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AEROSPACE MATERIAL SPECIFICATION

AMS 7714

Issued 9-15-57
Revised 10-1-82

STEEL SHEET AND STRIP, FLAT-ROLLED ELECTRICAL 3Si AISI Type M-19, Semiprocessed

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-16-74. It is recommended, therefore, that this specification not be specified for new designs.

This cover sheet should be attached to the initial issue of the subject specification.

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This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of 10-1-82. By this action, subject specification number and title will be deleted from the active specification index of Aerospace Material Specifications.

This specification is under the jurisdiction of AMS Committee "E".

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CANCELED

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS7714

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

Issued 9-15-57
Revised

STEEL, FLAT-ROLLED ELECTRICAL
3Si
AISI Type M-19, Semiprocessed

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Sheet and strip in coils or cut lengths.
3. APPLICATION: Primarily for use in large rotating machines, power transformers for the electronic industry, voltage regulator transformers, welding transformers, and other large transformers designed to operate at frequencies lower than 60 cycles.
4. COMPOSITION: Iron base, nominal 3% silicon.
5. CONDITION: Semiprocessed material, in which the specified core loss is developed by the purchaser. Unless otherwise specified, either cold rolled or hot rolled material may be supplied.
6. TECHNICAL REQUIREMENTS:
 - 6.1 Magnetic Properties: Material shall conform to the following requirements after annealing at not lower than 1450 F by means which will avoid carburization or excessive oxidation; tests shall be performed in accordance with the methods listed in ASTM A34-55, insofar as practicable, using assumed density of 7.65 g per cubic centimeter.
 - 6.1.1 Core Loss at 60 Cycles, w per lb, max:
 - 6.1.1.1 Epstein specimens cut from material treated in accordance with 6.1 (fully processed) shall not exceed the following maximum core losses at either 10 or 15 kilogausses as specified on the purchase order. If no value is specified on the purchase order, requirements for 15 kilogausses shall apply.

Nominal Thickness Inch	Core Loss at 10 Kilogausses	Core Loss at 15 Kilogausses
0.0140	0.72	1.78
0.0155	0.76	1.87
0.0170	0.80	1.96
0.0185	0.83	2.03
0.0220	0.90	2.19
0.0250	0.97	2.35

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