ASTM A751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products

ASTM E340 Macroetching Metals and Alloys

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the percentages by weight shown in Table 1, determined in accordance with ASTM A751, or by other analytical methods acceptable to purchaser.

Table 1 - Composition

Element	Min	Max
Carbon	--	0.07
Manganese	--	1.00
Silicon	--	1.00
Phosphorus	--	0.040
Sulfur	--	0.030
Chromium	15.00	17.50
Nickel	3.00	5.00
Columbium (Niobium)	5xC	0.45
Copper	3.00	5.00
Molybdenum	--	0.50

3.1.1 Check Analysis

Composition variations shall meet the applicable requirements of AMS2248.

3.2 Condition

The product shall be supplied in the following condition:

3.2.1 Bars and Wire

3.2.1.1 Rounds

Solution heat treated and descaled Bars 2.00 inch (50.8mm) and under in nominal diameter shall be cold finished (see 3.5.2). Bars over 2.0 inches (50.8 mm) in nominal diameter shall be hot or cold finished (see 3.5.2). When a specific finish is required, it must be ordered (see 8.10).

3.2.1.2 Hexagons

Cold drawn, solution heat treated, and descaled.

3.2.1.3 Squares and Flats

Hot finished, solution heat treated, and descaled.

3.2.1.4 Bar shall not be cut from plate (see also 4.4.6).

3.2.2 Forgings and Flash Welded Rings

Solution heat treated and descaled.

3.2.2.1 Flash welded rings shall not be supplied unless specified or permitted on purchaser’s part drawing. When supplied, rings shall be manufactured in accordance with AMS7490.