



# Tube-Alloy<sup>®</sup> 244-O

OPEN ARC HARD SURFACING WIRE

OVERLAY

Replaces HS-130-A

260-Q, INDEX: 990129

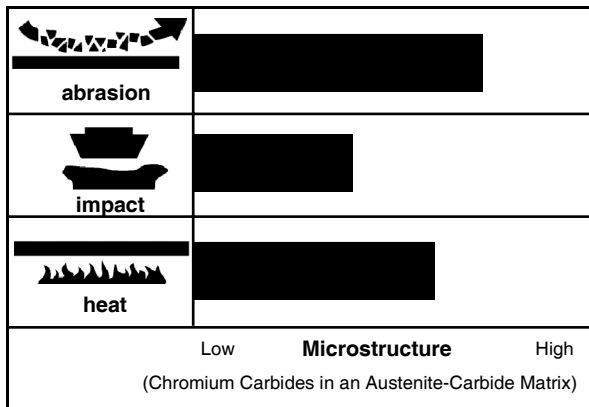
**DESCRIPTION:**

**Tube-Alloy 244-O** is a medium alloy carbide steel. It is primarily designed to meet the specific physical and operational requirements necessary in the automatic rebuilding of dredge pump shells. Deposits do stress relief check crack.

**OPERATIONAL CHARACTERISTICS:**

Tube-Alloy 244-O requires no external shielding to produce good, sound weld deposits but CO<sub>2</sub> shielding gas is sometimes utilized for special conditions. Weldability is excellent in the horizontal position. A fine check pattern provides maximum stress relief.

**RELATIVE WEAR RESISTANCE:**



**TYPICAL WELD METAL PROPERTIES\* (CHEM PAD):**

**Weld Metal Analysis**

Carbon (C)	2.50
Manganese (Mn)	1.60
Silicon (Si)	2.00
Chromium (Cr)	9.00
Molybdenum (Mo)	1.50
Copper (Cu)	0.50
Iron (Fe)	Bal.

**TYPICAL MECHANICAL PROPERTIES\* (AS WELDED):**

	Number of Layers	As-Deposited on	
		1020 Steel	12-14% Mn Steel
Hardness	1	34 Rc	24 Rc
	2	37 Rc	33 Rc
	3	40 Rc	38 Rc
Abrasion resistance - very good			
Impact resistance - fair			
Machinability - very difficult			
Cannot be flamed cut			
Slightly magnetic			
Will relief check crack readily			
Thickness - 3 to 5 layers maximum			

\*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.



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## RECOMMENDED OPERATING PARAMETERS:

Diameter		Type of Power	Stick-Out		Optimum Amps	Volts	Amps	Deposition Rate lb/hr
Inches	mm		Inches	mm				
7/64	2.8	DCEP	1-1/2 - 2	38-51	350-400	24-27	300	11
					<b>400-450</b>	<b>26-29</b>	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		250 lb. Auto-Pak	500 lb. Auto-Pak
Inches	mm		
7/64	2.8	S604439-65	S604439-066

## APPLICATIONS:

- Dredge Pump
- Impellers and Side Plates
- Pipeline Ball Joints
- Pump Shells

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

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