

## ISOKINETIC SAMPLING PROBE

In compliance with the NF ISO 2889 version 2010 standard

The know-how and expertise for quality isokinetic sampling probes for measuring and controlling radioactive substances in the pipes and outfalls of nuclear facilities.



### OPERATING PRINCIPLES

Isokinetic sampling consists of taking a sample at each measurement point such that the average suction speed at the probe inlet is equal to the suction speed in the absence of a probe.

In the context of representative sampling of particles on a discharge outlet, it is essential to maintain the isokinetic nature of the sampling and to meet the requirements of the ISO 2889 standard.

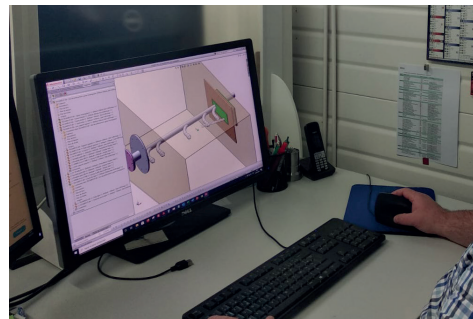
### PROCESS

#### Conception:

- aeraulic studies: calculation note according to ISO 2889
- mechanical studies: definition of the type of installation and connection according to the constraints of the installation

#### Drawing and 3D projection:

- drawing of plans with detailed dimensions and identification of welds
- 3D projection: verification of the layout



3D

#### Manufacturing:

- machining / cutting / bending
- welding: NF EN ISO 9606-1 qualification
- high anti-corrosion treatment: pickling then passivation by chemical baths to regenerate the protective layer of the stainless steel by oxidation of the chromium
- traceability: laser engraving of the serial number and site number on the probe
- all stainless steel seals and screws are supplied with our probes



TIG welding

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### QUALITY CONTROL

**Weld inspection:** by dye penetrant inspection according to NF EN ISO 3452-1 standard by a certified and independent body

**Dimensional control:** with a measuring column on a marble

**Tightness control:** according to NF ISO 2889 standard

**Material and roughness control:** material certificate 3.1b (stainless steel 316L) and internal roughness ( $< 0.8 \mu\text{m}$ )

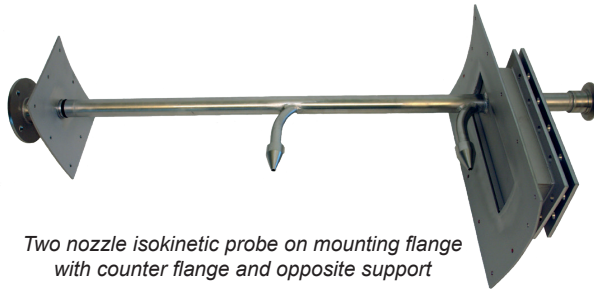
Supply of the complete quality control and assurance file according to ORANO, EDF and CEA standards



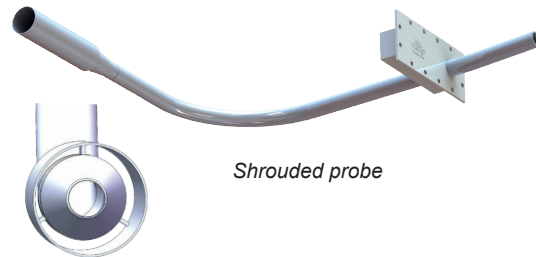
Measurement column on marble

### PROJECT FOLLOW-UP

Our teams accompany you until the installation of the probes on site.



Two nozzle isokinetic probe on mounting flange with counter flange and opposite support



Shrouded probe

### BENEFITS

- ISO2889 compliance
- Control of the process from design to manufacture
- Customised design adapted to the constraints of the installation
- Probes manufactured entirely in stainless steel  $R_a < 0.8 \mu\text{m}$

- Our probes are entirely manufactured in France in our factory in Reignac sur Indre

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