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ISSUED SEPTEMBER 1966

**SUGGESTED GUIDE
SPECIFICATIONS
FOR**

Stainless Steel Roofing, Flashings and Accessories

Published by THE INTERNATIONAL NICKEL COMPANY, INC.

In cooperation with COMMITTEE OF STAINLESS STEEL PRODUCERS,
AMERICAN IRON AND STEEL INSTITUTE

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AIA FILE NO. 12

USHO 002857

NOTES FOR SPECIFICATION WRITER

INTENT

These Suggested Guide Specifications for Stainless Steel Roofing, Flashings and Accessories are offered to the construction industry to promote better specifications for stainless steel products and to provide the Specification Writer with a workable manuscript that will assist him in writing individual project specifications for the items described herein.

The manuscript may be used as a separate section of a project specification to specify stainless steel roofing, flashings and other stainless steel sheet metal work; or applicable parts of the specification may be inserted into other type of roofing specifications such as slate, tile, built-up, etc.

The "Notes to Specification Writer" contain background information which is pertinent to the items included. These notes are intended to serve as a check list for items that are not included in the text and also to explain some of the variables that must be determined for each project.

AIA FORMAT • CSI FORMAT

These Suggested Guide Specifications follow the format of the copyrighted AIA Specification Work Sheets with the consent of the American Institute of Architects.

When the CSI Format For Building Specifications is used as the basis for numbering the project specification, the Metal Roofing, Flashings and Accessories described herein would normally be located as one of the sections under Division 7 - "Moisture Protection". This format requires each section number to be identified by a number and a letter; the number is that of the fixed division under which the section is located; the letter is any letter beginning with "A" and continuing alphabetically as necessary.

REFERENCE TO SHEET METAL MANUALS

References are made herein to the following manuals:

The Architectural Sheet Metal Manual First Edition, published in 1965 by the Sheet Metal and Air Conditioning Contractors National Association, Inc., 107 Center Street, Elgin, Illinois. (Referenced as "The SMACNA Manual".)

The Stainless Steel Data Manual - Suggested Practices for Roofing, Flashing, Copings, Gravel Stops, Fascia and Drainage, as published by The Committee of Stainless Steel Producers, AISI, 150 East 42nd Street, New York, N. Y. 10017 and dated August 1966.

In some cases, references are made to specific plate and/or detail numbers. In other cases, blanks are provided for the user to select plates and details that are applicable to the job.

ARRANGEMENT OF TEXT

The text of these Suggested Guide Specifications is prepared and arranged on the basis that the Stainless Steel Roofing, Flashings and Accessories will be a separate trade section of the project specification and the work will be performed as a sub-contract under a General Contractor. Therefore all bids, shop drawings, samples, etc. will be submitted through the General Contractor. For projects where a General Contractor is not engaged, the text should be modified accordingly.

Paragraphs 1 through 9 are generally applicable to the entire section. Paragraphs 10 through 36 describe only specific items; however they are dependent to some extent upon

the requirements of paragraphs 1 through 9. When only a few specific items from these guide specifications are used to form parts of another specification section such as Built-Up Roofing, Slate Roofing, etc., care should be taken to include the applicable requirements described herein in paragraphs 1 through 9.

SUGGESTIONS FOR USE

These Guide Specifications are prepared to supplement details on the project drawings as necessary. Certain requirements, which are adequately covered by large scale details on the project drawings may be deleted from the specifications. In some cases the user may conserve on drafting and specifications by referencing the plate and detail numbers provided in The SMACNA Manual or by direct references to the Stainless Steel Data Manual.

The notes for specification writer preceding the text contain background information to assist the Specification Writer. Some of the notes are keyed to specific paragraphs in the text. It is intended that a copy of the specification text be marked-up and edited as necessary to suit specific requirements of the project. From this rough draft, the plates or stencils for the project specification may be typed. Additional copies are available upon request, or photocopies of the originals may be made as desired.

The words, figures or clauses in (parenthesis) indicate a choice that must be made. Inapplicable words, figures and clauses should be omitted or revised to suit the project requirements. The blank spaces must be filled in to complete the information necessary. The paragraph and page numbering system indicated may be changed to suit individual requirements.

NOTICE OF RESPONSIBILITY

The system and text presented herein, for these Suggested Guide Specifications require that the user fill in the blank spaces, make the changes, additions or deletions necessary to adapt them to his specific project conditions and requirements. The user must assume full responsibility for correctness of the finished specifications. No warranty expressed or implied, is made and no responsibility is assumed by the Author, the International Nickel Company, Inc. or the American Iron and Steel Institute with respect to the use of these Suggested Guide Specifications.

These Suggested Guide Specifications shall not be made a part of any specification or contract by reference.

NOTES FOR SPECIFIC ITEMS

NOTE 1 This suggested paragraph is included for the specification writers who make a practice of listing the items to be provided under each trade section. Such a list is often helpful to contractors and subcontractors during the bidding period, especially when the divisions of work become complicated. When included, the list should be complete. If the project drawings clearly indicate the extent and location of all items to be included under this section, the entire paragraph could be omitted.

NOTE 2 Stainless steel AISI Types 302 or 304 are generally recommended for normal flashings and roofing work. For most roofing and flashing applications, "dead soft fully annealed" material is recommended and should be specified. Where stainless steel is used in locations requiring maximum resistance to corrosion, specify Type 316. AISI No. 2D, dull finish is preferred for most roofing and flashing installations, particularly where a non-

reflective effect is desired. Where a bright polished finish is desired, specify a No. 4 finish. Other finishes are also available.

