
NAVFAC IGS-10605 (SEPTEMBER 2002)

Preparing Activity: LANTNAVFACENGCOM Based on UFGS-10605N

ITALIAN GUIDE SPECIFICATIONS

Use for ITALIAN projects only

SECTION 10605

WIRE MESH PARTITIONS

09/02

NOTE: This guide specification is issued by the Atlantic Division, Naval Facilities Engineering Command for regional use in Italy.

NOTE: This guide specification covers the requirements for interior location wire mesh partitions for normal and for extra heavy industrial use.

Comments and suggestion on this specification are welcome and should be directed to the technical proponent of the specification. A listing of the technical proponents, including their organization designation and telephone number, is on the Internet.

Use of electronic communication is encouraged.

Brackets are used in the text to indicate designer choices or locations where text must be supplied by the designer.

NOTE: Prefabricated wire mesh partition systems are not readily available in Italy but are custom fabricated with similar type materials. Provide sufficient drawing details and definition of components to ensure results.

NOTE: The following information shall be indicated on the project drawings:

1. Location, extent, height, and configuration of wire mesh partitions.

2. All openings, direction of door swing.

3. If the project includes both normal duty and heavy duty partitions, indicate the extent of each type.

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred within the text by the basic designation only.

ITALIAN LAWS AND NORMS (D.M.)(LAW)(CIRC.)

NOTE: Italian laws and normatives are the legislative regulations and decrees issued by the Italian government in the form of laws, norms, decrees, circulars, and letters. These Laws and Decrees concur together with Norms and Standards in forming the governing directives for construction.

Law 64 (02-02-1974) Construction provisions with particular reference to seismic areas

D.M. 16/1/96 Technical rules for construction in seismic areas

ITALIAN NATIONAL ASSOCIATION FOR UNIFICATION OF STANDARDS (UNI)

NOTE: A UNI Norm is a technical normative recognized as Italian Law, submitted by a private organization "Ente Nazionale Italiano di Unificazione" for Italy and is available only in the Italian language. It is the National Standard.

UNI 3598 (1954) Standard steel wire - Types, requirements, tests

UNI 3995 (1958) Single-twist steel netting, with rhomboidal mesh

UNI 5132 (1974) Covered electrodes for the arc welding of unalloyed steels and Mn-low alloyed steels - General technical conditions, symbolization and methods of

test

CNR-UNI 10011

(1988) Steel structures - Instructions for design, construction, testing and maintenance

ITALIAN/EUROPEAN HARMONIZATION STANDARDS (UNI EN)(UNI ENV)(CEI EN)
(UNI EN ISO)(UNI ISO)

NOTE: A UNI EN, UNI ENV, CEI EN, UNI EN ISO or UNI ISO is a European Standard with a coincident Italian National Standard or International Standard. The two standards are identical, with most (but not all) EN's available in the English language and the UNI available only in the Italian language.

UNI EN 10131

(1993) Cold rolled uncoated low carbon and high yield strength steel flat products for cold forming. Tolerances on dimensions and shape

UNI EN 10020

(2001) Definition and classification of grades of steel

ITALIAN WELDING INSTITUTE (IIS)

IIS

Italian Welding Institute Publications and Manuals

1.2 SUBMITTALS

NOTE: Where a "G" in submittal tags follows a submittal item, it indicates Government approval for that item. Add "G" in submittal tags following any added or existing submittal items deemed sufficiently critical, complex, or aesthetically significant to merit approval by the Government. Submittal items not designated with a "G" will be approved by the QC organization.

Submit the following in accordance with Section 01330, "Submittal Procedures."

SD-02 Shop Drawings

Wire mesh partitions

Show layout, details, materials, dimensions, finishes, and all information necessary for fabrication and installation. Submit

both fabrication drawings and erection drawings for approval prior to fabrication. Prepare in accordance with CNR-UNI 10011. Drawings shall not be reproductions of contract drawings. Include complete information for the fabrication and erection of the structure's components, including the location, type, and size of bolts, welds, member sizes and lengths, connection details, blocks, copes, and cuts. [Partition system shall be designed for seismic performance and sealed by a registered professional engineer and submitted for record purposes[, with calculations,] as part of the drawings.]

SD-03 Product Data

Wire mesh partitions

Submit data for each material and fabricated component for each type of partition, door, and window.

