RENEWABLE FACILITIES MANAGEMENT SERVICES		FORM – YT004
Issue Date	10/10/25	***GENERATOR REFURBISHMENT REPORT***
Revision No	1	

Location :	Main Component Workshop	**Technician :**	Jake Mason, Daniel Vincent, Jack Evans, Ben Appleby
Client :	Ynni-Teg	**Date :**	17/07/2025 - 10/10/2025
Generator Type :	G48-G2	**Installation Date :**	05/09
Serial Number :	2316	**Technical Data :**	2Y-530V-465A

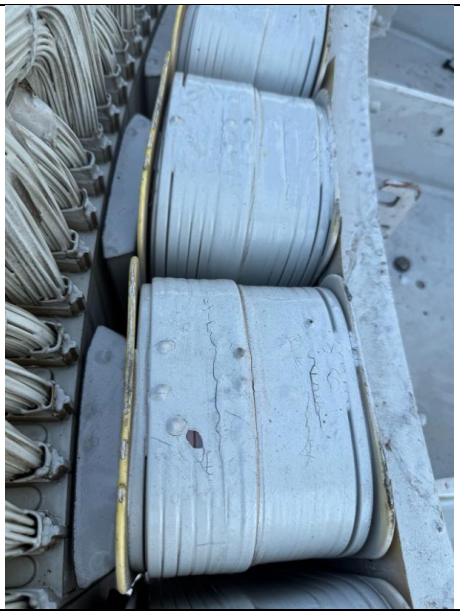
Prior Observations:

The generator and stator underwent a comprehensive visual inspection, during which they were found to be in a significantly deteriorated state. Extensive degradation of the resin insulation was observed, indicating that the protective resin coatings had become brittle, cracked, or broken down over time, which could compromise electrical insulation and increase the risk of electrical faults. Additionally, widespread damage to the paintwork was evident, with areas showing signs of peeling, chipping, or bubbling, likely due to prolonged exposure to environmental elements or chemical reactions.

Corrosion was also observed extensively throughout both the generator and stator components. This corrosion appeared as rust and oxidation on metal surfaces, often accompanied by pitting and surface degradation, which can weaken structural integrity and negatively impact electrical performance. The combination of resin degradation, paint damage, and corrosion indicates a high level of wear and age-related deterioration, significantly impairing the reliability and safety of the equipment.

Given the severity of these issues, a detailed assessment is necessary to determine the extent of repairs or refurbishments required to restore these critical components to a safe and operational condition. The observed deterioration underscores the urgent need for thorough cleaning, repair, and possibly replacement of affected parts to ensure the generator can be safely returned to service and operate reliably in future use.





Test Sheet (Before refurbishment):			
Test Value:	1Kv	**Humidity :**	60%

Insulation Resistance Stator :

(Insulation resistance (IR) testing involves applying a DC voltage to an electrical system and measuring the leakage current to determine the integrity of its insulation. This "dead test" is crucial for verifying protection against short circuits and earth faults by ensuring the insulation resistance is high enough, typically above 1 megaohm (MΩ) for a typical circuit.)

1U1-PE	**85.1 kΩ**	**2.98mA**	**30ms**	
1V1-PE	**79.1 kΩ**	**2.98mA**	**30ms**	
1W1-PE	**65.0 kΩ**	**2.98mA**	**30ms**	
2U1-PE	**58.6kΩ**	**2.98mA**	**30ms**	
2V1-PE	**60.1kΩ**	**2.98mA**	**30ms**	
2W1-PE	**57.2kΩ**	**2.98mA**	**30ms**	
U1-V1	**106.9kΩ**	**2.98mA**	**30ms**	
U1-W1	**102.0kΩ**	**2.98mA**	**30ms**	
U2-V2	**81.3kΩ**	**2.98mA**	**30ms**	
U2-W2	**79.9kΩ**	**2.98mA**	**30ms**	
U1-U2	**101.4kΩ**	**2.98mA**	**30ms**	
W1-V2	**72.8kΩ**	**2.98mA**	**30ms**	
W1-W2	**77.9kΩ**	**2.98mA**	**30ms**	
V2-W2	**87.5kΩ**	**2.98mA**	**30ms**	
U1-V2	**99.7kΩ**	**2.98mA**	**30ms**	
V1-W1	**59.2kΩ**	**2.98mA**	**30ms**	
W1-U1	**100.1kΩ**	**2.98mA**	**30ms**	
V1-U1	**107.3kΩ**	**2.98mA**	**30ms**	

Comments :

The insulation resistance measurements obtained during the testing process were notably low in several regions of the system, which is particularly concerning given that these tests were conducted under controlled workshop conditions. Under ideal circumstances, and for a generator of this age, higher resistance readings—typically in the high megaohm (MΩ) range—would be expected, reflecting healthier insulation integrity. The fact that the measurements are significantly lower than expected suggests a considerable degree of insulation deterioration. This decline in insulation resistance indicates that the material has suffered degradation over time, likely due to aging, exposure to environmental factors, or operational stresses. Such deterioration can compromise the system's safety and reliability, increasing the risk of electrical faults, leakage currents, or potential failure.

