





The Legacy of Realtme Technologies

Realtme Technologies is Ireland's leading provider of advanced electronic **design, manufacturing, and refurbishment** solutions. With more than **30 years of experience**, the company is certified to **AS9100** and **ISO 13485**, ensuring the highest standards of quality and reliability. Realtme supports some of the world's most demanding industries by delivering complete design, manufacturing, testing, and repair services. Today, its expertise spans across **Aerospace, Telecoms, Automotive, MedTech, and Renewables**, where innovation and sustainability continue to drive its success.



Meet Akuray

Akuray is the dedicated industrial services division of Realtime Technologies, focused on supporting industries with **sustainable, high-quality solutions**. Building on Realtime's legacy of excellence.

Akuray provides specialized services that **extend the lifetime** of critical components, **reduce costs**, and promote a **circular economy** within renewable power generation.

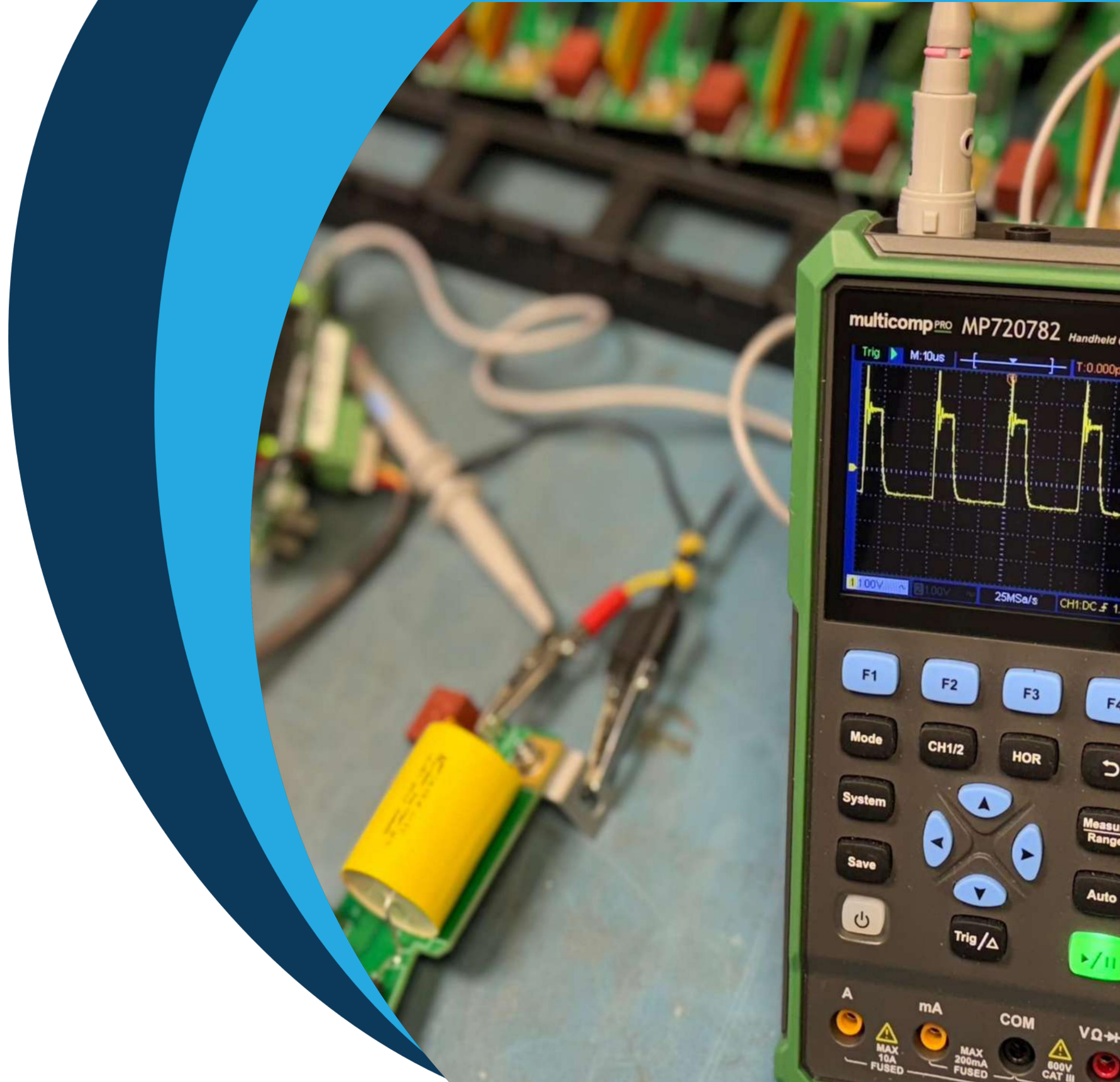
- **Repair & refurbishment**
- **End-of-life and obsolete component solutions**
- **Premium rebuilds with extended warranties**
- **Advanced test and validation systems**
- **Sustainable alternatives that reduce waste and CO₂ impact**

Our expertise ensures reliable, high-quality solutions tailored to the renewable industry's evolving needs.