For additional information concerning metals, finishes and other data such as recommended gauges, alloy types, available finishes, finish designations, joining methods, methods to reduce distortion and waviness, refer to the following publications.

"Stainless Steel Data Manual, Suggested Practices for Roofing, Flashing, Copings, Gravel Stops, Fascias and Drainage as published by The Committee of Stainless Steel Producers, American Iron and Steel Institute and dated August 1966.

"Stainless Steel Architectural Fact Sheet", dated 1964 as prepared by the International Nickel Co., Inc. in cooperation with The Committee of Stainless Steel Producers, AISI.

"Metal Finishes Manual", published 1964 by National Association of Architectural Metal Manufacturers, 228 N. LaSalle St., Chicago, Ill.

In most cases, the minimum gauges and metal thickness listed herein for specific items are in accordance with suggestions of the AISI Committee of Stainless Steel Producers and accepted industry practices. Heavier gauges may be required for special conditions.

NOTE 3 Solder should be used only as a means of filling or sealing joints; it should never be relied upon to provide structural strength. Where strength is required, joints should be fastened mechanically or welded.

NOTE 4 When it is considered necessary to have welded joints in exposed metal work dressed smooth, the location of joints so treated should be specified. Dressing and finishing increases costs and is generally not necessary in sheet metal work except at eye level locations.

NOTE 5 Where the Diamond Pattern is used for flat seam roof, change size of sheet in the Guide Specification to 15 by 15 or 18 by 18 inches, and revise cleating requirements accordingly.

Where flat seam roofs occur on surfaces having a slope of 3 inches per foot or more and with adequate drainage, seams may be sealed with white lead paste or an approved sealing compound in place of the solder specified.

On very steep roofs such as spires and other roofs having slopes 6 inches per foot or more, sealing of joints may not be necessary, but a 3/4 inch edge fold should be specified.

NOTE 6 Paragraph 14 (E) should be included as part of flat seam roof specifications only when expansion joints or expansion battens are used to divide large roof areas. When expansion joints are required, they should be located and detailed.

The use of expansion joints to break up large areas of low pitched flat seam metal roofs is recommended by some manufacturers to prevent buckling of roofing sheets and the loosening of seams and cleats. There are other manufacturers who do not recommend the use of expansion joints. Recommendations of the manufacturer should be obtained and all conditions considered for each project.

NOTE 7 Standing seam roofs are intended for application on slopes of 3 inches per foot or greater. Make provision for installation of wood nailing strips to receive cleats where deck material is not wood. The width of roofing sheets should be specified; note that metal thickness in-

creases with the sheet width. Long pans up to 60 feet may be used and are usually formed at the site with portable rolled pan forming equipment. (See Stainless Steel Data Manual for details.)

A proprietary welded type standing seam roofing system utilizing long pans formed at the site and portable welding machines may be used in place of the methods specified. If this system is used, consult manufacturers literature and revise the specification accordingly. See that sufficient electric service is available to operate the welding machines.

NOTE 8 Batten seam roofing is intended for application on slopes of 3 inches per foot and greater; however, some manufacturers recommend batten seam roofs on slopes as low as 1-1/2 inches per foot where mechanical type metal battens are used. Make provision for installing wood nailing strips to receive cleats where deck material is not wood. Care should be taken in spacing the battens to avoid waste from cutting the metal sheets. If a stock metal batten system is used, consult manufacturers details and revise this specification accordingly.

NOTE 9 Metal base flashing is not generally recommended for built-up roof installations. It should be used, with built-up roofs only where composition base flashings are not suitable. Adequate wood nailers must be provided for securing base flashing to decks.

NOTE 10 When reflective finishes such as AISI No. 4 are used for gravel stops and fascias, care should be taken to control visual waviness. This is especially necessary at eye level locations and for wide fascias. Visual waviness may be reduced by increasing the metal thickness or by detailing ribbed, cross corrugated or curved profiles. Matte, textured or patterned finishes may not require special detailing. (Refer to the "Stainless Steel Data Manual" for suggestions concerning flatness.)

NOTE 11 The gauge or thickness of metal for gutters should be determined by the type and size of gutters. Refer to Plate 1 Chart 6 of SMACNA Manual for recommended gauges based on girth of gutter. Also refer to Chart 7 on Plate 3 for recommended distance between expansion joints for built-in gutters.

NOTE 12 Where adjustable metal louvers, self closing fire louvers or other special type louvers are required, revise the specifications accordingly. Louvers requiring duct connections should be provided with collar extensions unless this requirement is included as part of the duct work.

ADDITIONAL COPIES

Additional copies of any of the following Suggested Guide Specifications for Stainless Steel Products may be obtained without cost from the Committee of Stainless Steel Producers, 150 East 42nd Street, New York, N. Y. 10017.

Stainless Steel Revolving Doors

Stainless Steel Rolling Doors and Grilles

Stainless Steel Swinging Doors and Frames

Stainless Steel Sliding Doors and Frames

Stainless Steel Windows

Stainless Steel Curtain Walls, or Stainless

Steel Components In Curtain Walls

Stainless Steel Roofing, Flashings and Accessories.

(Continued on back cover)

ACKNOWLEDGEMENTS

The manufacturers and individuals listed below have reviewed the earlier draft of this Suggested Guide Specification. The comments and recommendations received have been incorporated into the final Guide Specification where applicable.

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USHO 002860