

# Process Monitoring Reimagined

**The potential for additive manufacturing is immense.** One of the greatest challenges is the need for robust in-process Quality Assurance to ensure the print quality and repeatability of metal 3D printed parts.

Introducing AMiRIS™ by Additive Assurance, a world-leading process monitoring and quality assurance solution for laser powder bed fusion additive manufacturing.



## Real-Time Quality Assurance For Metal 3D Printing

AMiRIS™ is a highly effective quality assurance solution for metal additive manufacturing, enabling much needed traceability and process insight. The cloud enabled AMiRIS™ system provides fully automated analytics, able to track part quality across a fleet of multiple machine types and complementing and extending existing quality assurance systems.

The unique process monitoring technique utilizes high-resolution sensors to monitor the metal Laser Powder Bed Fusion process to the micron level. This delivers actionable information simultaneously to management and the factory floor as the issues are occurring, allowing for increased production throughput, and supplementing costly NDE.

### INDUSTRY SEGMENTS:

- ✓ Aerospace
- ✓ Medical Devices
- ✓ Energy
- ✓ Defence
- ✓ Research
- ✓ Service Bureaus

### AMiRIS™ delivering value through:

#### STREAMLINED PART CERTIFICATION

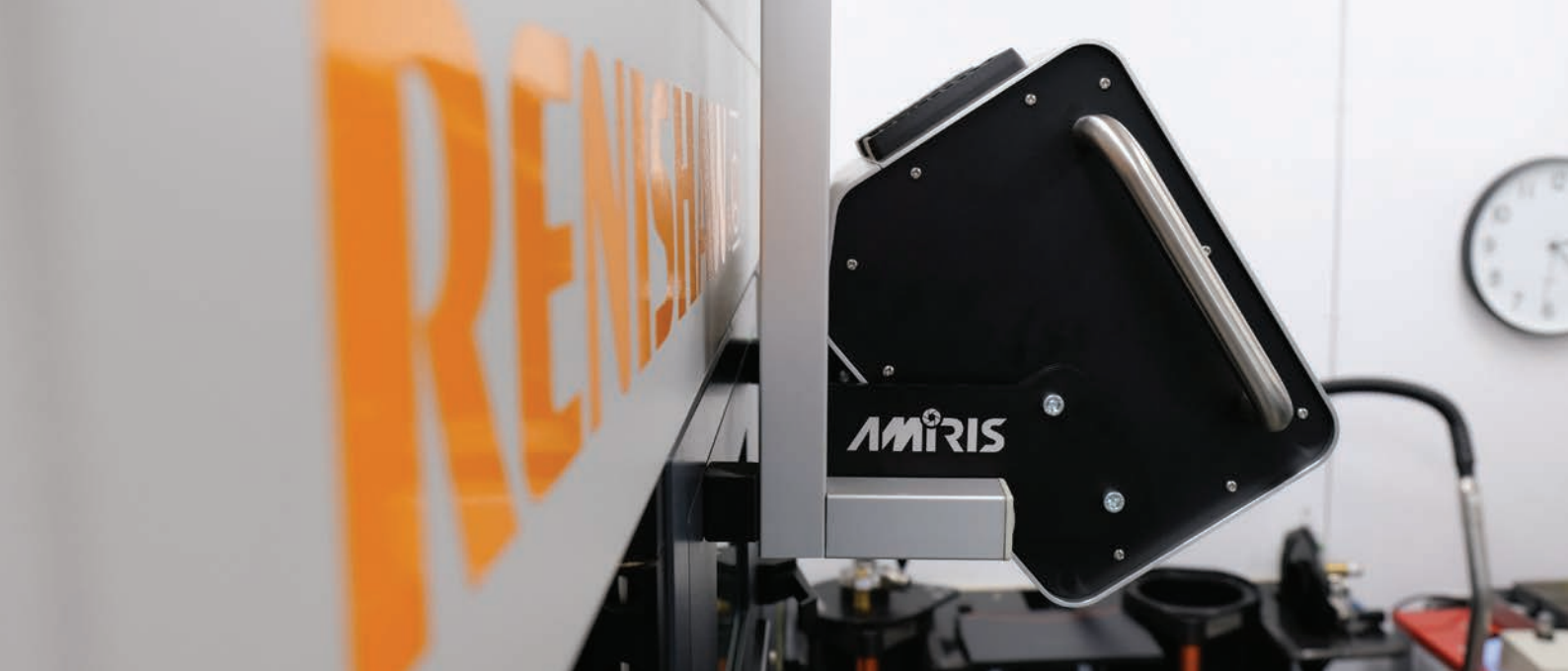
- » Certify during production, not after production
- » The pathway to meet regulatory requirements
- » Full process traceability - Industry 4.0 ready

#### INCREASING PRODUCTION THROUGHPUT

- » Able to detect faults and anomalies in real-time
- » Increase uptime with immediate notifications
- » Reduced costs due to non-conforming parts
- » Saves time on post process NDE

#### ENSURING PART RELIABILITY

- » Reduce certification costs
- » Reduce R&D time



## An Independent QA Solution For Metal 3D Printing

**AMiRIS™** combines multiple high resolution optical sensors with powerful machine learning analysis to provide real-time feedback on build quality. Capable of detecting multiple process inconsistencies, the system offers manufacturers a pathway for qualification and eliminates waste through early fault detection.



### RAPID RETROFIT

The externally mounted sensor system is simple to install and requires zero machine modifications. No impact on gas flow or machine warranty.

### AMiRIS™ Features

#### AUTOMATED ANALYTICS

- » Be alerted when and where a problem occurs
- » Production KPI dashboard for management

#### SECURE VIRTUAL PRIVATE CLOUD SOLUTION

- » Track QA metrics from a single managed platform
- » API available for integration with existing tools
- » Air-gapped (on premise) solution available on request

#### DETAILED PROCESS MONITORING (TO THE MICRON LEVEL)

- » Unique patent pending technology
- » Intuitive interface alerts operators to faults in real-time
- » Powered by pre-trained machine learning

#### EXTERNALLY MOUNTED, SUITABLE FOR ALL L-PBF MACHINES

- » Fast installation in less than 30 mins
- » No impact on machine warranty
- » Vendor independent QA for all machines



**Additive Assurance** is a venture backed startup formed by a passionate team of AM users, creating real solutions for AM industry problems. We are proudly from Melbourne, Australia, with representatives in Europe and North America. Contact us to learn more.

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