



Remote inspection of bunkered tanks - case study

CASE STUDY

Vinçotte, member of KIWA group, was contracted by **Belgoprocess**, a subsidiary of NIRAS (the Belgian National Agency for Radioactive Waste and enriched Fissile Material), for visual inspection and thickness measurements of bunkered storage tanks at their wastewater treatment plant on site 2. Due to the ionizing radiation and the risk of radioactive contamination, a remote inspection was the logical solution.

Your tailor-made solution

The Challenge

Most of the storage tank is stainless steel, which precluded the use of magnetic crawlers. Suction-based crawler robots and UAVs (drones) were deemed unsuitable due to the high risk of contamination in such environments.

Vinçotte relied on their robotics partner hibot to deliver the Floatarm, an articulated arm robot for multifunctional NDT (Non-Destructive Test) inspections. This arm can be packaged against contamination and fitted with the appropriate sensor payloads.

A dedicated cage was developed & commissioned to deliver the robot in the narrow corners of the deep bunkers by means of the onsite overhead cranes.

Download our testimonial and [read more about BelgoProcess' experience](#).

Contact our [Innovation Manager](#) or [Product Engineer](#) to find out how this solution can help YOU!

Your result

Thanks to the Floatarm, an articulated arm robot for multifunctional NDT inspections, the risk associated with working at great heights can be significantly reduced. Additionally, exposure to ionizing radiation and the risk of radioactive contamination is reduced to a minimum.

No major preparations, such as building scaffolding or other general protective measures were required. All measurements are digitized and referenced to a coordinate system and point cloud.

Thanks to this robotic inspection, the reporting is intuitive and repeatability of the measurements is ensured for future inspections.

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Please note

- Robotics can provide access to hazardous or difficult-to-reach areas, such as the inside of tanks, pipes, and pressure vessels.
- Robotics can inspect equipment while it is in operation, reducing downtime and maintenance costs.
- Robotics can produce high-quality images and data that can be used to detect defects and assess the condition of assets.
- Robotics can be used to perform inspections more quickly and efficiently than traditional methods.
- Robotics can help to improve worker safety by reducing exposure to hazardous environments.

In which situation?

Robotic inspection systems are used in a wide range of industries, including:

- Oil and gas
- Power generation
- Chemical processing
- Manufacturing
- Construction
- Infrastructure
- Nuclear power
- Waste management
- Environmental remediation