SCOPE

1.00 These specifications cover the general material, and fabrication standards employed by Kencoil in the manufacture of A/C stator coils operating at normal voltage ratings up to and including 7200 volts.

STANDARDS

2.00 All coils manufactured under these specifications are done so in accordance with the latest published IEEE and NEMA Standards unless otherwise specified.

MATERIALS

3.00 All materials are compatible during their manufacture and unless otherwise specified will be compatible with standard materials used in the industry. Materials meet or exceed class "F" temperature ratings.

4.00 Conductors used are high conductivity 100% virgin copper.

5.00 Conductor strand insulation shall be heavy or quad amide-imide film covered wire or a heavy or quad amide-imide film served with a fused single or double glass over film wire. Other supplemental turn insulation (if required); will consist of taped turn insulation.

5.01 Strand insulation choice is determined from any of the following factors:

A. RMS volts between turns
B. Available slot space
C. Machine application

6.00 The end turn insulation shall consist of a .0075 thick mica material ¾ lapped, with the minimum servings as indicated below:

Voltage	No. of Servings
Thru 600	1
2300	1
4160	2
7200	4

7.00 The ground wall insulation shall be a tape or wrapper type insulation, or a combination of both, applied to the minimum total thickness as indicated below:

Voltage	Thickness
Thru 600	.035
2300	.065
4160	.095
7200	.150

8.00 The lead insulation for various voltages shall be as indicated below:

Voltage	Type
Thru 4160	Double serving of NEMA type 2 & 6 sleeving
7200	No less than 2 servings of ½ Lap, 0.0075 mica, or kapton under NEMA type 2 & 6 sleeving

9.00 A lead sealing agent shall be a room temperature vulcanizing (RTV) silicone rubber material.

10.00 The coil sealant material shall consist of a thermosetting, "B" staged, epoxy coated tape, .005 thick, applied to the entire coil in a ½ lap fashion, with minimum serving of one layer.

11.00 The outer protective armor tape consists of one serving, ½ lapped, polyester Dacron, .0045 thick.

CONSTRUCTION

12.00 Coils are shuttle wound, hydraulically press molded to assure conductor alignment, varnish submerged, and oven cured.

13.00 The hairpin loops have the lead insulation wiped clean to bare copper; are spread to proper shape, and checked for uniformity prior to receiving any insulation.

14.00 Leads are sleeved and/or taped. A bead of RTV is placed in the area between where the leads rest and the adjacent turns. The prescribed servings of mica tape/s are applied by machine. A single continuous sheet of mica material is wrapped around the full straight length of the slot sections.

15.00 A final armor tape is machine applied. RTV is injected into the cavity of the lead breakout area. The coils are totally submerged in varnish, lead end up, to a point just covering the insulation. Coils are fully baked in the oven to assure thorough drying of the varnish, yet maintain a degree of flexibility for ease of insertion. During the cure cycle, both the outer protective polyester Dacron tape and the polyester threads in the epoxy tape shrink. This shrinkage action causes the tape resin to flow within the coil resulting in a leak proof moisture and chemical seal.

TESTING

16.00 Prior to shipment all coils must pass a D.C. ground test of twice normal operating voltage, plus 1000, times 1.7, for one minute. Coils must pass a ten second high frequency turn to turn insulation test as follows:

Strand Ins.	Applied Voltage
Film, glass or Combination Of both	Turns per coil x 500 = test volt
Mica over film	Turns per coil x 1800 = test volt

GUARANTEE

17.00 Kencoil, Inc. guarantees its manufactured products to be free of defective materials and workmanship. It further guarantees the coils will pass the standard hi-pot and surge tests after complete insertion and proper connections are made. This guarantee remains in effect for one year from date of our invoice. Exceptions will be taken should the end user, through neglect or abuse, allow the machine to become victim of faulty electrical, mechanical, or environmental circumstances.