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Not applicable

Supply and Installation of a Hydrogen Reactor for Processing of Magnetic Scrap (HPMS) Vessel, to the University of Birmingham

UNIVERSITY OF BIRMINGHAM

F14: Notice for changes or additional information

Notice identifier: 2021/S 000-014930

Procurement identifier (OCID): ocds-h6vhtk-02b914

Published 30 June 2021, 11:57am

Section I: Contracting authority/entity

I.1) Name and addresses

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Section II: Object
II.1) Scope of the procurement**II.1.1) Title**

Supply and Installation of a Hydrogen Reactor for Processing of Magnetic Scrap (HPMS) Vessel, to the University of Birmingham

Reference number

SC9230/21

II.1.2) Main CPV code

- 44615000 - Pressure vessels

II.1.3) Type of contract

Supplies

II.1.4) Short description

This project is funded by the UK Research and Innovation (UKRI) Industrial Strategy Challenge Fund; Driving the Electric Revolution under grant agreement 1524086 The University of Birmingham invites tenders for supply of a bespoke, hydrogen processing of magnet scrap (HPMS) vessel. The HPMS vessel will be the largest magnet recycling plant of its kind in the UK and will focus on processing of end of life magnets containing magnetic scrap. The HPMS vessel is based on a patented technology, developed at the University of Birmingham, in which hydrogen is used to extract neodymium-iron-boron (Nd-Fe-B) magnet powder from end of life permanent magnet containing products. During the HPMS process, sintered Nd-Fe-B magnets, which are embedded in end of life products, are loaded inside a vessel, which is then sealed, evacuated, back filled with an inert gas (e.g. Argon or Nitrogen), evacuated and then filled with between 1-4 bar of

hydrogen at room temperature for between 1-4 hours. Once exposed to hydrogen, the sintered Nd-Fe-B undergoes the hydrogen decrepitation (HD) process and breaks down into a friable, demagnetised, hydrogenated powder. Often the end of life products containing the Nd-Fe-B material are encased within some sort of housing so the hydrogenated powder needs to be liberated from the scrap using mechanical agitation through a porous sieve stage. This is typically performed by rotating the scrap within a porous drum (3-5 mm pore size) within the HPMS vessel, after which the powder falls into a sealable collection pot at the bottom of the vessel, which can then be unloaded under an argon or nitrogen atmosphere (O₂ =

Section VI. Complementary information

VI.6) Original notice reference

Notice number: [2021/S 000-012707](#)

Section VII. Changes

VII.1.2) Text to be corrected in the original notice

Section number

IV.2.2

Place of text to be modified

Time limit for receipt of projects or requests to participate

Instead of

Date

7 July 2021

Local time

12:00pm

Read

Date

21 July 2021

Local time

12:00pm