
3. All items except round pipes the sizes should be in OD. For round pipes the size should be in ID or NB. ID is Inner diameter & NB means Nominal bore
4. Sizes of GI, HDPE & PVC pipes used for plumbing generally mean NB or ID
5. For structural works (i.e. for load bearing structures) 12 gauge thickness (2.7 mm), coil material should be used. Structural works include AC sheets fixing, outer pipes of gates, hoardings, scaffolding, stools, etc.
6. Decorative works (or non-load bearing structures) include grills, gates, railings, etc. For decorative works 16 gauge (1.5 mm) coil material should be used.
7. For works that fall in between structural works and decorative works like canopy for covering ducts on the terrace floor, partition walls, etc., 14 gauge (2 mm) coil material may be used.
8. In general A class / light weight pipes mean 16 gauge thickness & B class / medium weight means 12 gauge thickness.
9. In general unless otherwise specified use the following:
10. For French window grills use ½" - 6mm flat with 6mm sq rods
11. For window grills use ¾ " - 6mm flat with 10 mm sq rods
12. For tree guards use 3"x 1"- 10 gauge welded mesh with 1/2" - 6 mm flat & 3/4" - 3mm L angle
13. For 6 x 4 hoardings use 1/¼" - 2 mm thick round pipe with ¾”/ - 1.5 mm square pipes and & 3"x 1"- 10 gauge welded mesh.
14. For 8 x 12 hoardings use 1/½" - 2 mm thick round pipe with 1” -1.5 mm square pipes.
15. For gates outer pipes must be atleast 12 gauge (2.7 mm thick).
16. For stools, tube light stands, walking boards (tadkas) use ¾” L angle – 3 mm thick
17. For ladders – use 40mm round pipe 2 mm thick for vertical pipes and 1”- 2 mm thick pipes for horizontal rungs.

The above information is not accurate - Engineers are welcome to give suggestions and corrections. Engineers must accurately specify ID or OD & thickness in their requisitions

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| Circular no. | 868(a) | Construction Division. | Date: | 18.01.2010 |  |  |  |  |
| Subject: Details for use and purchase of MS items for fabrication. |  |  |  |  |  |  |  |
|  | Conversion table from gauge to mm - applicable for MS sheet metal. |  |  |  |  |  |  |
|  | Gauge |  | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 |
|  | Thickness in mm | 4.9 | 4 | 3.4 | 2.7 | 1.9 | 1.5 | 1.2 | 0.91 | 0.76 | 0.61 | 0.46 |
|  |  | Size | Size | Size | Size |  |  |  |  |  |  |  |  |
| S No | Item |  Size - OD/Width in mm | Size - OD/Width in inches | Size - NB in mm | Size - NB in inches | Thickens in mm | Thickness in Gauge | Length in ft. | Aprox. Weight in kgs | General Use |  |  |  |
| 1 | Sq Rod | 6 |  |  |  |  |  | 10 |  1.50  | For grills of French windows |
| 2 | Sq Rod | 10 |  |  |  |  |  | 18 |  4.50  | For decorative work |
| 3 | Sq Rod | 12 | 1/2 |  |  |  |  | 18 |  6.00  | For decorative work |
| 4 | Flat Pattis | 12 | 1/2 |  |  | 6 |  | 18 |  3.30  | For grills of French windows, tree guards |
| 5 | Flat Pattis | 20 | 3/4 |  |  | 3 |  | 18 |  2.00  | For door hold fast. |
| 6 | Flat Pattis | 20 | 3/4 |  |  | 6 |  | 18 |  4.50  | For grills |