Solutions

At **Akuray**, we specialize in refurbishment of end-of-life equipment, ensuring **extended service** life, high **performance**, and **sustainability**.

- We repair and refurbish critical components such as Power Electronics, Drivers, HMI, UPS, Inverters, and Converters across multiple OEMs.
- We retrieve outdated or faulty units from wind sites, proactively repair them, and return them to reliable and high-performance standards.
- Advanced Testing Capabilities – Identifying failures early to ensure quality and reliability in every refurbished component.
- We actively support sustainability programs by maximizing the lifecycle of essential components.



Case History

Akuray has been entrusted with **long-term contracts** for the refurbishment of critical power modules across **multiple wind farms**.

- ✓ Continuously chosen for contract extensions, reflecting proven performance and reliability
- ✓ Industry-leading turnaround time
- ✓ Comprehensive testing and detailed reporting for every refurbishment
- ✓ 12-month warranty offering continued support and confidence in quality
- ✓ < 1% of return rates, reflecting our quality commitment



Delta Modules

Akuray offers a Premium Rebuild Solution for Delta Modules that delivers a significant improvement in reliability, ensuring optimal performance and minimizing downtime..

- ✓ Akuray has a robust testing solution for Delta Modules, involving high-current, high-voltage power supplies and associated loads.
- ✓ We have designed and manufactured complex test rigs to fully exercise the Delta Interface Board and all associated electronics.
- ✓ The company has developed a high-power test room capable of exercising Delta modules to ensure reliability and repeatability over extended service intervals.
- ✓ Our Premium Rebuild solution for Delta Modules includes the replacement of all major components, including:
 - SKiiP IGBTs
 - Capacitors
 - Bus Bar Assembly
 - Snubbers, etc.





Delta Module Interface Boards Process Overview

- ✓ Generates voltages to power the board and ensures that excess current is not drawn.
- ✓ Monitors the 5V supply generated by the board under test.
- ✓ Tests analog circuits, including current and temperature feedback from three SKiiP units, as well as DC link voltage from the Delta power supply.
- ✓ Verifies power output to each SKiiP.
- ✓ Enables switching of the high-side and low-side of each SKiiP.
- ✓ Enables digital communication with the board under test to retrieve the serial number and power supply serial information.
- ✓ Allows testing of all alarms, including temperature and overcurrent from each SKiiP, DC link overvoltage, and external interlock trips.

Repair Solution for SkiiP Modules

Testing Overview and Key Test Parameters:

- ✓ Akuray have put in place a robust and custom built SKiiP test that carries out full functional electrical testing of the IGBT components.
- ✓ Initial inspection includes checks for overheating, leakage and signs of explosion.
- ✓ Proactive replacement of capacitors on gate driver boards and DC link assemblies
- ✓ Proactive replacement of connectors, fibre interfaces, cabling etc.
- ✓ Water cooling systems checked for leakage under a pressurized Liquid test system



Repair Solution for SkiiP Modules

Testing Overview and Key Test Parameters:

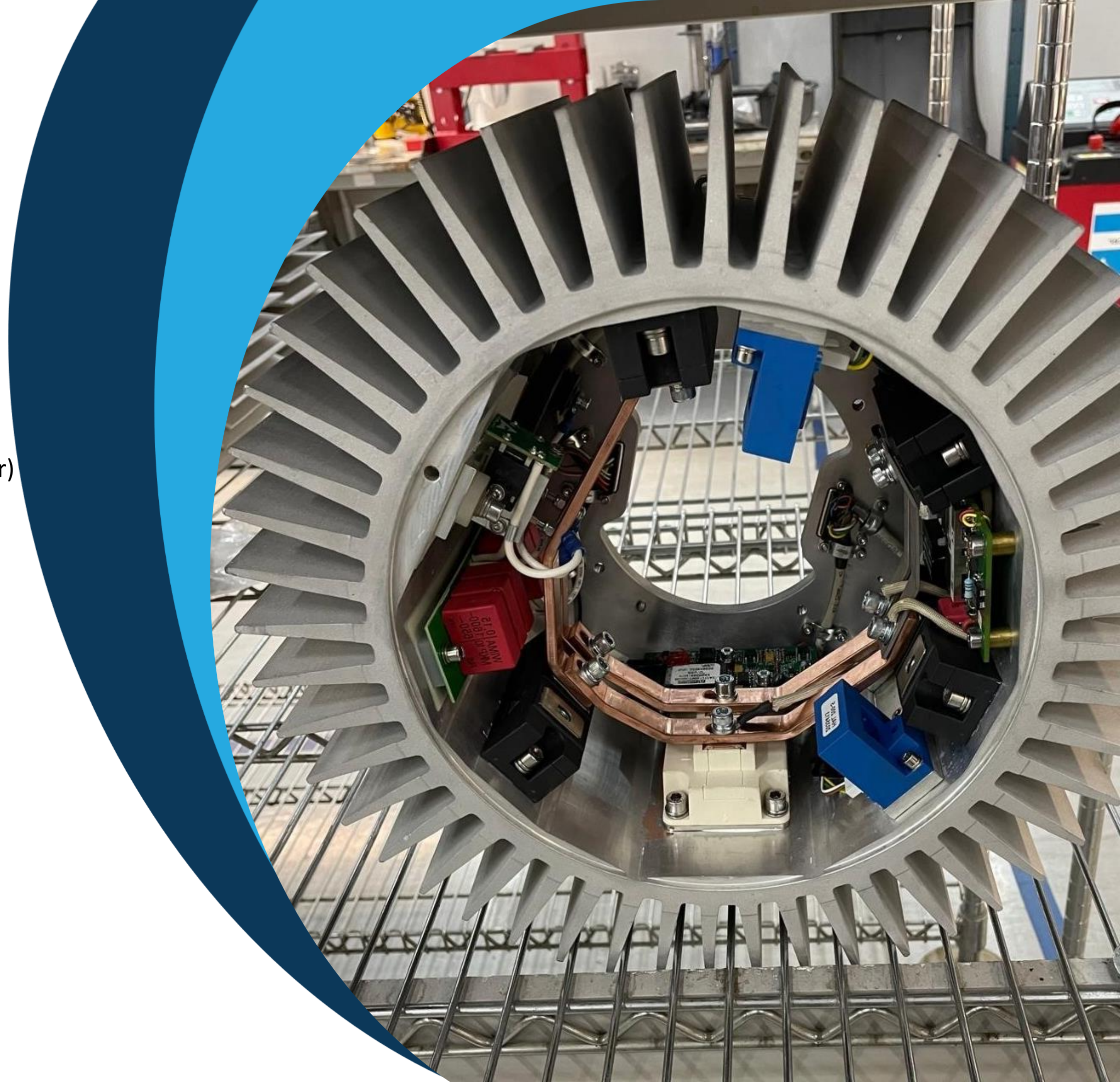
- ✓ Semiconductor tests to include VCE[SAT] / VF[DIODE] checks
- ✓ Check and record supply measurement
- ✓ Complete overvoltage and temperature analysis tests
- ✓ Check DC-Characterisation using high voltage DC power supply
- ✓ Complete Capacitor Reforming using high voltage DC power supply
- ✓ Complete the final mechanical and electrical inspection during 100% out of box audit process
- ✓ Track and trace through Akuray serial number, labelling and Online Erp System.



VRCC Power Module

Full replacement of all electronic components in the VRCC Power Module, effectively creating a like-new unit, including:

