

# ASTM B464 / ASME SB464

## SPECIFICATION FOR WELDED UNS N08020, N08024, AND N08026 ALLOY PIPE

This specification covers welded UNS N08020, N08024, and N08026 alloy pipe for general corrosion resisting and low- or high-temperature service.

### A. General Requirement :-

1. Material furnished in accordance with this specification shall conform to the applicable requirements of the current edition of Specification B 775 unless otherwise provided herein.

### B. Heat Treatment :-

1. Pipe of UNS N08020 alloy shall be furnished in the stabilized-annealed condition. Pipe of UNS N08024 alloy shall be furnished in the annealed condition. Pipe of UNS N08026 alloy shall be furnished in the solution-annealed condition.

*NOTE 1 —The recommended annealing temperatures are 1800 to 1850°F (982 to 1010°C) for UNS N08020, 1925 to 1975°F (1052 to 1079°C) for UNS N08024, and 2050 to 2200°F (1121 to 1204°C) for UNS N08026.*

### C. Chemical Composition :-

The material shall conform to the composition limits specified in Table 1.

**Table 1**

Element	UNS N08020	UNS N08024	UNS N08026
Carbon, max	0.07	0.03	0.03
Manganese, max	2.0	1.0	1.0
Phosphorous, max	0.045	0.035	0.03
Sulphur, max	0.035	0.035	0.03
Silicon, max	1.0	0.5	0.5
Nickel	32.00–38.00	35.00–40.00	33.00–37.20
Chromium	19.00–21.00	22.50–25.00	22.00–26.00
Molybdenum	2.00–3.00	3.50–5.00	5.00–6.70
Copper	3.00–4.00	0.50–1.50	2.00–4.00
Columbium (Nb) + tantalum	8×carbon–1.00	0.15–0.35	
Nitrogen	...	...	0.10–0.16
Iron <sup>A</sup>	Remainder	Remainder	Remainder

<sup>A</sup> By difference.

### D. Mechanical Properties and Other Requirements :-

1. Mechanical Properties — The material shall conform to the mechanical property requirements specified in Table 2. One test is required for each lot as defined in Specification B 775.

**Table 2**

Tensile Strength, min		Yield Strength, min		Elongation in 2 in. or 50.8 mm, min, %
ksi	MPa	ksi	MPa	
80	551	35	241	30.0

2. Flattening Test.

3. Non-destructive Test Requirements — Each pipe shall be subjected to either a pressure test or a non-destructive electric test at the manufacturer's option.
4. Transverse Guided Bend Test — At the option of the pipe manufacturer, the transverse guided bend test may be substituted in lieu of the flattening test.

**E. Lengths :-**

1. Lengths may be ordered as either random lengths (normally 15 to 24 ft (4.6 to 8.3 m) with some agreed upon allowance for shorts) or specific cut lengths.

**F. Supplementary Tests :-**

1. Corrosion Tests—  
One intergranular corrosion test per lot shall be performed by the manufacturer on a sensitized specimen and tested in accordance with Practices A 262.

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