

e-ROCS

An electric vehicle designed for radiological road mapping of nuclear sites

Scope

Orano DS has developed e-ROCS (electric ROVer for Contamination Scanning), an electric vehicle designed to inspect roads to meet radiological cleanliness standards at various nuclear sites (e.g., nuclear power plants, fuel cycle facilities and research centres).

e-ROCS features:

- A gamma detection system capable of scanning a 2400 cm² area.
- Integrated lead shielding to isolate the detector from background noise.
- A hydraulic actuator to position the sensor to match road surface irregularities. This mechanism also allows the sensor to be extended sideways to inspect road edges (gutters, kerbs, etc.).
- A four-wheel drive electric vehicle capable of carrying out inspections at a speed of approximately 5 km/h, ensuring optimal detection of 800 Bq, equivalent to ⁶⁰Co.

The collected data is geolocated and accessible to the operator through a dedicated application, ensuring traceability.



Advantages

- **PERFORMANCE**
Covers a surface area over 65% larger compared to a traditional controller in the same amount of time
- **ROBUST**
Eliminates unplanned downtime for corrective maintenance
- **QUALITY**
Geolocated data (accurate to the centimeter), traceable and reliable
- **SAFETY**
Equipped with electromechanical brakes and collision detector
CE Certified
- **CSR**
Electric powered, zero carbon emission

Key data

Dimensions:

- L 1.20 m x l 2.80 m x H 2.45 m

Weight:

- 960 kg

Detection surface:

- 240 cm²

Sensor extension:

- Vertical : 40 to 300 mm
- Horizontal : ± 150 mm

Optimize your site management with our solution that provides extended coverage and reliable geolocated data

Our offers

- Orano DS provides road inspection services with e-ROCS at nuclear sites such as nuclear power plants (CNPE) and fuel cycle facilities.
- e-ROCS is also available for purchase, allowing flexible and independent inspection management.



Our references

e-ROCS was deployed at the Chinon Nuclear Power Plant on August 17th 2023:

- Inspections were carried out over a total area of 20 000 m², covering 4 km of roads, equivalent to 25 km of actual vehicle travel.



Contact us to discover the full capabilities of e-ROCS.

Orano DS

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