

Automated robotic cleaning of parts using retina safe wavelengths

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To minimise carbon emissions and transition towards a zero-carbon economy, it is essential that we find a way of maintaining our assets and extending their life cycle for as long as possible.

Laser-cleaning provides the ultimate eco-friendly surface cleaning solution. It is a phenomenal technology that cleans surfaces without the need for water, chemicals or any consumables, whilst generating no secondary waste. This technology can enable reduction of consumables, remanufacturing, reuse and recycling of parts which are the fundamental principles of our circular economy.

We address the challenge of moving to a circular economy, by demonstrating the feasibility of eco-friendly, automated, parts-rejuvenation technology. We demonstrate a robotic delivered, fully automated solution, using machine vision, collaborative robots and laser cleaning to maximise the lifetime of metallic objects and increase resource efficiency through reuse. Combined with our reduced hazard laser technology, these systems can be deployed into workshops or factories so that users can laser clean safely in open spaces within a defined region without the use of physical safety barriers or unwanted shutdowns.