

AERONAUTICAL MATERIAL SPECIFICATION

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INSERTS, THREAD FORM Corrosion Resistant Steel

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Closely wound wire helices, the insides of which, after assembly, provide threads of diameter and pitch specified on drawing.
3. **APPLICATION:** Primarily to provide hard, wear-resistant, interchangeable threads in metals and non-metals, and for salvaging worn or damaged threads.
4. **COMPOSITION:**

		Check Analysis	
		Under Min	or Over Max
Carbon	0.15 max	--	0.01
Manganese	2.00 max	--	0.04
Silicon	1.00 max	--	0.05
Phosphorus	0.17 max	--	0.01
Sulfur	0.35 max	--	0.01
Chromium	17.00 - 20.00	0.20	0.20
Nickel	7.00 - 11.00	0.15	0.15
Selenium	0.35 max	--	0.03
Molybdenum	0.60 max	--	0.03

5. **FABRICATION:** Inserts shall be coiled from cold drawn and shaped wire.
6. **TECHNICAL REQUIREMENTS:**
 - 6.1 **Tensile Properties:** Shaped wire before coiling into inserts shall have tensile strength not lower than 150,000 psi.
 - 6.2 **Bending:** Wire shall withstand, without cracking, bending at room temperature through an angle of 180 degrees around a diameter equal to twice the cross sectional dimension of the wire in the plane of bend.
 - 6.3 **Spacing:** Any insert shall be capable of stretching with approximately equal spacing between coils when extended axially beyond its elastic limit.
7. **QUALITY:**
 - 7.1 Inserts shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external defects detrimental to their performance.
 - 7.2 Edges of wire in inserts shall be continuous and uniformly smooth.

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