Insulation Resistance Pole Shoe :

(Insulation resistance (IR) testing involves applying a DC voltage to an electrical system and measuring the leakage current to determine the integrity of its insulation. This "dead test" is crucial for verifying protection against short circuits and earth faults by ensuring the insulation resistance is high enough, typically above 1 megaohm (MΩ) for a typical circuit.)

U+-PE	**<10kΩ**	**2.64mA**	**30ms**	
U--PE	**<10kΩ**	**2.64mA**	**30ms**	

Comments :

The insulation resistance measurements were found to be extremely low across the system, which is a clear indication of severe insulation deterioration or possible direct connection to the earth (ground). Such low resistance values suggest that the insulation integrity has been critically compromised, potentially due to aging, environmental factors, or operational stresses that have caused the insulation materials to weaken or break down.

Polarization index testing :

(A Polarisation Index (PI) test is an insulation resistance test used on electric motors and generators to assess the health of the insulation by measuring the insulation resistance (IR) at one minute and again at ten minutes. The PI is the ratio of the 10-minute IR reading to the 1-minute IR reading, and a PI value of 2.0 or higher generally indicates good, dry insulation, while lower values suggest moisture or deterioration.)

System 1-PE	**27.2kΩ**	**2.99mA**	**10 :00ms**	**1.65PI**
System 2-PE	**19.91kΩ**	**3.00mA**	**10 :00ms**	**1.46PI**
System 1-System 2	**33.4kΩ**	**3.00mA**	**10 :00ms**	**1.50PI**

Comments :

The observed Polarization Index (PI) values are significantly below the standard acceptable range. Typically, a PI value of 2.0 or higher is considered the minimum threshold for indicating acceptable insulation health, while a value of 4.0 or higher is regarded as indicative of excellent insulation condition and optimal performance. In this case, the PI readings are well below these benchmarks, signaling that the insulation system is in a compromised state. Such low PI values suggest that the insulation has undergone considerable deterioration, reducing its ability to effectively resist electrical stress and potentially increasing the risk of insulation failure or electrical faults.

Dielectric Absorbtion Ratio :

(This is a ratio of two insulation resistance readings, usually taken at the 30-second and 60-second marks, to evaluate the health of electrical insulation. A higher DAR value (e.g., 1.6 or above) indicates good, increasing resistance as polarisation currents dissipate, suggesting healthy insulation. In contrast, a lower DAR (e.g., between 1 and 1.25) suggests questionable insulation, while a value close to 1 indicates poor or contaminated insulation.)

System 1-PE	**14.14 kΩ**	**2.99mA**	**1 :00ms**	**1.03 DAR**
System 2-PE	**18.16kΩ**	**2.99mA**	**1 :00ms**	**1.13 DAR**
System 1-System 2	**25.4kΩ**	**2.99mA**	**1 :00ms**	**1.11 DAR**

Comments :

The results obtained from the Dielectric Absorption Ratio (DAR) test revealed values that are significantly below the accepted and recommended tolerance levels. This substantial deviation from the standard thresholds strongly indicates that the insulation in question is in an extremely poor condition and has sustained serious degredation. Such low DAR values are characteristic of severely deteriorated insulation material, which has likely lost much of its dielectric properties and ability to resist electrical stress. This situation poses a considerable risk to the safety and reliable operation of the electrical system, as compromised insulation can lead to increased chances of electrical faults, leakage currents, or even catastrophic failures.

Dielectric Discharge :

(A Dielectric Discharge (DD) test assesses insulation integrity by measuring discharge current after a device is charged, identifying deterioration in multi-layered insulation by detecting distorted charge spread. Unlike standard insulation tests that measure charging or leakage current, the DD test focuses on the re-absorption current that occurs during the discharge phase to analyze internal insulation conditions independent of surface contamination. A figure of merit is calculated, where lower numbers are better, indicating a healthier insulation system.)

