

Ratna E 312

CLASSIFICATION

- AWS/SFA-5.4 E 312-16
- IS 5206 E 29.9 R 26

APPLICATIONS

- It is ideally suitable for welding difficult-to-weld e.g. High harden-able tool, die & spring steel, 13% Mn steels, free cutting steels, high temperature steels.
- Dissimilar joints between stainless steel and high carbon steels.
- Surfacing to metal-to-metal wear areas, not working tools, furnace components etc.
- Suitable rebuilding chemical agitator blades, shafts, rolling mill spindles, bucket lips.

DESCRIPTION

- It is an electrode that gives 30/10 deposit, it has two phase structures with high nos. of ferrites in austenitic matrix. It is suitable for carbon steel, low alloy steel, dissimilar materials etc. electrode is recommended also for unknown steel, leaf springs and difficult-to-weld with higher strength.

TYPICAL WELD METAL CHEMICAL PROPERTIES (ELEMENT %)

CARBON (C)	MAGNESIUM (MN)	SILICON (SI)	SULFUR (S)	PHOSPHORUS (P)	CHROMIUM (CR)	NICKEL (NI)	MOLYBDENUM (MO)	COPPER (CU)
0.15 MAX	0.50-2.50	1.00 MAX	0.030 MAX	0.040 MAX	28.0-32.0	8.00-10.50	0.75 MAX	0.75 MAX

CURRENT POLARITY

DC(+), AC

WELDING POSITION

FLAT, HORIZONTAL, VERTICAL, OVERHEAD

TYPICAL WELD METAL MECHANICAL PROPERTIES (ELEMENT %)

YIELD STRENGTH (N/MM ²) KSI	ULTIMATE TENSILE STRENGTH (N/MM ²) KSI	ELONGATION (%)	CVN IMPACT AT °C JOULES
-	660 (96) MIN	22 MIN	-

SIZE AND CURRENT RECOMMENDATIONS

SIZE D X L (MM)	SIZE D X L (IN)	CURRENT (AMPS) DC+, AC
2.5mm x 350mm	3/32" x 14"	50-80
3.2mm x 350mm	1/8" x 14"	75-100
4.0mm x 350mm	5/32" x 14"	110-140

RE-DRY CONDITIONS

- Re-dry the electrode at 250°C for 1 hour.

NOTE:
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