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Planning

## **Chemical Vapour Infiltration and Deposition of Silicon Carbide, Carbon, and Oxides**

United Kingdom Atomic Energy Authority

F01: Prior information notice

Prior information only

Notice identifier: 2022/S 000-019222

Procurement identifier (OCID): ocds-h6vhtk-0351be

Published 13 July 2022, 5:41pm

### **Section I: Contracting authority**

#### **I.1) Name and addresses**

United Kingdom Atomic Energy Authority

Culham Science Centre

Abingdon

OX14 3DB

#### **Contact**

Jim McGough

#### **Email**

[jim.mcgough@ukaea.uk](mailto:jim.mcgough@ukaea.uk)

#### **Telephone**

+44 1235467082

**Country**

United Kingdom

**NUTS code**

UK - United Kingdom

**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.2) Information about joint procurement**

The contract is awarded by a central purchasing body

**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/rwlenrance\\_s.asp?PID=50430&B=UK](https://uk.eu-supply.com/app/rfq/rwlenrance_s.asp?PID=50430&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

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## **Section II: Object**

### **II.1) Scope of the procurement**

#### **II.1.1) Title**

Chemical Vapour Infiltration and Deposition of Silicon Carbide, Carbon, and Oxides

Reference number

T/JM119/22

#### **II.1.2) Main CPV code**

- 71350000 - Engineering-related scientific and technical services

#### **II.1.3) Type of contract**

Services

#### **II.1.4) Short description**

The purpose of this RFI is to have a better understanding of the capabilities for chemical vapour infiltration of fibre reinforced composites which currently exist. The materials of interest to be manufactured by chemical vapour infiltration or deposition (CVI or CVD) are silicon carbide fibre reinforced composites. The CVI materials will act as the interphase coating on the fibres, and the matrix. Interphase materials of interest include pyrolytic carbon, and rare earth oxides (eg. erbia) and silicates (eg. yttrium disilicate). Matrix materials of interest are silicon carbide, and coatings of interest are silicon carbide and rare earth oxides. Alternative methods of applying sub-micron scale interphases are also of interest.

#### **II.1.5) Estimated total value**

Value excluding VAT: £60,000

#### **II.1.6) Information about lots**

This contract is divided into lots: No

### **II.2) Description**

#### **II.2.2) Additional CPV code(s)**

- 71350000 - Engineering-related scientific and technical services

### **II.2.3) Place of performance**

NUTS codes

- UK - United Kingdom

### **II.2.4) Description of the procurement**

The purpose of this RFI is to have a better understanding of the capabilities for chemical vapour infiltration of fibre reinforced composites which currently exist. The materials of interest to be manufactured by chemical vapour infiltration or deposition (CVI or CVD) are silicon carbide fibre reinforced composites. The CVI materials will act as the interphase coating on the fibres, and the matrix. Interphase materials of interest include pyrolytic carbon, and rare earth oxides (eg. erbia) and silicates (eg. yttrium disilicate). Matrix materials of interest are silicon carbide, and coatings of interest are silicon carbide and rare earth oxides. Alternative methods of applying sub-micron scale interphases are also of interest.

The main objective is to find out supplier's capabilities to produce parts, and obtain an understanding of the possible size, and geometric complexity which can be achieved, including limitations on the supply of raw materials. These parts are intended for material testing, with potential application as structural materials in the blanket of a tokamak fusion reactor. The aims of this RFI are given in section 3.1. UKAEA wish to ask prospective suppliers to answer the requirements in section 3.2. Estimation of cost and timelines would also be appreciated to aid us in planning.

### **II.3) Estimated date of publication of contract notice**

14 October 2022

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## **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: No