

MegaSeal™

High-Voltage VPI Rewind for AC Motors & Generators



MegaSeal™

WHEN GOOD AS NEW ISN'T GOOD ENOUGH

Quality Assurance

*Documented and ready
for verification*



IPS conducts complete inspections and testing on every motor and generator we receive for a MegaSeal rewind. Your rewind comes with the following documentation:

- Megger® test
- Core loss test
 - Max. 500 kVA up to 30,000 HP
- Surge test
 - per IEEE 522 specification
- Polarization index
- Oven cycle reports
- Full VPI process documentation
 - o Capacitance
 - o Pressure
 - o Vacuum
 - o Temperature
 - o Cycle time
- Design parameter verification

We also offer these special tests:

- IEEE 1776-2008 water immersion test
- IEEE 1043 voltage endurance test
- Doble® testing
- Partial discharge testing
- Corona (TVA) Probe
- Blackout test

MegaSeal™ is our premium engineered insulation system for high-voltage AC motors and generators operating in severe, dynamic conditions. It's designed to provide the reliability and performance you need for the most demanding high-voltage applications.

Developed with extensive laboratory and material testing, the MegaSeal engineered insulation system consists of technologies, processes and materials which yield performance and durability beyond "good as new."

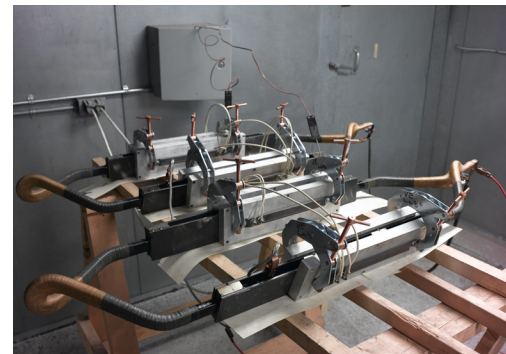


Environmental controls for optimum materials performance

All MegaSeal rewinds are conducted in a clean, temperature- and humidity-controlled environment to ensure optimum materials performance and rewind integrity. These environmental controls help prevent dirt or moisture contamination throughout the process.

MegaSeal handles ratings up to 15 kV and stator dimensions up to fourteen feet in diameter. Each MegaSeal rewind comes with an industry leading five-year limited warranty, which is up to five times longer than many others.

Like all IPS engineered insulation systems, MegaSeal is available through and backed by the North American network of IPS regional service centers. For more information, talk to your regional IPS sales representative or visit us at www.ips.us.



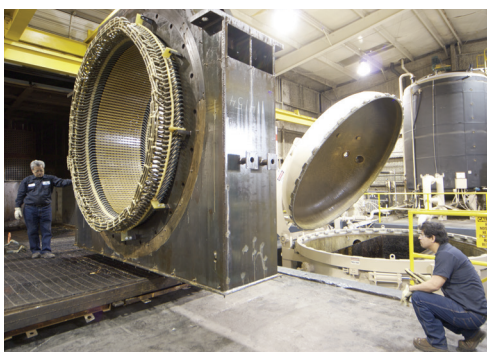
Coil testing before and after insertion

We surge test coils before and after insertion in the stator core, according to IEEE 522 standards. We also perform in-process proof tests on the entire winding for added assurance of winding integrity. Sample coils undergo IEEE 1043 high-voltage endurance testing.



Rewinding for maximum structural integrity

With the coils inserted into stator slots and top sticks in place, IPS technicians lash the coils to metallic- or epoxy-impregnated surge rings, then block the coil heads by lashing Dacron® mat and polyester laminate. This ensures negligible coil movement in severe-duty applications, such as plug reversals or across-the-line starts.



Oven curing for improved durability

We oven cure stators after each VPI cycle. This reinforces the previous steps of lashing the coils, blocking the coil heads and vacuum pressure impregnation, to turn the winding into a solid, rugged system.



Lower vacuum—higher pressure eliminates voids

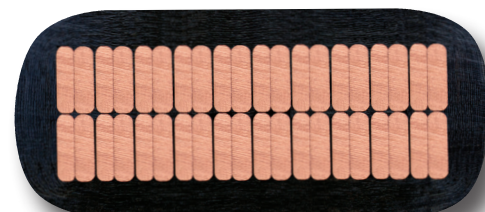
Every stator undergoes computer-controlled vacuum pressure impregnation—ensuring a homogenous fill and void-free insulation for maximum durability, maximum structural integrity and maximum resistance to abrasion, chemicals and moisture.