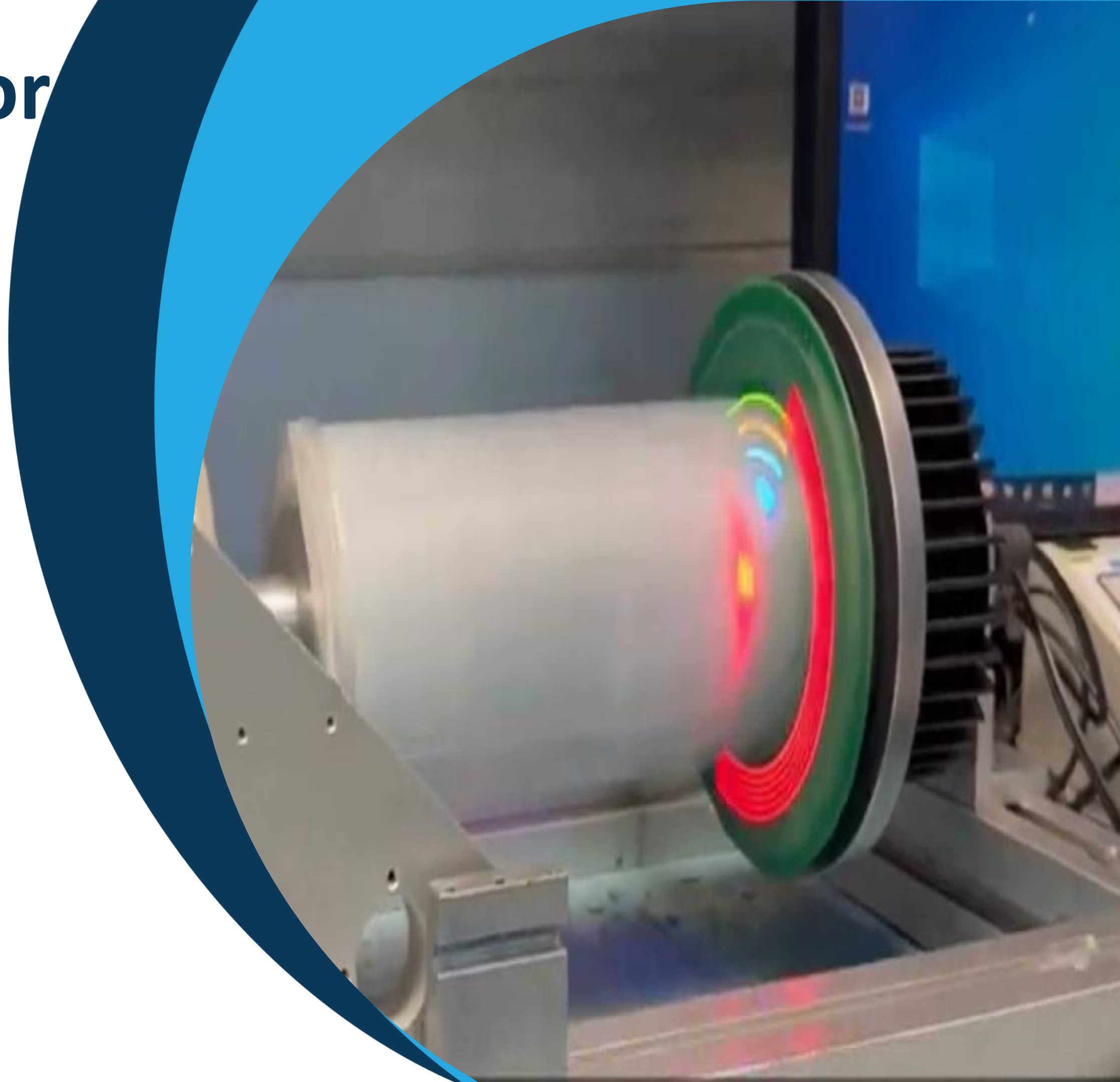
- ✓ Snubber circuit (snubber capacitor and diode PCB, snubber resistor)
- ✓ Thyristor module
- ✓ Diodes
- ✓ IGBT module
- ✓ IGBT driver board
- ✓ Current transducers
- ✓ Temperature sensor
- ✓ All cables and connectors
- ✓ Heatsink cleaned using sandblasting process.



VRCC CT273 Processor

As part of our processor rebuild service, and due to the high failure rate observed in critical components, we proactively replace the following items:

- ✓ Bearings
- ✓ Capacitors
- ✓ LEDs, Optislip components, controller boards etc – as required



VRCC Resistor Units

As part of our resistor unit refurbishment service, a detailed visual inspection is performed to identify any signs of overheating, broken welds, or physical damage to the resistor element.

- ✓ Each resistor is thoroughly cleaned to remove grease, contamination, and dirt using a sandblasting process.
- ✓ Repairs are carried out using the same alloy material to ensure material compatibility. All welds are inspected and re-welded where necessary.
- ✓ A new O-ring is supplied as part of the service.



Thyristor Modules

Akuray offer a repair solution that replaces the defective components and also pro-actively replace the components that frequently fail in these modules. In this way, further repairs are avoided and the life of the module is extended.

