



# Hardalloy® 120

**HARD SURFACING ELECTRODE**

**MAINTENANCE**

Replaces Preliminary

250-B INDEX: 981201

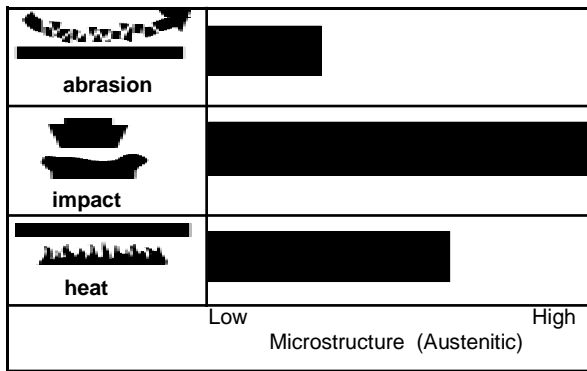
**DESCRIPTION:**

**Hardalloy 120** is an economical austenitic stainless steel electrode with ferrite content of at least 20FN. It is designed to achieve good impact, corrosion and abrasion resistance, high compressive strength and superior joining properties in one product. It makes an excellent build-up material and is recommended for joining dissimilar metals. Due to a heavy coating, Hardalloy 120 electrodes compare with standard electrodes having 1/32" larger core wires.

**OPERATIONAL CHARACTERISTICS:**

Hardalloy 120 is an all-position electrode which runs similar to a low hydrogen type electrode. It produces a smooth spray type transfer.

**RELATIVE WEAR RESISTANCE:**



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

**WELD METAL ANALYSIS**

Carbon (C)	0.07
Manganese (Mn)	1.30
Silicon (Si)	0.40
Nickel (Ni)	9.70
Chromium (Cr)	23.50
Iron (Fe)	Bal.

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

	NUMBER OF LAYERS	AS DEPOSITED ON	
		1020 STEEL	12-14% MN STEEL
Hardness	1	20 Rc	21 Rc
	2	19 Rc	21 Rc
	3-8	17 Rc	18 Rc
Tensile Strength		97,000 psi (669 MPa)	
Yield Strength		71,000 psi (490 MPa)	
Elongation % in 2"		37%	
Ferrite Number		20FN	
Good hot hardness to 1000°F			
Work hardened		40-45 Rc	
Cannot be flame cut			
Machinability		Very Good	

\*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	OPTIMUM AMPS
INCHES	MM		
1/8	3.2	DCEP* or AC	130
5/32	4.0	DCEP* or AC	175
3/16	4.8	DCEP* or AC	230

\*PREFERRED

## AVAILABLE DIAMETERS AND PACKAGES:

DIAMETER		LENGTH		10-LB. COIL
INCHES	MM	INCHES	MM	
1/8	3.2	14	355	S541244-033
5/32	4.0	14	355	S541251-033
3/16	4.8	14	355	S541258-033

## APPLICATIONS:

- Surfacing Valve Seats
- Welding Attachments to Manganese Castings
- Welding Alloy Steel Tips to Manganese Buckets

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.

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