| 7 | Flat Pattis | 24 | 1 |  |  | 6 |  | 18 |  6.00  | For decorative work |
| 8 | Flat Pattis |  | 2 |  |  | 12 |  | 18 |  19.00  | For gate hold fast |
| 9 | Sq Pipe | 20 | 3/4 |  |  | 1.5 | 16 | 20 |  5.00  | For decorative work |
| 10 | Sq Pipe | 24 | 1 |  |  | 1.5 | 16 | 20 |  7.00  | For decorative work |
| 11 | Sq Pipe | 30 | 1 1/4 |  |  | 1.5 | 16 | 20 |  9.00  | For decorative work |
| 13 | Round Pipe  | 28 |  | 20 | 3/4 | 1.5 | 16 | 20 |  5.50  | For decorative work |
| 14 | Round Pipe  | 28 |  | 20 | 3/4 | 2 | 14 | 20 |  8.50  | For mixed used |
| 15 | Round Pipe  | 28 |  | 20 | 3/4 | 2.7 | 12 | 20 |  11.00  | For structural work |
| 16 | Round Pipe  | 33 |  | 25 | 1 | 1.5 | 16 | 20 |  7.00  | For decorative work |
| 17 | Round Pipe  | 33 |  | 25 | 1 | 2 | 14 | 20 |  9.00  | For mixed used |
| 18 | Round Pipe | 33 |  | 25 | 1 | 2.7 | 12 | 20 |  13.00  | For structural work |
| 19 | Round Pipe | 42 |  | 32 | 1 1/4 | 1.5 | 16 | 20 |  9.00  | For decorative work |
| 20 | Round Pipe | 42 |  | 32 | 1 1/4 | 2 | 14 | 20 |  11.50  | For mixed used |
| 21 | Round Pipe | 42 |  | 32 | 1 1/4 | 2.7 | 12 | 20 |  16.00  | For structural work |
| 22 | Round Pipe | 48 | 2 | 40 | 1 1/2 | 1.5 | 16 | 20 |  11.00  | For decorative work |
| 23 | Round Pipe | 48 | 2 | 40 | 1 1/2 | 2 | 14 | 20 |  13.50  | For mixed used |
| 24 | Round Pipe | 48 | 2 | 40 | 1 1/2 | 2.7 | 12 | 20 |  17.00  | For structural work |
| 25 | Round Pipe | 60 | 2 1/2 | 50 | 2 | 1.5 | 16 | 20 |  15.50  | For decorative work |
| 26 | Round Pipe | 60 | 2 1/2 | 50 | 2 | 2 | 14 | 20 |  17.50  | For mixed used |
| 27 | Round Pipe | 60 | 2 1/2 | 50 | 2 | 2.7 | 12 | 20 |  24.00  | For structural work |
| 28 | Round Pipe | 76 | 3 | 65 | 2 1/2 | 2.7 | 12 | 20 |  31.00  | For structural work |
| 29 | Round Pipe | 89 | 3 | 80 | 3 | 2.7 | 12 | 20 |  37.00  | For structural work |
| 30 | Z angle |  | 3/4 |  |  | 3 |  | 18 |  8.50  | For templates |
| 31 | L Angle |  | 3/4 |  |  | 3 |  | 18 |  3.50  | For Stands & Stools |
| 32 | L Angle |  | 1 |  |  | 3 |  | 18 |  6.50  | For measurement boxes& miscellaneous use |
| 33 | L Angle |  | 1 |  |  | 6 |  | 18 |  10.00  | For Miscellaneous use |
| 34 | L Angle |  | 1 1/4 |  |  | 6 |  | 18 |  14.00  | For Door Frames |
| 35 | L Angle |  | 1 1/2 |  |  | 6 |  | 18 |  19.00  | For AC Brackets |
| 36 | L Angle |  | 3 |  |  | 6 |  | 18 |  40.00  | For lentil brackets |
| 37 | Sheet Metal |  | 6' x 3' |  |  | 1.5 | 16 |  |  18.00  | For concrete/ mortar mix |
| 38 | Sheet Metal |  | 6' x 3' |  |  | 1.2 | 18 |  |  16.00  | For measurement boxes and chajjamoulds |
| 39 | Sheet Metal |  | 6' x 3' |  |  | 0.9 | 20 |  |  13.00  | For decorative work |
| 40 | Welded Mesh |  | 1"x 3" |  |  |  3.40  | 10 | 50' x 5' | 60.00 | For tree guards |
| 41 | Welded Mesh |  | 1"x 3" |  |  |  2.00  | 14 | 50' x 5' | 20.00 | For shelves |
| 42 | Chain link - GI |  | 2.5" X 2.5 |  |  | 2.7 | 12 | 50' x 5' |  40.00  | For sports areas, temporary partitions |
| 43 | Chain link - GI |  | 2" X 2" |  |  | 3.4 | 10 | 50' x 5' |  60.00  | For security fencing / transformers |