

ANEMONE

Recovery and sampling tool

Head

Body



ANEMONE sampling tool
Head positions



ANEMONE sampling
tool installed on a pole

ANEMONE has been designed to grip any solid element, whether for sampling purposes or more generally for recovery and removal:

- It comprises a rigid body and a flexible head equipped with tentacles designed to grip and trap any type of object or material
- The gripping action is provided by retraction of the anemone head
- The anemone is controlled by a pneumatic air supply

An universal tool:

- Allows the recovery of various objects (i.e. shape, size, density, material), in different environments (e.g. air or water) and on different surfaces (e.g. sand, sludge, rubble)
- Can be used remotely:
 - on a pole equipped with a ball joint allowing the orientation of the tool
 - on a remotely controlled arm
- Resists cuts, tears and irradiation
- 3D printing design: reproducible and scalable
- Dimensions and characteristics adaptable to needs

Advantages

- **PERFORMANCE**
Possible to perform operations in challenging, irradiating and underwater environments
- **ADAPTABILITY**
Tool adaptable to the size of objects to grab
- **EASE OF USE**
User-friendly tool and powered using compressed air
- **VERSATILITY**
One tool for several objects or materials
- **SAFETY / RADIATION PROTECTION**
Limited dose exposure through rapid and remote implementation

Key data

Lightweight and space-saving tool (standard version):

- Diameter of the anemone: 95 mm
- Length: 375/265 mm (deployed/retracted)
- Weight: 1.7 kg

Payload:

- Recovery of elements weighing up to ~10 kg

Pole characteristics:

- Length: 2 to 10 m
- Type : with connectable sections
- Equipped with a remotely controlled ball joint allowing the orientation of the tool

An universal sampling tool for solid elements

A solution developed and tested internally by Orano DS for deployment on several worksites.

Several possible fields of application:

- Remote recovery of objects in areas that are difficult to access and/or highly irradiating (e.g. pool, bottom of vessels, equipment in operation, shielded cells, etc.)



Screws



Sample holders



Bottles



Tools



Gloves



Sheared sleeves

- Taking and recovery of samples for analysis and characterisation (e.g. corium in the Fukushima-Daiichi reactor, fission product residues, pieces of fuel, etc.)



Corium sample recovery kinematics (simulation)



An application for Patent protection has been filed for ANEMONE under number FR 20 02401 with an international extension PCT/FR2021 050414

Watch our presentation video for ANEMONE



Contact us to discover the range of possible solutions with ANEMONE

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