

United States Steel Corporation Subsidiaries

Carnegie-Illinois Steel Corporation, Pittsburgh and Chicago
Columbia Steel Company, San Francisco
Tennessee Coal, Iron & Railroad Company, Birmingham
United States Steel Export Company, New York
District Offices in all Principal Cities



U-S-S COPPER STEEL

For Superior Rust Resistance at Low Cost

Corrosion resistance and cost are two determining factors of the type of metal to be used for various air-conditioning jobs.

Copper Steel has 2 to 3 times the atmospheric corrosion resistance of plain steel or pure iron as shown in the results of unbiased tests made at Pittsburgh, Ft. Sheridan and Annapolis by the American Society for Testing Materials.

The cost of U-S-S Copper Steel is less than that of pure iron or copper-bearing pure iron and only slightly more than plain steel. Thus there often is a dividend of 200 per cent to 300 per cent longer life and a saving in the first cost as well.

When galvanized, U-S-S Copper Steel produces a sheet that is rust resistant all the way through—not just on the surface. It should be used for all ducts carrying humidified air or placed in damp locations such as basements, shower rooms, etc.

U-S-S PAINTBOND

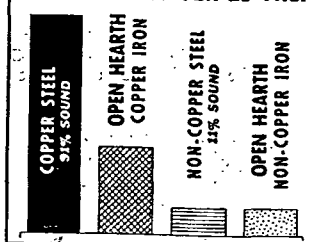
U-S-S PaintBond should be used whenever galvanized steel is to be painted. This special Bonderized sheet can be painted immediately, offers a much better surface for painting, lessens danger of the paint flaking and retards corrosion. It is used for ductwork, furnace housings and outdoor metal work. Produced in Chicago district.

Send for our PaintBond booklet.

U-S-S GALVANNEALED

U-S-S Galvannealed has a tight, matte-surface zinc coating that withstands severe forming operations without peeling or cracking. Suitable for immediate painting without aging or other surface preparation. Produced in Chicago district.

HERE'S THE PROOF!
UNCOATED COPPER STEEL
91% SOUND AFTER 21 YRS.



Corrosion test of A.S.T.M. on 28 gage black sheets exposed at Annapolis, Md., October, 1916. The copper steel sheets outlasted all others in the test.

U-S-S DUL-KOTE

U-S-S Dul-Kote is a specially treated non-spangled galvanized sheet which also can be painted immediately without aging or otherwise preparing the surface. Produced in Birmingham district.

Send for our Dul-Kote booklet.

OTHER U-S-S PRODUCTS INCLUDE:

Black Sheets—All grades, hot rolled, cold rolled in a number of different finishes.

Stainless—Heat resisting steel for various uses where temperatures are high and corrosion severe.

Cor-Ten—High strength steel—greater strength, greater atmospheric corrosion resistance for smokestacks, hoods, etc.

Chicago Metal Hose Corporation

EXPANSION JOINT DIVISION

Maywood, Illinois

PLANTS

Maywood, Elgin and Rock Falls, Ill.

District Offices

Atlanta Boston Chicago Cleveland Detroit Ft. Worth
Los Angeles New York Philadelphia Pittsburgh San Francisco
In Canada: Canadian Metal Hose Company, Ltd., Brampton, Ontario

CMH CONTROLLED-FLEXING EXPANSION JOINTS

For pressures up to 300 psi—copper liners for temperatures to 400 F, stainless steel liners for temperatures to 1400 F (under certain conditions).

CMH Controlled-Flexing Expansion Joints combine CMH "engineered curvature of corrugations" with precision designed control rings. The corrugation-mated control rings provide guided flexing of the joint and prevent any permanent deformation of corrugations. Control rings are firmly anchored into

corrugations to close working dimension tolerances. Expansion travel up to 6½ in. may be secured with a single CMH Expansion Joint.

Standard sizes from 4 in. to 24 in. I.D. in either stainless steel or copper. Available with or without stainless steel or Monel internal sleeves.



Cut-away view of CMH Controlled-Flexing Expansion Joint with flanged ends.



CMH Controlled-Flexing Expansion Joint with Welding Ends.

CMH FREE-FLEXING EXPANSION JOINTS

... for pressures up to 30 psi ... Stainless Steel or copper ... temperatures to 1400 F for Stainless Steel units (under certain conditions) and 400 F for copper.

CMH Free-Flexing Expansion Joints are made with single or multiple corrugations. Designed for expansion travel up to 1 in. per unit. Used in low to moderate pressure systems for controlling expansion up to ½ in. with each expansion joint. Additionally, misalignment correction or offset motion is calculated at ½ in. per corrugation when two or

more corrugations are used. When more than four corrugations are used a greater lateral motion may be allowed, depending on service requirements.

Standard sizes from 4 in. to 24 in. I.D. in either stainless steel or copper. Available with or without stainless steel or Monel internal sleeves.

Left—CMH Free-Flexing Expansion Joints with multiple-corrugations require less force to compress than single-corrugation joints. Force necessary to compress multiple-corrugation joints may be calculated for copper by multiplying inside diameter in inches by 100; for stainless steel, 150 times diameter in inches. Right—CMH single-corrugation Expansion Joint for travel up to ½ in. Force in pounds necessary to compress joint ½ in. may be calculated for copper by multiplying 200 by inside diameter of pipe in inches; for stainless steel, multiply pipe diameter in inches by 300.