System 1-PE	**18.9uA**	**1.55PI**	**31 :00ms**	
System 2-PE	**18.3uA**	**1.48PI**	**31 :00ms**	
System 1-System 2	**18.4uA**	**1.24PI**	**31 :00ms**	

Comments :

All dielectric discharge readings recorded during the testing process have been found to fall below the optimal or acceptable thresholds established for this type of assessment. This suggests that the insulation integrity across the system is not at its best, and there are clear signs of compromise. In particular, the insulation between System 1 and System 2 appears to be especially affected, indicating a significant deterioration in this area. The findings strongly suggest that the outer insulation covering the coils in these systems has undergone substantial degradation, leading to reduced dielectric performance. Such deterioration can increase the risk of insulation failure, potential electrical faults, or even system breakdown if not addressed promptly.

Step Voltage Insulation Test :

(A step voltage test is an insulation resistance test where a high DC voltage is appled to the generator in a series of increasing timed steps. A healthy insulation system will show a proportional increase in current, while a drop in resistance with each voltage step indicates flaws, such as cracks or voids)

System 1-PE	**1m – 46.4 kΩ**	**2m – 53.3 kΩ**	**3m – 56.4 kΩ**	**4m – 58.1 kΩ**
System 2-PE	**1m – 10.0 kΩ**	**2m – 10.1 kΩ**	**3m – 10.2 kΩ**	**4m – 10.4 kΩ**
System 1-System 2	**1m – 45.1 kΩ**	**2m – 54.3 kΩ**	**3m – 58.4 kΩ**	**4m - 60.9 kΩ**

Comments :

The insulation resistance between System 2 and PE (Protective Earth) for step voltage was found to be significantly low. Therefore, it is essential to perform individual step voltage testing. The procedure for conducting these tests is detailed below:

2U1-PE	**1m – 20.7 kΩ**	**2m – 23.2 kΩ**	**3m – 26.0 kΩ**	**4m – 29.2 kΩ**
2V1-PE	**1m – 24.2 kΩ**	**2m – 28.6 kΩ**	**3m – 34.4 kΩ**	**4m – 43.0 kΩ**
2W1-PE	**1m – 23.2 kΩ**	**2m – 25.8 kΩ**	**3m – 28.9 kΩ**	**4m – 33.0 kΩ**

Every phase within System Two has been found to be in a severely deteriorated state. This observation highlights that the insulation protecting these phases is also extensively compromised.

Works Carried Out:

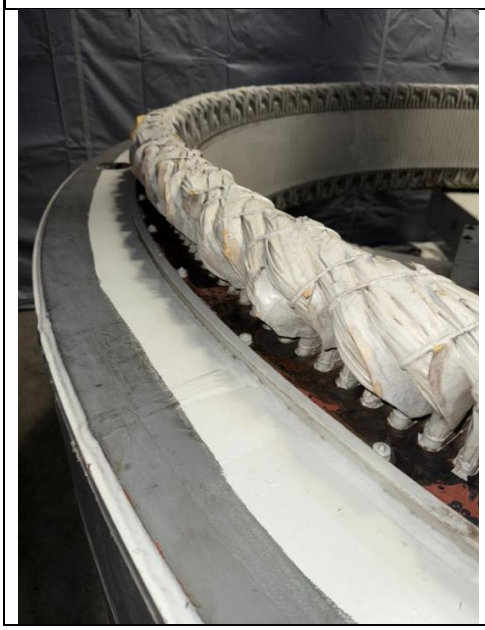
Following the initial testing phase, a meticulous and systematic process was undertaken to assess and restore the generator and rotor components. This process began with a comprehensive stripping procedure, during which all external paintwork was carefully removed to facilitate a thorough inspection and cleaning. The removal of paint was performed with precision tools to prevent any accidental damage to the underlying structures.

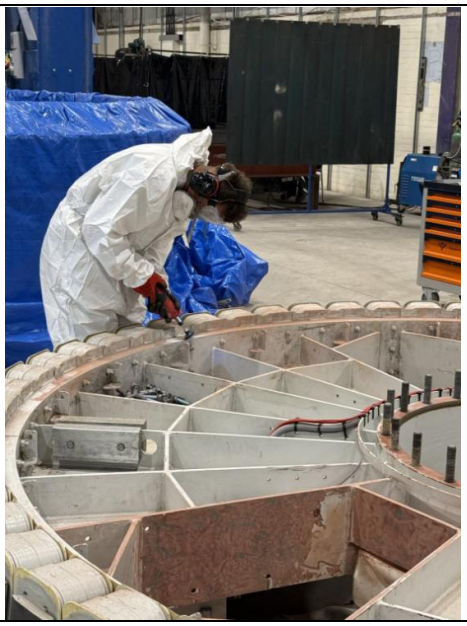
Next, all damaged resin materials, which can often become brittle, cracked, or degraded over time, were carefully extracted by hand. Special care was taken during this process to ensure that no additional harm was inflicted on the delicate insulation layers or the main insulating paper, which are critical components for maintaining electrical insulation and preventing shorts or arcing within the generator. Furthermore, any corrosion present on the metal parts was carefully removed using gentle cleaning techniques such as hand sanding, wire brushing, or chemical treatments suited for electrical equipment to avoid compromising the structural integrity of the components.

