

W 'Tungsten inert gas arc welding'

Prepared by	Qualified by	Approved by	Reg no	Cancelling	Reg date	Page
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REASON FOR ISSUE

Change ownership

GENERAL

Exaton Ni54 is a nickel-chrome-molybdenum alloy of type alloy C-22. It is a versatile alloy with excellent wet corrosion resistance in oxidizing and reducing media. It has better overall corrosion resistance than other Ni-Cr-Mo alloys such as alloy UNS N10276 (2.4819) and alloy UNS N06626 (2.4856). However, in severely reducing media alloy UNS N10276 is preferred where Exaton Ni56 is a better matching consumable. Applications for Exaton Ni54 are found in aggressively corrosive media such as chlorination systems, geothermal wells, HF furnace scrubbers, pesticide production, phosphoric acid production, SO cooling towers and for weld overlays on valves.

Exaton Ni54 is used for joining alloy UNS N06022 (2.4602) and is widely used as overmatching filler material for alloy UNS N10276 (2.4819) and other nickel-chrome-molybdenum alloys for better weld metal properties. It is used for surfacing low alloyed steels.

Applications for Exaton Ni54 are found in components for organic synthesis, flue gas scrubber systems, electrolytic galvanizing, plate heat exchangers, phosphoric acid production, wet chlorine gas, hypochlorite and chlorine dioxide atmosphere. Exaton Ni54 is also used in combustion-resistant components for high pressure oxygen service and ferric and cupric chloride environments. It is used for TIG welding.

CLASSIFICATIONS Wire Electrode

SFA/AWS A5.14 ERNiCrMo-10
 EN ISO 18274 S Ni 6022 (NiCr21Mo13Fe4W3)
 Werkstoffnummer 2.4602

APPROVALS

CE EN 13479

CHEMICAL COMPOSITION

Wire/Strip (%)

	Nom
C	<=0.015
Si	<=0.08
Mn	<=0.50
P	<=0.020
S	<=0.010
Cr	21.5
Ni	56
Mo	13.5
W	3
Co	<=2.5
V	<=0.35
Fe	<=4

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MECHANICAL PROPERTIES OF WELD METAL**All Weld Metal**

Properties	As welded	Typ
Rp0.2 (MPa)	500	
Rm (MPa)	770	
Z (%)	50	
Charpy V at 20°C (J)	150	
Charpy V at -196°C (J)	80	
	Comments:	
	Elongation, A = 45	

OTHER DATA**RECOMMENDED WELDING DATA:**

The parameters for TIG welding depend largely upon the base metal thickness and the welding application.

Electrode negative and a shielding gas of argon or helium should be used to prevent oxidation of the weld metal.

WELD METAL CHARACTERISTICS: The microstructure is fully austenitic.