Reliability. Delivered.

We performance-match all MegaSeal materials and processes to deliver the reliability you need from your rewind. We offer optional testing such as IEEE 1776-2008 Water Immersion to validate our MegaSeal VPI engineered insulation system. Pictured above is a nuclear circulating water pump stator (3,500 HP / 13.8 kV / 327 RPM) undergoing the underwater AC hi-pot test at 15,870 Volts AC.

MegaSeal Coil Construction



Coil Cross Section

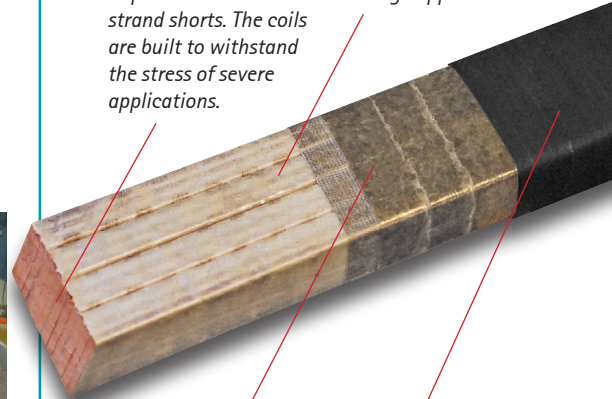
MegaSeal technology completely encapsulates coil wire and tape in epoxy resin as a solid, rugged mass.

Coil Wire

All coils are manufactured with strand insulation designed to prevent strand-to-strand shorts. The coils are built to withstand the stress of severe applications.

Turn Insulation Tape

Required due to turn-to-turn voltage associated with high-voltage applications.



Ground Wall Insulation Tape

We use multiple layers of half-lapped high content Mica-Glass tape, engineered for your specific voltage requirements.

Conductive Corona Tape

Applied to the slot portion of the coil to prevent corona discharges in the slot.



LOCATIONS

UNITED STATES

Beaumont, TX	888-868-9475
Billings, MT	406-245-6191
Birmingham, AL	800-978-2212
Butte, MT	406-494-1645
Carson, CA	310-549-5673
Charleston, SC	843-747-7644
Chicago, IL	800-978-4559
Cincinnati, OH	800-998-8447
Cleveland, OH	800-433-7801
Clifton, NJ	973-471-2600
Corpus Christi, TX	800-221-3698
Denver, CO	800-448-0899
Des Moines, IA	515-608-8215
Detroit, MI	800-992-9466
Dothan, AL	334-699-8080
Enid, OK	580-234-8622
Erie, PA	724-479-9066
Evansville, IN	800-998-8447
Folcroft, PA	484-498-4848
Houston, TX	800-221-3698
Indiana, PA	800-537-0097
Lake Benton, MN	507-368-4015
Litchfield, MN	888-694-6200
Longview, WA	360-426-8700
Los Angeles, CA	323-587-2284
Meridian, MS	601-679-5500
Philadelphia, PA	800-451-5718
Reno, NV	775-824-7333
Rock Hill, SC	800-868-3702
Seattle, WA	206-767-9506
Shreveport, LA	800-366-6030
Spokane, WA	509-922-2112
Sweetwater, TX	325-933-4274
Visalia, CA	559-651-0606
Wichita, KS	316-263-3131

CANADA

Regina, SK	306-586-0000
Saskatoon, SK	306-651-0400
Winnipeg, MB	204-237-6066

HEADQUARTERS

Greenville, SC	864-451-5600
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IPS is an industrial services company, providing premium-quality motor, generator and mechanical services on all OEM brands to a wide range of customers. We're also an authorized reseller and distributor for leading OEMs.

IPS regional service centers give you 24/7 dependability, with trained professionals offering years of experience in your industry. They're backed by unmatched technical resources and capabilities, plus a network for North American coverage and documented standards for workmanship and materials.

To learn more about how we deliver reliability and an Unmatched Customer Experience (UCE), talk to your regional IPS sales representative or visit us at www.ips.us.

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