



Tube-Alloy[®] 218 TiC-O

OPEN ARC HARD SURFACING WIRE

Build-Up

REPLACES HS-164

260-O, INDEX 990129
U.S. Pat. No. 4,584,459

DESCRIPTION:

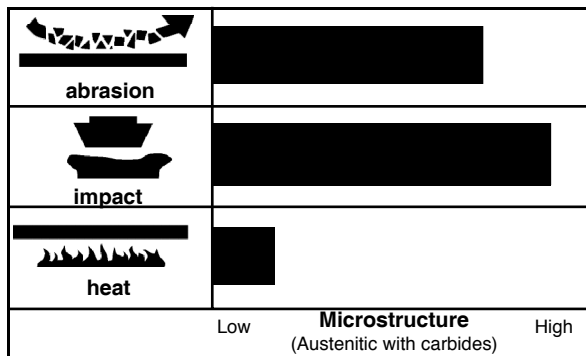
Tube-Alloy 218 TiC-O is a self-shielded, flux-cored wire that deposits a work-hardenable austenitic manganese steel alloy with finely dispersed titanium carbides (TiCs). The deposit is extremely tough, making it suitable for severe impact. It also provides very good abrasion resistance due to the titanium carbides.

Tube-Alloy 218 TiC-O is not limited to a maximum number of layers of build-up and provides a build-up and overlay in a single wire with abrasion resistance equal to many chrome-carbide alloys.

OPERATIONAL CHARACTERISTICS:

Tube-Alloy 218 TiC-O has a steady arc with a globular transfer. Spatter and noise levels are minimal, and the slag cover is minimal. It is designed primarily for use in automatic applications without slagging between passes. Out-of-position welding is limited to a horizontal shelf technique.

RELATIVE WEAR RESISTANCE:



TYPICAL WELD METAL PROPERTIES* (CHEM PAD):

Weld Metal Analysis

Carbon (C)	2.00
Manganese (Mn)	13.00
Silicon (Si)	0.60
Chromium (Cr)	3.20
Titanium (Ti)	3.50
Iron (Fe)	Bal.

TYPICAL MECHANICAL PROPERTIES* (AS WELDED):

	Number of Layers	As Deposited on	
		1020 Steel	12-14% Mn Steel
Hardness	1	25 Rc	30 Rc
	2	29 Rc	30 Rc
	3	31 Rc	30 Rc
Work Hardened		50-55 Rc	
Abrasion resistance		Good	
Impact resistance		Very Good	
Machinability		Poor	
Can Be Flame Cut			
Non-magnetic			

*The information contained or otherwise referenced herein is presented only as "typical" without guarantee or warranty, and McKay expressly disclaims any liability incurred from any reliance thereon. No data is to be construed as a recommendation for any welding condition or technique not controlled by McKay.



Tube-Alloy® 218 TiC-O

RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Stick-out		Optimum Amps	Volts	Deposition Rate	
Inches	mm		Inches	mm			Amps	lb/hr ¹
7/64	2.8	DCEP	1 - 1/2 - 2	38-51	350 - 400	24 - 27	300	11
					400 - 450	26 - 29	350	14
					450 - 500	28 - 32	400	18

Start with **middle ranges** and adjust accordingly. Higher amperages will increase deposition rate, dilution, and heat input to base metal, increasing voltage will widen and flatten bead profile, but excessive voltage will result in porosity. Too much electrical stick-out may result in increased spatter, too little may result in internal porosity.

AVAILABLE DIAMETERS AND PACKAGES:

Diameter		60-lb. Coil	250-lb. Auto-Pak
Inches	mm		
7/64	2.8	S603939-062	S603939-065

APPLICATIONS:

- Gyrotory Crusher Mantles and Cones
- Hammer Mill Hammers
- Impactor Crusher Bars

Material Safety Data Sheets on any McKay product may be obtained from McKay Customer Service. Because McKay is constantly improving products, McKay reserves the right to change design and/or specifications without notice.

Tube-Alloy is a registered trademark of Hobart Brothers Company, Troy, Ohio.