1.3 DELIVERY, STORAGE, AND HANDLING

Deliver materials in manufacturer's original, unopened containers or packaging with labels intact and legible. Deliver, store, and handle materials so as to prevent damage. Replace damaged or defective materials with new.

1.4 DESCRIPTION OF WORK

Wire mesh partitions shall be [all wire type] [sheet metal base type], [normal duty for normal industrial use] [heavy duty for extra heavy industrial use], and shall be provided complete with fasteners, capping bars, adjustable floor sockets, bracing, doors, [service windows,] hardware, and other items necessary for a complete, useable, and rigid installation. Wire mesh partitions include all cages, dividers, and lockers, etc. attached to the indicated wire mesh partitions.

1.4.1 Seismic Performance

Provide wire mesh partitions capable of withstanding the effects of earthquake motions determined according to Law 64 and D.M. 16/1/96.

1.5 DEFINITIONS

1.5.1 Intermediate Crimp

Wires pass over one and under the next adjacent wire in both directions, with wires crimped before weaving and with extra crimps between the intersections.

PART 2 PRODUCTS

2.1 SOURCE MANUFACTURERS

2.1.1 Wire Mesh

The following manufacturers provide wire mesh materials that generally comply with these specifications:

BROLLO
Viale Sarca, 336
20126 Milano
Tel: 02-661717.1
Fax: 02-66171722

PITTINI-FERRIERE NORD S.p.A.
Zona Industriale Rivoli
33010 Osoppo (UD)
Tel: 0432-981811
Fax: 0432-981800
www.ferrierenord.com

ACTIS FURIO S.r.L.
via Valbrona 3
C.P. 10120
20125 Milano
Tel: 6435-751/2-6432648
Fax: 66100186

2.1.2 Steel Shapes

The following manufacturers provide steel framing shapes for wall framing that generally comply with these specifications:

PITTINI-FERRIERE NORD S.p.A.
Zona Industriale Rivoli
33010 Osoppo (UD)
Tel: 0432-981811
Fax: 0432-981800
www.ferrierenord.com

PALESCANDOLO S.p.A.
via B. Brin, 35
80142 Napoli
Tel: 0817-340800
Fax: 0817-340454

2.2 MATERIALS

2.2.1 Steel Shapes, Plates, and Bars

UNI EN 10020 carbon steel and UNI EN 10131.

2.2.2 Cold-Formed Steel

UNI 3598.

2.2.3 Wire Mesh

UNI 3995. Carbon steel wire, woven diamond mesh, intermediate crimped.

2.2.4 Floor Sockets

Cast or forged steel or ductile iron, adjustable, approximately 64 mm high.

2.2.1 Welding Electrodes and Rods

UNI 5132 and IIS.

2.3 NORMAL DUTY PARTITIONS

2.3.1 Wire Mesh

3.5 mm diameter wire, 38 mm mesh.

2.3.2 Vertical Frames

32 by 16 mm cold-rolled C section channels or 32 by 16 by 3 mm channels.
[Provide only C channels where frames are installed toe to toe without posts.]

2.3.3 Horizontal Frames

25 by 16 mm channels.

2.3.4 Center Reinforcing Bar

One 25 by 13 by 3 mm channel with all wires woven through or welded to channel, or two 25 by 10 by 3 mm channels bolted together with mesh in between.

2.3.5 Capping Bar

56 by 25 by 3 mm channel or 50 by 6 mm flat bar.

2.3.6 Corner Posts

Structural steel angles, 32 by 32 by 3 mm.

2.3.7 Line Posts

Unless otherwise indicated, provide partitions more than 3600 mm high with flat bar line posts bolted between vertical frame channels. Sizes of posts shall be as follows:

Partition Height	Size of Posts
3600 to 4400 mm	44 by 7.9 mm or 50 by 6 mm
4400 to 5900 mm	63 by 7.9 mm
5900 to 7100 mm	75 to 7.9 mm

2.3.8 Hinged Doors

Frames shall be 32 by 13 by 3 mm channels with 32 by 3 mm flat bar cover on top and bottom rails and on hinge stile and a 35 by 20 by 3 mm angle riveted to the lock stile. Provide 1 1/2 pairs of regular weight, wrought steel, non-removable pin, butt hinges riveted or welded to the door and the door opening frame for each door.

2.3.9 Sheet Metal Base

Hot- or cold-rolled sheet steel, not lighter than 1.5 mm.

