



RCS Visual inspection of a 30-meter chimney in June 2023

The inspection was carried out by a team of trained and certified personnel from Invert Robotics and Amotec AG. Non-destructive crack testing with robots, the RCS camera in particular offers numerous advantages such as time savings and security for your own employees. The test equipment is simply stowed in two suitcases, makes traveling easier for technicians.

With a high-resolution RCS camera system, Invert Robotics, together with Amotec AG, carried out the visual inspection of a chimney made of S235 steel. The chimney is 30 meters high and one meter in diameter. The inspection was carried out within one day.

At the end of the inspection, the client receives a preliminary report that already contains the most important findings. This enables decision making as to whether an immediate repair is necessary or whether it can be postponed. The detailed test report, which contains all the important information and the overall result, will follow within 72 hours.

Total findings after 6 hours of inspection

Detected number of cracks: 2
Mechanical damage/corrosion: 13

How long would it have taken with regular inspection methods and how?

Not easy to answer, it depends:
Using rope access technician in the chimney, team of 3 Persons, of which must be able to go in the chimney. So one person inside and always 2 people outside to secure that person. This can be a little faster BUT you need more preparation time and safety aspects to be considered, due to having human bean in a very tricky confined space, so extremely higher risk (confined space entry)
Drones, these can be faster than our method BUT, not many companies have them AND you need a very good pilot for it, this makes the possible companies with expertise even less.

Major disadvantage if drones: they cannot fly long (25-30 Minutes only) so you need many loaded batteries AND If the deep parts of the chimney are to be inspected, then the drone has to fly a long distance to pick up where it left off and that costs inspection time. This means that the lower you fly, the more battery power is needed to fly to the inspection point, which makes everything difficult. In addition, many customers are not satisfied with drones because they wobble and the image quality is not comparable to ours.

Where both of the Invert inspectors in the cherry picker or was one on the ground?

Both on the cherry picker.



Technical Information

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| Vessel type | Chimney |
| Vessel size | 40 meters high & some 1 meter in the diameter |
| Vessel material | stainless steel |
| Robot platform | RCS |
| NDT | Visual |