WORK HARDENING ELECTRODE FOR AUSTENTIC MANGANESE STEELS

EURO MANGAN Ni

CODING:

I.S.7303-1974: E Fe Mn B

DESCRIPTION:

EURO MANGAN Ni is a low hydrogen type, heavy coated electrode suitable for repairs of worn out machine parts of austenitic manganese steels. The weld deposit is austenitic and contains upto1% carbon, 12 to 16% Mn and 3% Ni. The weld metal has a characteristic of work hardening on the surface in use, while the core remains tough and softer. The hardness of weld deposit is around 250VPN before work-hardening and rises to approximately 550VPN under working conditions. The soft austenitic surface is converted to hard martensite under working as well as under impact conditions and is capable of resisting wear and abrasion. The jaw-crusher is the best example of this action.

NOTED FEATURES:

1. Work hardening type electrode specially designed for filling up worn out parts of austenitic manganese steels.
2. Sound and stable arc with easy striking and restriking characteristics.
3. Uniform and defect free weld deposit with easily removable slag.
4. Can be operated on AC as well as DC(+)

USES:

EURO MANGAN Ni is well suited for repairs of austenitic manganese steel railway crossings, crusher jaws, crusher linings, earth moving equipments, dredger and grab buckets etc.

RECOMMENDED CURRENT RANGES:

SIZE mm		3.15X450	4.00 X 450	5.00 X 450
CURRENT-Amps	DC(+)	100-140	140-180	180-220

TYPICAL CHEMICAL ANALYSIS OF WELD METAL

Element	C	Mn	Ni
Range	1.0%max	12-16%	2.75%min

RECOMMENDED PROCEDURE:

1. No preheating is necessary for welding of austenitic manganese steels.
2. Use low current, short arc and make shorter and stringer welds.
3. Make the surface free from rust, moisture, oil , grease etc.
4. Rapid cooling is recommended because slow cooling between 500°C and 900°C will cause carbide precipitation and embrittlement.
5. Interpass temp should not exceed 350°C.
6. Preheating and post heating is recommended for carbon steels, castings, chromium steels etc.,

SPECIAL INSTRUCTIONS:

1. Redry the electrodes @ 350°C for one hour before use.
2. Use short arc during welding.
3. Use stringer technique and avoid weaving to avoid overheating
4. Peening is necessary during welding to relieve stresses of weld deposit.
5. The surface should be thoroughly cleaned and should be free from rust, moisture oil, grease etc.