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Award

## **Components of Shock Tube System**

UNIVERSITY OF SHEFFIELD

F15: Voluntary ex ante transparency notice

Notice identifier: 2021/S 000-020253

Procurement identifier (OCID): ocds-h6vhtk-02d68c

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### **Section I: Contracting authority/entity**

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

UNIVERSITY OF SHEFFIELD

Western Bank

SHEFFIELD

S102TN

#### **Contact**

David Middle

#### **Email**

[dave.middle@sheffield.ac.uk](mailto:dave.middle@sheffield.ac.uk)

#### **Telephone**

+44 1142221560

#### **Country**

United Kingdom

**NUTS code**

UKE32 - Sheffield

**Internet address(es)**

Main address

<https://www.sheffield.ac.uk/>

**I.4) Type of the contracting authority**

Body governed by public law

**I.5) Main activity**

Education

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## **Section II: Object**

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

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

Components of Shock Tube System

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

- 38970000 - Research, testing and scientific technical simulator

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

Supplies

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

The University of Sheffield (UoS) is establishing a Shock Tube laboratory as part of its brand-new Translational Energy Research Centre (TERC). The intention of the shock tube is to study high-pressure chemical kinetics of combustion reactions using various diagnostic equipment.

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

This contract is divided into lots: No

#### **II.1.7) Total value of the procurement (excluding VAT)**

Value excluding VAT: £315,000

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

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

NUTS codes

- UKE32 - Sheffield

Main site or place of performance

The Translational Energy Research Centre (TERC), Department of Mechanical Engineering at the University of Sheffield.

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

The Shock Tube will be used to study high-pressure and high-temperature chemical kinetics of hydrogen and methane combustion, before moving onto syngas and larger hydrocarbons.

The tube will focus on high-pressure combustion applications, such as the Allam-Fetvedt cycle, diesel engine and scram-jet combustion. The supply of Shock tube will include certification, pressure testing and delivery.

? Mixing vessel

? Shock tube support (Hollow stand which can be filled up with sand, concrete, or similar)

? Measuring equipment as specified before

? Gas manifold for preparing mixtures in mixing vessel and high pressure section of the shock tube

? Engineering support

? Support for facility setup

#### **II.2.11) Information about options**

Options: No

#### **II.2.14) Additional information**

Regulation 32 of PCR 2015 is being applied as in 32: 2a & 2b(ii) and 5a.

No contract will be entered into until after a 10 calendar day period from the submission of the VEAT notice date.

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## Section IV. Procedure

### IV.1) Description

#### IV.1.1) Type of procedure

Negotiated without a prior call for competition

- No tenders or no suitable tenders/requests to participate in response to open procedure
- The products involved are manufactured purely for the purpose of research, experiment, study or development

Explanation:

Following several months of market research a tender specification was developed and a full OJEU tendering exercise was conducted for a range of elements of the Shock Tube system. However, on evaluation it was determined that none of the proposed systems met the technical requirements of the specification. In addition, all bidders were found to be lacking the technical experience with similar high pressure systems, leading to safety concerns. Furthermore, all of the solutions exceed the budget for the tender by circa £150k minimum, likely due to the uncertainties that remained in each of submission.

Therefore, the tender exercise was cancelled and a further period of market research ensued. During this time Heblac Technologies were identified as a technically experienced potential vendor. Following some design development, a technical solution was identified and quotation for the system specification was received. This value included all major aspects of the system with only minor site specific/installations not included.

However, the requirement remains to deliver the technical outputs associated with the full system, hence the purchase of this aspect of the system is still necessary.

A single source tender is therefore proposed to formalise the solution provided by Heblac Technologies for the following reasons:

1. The vendor is the only technically competent vendor of a potential dangerous pressure related system identified in more than 2 years of research.
2. The vendor has produced a detailed technical solution that meets all the requirements of the Centre's technical capability and must be capability and fully integrated with the Centre's other systems.
3. The solution provided is the only solution within budget.

4. In order to secure this solution within the time available as per the grant funding agreement programme, a direct purchase is the only feasible option. It would also be considered, unprofessional to run full tender exercise in the knowledge a vendor has been identified.

5. Extreme urgency brought about by events unforeseeable for the contracting authority and in accordance with the strict conditions stated in the directive.

## Summary

This is for the installation of a Shock Tube system on the grounds that meets technical capability in relation to safety needs and close collaboration with the department to ensure the technical capabilities meet the expectations of UK law. The Shock Tube and process control systems are complex and intimately linked to the design of the Centre. Therefore, we require a manufacture who has long-standing experience in the field, who are able to supply and guarantee our materials specifications, and who has proven experience of delivering similar projects in the past. Furthermore, we require the system to be fully tested FAT (Factory Acceptance Test) prior to shipment with unique systems required to fulfil this capability in the place of manufacture.

Hence, following unsuccessful tender process it is deemed necessary to collaborate with leading supplier in the field of the Shock Tube manufacture in order to obtain the goods within the allotted timescales. Therefore, Regulation 32 is being applied as in 32: 2a , 2b(ii) and 5a

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

The procurement is covered by the Government Procurement Agreement: Yes

## **IV.2) Administrative information**

### **IV.2.1) Previous publication concerning this procedure**

Notice number: [2021/S 053-134907](#)

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## **Section V. Award of contract/concession**

A contract/lot is awarded: Yes

### **V.2) Award of contract/concession**

#### **V.2.1) Date of conclusion of the contract**

9 August 2021

#### **V.2.2) Information about tenders**

The contract has been awarded to a group of economic operators: No

#### **V.2.3) Name and address of the contractor/concessionaire**

Heblac Technologie

Aachen

52070

Country

Germany

NUTS code

- DE - Germany

The contractor/concessionaire is an SME

No

#### **V.2.4) Information on value of contract/lot/concession (excluding VAT)**

Total value of the contract/lot/concession: £315,000

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## **Section VI. Complementary information**

### **VI.4) Procedures for review**

#### **VI.4.1) Review body**

University of Sheffield

Sheffield

Country

United Kingdom