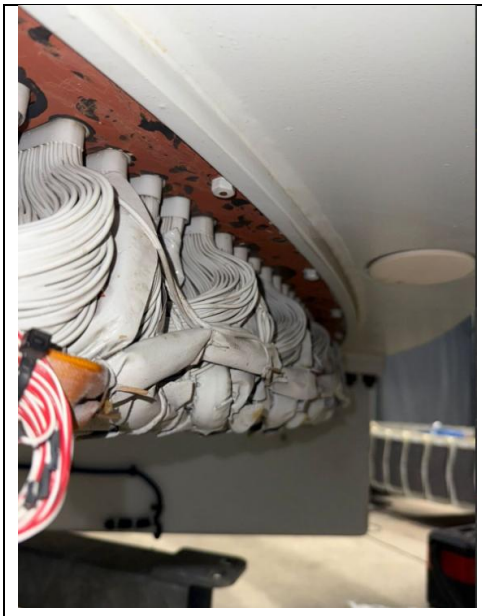
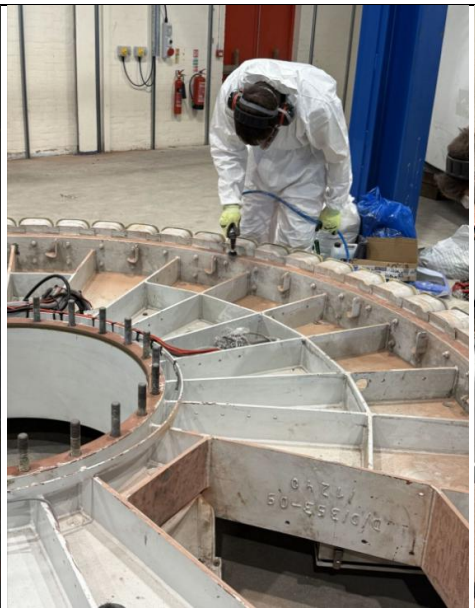
Throughout this entire process, extra precaution was exercised to protect the main coils and insulating paper from damage. These elements are particularly sensitive and vital to the safe and efficient operation of the generator, and any accidental tearing, puncturing, or abrasion could compromise insulation quality and lead to future faults. Therefore, all handling and cleaning procedures were carried out with precision and care, using hand tools and non-invasive methods designed specifically for such delicate work.

Once the stripping and cleaning were completed, the components were thoroughly examined under magnification, checking for any signs of deterioration, cracks, or wear that might require further repair or replacement. This detailed pre-maintenance cleaning and inspection allow for accurate assessment and planning for subsequent refurbishment or re-insulation work, ensuring the generator and rotor are restored to the highest standards of safety, functionality, and longevity.

This rigorous and careful approach ensures that the internal components are preserved in their best possible condition, laying a solid foundation for the subsequent steps of refurbishment and reassembly, ultimately extending the operational lifespan of the generator and ensuring reliable performance in the field.






The process of restoring the generator and rotor began with a meticulous assessment and identification of areas where the insulating paper had deteriorated or become compromised. These degraded insulating papers were carefully removed and replaced with high-quality, newly fitted insulation materials to restore the electrical integrity and safety of the winding system. This precise work was carried out by hand, ensuring that the delicate main coils and insulating layers were not damaged during removal or installation, thereby maintaining the overall system integrity.

