# VERIFY

VISUALLY GUIDED ROBOTISED CELL FOR FINISHING PROCESSES

The automation of **quality control** activities and **corrective** actions in existing industrial cases is one of the core challenges of VERIFy. In particular, an **autonomous robotic cell** is able to detect **aesthetic defects** after the casting process by an innovative **visual inspection system**. This system robustly detects the defects and classifies them either as scrap or as-to-be-finished and upon the detection a **force feedback enabled robot** performs the finishing process on the identified spots.
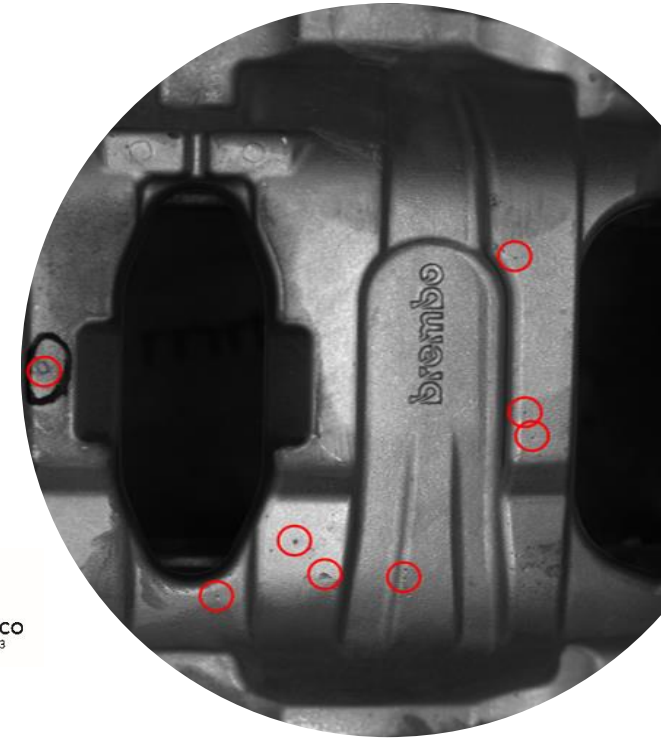
BACKGROUND

Traditionally, quality control after the casting process has been traditionally performed by visual examination of the produced parts and specifically by humans. Furthermore finishing processes for corrective actions is also performed by humans since corrective actions require sensitivity and accuracy, performing repetitive non-ergonomic operations that can affect negatively the health and safety as well as the efficiency of the production.

CHALLENGE

Improve the aesthetical defect identification and correction on aluminium casted parts, reducing non-value added activities and increasing the efficiency of the production. Quality improve and production cost reduction will be possible only if the system successfully diagnoses the surface of the product and the finishing tool corrects the identified defects.

CONSORTIUM

COMAU

LMS — Laboratory for Manufacturing Systems & Automation

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KEY BENEFIT

- Reduced Time and Cost
- Less scrap
- Increased defects diagnosis
- Reduced subjectivity of the workers
- Reduced non-ergonomic tasks
- Minimisation of deburring equipment
- Less spare parts