

NICROWELD 625

Electrodes MMA [SMAW]

Nickel alloys

CLASSIFICATION:	APPROVALS:	APPLICATION:
EN ISO 14172-A : E Ni 6625 (NiCr22Mo9Nb) DIN 1736 : EL NiCr 20 Mo 9 Nb AWS A-5.11 : E NiCrMo-3 W.Nr. : 2.4621		Power generation industry Hardfacing and repairing Constructions & Engineering Petrochemical and chemical industry

- A special electrode with an alloy core and an basic coating.
- For joining and cladding high-alloy and heat-resistant steels, as well as dissimilar joints, e.g. lowalloy steels with nickel- or copper-based steels.
- The austenitic deposit is ductile at both low and high temperatures.
- Resistant to scaling up to 1100°C and to low temperatures down to -196°C.
- Resistant to the effects of heated and hot chlorides, making it recommended for critical work in the shipbuilding industry.
- Operating temperature: -196°C to 500°C.

Application

For dedicated materials, dissimilar connections, cladding. Thermal shields, furnace equipment (scrubbers), gas turbine engine components, combustion chamber linings, chemical plant fittings, seawater specialty applications. In the aerospace industry (exhaust devices, fuel lines, heat exchanger housings). Numerous of applications in the nuclear industry (very low cobalt content). In general industry (tanks, heat exchangers, valves and fluid distribution systems, pipes). Waste disposal (reheaters), pulp and paper industry. Various fasteners, compensators, exhaust systems.

Base material



DIN	W.Nr.	Alloy
X2 NiCrAlTi32-20	1.4558	
NiCr20TiAl	2.4631	80A
NiCr23Mo16Al	2.4605	59
NiCr22Mo6Cu	2.4618	
NiCr22Mo7Cu	2.4619	G-3
NiCr20Ti	2.4630	75
NiCr21Mo6Cu	2.4641	
NiCr20CuMo	2.4660	20
NiCr20Ti	2.4951	75
NiCr15Fe	2.4816	600
LC-NiCu15Fe	2.4817	8
NiCr23Fe	2.4851	601
NiCr21Mo	2.4858	825
X8Ni9	1.5662	
12Ni19	1.5680	2515
GX9Ni5	1.5681	
X3CrNiN18-10	1.6907	
X3CrNiMoN18-14	1.6967	
X10NiCrAlTi32-20, X10NiCrAlTi32-21	1.4876	800
X8NiCrAlTi32-21	1.4959	800H
X1NiCrMoCu25-20-5	1.4539	904L
X12 Ni5		

GX10Ni5		
NiCr22Mo9Nb	1.4856	625
X5NiCrAlTi31-20	1.4958	
X1CrNiMoCuN20-18-7	1.4547	F44

Typical chemical composition %

C	Si	Mn	Cr	Ni	Mo	Nb	Fe
0,04	0,80	0,60	22,00	base	9,00	3,50	<6,00

Typical mechanical properties

Yield strength Re [N/mm2]	>500
Tensile strength Rm [N/mm2]	>750
Elongation A5 [%]	>30
Impact energy Kv [J]	>47 J (-196°C) /
Hardness	app. 235HB after welding if a surge of about 400HB works /
Coating type	basic
Welding current	
Welding positions	
Redrying	300°C / 1h
Additional description	The microstructure consists of solutionstrengthened high-nickel austenite with carbides. Maintain the lowest possible current values. Interpass temperature max 250[°C]. When welding super austenites, the inter-pass temperature should not exceed 100 [°C].

Welding parameters and packing

Ø	Length [mm]	Welding current [A]	Weight of packet [kg]	Weight of carton [kg]
2,5	300 /	65-100	1,0	6,0
3,2	350 /	90-130	1,0	6,0
4,0	350 /	120-170	1,0	6,0
5,0	450 /	170-240	1,0	6,0

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