JOINING

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CASTOMAG 45706

Gas-Shielded, Solid Wire Continuous Electrode For Copper And Silicone Bronze

DESCRIPTION

Special bronze (Cu-Si) MIG wire (3% Si) for assembly and coating of copper and its alloys such as special bronzes Cu-Si and brass (Cu-Zn) base metals to themselves and to automobile industry steel. It has good resistance to corrosion in urban, industrial, and marine environment. Work hardening and ductile deposit. Color close to that of copper.
The addition of silicon acts as deoxider and reduce the thermal conductivity getting an improved weldability.

APPLICATIONS

For joining of copper, copper zinc and copper silicium alloys, for example:2.0220 -CuZn 5, 2.0230 -CuZn 1 0, 2.0240 -CuZn 15, 2.1322 -CuMg 0,4, 2.1323 -CuMg 0,7
and for coatings on copper alloys and ferrous metals.

For welding of forged or cast copper as well as for the manufacturing of refrigerating equipment. The welding of copper alloys with an oxygen content exceeding 0,02% is not recommended.

Boilers, vessels (also cladding), heat exchangers, distillating and reheating installations in the chemical, sugar and paper industry. For sewage plants. For joining of earthing connection.

PROCEDURE FOR USE

Preparation
Eliminate earlier deposits and worn metal by grinding, or with the manual electrode ChamferTrode 04 , until a sound, regular and crack freesurface is obtained. The surfaces of new workpieces must be free from oxidation, grease, paint etc. Round off sharp edges.
Preheating
For low-thickness parts, preheating is not generally required. For ticker parts, we recommend the following preheating temperatures:

Copper with thickness > 4 mm:300-600.C.
Brass with thickness > 6 mm:250-300.C.
Bronze with thickness > 8 mm:200-250.C.
Welding Current: = (+)
Weld with short or spray arc, however use preferably the pulsed-arc technique.

Standards :
AWS A5.7: ERCuSi-A

TECHNICAL DATA

Tensile strength: 350 N/mm2 (psi)
Elongation : 40%
Typical hardness : 80HB

Shielding gas
Recommended gas: .100% Ar [ISO 14175-I1]

Electrode (mm)	0.8mm	1.0mm	1.2mm
Voltage (V)	13-31	14-31	14-32
Current (A)	40-230	40-280	60-270
Wire speed m/min	3-18	2-14	1.75-11
Gas 1/min	10	12	14

Note: For optimum result use the lowest amperage practical