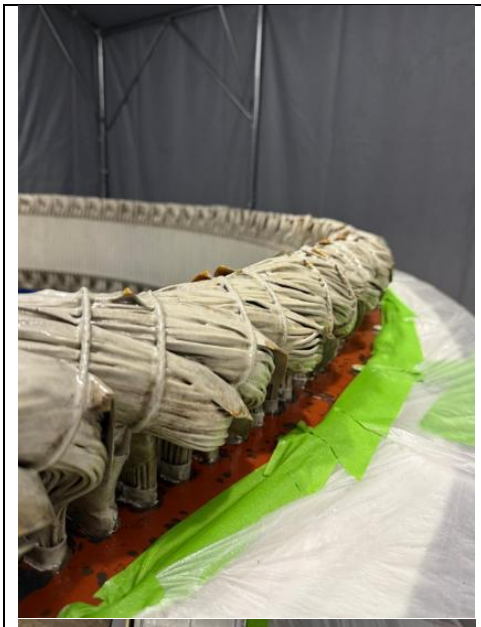
Simultaneously, any faulty or worn temperature sensors embedded within the generator and rotor were replaced with new, reliable units. These sensors are critical for monitoring operational temperatures and preventing overheating, so their accurate functioning is essential for safe and efficient operation. The replacements were chosen to match OEM specifications, ensuring compatibility and accuracy in temperature readings.

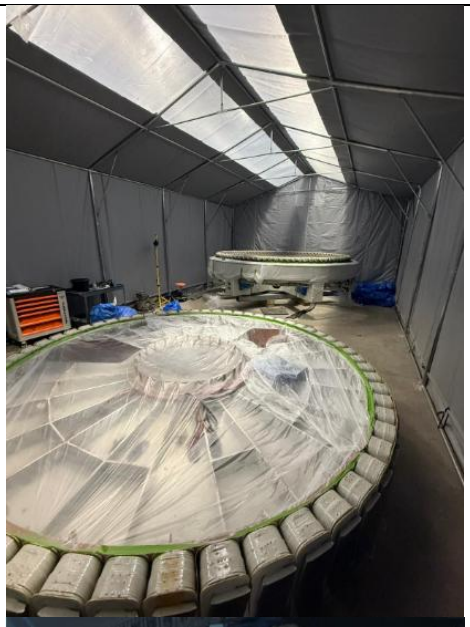
Once all internal components were replaced and inspected, the entire generator and rotor assembly were prepared for a comprehensive priming process. This involved applying a specialized primer to the surface to create a clean, adherent base for subsequent resin applications. Following priming, a rigorous series of resin applications was carried out to reinforce structural integrity and prevent future cracking or damage. This included seven layers of both brush-on and spray-on anti-cracking generator resin, carefully applied over several days to ensure complete coverage and penetrating depth. Each layer was allowed sufficient curing time before applying the next, which helped ensure a thorough and durable resin coat.

In addition to the resin layers, resin was injected directly into the stator slots to further strengthen the internal winding system, eliminate voids, and ensure the system's long-term structural integrity. This injection process was performed with precision to guarantee full penetration into the slots, effectively sealing and stabilizing the windings against future mechanical or thermal stresses.

Following the resin work, the entire generator and rotor received six coats of specially formulated anti-tracking paint. These coats were applied over many days, with sufficient curing time between each layer to maximize their effectiveness. The anti-tracking paint forms an insulating barrier on the surface, preventing voltage arcs and tracking that could lead to electrical faults. The multiple layers and curing periods ensure a high level of surface protection, enhancing the system's resistance to environmental and electrical stressors.

