

# MAGNA 210 DC

Magna 210 is an acid resisting bronze electrode with outstanding physical properties. It has the following qualities:

- 1. All Mineral Coating.** Some ordinary bronze electrodes have cheap cellulose coatings, similar to the coatings on mild steel electrodes. Magna 210 has an all mineral coating which contains silicones and other moisture and heat resistant constituents. In manufacture the coating is baked at elevated temperatures for a long time to remove all moisture. This prevents underbead cracking in the weld deposit.
- 2. High Deoxidation.** Most ordinary bronze electrodes make welds which are porous because copper oxidizes readily in the molten condition during welding. Often when ordinary bronze electrodes are used, the deposit is porous because sulphides and oxides are present in the deposit. These impurities cause a great reduction in the physical properties of the weld metal. Elongation is reduced and fatigue resistance is greatly lowered. The Magna 210 core wire is deoxidised during manufacture. Additionally the coating contains compounds which purge the weld metal while it is molten removing virtually all danger of oxidation and oxide inclusions.
- 3. Versatility.** Magna 210 can be used on practically all metals including the following:

Stainless Steel	Bronze	Aluminium Bronze
Cast Iron	Brass	Architectural Bronze
Steel	Copper	Naval Bronze
Monel	Galvanized Iron	Malleable Iron

It can be used for building up worn parts, for anti-friction overlays, for bronze foundry salvage. It can be used for joining non-ferrous and dissimilar metals. Ideal as a non-spark material for explosives and combustible industries.

- 4. High Physical Properties.**

Elongation:	50%
Tensile strength:	58,000-65,000p.s.i. (40.8 to 45.7Kg/mm <sup>2</sup> )
Machinability:	Very good

Corrosion resistance: Very high. Resists a wide variety of chemical compounds including Aluminium Hydroxide, Dry Hydrogen Sulphide, Zinc Sulphate, Potassium Chloride, Acetic Acid, Sulphurous Acid, Ammonia (moisture free.)

## APPLICATION

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Prepare work area by chamfering sections being welded to form a well fitting joint. Magna 100 can be used here to completely remove flaws and cracks and form a perfect weld joint.

For optimum results on heavy sections, preheat to 204°C (400°F). Large copper sections will require preheating up to 425°C (800°F).

Strike an arc and work quickly to deposit filler metal. Hold electrode approximately 10° off centre and keep a close to medium close arc. Remove slag between passes.

Use only DC reverse polarity welding machines (electrode positive). Fluctuation of the arc is most likely caused by your machine being set on the wrong polarity. In this instance turn machine off and adjust to opposite polarity, then resume welding.

Welding vertically up is best handled by making a large deposit and then working up using the first deposit as a ledge.

Porosity may be evident after the first deposit, however this can be eliminated by applying further passes.

## RECOMMENDED AMPERAGES:

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Metric	Inch.	Gauge	Setting
3.2 mm.	1/8	10	110 - 150 amps