2.4 HEAVY DUTY PARTITIONS

2.4.1 Wire Mesh

4.3 mm wire, 50 mm mesh.

2.4.2 Panel Frames

38 by 20 by 3 mm steel channels.

2.4.3 Center Reinforcing Bar

One 38 by 20 by 3 mm channel with all wires woven through or welded to channel, or two 32 by 10 by 3 mm channels bolted together with mesh in between.

2.4.4 Capping Bar

Structural steel channel, 75 mm by 1.9 kg.

2.4.5 Corner Posts

Structural steel angles, 45 by 45 by 3 mm.

2.4.6 Line Posts

Unless otherwise indicated, provide partitions with flat bar line posts bolted between vertical frame channels. Sizes of posts shall be as follows:

Partition Height	Size of Posts
2100 to 3600 mm	62 by 7.9 mm
3600 to 4800 mm	75 by 7.9 mm or 62 by 10 mm
4800 to 6000 mm	87 by 7.9 mm

2.4.7 Hinged Doors

Frames shall be 38 by 20 by 3 mm channels with 38 by 3 mm flat bar cover on top and bottom rails and on hinge stile and a 41 by 22 by 3 mm angle riveted to the lock stile. Provide 1 1/2 pairs of heavyweight, wrought steel, non-removable pin, butt hinges riveted or welded to the door and the

door opening frame for each door.

2.5 SLIDING DOORS

Frames shall be 38 by 20 by 3 mm channels with 38 by 3 mm flat bar cover all around. Provide two four-wheel, roller bearing hangers and steel box track for each door.

2.6 DOOR OPENING FRAMES

Provide frames the same size and shape as the vertical frames for the mesh panels.

2.7 LOCKS

Provide each door with a mortise type lock with a six-pin tumbler lock cylinder on the outside and a recessed knob on the inside.

2.8 SERVICE WINDOWS

Slide up type, mounted in standard mesh panel reinforced with channel tracks. Opening shall be 600 mm wide by 450 mm high unless otherwise indicated. Provide two spring loaded latches, operable only from the inside, to lock window in open and closed positions. [Form shelf of 2.7 mm sheet steel, 300 mm deep by 625 mm wide, unless otherwise indicated.]

2.9 FABRICATION

Shop fabricate all components of the system in maximum sizes needed for ease of shipping and erection at the site.

2.9.1 Standard Panels

Wire shall be woven into diamond mesh, intermediate crimped, and securely clinched to frames. Joints shall be mortised and tenoned. Wire shall be continuous at center reinforcing bars, either woven through a single channel or bolted between two channels. Panel vertical frames shall have [6 mm bolt holes 300 mm o.c. for normal duty partitions] [10 mm bolt holes 450 mm o.c. for heavy duty partitions].

2.9.2 Sheet Metal Base Panels

Upper portion shall be as specified for standard panels, except that the wire shall be clinched into the center reinforcing bar. Form sheet steel to fit between the panel frames and securely bolt to the frames.

2.9.3 Doors [and Service Windows]

Construction shall be similar to that specified for panels. Wire mesh shall be the same as that used in the adjacent partition panels.

2.9.4 Finish

Thoroughly clean ferrous metal, treat with phosphate, and paint with

[green] [black] [gray] enamel in the shop.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Wire Mesh Partitions

Install plumb, level, and true to line, within a tolerance of 3 mm in 3 m or the height or run of the partition, if less than 3 meters. Anchor floor sockets to the floor with expansion bolts. Vertical frames and posts shall be bolted together with [6 mm bolts 300 mm o.c. for normal duty partitions] [10 mm bolts 450 mm o.c. for heavy duty partitions]. Secure top frames to a continuous capping bar with 6 mm diameter U bolts not more than 650 mm o.c.

3.1.2 Doors [and Service Windows]

Install in accordance with the manufacturers' recommendations. Adjust as required so that doors [, windows,] and hardware operate freely and properly.

3.1.3 Bracing

Brace free standing partitions more than 6 meters in length, at intervals not greater than 6 meters [with a steel channel brace connected to the capping bar and anchored to the building wall or framing member] [with a structural steel I section or tube post welded to a 225 by 225 mm steel base plate anchored to the floor with 4 expansion bolts] [or as indicated].

3.1.4 Touch-Up

Clean and paint scratches, abrasions, and other damage to shop painted surfaces to match the shop-applied finish.

-- End of Section --