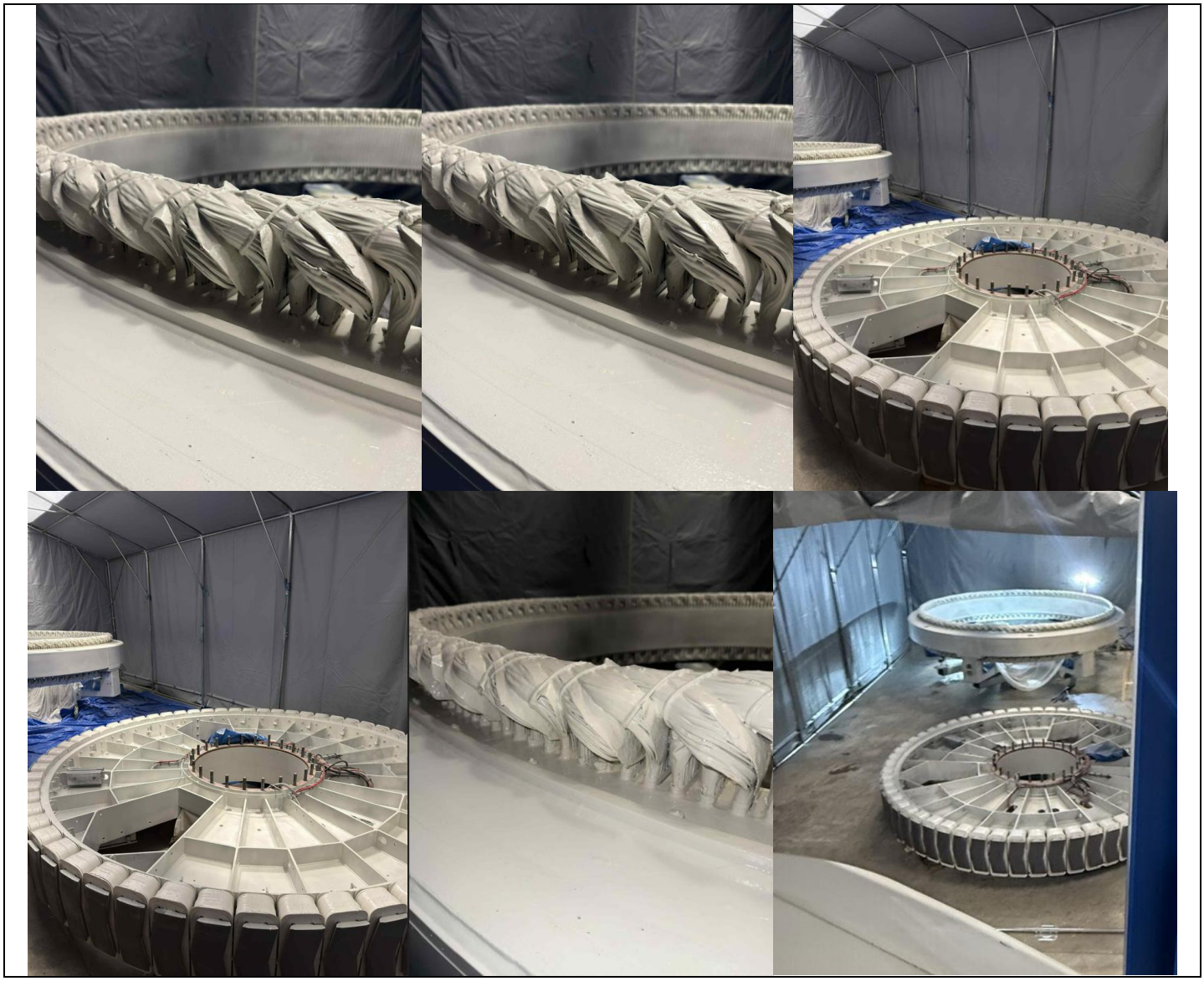
The complete process was carefully scheduled over multiple days to ensure each stage was performed under optimal conditions, resulting in a thoroughly refurbished generator and rotor system that is now prepared for reliable, long-term operation. This extensive refurbishment work significantly enhances the system's electrical integrity, mechanical durability, and operational safety, extending its service life and supporting sustained, trouble-free performance.











Test Sheet (Post Refurbishment):			
Test Value:	1Kv	**Humidity :**	53%

Insulation Resistance Stator :

(Insulation resistance (IR) testing involves applying a DC voltage to an electrical system and measuring the leakage current to determine the integrity of its insulation. This "dead test" is crucial for verifying protection against short circuits and earth faults by ensuring the insulation resistance is high enough, typically above 1 megaohm (MΩ) for a typical circuit.)

1U1-PE	**28.6 GΩ**	**2.98mA**	**30ms**	
1V1-PE	**42.1 GΩ**	**2.98mA**	**30ms**	
1W1-PE	**37.4 GΩ**	**2.98mA**	**30ms**	
2U1-PE	**28.9 GΩ**	**2.98mA**	**30ms**	
2V1-PE	**18.7 GΩ**	**2.98mA**	**30ms**	
2W1-PE	**40.6 GΩ**	**2.98mA**	**30ms**	
U1-V1	**25.2 GΩ**	**2.98mA**	**30ms**	
U1-W1	**28.6 GΩ**	**2.98mA**	**30ms**	
U2-V2	**33.7 GΩ**	**2.98mA**	**30ms**	
U2-W2	**29.4 GΩ**	**2.98mA**	**30ms**	
U1-U2	**22.7 GΩ**	**2.98mA**	**30ms**	
W1-V2	**38.5 GΩ**	**2.98mA**	**30ms**	
W1-W2	**28.3 GΩ**	**2.98mA**	**30ms**	
V2-W2	**17.4 GΩ**	**2.98mA**	**30ms**	
U1-V2	**33.1 GΩ**	**2.98mA**	**30ms**	
V1-W1	**23.9 GΩ**	**2.98mA**	**30ms**	
W1-U1	**33.6 GΩ**	**2.98mA**	**30ms**	
V1-U1	**28.1 GΩ**	**2.98mA**	**30ms**	

Comments :

Following the completion of the refurbishment process, insulation resistance tests were conducted to assess the effectiveness of the repairs and the overall electrical insulation integrity of the system. It was observed that the insulation resistance readings had significantly improved compared to previous measurements, with values now comfortably situated within the gigohm (GΩ) range. This drastic increase indicates a substantial enhancement in the dielectric quality of the insulation materials, reflecting the successful replacement and restoration of degraded insulating papers, the application of protective resins, and the coating with anti-tracking paint.

