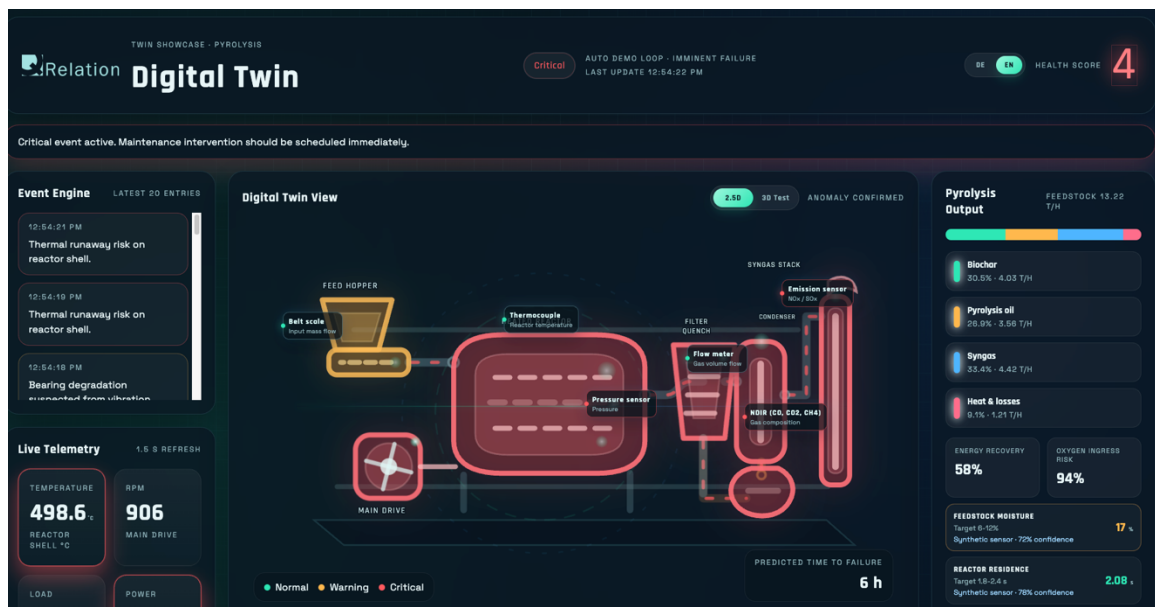


QRelation launches feasibility study into AI-supported optimisation of battery pyrolysis processes

Jesteburg, 20 May 2026 – QRelation Management Team GmbH is continuing to drive forward the digitalisation of industrial recycling processes: as part of the ZIM innovation network PyroNet, the company is conducting the feasibility study 'PyroTwin – Data- and AI-based control of the battery pyrolysis process'.

The aim of the project is to make existing pyrolysis processes in battery recycling more efficient, transparent and sustainable through the use of digital technologies. Whilst today's processes are technically well-established, process control is often still carried out manually and relies only to a limited extent on data.



Screenshot Twin Showcase

The PyroTwin project focuses on the development of a digital twin that links real-time process data – such as temperature, pressure, gas composition and energy consumption – with a simulation model. The aim is to control process flows more precisely and to optimise material yield, energy consumption and plant performance in a targeted manner.

The feasibility study is being carried out by QRelation's experienced digital team. As part of the project, the experts are analysing existing pyrolysis processes, collecting relevant process data and developing a digital process architecture for the intelligent networking of the plant, the digital twin and the ERP system. In addition, initial AI models are being designed to automatically detect anomalies, patterns and potential for optimisation.

In addition to technological considerations, the study also takes sustainability and market requirements into account. Against the backdrop of growing electromobility and increasing



regulatory requirements – such as those set out in the EU Battery Regulation 2023/1542 – efficient and traceable battery recycling is becoming increasingly important.

With PyroTwin, QRRelation is contributing to the digital transformation of the battery and recycling industry. At the same time, the project strengthens data-driven value creation, resource efficiency and technological innovation in Europe, and opens up new perspectives at the interface of digitalisation, sustainability and Industry 4.0.

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