

Classifications

AWS A5.14 / SFA-5.14
EN ISO 18274

ERNiCr-3

S Ni 6082 (NiCr20Mn3Nb)

Characteristics and typical fields of application

Thermanit Nicro 82 is a solid wire for submerged arc welding; Nickel alloy; heat and high temperature resistant. Good toughness at subzero temperatures as low as $-269\text{ }^{\circ}\text{C}$. Good for welding austenitic-ferritic joints. No Cr-carbide zone that become brittle in the ferrite weld deposit transition zone, even as a result of heat treatments above $300\text{ }^{\circ}\text{C}$. Good for fabricating tough joints and surfacing with heat resistant Cr- and CrNi-steels and Ni-alloys. Temperature limits: $900\text{ }^{\circ}\text{C}$ max. for fully stressed welds. Resistant to scaling up to $1000\text{ }^{\circ}\text{C}$.

Recommended SAW flux:

Marathon 104

Marathon 444

Marathon 504

Base materials

TÜV-certified parent metals

1.4876 – X8NiCrAlTi32-21; 1.4877 – X6NiCrNbCe32-27; 1.4958 – X5NiCrAlTi31-20; 2.4816 – NiCr15Fe; 2.4817 – LC-NiCr15Fe; 2.4851 – NiCr23Fe; 1.5662 – X8Ni9;

Combinations of 1.4539 – X1NiCrMoCu25-20-5, 1.4583 – X10CrNiMoNb18-12 and ferritic boiler steels as 1.7380 – 10CrMo9-10;

Alloy 800, Alloy 800 H, Alloy 600, Alloy 600 L, Alloy 601; UNS N08800, UNS N08810, UNS N06600, UNS N06600, UNS N06601

Typical analysis

	C	Si	Mn	Cr	Ni	Nb	Fe
wt.-%	0.01	0.10	3.2	20.5	Bal.	2.6	< 1.0

Structure: Austenite

Operating data

Dimension mm

1.6

2.0

2.4

3.2

No preheating. Attention must be paid to resistance to intercrystalline corrosion and embrittlement in case of austenitic stainless steels. To minimize the risk of hot cracking when welding fully austenitic and nickel-base alloys, heat input and interpass temperature must be low and there must be as little dilution as possible from the parent metal. Suggested heat input is max. 1.5 kJ/mm and interpass temperature max. 100°C .

Polarity: DC or AC.

Approvals

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