

PROYECTO I+D+i



Title of the project

Vision system for quality control and execution on site

Acronym

QUALITIC

Project Content

Currently, the quality control management on construction sites is carried out manually: somehow the foremen and the technicians do the inspections and checks informally in order to confirm that the assembly of the steel structures is being carried out in accordance with to technical specifications. It is not a fully developed process, nor does it offer any type of documentary support that evidences the correct assembly of the rebars. In addition to this, these structural elements are completely covered in concrete in a short period of time (often less than 3 days), which makes even more difficult to know truthfully that the on site structure meets the client's requirements.

Project Goals

The objective of this project is the development of ICT solutions to advance in the automation of quality control and the execution of the construction processes in those aspects related to the control of structures on site, such as the reinforcement of pillars and slabs.

Work packages

- PT1. Specification of use cases
- PT2. Laboratory tests
- PT3. Tests in construction environment
- PT4. System Validation
- PT5. Marketing plan
- PT6. Project management

Results and conclusions

The viability of the measurement process to obtain the number of rebars and their diameter in column and slab constructions has been demonstrated. It has been carried out with a lidar system, combined with visual SLAM algorithms, that as required, is low cost, portable and easy to obtain.



BUSINESS AREAS

Àrea de Infraestructuras

COMSA, S.A.

DURATION

2021-2023

BUDGET

Consortium Budget:
199.764,72€

COMSA Budget:
49.888,75 €

KEYWORDS

Image processing, computer vision, pillars, floors, inspection, construction

COORDINATOR

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