This extensive improvement in insulation resistance is a positive indicator of system health, as higher resistance values effectively reduce the risk of electrical leakage, arcing, and short circuits. It also demonstrates that the electrical insulation has been effectively re-established, ensuring reliable and safe operation under typical operating conditions. The substantial rise in these readings provides confidence that the refurbishment efforts— including insulation replacement, resin reinforcement, and surface protection—have successfully restored the system to a highly safe and efficient state, capable of handling operational stresses with minimal risk of insulation failure.

Insulation Resistance Pole Shoe :

(Insulation resistance (IR) testing involves applying a DC voltage to an electrical system and measuring the leakage current to determine the integrity of its insulation. This "dead test" is crucial for verifying protection against short circuits and earth faults by ensuring the insulation resistance is high enough, typically above 1 megaohm (MΩ) for a typical circuit.)

U+-PE	**>100kΩ**	**2.64mA**	**30ms**	
U--PE	**>100kΩ**	**2.64mA**	**30ms**	

Comments :

Following the comprehensive refurbishment process, the pole shoe insulation resistance measurements were subjected to detailed testing to evaluate the effectiveness of the repairs and the current condition of the insulation system. The results showed that the insulation resistance readings for the pole shoes have increased dramatically, reaching significantly higher values than prior to refurbishment. This marked improvement indicates a substantial enhancement in the insulating quality and dielectric strength of the pole shoe components, which had previously exhibited signs of deterioration.

The increased resistance readings serve as a clear indication that the insulation has been restored to a much healthier and more reliable state, effectively reducing the risk of electrical leakage, energy loss, and potential short circuits. This positive development reflects the success of the repair procedures, including the removal of degraded insulating materials, thorough cleaning, re-insulation, and the addition of protective coatings. Furthermore, the higher insulation resistance values are vital for maintaining overall system safety and performance, as they ensure better electrical isolation and durability during operational stresses.

Overall, the drastic rise in the pole shoe insulation resistance measurements confirms that the refurbishment has been highly effective in revitalizing the electrical insulation framework. This improved insulation integrity ensures that the pole shoes and associated systems will operate more efficiently and reliably, with a significantly reduced likelihood of insulation failure or electrical faults in the future, thereby extending the operational lifespan of the equipment and supporting safe, long-term operation.

Polarization index testing :

(A Polarisation Index (PI) test is an insulation resistance test used on electric motors and generators to assess the health of the insulation by measuring the insulation resistance (IR) at one minute and again at ten minutes. The PI is the ratio of the 10-minute IR reading to the 1-minute IR reading, and a PI value of 2.0 or higher generally indicates good, dry insulation, while lower values suggest moisture or deterioration.)

System 1-PE	**18.6 GΩ**	**2.99mA**	**10 :00ms**	**2.0PI**
System 2-PE	**23.4 GΩ**	**3.00mA**	**10 :00ms**	**2.1PI**
System 1-System 2	**33.2 GΩ**	**3.00mA**	**10 :00ms**	**2.3PI**

Comments :

The observed Polarization Index (PI) readings across all tested components consistently measured at 2.0 or higher. Such values are considered excellent and demonstrate that the insulation system is in very good condition. A PI at or above 2.0 typically indicates that the insulation is relatively free from moisture, contamination, or degradation, reflecting a healthy and well-maintained electrical system. These high readings suggest that the insulation has robust dielectric properties and is unlikely to fail prematurely, providing a high level of confidence in the system's ongoing reliability and safety. Overall, achieving all PI measurements at or above the 2.0 threshold is a strong positive indicator of excellent insulation health and minimal wear, supporting continued safe operation without immediate concern for insulation deterioration.

Dielectric Absorbtion Ratio :

(This is a ratio of two insulation resistance readings, usually taken at the 30-second and 60-second marks, to evaluate the health of electrical insulation. A higher DAR value (e.g., 1.6 or above) indicates good, increasing resistance as polarisation currents dissipate, suggesting healthy insulation. In contrast, a lower DAR (e.g., between 1 and 1.25) suggests questionable insulation, while a value close to 1 indicates poor or contaminated insulation.)

