ONIR SS104

Fully Austenitic CrNiMn Welding Electrode

Application Examples

- Buffer Layer: Deposition of a stress-relaxing layer on base metals before hardfacing.
- Armor plates: Welding of steel armor and components like rails, cross-overs, and crane wheels.
- Difficult to weld steels: Welding of 14% Mn steel, self-hardening steels, and steels with an unknown composition.
- Wear plates: Joining of wear plates to their supports and to each other.

Type of Current

AC, DCEP

Features

- The weld metal contains about 4-5% Manganese, resulting in high resistance to impact and wear.
- Work hardening: The weld metal hardens under impact and pressure, enhancing its suitability for dynamic applications.
- Dissimilar joining: It is excellent for joining dissimilar steels , such as carbon steels to austenitic and ferrite stainless steels.

Welding Method

- Clean the welding area thoroughly.
- Re-dry electrodes 2 hours at 250-350°C before use.
- Pre-heating of thick plate Carbon Steel to 150-250°C.
- Hold the electrode vertically with short arc.

Mechanical Properties of Weld Metal

UTS (MPa)	YS (MPa)	%El	Impact Strength
> 600	> 350	> 40	60 J @ +20°C

Hardness of the Pure Weld Metal	
As Welded	190 BHN
After Work Hardened	250 BHN

Welding Position

1G/1F, 2F, 2G, 4G, 3G Uphill & Downhill

Size, Packing and Recommended Welding Current Range

Size (mm) Dia x Length	Kg/Pack	Kg/Box	Current Range (Amp)
2.5x350	4.6	18.4	50-70
3.25x350	5.0	20	70-100
4.0x450	5.0	20	100-130
5.0x450	6.2	24.8	150-180