X1NiCrMoCuN25-20-5 (1.4539)

BGH
Excellence in Specialty Steel

Material Designation

1.4539	DIN EN
N08904	UNS
904L	UNS

Standards

DIN EN 10088-3
DIN EN 10222-5
DIN EN 10272
DIN EN 10250-4
ASTM A182/A182 M
ASTM A276/A276 M
ASTM A479/A479 M

Chemical Composition Mass-%

	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	N
min.	-	-	-	-	-	19,0	24,0	4,0	1,20	-
max.	0,020	0,70	2,00	0,030	0,010	21,0	26,0	5,0	2,00	0,10

Customer specific restrictions upon request

Properties

1.4539 is an austenitic steel with good resistance to intergranular and pitting corrosion. It is largely resistant to inorganic acids, as well as seawater and brackish water.

Delivery Condition

- solution annealed (+AT)

Application Area

Components for operating environments with increased demands on corrosion resistance.

Typical Applications

- Exhaust gas technology and flue gas systems
- Chemical and petrochemical industry
- Onshore and offshore industry
- Fertiliser industry
- Decorative elements.

Mechanical Properties Room temperature, condition +AT, acc. to DIN EN 10088-3

Diameter d [mm]	Yield strength [N/mm²]	Tensile strength [N/mm²]	Elongation [%]		Hardness [HBW]	Impact toughness [J] Charpy-V	
	long.	long.	long.	trans.		long.	trans.
≤ 160	≥ 230	530 - 730	≥ 35	-	≤ 230	≥ 100	-
160 < d ≤ 250	≥ 230	530 - 730	-	≥ 30	≤ 230	-	≥ 60

Heat Treatment Guideline values acc. to DIN EN 10088-3

	Temperature [°C]	Cooling medium
Solution annealing (+AT)	1050 – 1150	Water, air

Quality

- ISO 9001
- ISO 14001
- ISO 50001
- Approvals acc. to standards like ABS, BV, DNV ...
- Customer specific approval certificates

Innovation

- Fully automated ultrasonic testing up to dia. 1000 mm
- CO_2-reduction by innovative heat treatment solutions

Flexibility

- Product range from fine wire to forging
- Directly from stock close at hand

Individuality

- Dimensions
- Tolerances
- Surface qualities
- Delivery conditions

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