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Silicon Bronze Electrode

◆ INTRODUCTION

Aufhauser Silicon Bronze Electrode contains approximately three percent silicon plus small percentages of manganese and tin. It is an excellent choice for applications involving welding cast iron to steel, or where the part is exposed to corrosives. Silicon Bronze weld deposits are strong, ductile and crack resistant - even when welding on dirty, oily, burned cast or malleable parts. The high silicon content allows the Silicon Bronze Electrode to be used as a welding or brazing electrode.

◆ APPLICATIONS

- Welding copper-silicon alloys, cast iron, malleable iron, galvanized iron, copper-base alloys and dissimilar metals.
- Surfacing area subjected to corrosion.

◆ CHEMICAL COMPOSITION

<u>Copper</u>	<u>Zinc</u>	<u>Tin</u>	<u>Manganese</u>	<u>Iron</u>	<u>Silicon</u>	<u>Nickel</u>	<u>Phosphorus</u>	<u>Aluminum</u>	<u>Lead</u>
Remainder	*	1.5	1.5	0.50	2.4-4.0	*	*	0.01	0.02

Note: Copper contains Silver. All values are maximum percentage, unless shown in range. Total other elements = .50
 * these elements must be included in total of other elements.

◆ PHYSICAL and MECHANICAL PROPERTIES

Machinability:	Excellent
Color:	Yellow brass
Current Used:	AC/DC Reverse Polarity
Position(s):	All Position
Tensile Strength:	65,000 psi, max.
Yield Strength:	42,000 psi, max.
Elongation, in 4 in.:	20%
Brinell Hardness:	80-100

◆ SPECIFICATIONS MEET or EXCEED

- AWS A5.6 ECuSi-A
- ASME SFA5.6

◆ STANDARD SIZES AND DIAMETERS

<u>Diameters</u>	<u>Lengths</u>	<u>Amperage</u>
3/32	12"	----
1/8	14"	75-120
5/32	14"	----
3/16	14"	----

Copper and its alloys require a relatively high heat input with shortened welding time. Higher preheat temperatures and faster welding rates than for steel are necessary.

EC656: Silicon Bronze Electrode

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