

Lincore[®] 420

GENERAL DESCRIPTION

Lincore 420 is a self shielded, open arc, flux cored tubular electrode that produces a martensitic deposit similar to AISI 420 stainless steel. The arc characteristics are excellent producing minimal spatter and good slag removal.

WELDING POSITIONS



ISO/ASME PA/TG

CURRENT TYPE

DC+

CHEMICAL COMPOSITION (W%), TYPICAL, ALL WELD METAL

C	Mn	Si	Cr
0.2	1.2	0.5	12.0

STRUCTURE

In the as welded condition, the microstructure consists of a soft chromium manganese alloy austenite which rapidly work hardens under impact loading

MECHANICAL PROPERTIES, TYPICAL, ALL WELD METAL

Typical hardness values

Layer 1	52 HRc
Layer 2	51 HRc
Layer 3	53 HRc
Welded on Mild Steel Plate (12mm)	

PACKAGING AND AVAILABLE SIZES

Diameter (mm)	2.4	3.2	4.0
Unit : 22.7 kg coil 50C	X	X	
272.2 kg speed Feed Drum		X	X

Lincore[®] 420 rev. EN 22

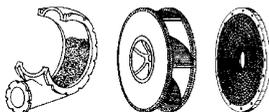
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APPLICATION

Lincore 420 is martensitic stainless hardfacing electrode designed to provide overlay deposits that resists metal wear under corrosion.

Typical applications include:

- Sand pumps
- Dredging equipment
- Fans
- Valve seats in steam and liquid pipes



ADDITIONAL INFORMATION

All work-hardened base material and previously deposited material should be removed prior to applying a new deposit, since such areas are prone to embrittlement and possible cracking.

Areas that contain irregularities such as cracks and deep gouges can be repaired locally using Wearshield[®] BU30 or Wearshield[®] 15CrMn prior to hardfacing with Lincore 420.

Preheat would be needed if the welding is done over either highly restrained material or martensitic stainless base metal.

A preheat and interpass temperature in the range of 200-300°C can be used depending on the nature of the material to be welded.

Under conditions of low dilution, the microstructure is similar to that of AISI 420 martensitic stainless steel. This structure provides good abrasion resistance under conditions of severe corrosion and high impact. At higher dilutions, when overlaid on mild steel or low alloy steel, the weld metal microstructure will retain its martensitic stainless structure. But the reduced chromium level might adversely affect the corrosion resistance of the deposit.

The Lincore 15CrMn deposit can not be cut using the oxy-fuel process due to the high chromium content, however, plasma arc and air carbon arc processes are appropriate.

CALCULATION DATA

Diameter (mm)	Wire Feed Speed (cm/min)	Current (A)	Arc Voltage (V)	Deposition rate (kg/h)
2.4	1.7-4.4	250-450	24-31	2.9-7.9
3.2	1.5-3.6	350-625	26-30	4.3-10.0
4.0	1.4-2.9	475-800	27-32	5.9-12.4