

AERONAUTICAL MATERIAL SPECIFICATION

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INSERTS, THREAD FORM Corrosion Resistant Steel

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number 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 nonmetals, and for salvaging worn or damaged threads.

4. **COMPOSITION:**

		<u>Check Analysis</u>	
		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. **CONDITION:** Wire shall be cold-drawn, formed to the shape specified on drawing and coiled to produce inserts.

6. **TECHNICAL REQUIREMENTS:**

6.1 Shaped wire before coiling into inserts shall have tensile strength not lower than 150,000 psi.

6.2 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 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 performance of parts.

7.2 Edges of wire in inserts shall be continuous and uniformly smooth.

8. **SAMPLES:** When so specified, vendor shall supply with each shipment of inserts three straight, 12-in. long samples of the shaped wire representative of that used for making parts.

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