Key Tests:

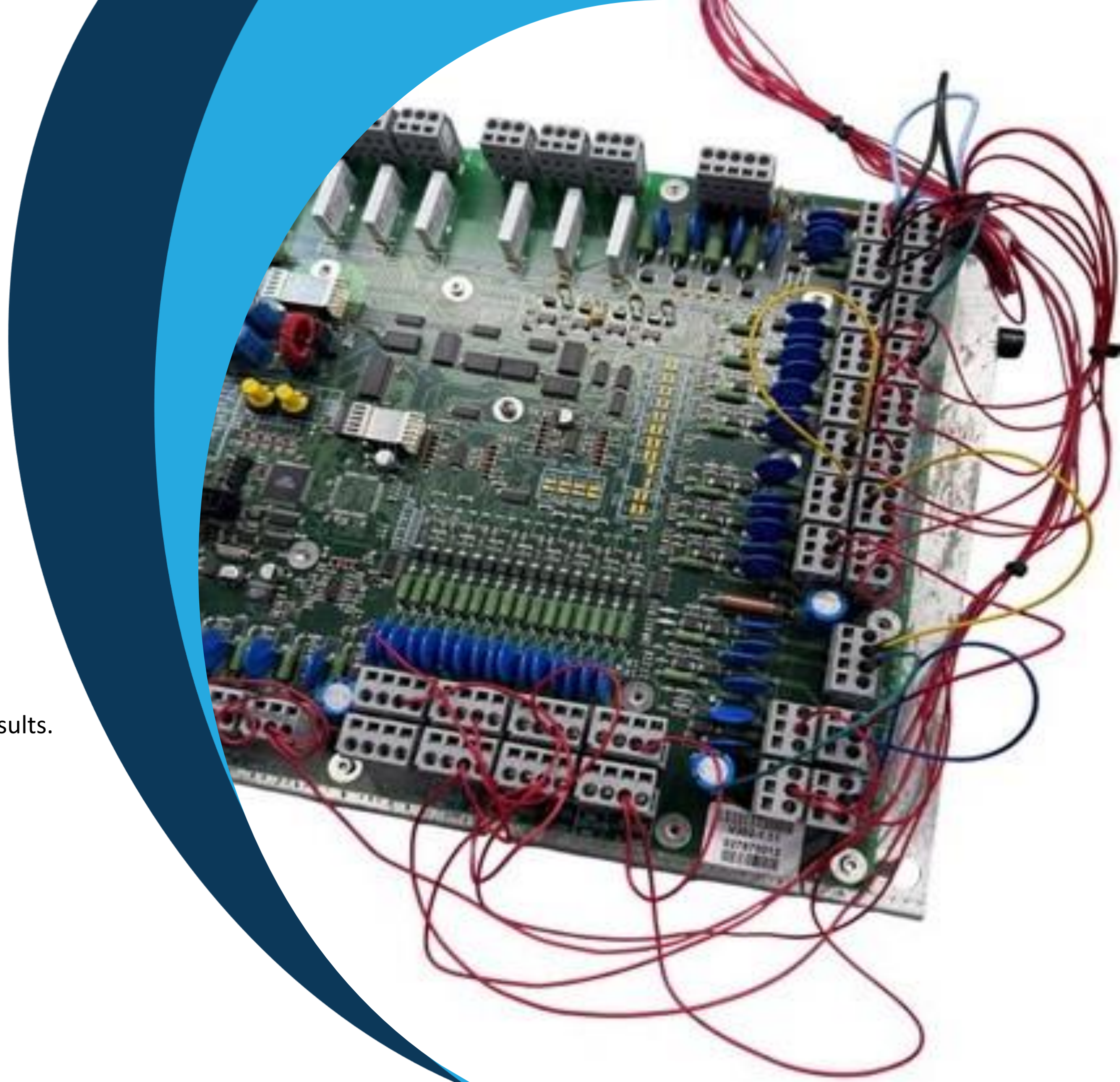
- ✓ High Current Thyristor Switching – Single phase AC supply, 5KW load assemblies, Akuray switching module
- ✓ Replace Driver Board with New board when damaged
- ✓ Pro-actively replace Thermostats
- ✓ Cooling system verification
- ✓ Replacement / Testing of SCRs



KK Wind Solutions WTC3 IO Module

The Scope Includes

- ✓ Functional testing of all digital and analog input/output channels..
- ✓ Verification of CAN communication of LED indicators based on internal diagnostics
- ✓ inspection and interpretation of LED indicators based on internal Diagnostics.
- ✓ Environmental condition review and physical inspection guidance.
- ✓ Standardized test setup and measurement points for consistent results.
- ✓ Troubleshooting steps for identifying and isolating failures.



Trusted By



Certifications





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Check our expertise in action on YouTube!



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