

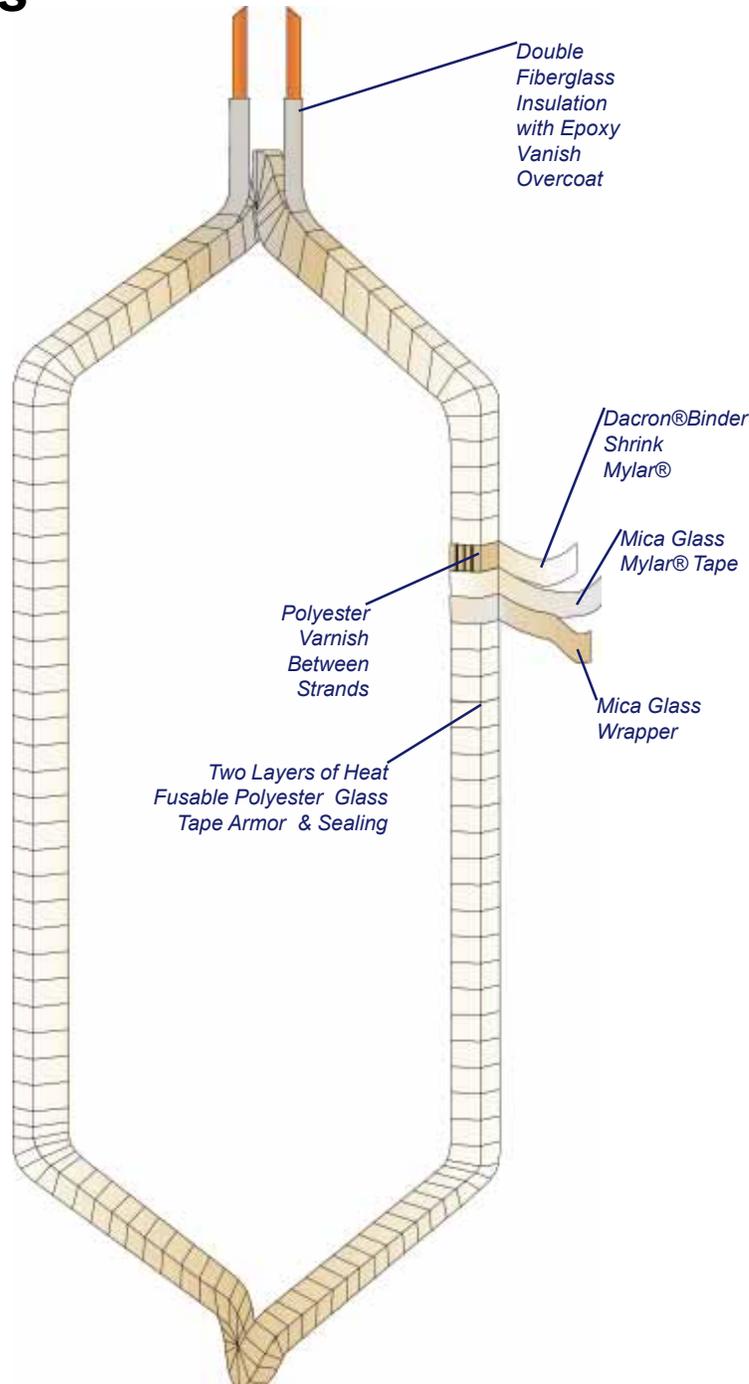


NATIONAL ELECTRIC COIL®

Our Experience Generates Results!

800 King Avenue, Columbus, Ohio 43212 • 3330 East 14th Street, Brownsville, Texas 78521

NECCOSeal™ Coils & Installation Process



Low, Medium and High Voltage Coils —

National Electric Coil manufactures green coils for machines of all ratings. In general, NEC's green coils are form wound to a consistent shape. Heated steel dies are used to precisely straighten strand wires in the cell portion of the coil and fuse them together. Individual strands are insulated with B-Stage mica tapes, which aids in the consolidation of the strands.

Next, depending on the voltage rating of the machine, multiple layers of mica splitting tape are applied to the entire coil. Then continuous lengths of turn tape and ground mica tape are applied, without any breaks, over the full length of the coil. For the final tape layer, a glass tape is used. If the machine voltage requires, a semiconducting tape is used for the last layer.

Installation — After the final layer of tape is applied, coils are ready to be installed in the stator slots. During installation, each coil is tested to assure the appropriate voltage for ground and turn insulation. Once all coils are in place and fully secured, the wound stator is pre-baked to remove any residual moisture from the machine and coils.

The wound machine now proceeds to the Vacuum Process Impregnation (VPI) tank. Within the pressurized atmosphere of the tank, nitrogen gas is released to force residual air pockets from between the tape layers. Then polyester resin is released into the tank, completely submerging the wound machine. Internal pressures within the tank forces the resin to seep into all voids.

Following the VPI process, the wound machine is baked to cure the polyester resin. The resulting void-free insulation system contributes to the longevity of the winding, particularly in high voltage machines, where it is effective in reducing internal corona.

If you have additional technical questions, please call or email Bill Moore at (614) 488-1151 x125, bmoore@national-electric-coil.com or Steve Jeney at (614) 488-1151 x105, sjeney@national-electric-coil.com.