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Planning

STEP - Divertor Heat Exchanger AM PIN

United Kingdom Atomic Energy Authority

F01: Prior information notice
Prior information only
Notice identifier: 2021/S 000-011973
Procurement identifier (OCID): ocds-h6vhtk-02b637
Published 28 May 2021, 12:06pm

Section I: Contracting authority

I.1) Name and addresses

United Kingdom Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

Contact

Rukhsar Samnani

Email

rukhsar.samnani@ukaea.uk

Telephone

+44 1235467082

Country

United Kingdom

NUTS code

UKJ14 - Oxfordshire

National registration number

N/A

Internet address(es)

Main address

http://www.gov.uk/government/organisations/uk-atomic-energy-authority

Buyer's address

https://uk.eu-supply.com/ctm/Company/CompanyInformation/Index/72814

I.3) Communication

The procurement documents are available for unrestricted and full direct access, free of charge, at

https://uk.eu-supply.com/app/rfq/rwlentrance_s.asp?PID=38125&B=UK

Additional information can be obtained from the above-mentioned address

I.4) Type of the contracting authority

Body governed by public law

I.5) Main activity

Other activity

Fusion Research

Section II: Object

II.1) Scope of the procurement

II.1.1) Title

STEP - Divertor Heat Exchanger AM PIN

Reference number

T/RS090/21

II.1.2) Main CPV code

- 71333000 - Mechanical engineering services

II.1.3) Type of contract

Services

II.1.4) Short description

UKAEA is looking to engage with companies through this PIN which have capability in additively manufacturing lattice structures to a high quality, using nuclear fusion relevant materials (e.g., copper, copper chromium zirconium, tungsten, tantalum, and alloys of these materials).

II.1.6) Information about lots

This contract is divided into lots: No

II.2) Description

II.2.2) Additional CPV code(s)

- 14715000 - Copper
- 14754000 - Tantalum
- 14755000 - Tungsten
- 42152100 - Reactor-cooling systems

- 71314000 - Energy and related services
- 71335000 - Engineering studies

II.2.3) Place of performance

NUTS codes

- UKJ14 - Oxfordshire

II.2.4) Description of the procurement

Future nuclear fusion reactors will be required to manage high heat fluxes (up to 20MW/m2) on in-vessel components, such as the divertor targets in the plasma exhaust system. This will require heat exchangers with significant heat handling capabilities. This has led the United Kingdom Atomic Energy Authority (UKAEA), specifically STEP to explore novel heat exchanger designs that use additively manufactured lattices as cooling structures.

As a result, UKAEA is now looking to engage with companies through this PIN which have capability in additively manufacturing lattice structures to a high quality, using nuclear fusion relevant materials (e.g., copper, copper chromium zirconium, tungsten, tantalum, and alloys of these materials).

UKAEA would like to quantify the heat transfer and flow/pressure drop characteristics of such lattice structures, to assess their feasibility for use in novel heat exchanger designs. This may be done through use in small scale, high heat flux testing, or through exploration and validation of previous test results/analytical models.

If capabilities mentioned above are within your expertise, we would like to engage with you. Please contact with Rukhsar Samnani (rukhsar.samnani@ukaea.uk).

II.2.14) Additional information

This is a pre-market engagement exercise.

II.3) Estimated date of publication of contract notice

31 December 2021

Section IV. Procedure

IV.1) Description

IV.1.8) Information about the Government Procurement Agreement (GPA)

The procurement is covered by the Government Procurement Agreement: Yes