System 1-PE	**20.2 GΩ**	**2.99mA**	**1 :00ms**	**1.7 DAR**
System 2-PE	**22.4 GΩ**	**2.99mA**	**1 :00ms**	**1.7 DAR**
System 1-System 2	**31.6 GΩ**	**2.99mA**	**1 :00ms**	**1.9 DAR**

Comments :

All of the Dielectric Absorption Ratio (DAR) readings obtained during testing were measured to be above 1.6. These elevated values are indicative of very good insulation condition and are considered positive signs in the assessment of electrical systems. A DAR value above 1.6 suggests that the insulation has minimal moisture content, low contamination levels, and is operating effectively without significant degradation or deterioration.

Such high readings provide confidence that the insulation system is performing optimally, offering reliable dielectric strength and a low likelihood of developing electrical faults in the near future. Achieving consistent DAR values above this threshold confirms that the insulation remains in a healthy state, demonstrating good maintenance and effective aging management. Overall, these test results strengthen the assurance that the electrical components are well-protected and suitable for continued safe operation under normal operating conditions.

Dielectric Discharge :

(A Dielectric Discharge (DD) test assesses insulation integrity by measuring discharge current after a device is charged, identifying deterioration in multi-layered insulation by detecting distorted charge spread. Unlike standard insulation tests that measure charging or leakage current, the DD test focuses on the re-absorption current that occurs during the discharge phase to analyze internal insulation conditions independent of surface contamination. A figure of merit is calculated, where lower numbers are better, indicating a healthier insulation system.)

System 1-PE	**17.4uA**	**1.9PI**	**31 :00ms**	
System 2-PE	**17.1uA**	**1.7PI**	**31 :00ms**	

System 1-System 2	**17.5uA**	**2.1PI**	**31 :00ms**	

Comments :

All of the dielectric discharge (DDR) readings recorded during the recent testing process have shown notable improvement compared to the initial measurements taken previously. This positive trend indicates a significant enhancement in the insulation quality and dielectric strength of the system over time. The improved readings suggest that any issues related to moisture, contamination, or deterioration that may have been present earlier have been effectively mitigated through maintenance, repairs, or environmental controls.

This progress not only reflects the overall health of the insulation system but also reinforces confidence in the system's continued performance and reliability. The trend of improving dielectric discharge readings is a strong indicator that the insulation is becoming more resilient, with reduced leakage currents and increased dielectric robustness, thereby lowering the risk of electrical faults and potential failures in the future. Ongoing monitoring and routine testing are recommended to maintain these positive results and ensure sustained system integrity over the long term.

Step Voltage Insulation Test :

(A step voltage test is an insulation resistance test where a high DC voltage is appled to the generator in a series of increasing timed steps. A healthy insulation system will show a proportional increase in current, while a drop in resistance with each voltage step indicates flaws, such as cracks or voids)

System 1-PE	**1m - 17.4 GΩ**	**2m – 23.6 GΩ**	**3m – 24.7 GΩ**	**4m – 25.2 GΩ**
System 2-PE	**1m - 22.8 GΩ**	**2m – 31.4 kΩ**	**3m – 33.6 GΩ**	**4m – 33.9 GΩ**
System 1-System 2	**1m – 29.3 GΩ**	**2m – 34.2 GΩ**	**3m – 38.7 GΩ**	**4m – 39.3 GΩ**

Comments :

The results of the Step Voltage Insulation Test have showed a significant and notable increase since the previous testing conducted earlier. This considerable improvement in the readings suggests that the insulation system has become considerably healthier and more effective over time. Elevated or higher measurement values in this context typically indicate that the insulation is in a good condition, exhibiting increased dielectric strength and a reduced likelihood of leakage currents or electrical faults.

The dramatic rise in these test results serves as a positive sign, demonstrating that any previous issues related to moisture ingress, deterioration, or contamination have been successfully addressed through maintenance or refurbishment efforts. Such improvements not only enhance the overall safety and reliability of the electrical system but also provide reassurance that the insulation is capable of withstanding higher voltage stresses without degradation.

Maintaining these good readings through regular inspection and testing is essential for early detection of any future deterioration. The current trend underscores the importance of ongoing condition monitoring, which ensures that safety margins are preserved, and system longevity is maximized. Overall, the dramatic increase in Step Voltage Insulation Test results attests to the improved health of the electrical insulation and signifies a robust, reliable system ready for continued operation.

Technician			
Name :	Jake Mason	**Signature :**