Data sheet and application

DIM L-1.4519 ©

Mat.-no.: 1.4519	
DIN 8556:	SG X2CrNiMoCu20 25
EN ISO 14343-A:	G Z20 25 5 Cu N L
EN ISO 14343-B:	S S385
EN 12072:	G Z20 25 5 Cu N L
AWS A5.9:	ER385 (mod.)

Für high-corrosion CrNiMo-steels

Characteristics

The weld metal is austenitic. Resistant to intercrystalline corrosion. Resistant in non-oxidizing bodies (up to 90% sulfuric acid, phosphoric acid and organic acids).
Solid wire electrode for steels such as 1.4539 (904L) with an above-average high Mo-content and very high effective sum (PREN≤45) of the weld material for the pitting potential (according to% Cr + 3.3 x% Mo + 30 x% N).
Resistant to chloride in solutions containing chloride. Scaling resistance up to 1000 ° C (air). Permissible temperature: -10°C to +350°C.
Special application in sulfur and phosphoric acid production, in the medical and pharmaceutical industry, in the pulp industry and in flue gas desulphurization plants. Moreover, in the fertilizer industry, petrochemical sector, fatty acid processing, acetic and formic acid production, seawater desalination, in pickling plants and heat exchangers, which are operated with sea or brackish water.
Resistant against crack corrosion in media containing chloride, high resistance to sulfuric, phosphoric, acetic and formic acid, as well as sea and brackish water. The high Ni-content results in comparison with the conventional 18/8 CrNi welding products to have a very good resistance to stress corrosion cracking.
Due to the high overlay at Mo compared to 1.4539 or UNS N08904, the high rate of increase of Mo-alloyed CrNi welding products can be compensated for.

Materials

Same type high-Mo containing Cr-Ni steels1.4539 X1NiCrMoCu25-20-5,
1.4439 X2CrNiMoN17-13-5, 1.4537 X1CrNiMoCuN25-25-5
UNS N08904, S31726
Same and similar type CrNiMo-steels: 1.4505/06, 1.4529/31/36, 1.4585
Non-stabilized and stabilized austenitic CrNi steels: 1.4301/06, 1.4401/04/06/08, 1.4429, 1.4435/36, 1.4541, 1.4550/52, 1.4571/73, 1.4580/83

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Chemical composition

C	Si	Mn	Cr	Ni	Mo	Cu	N	PREN
≤0.02	0,7	4,7	20,0	25,4	6,2	1,5	0,12	≥45.0

Certificate of batch upon request.

Mechanical properties of pure weld metal

	Yield strength Rp0.2 MPa	Tensile strength Rm MPa	Elongation A 5 (%)	Impact enegery ISO-V KV J +20°C | -196°C
u*	410 (≥ 320)	650 (≥ 510)	39 (≥ 25)	100 | (≥ 32)

untreated, welding state - protective gas Ar + 20% He + 0.5% CO_2

Processing instructions

Protectige gases:
Argon + 20-30% He + max. 2% CO_2
Argon + 20% He + 0.5% CO_2
Argon 98%, max 2% CO_2

Approvals and suitability tests

TÜV (ID sheet no. 4302)