Request for Information (RFI)
For
701577695 - Supply of Non-Destructive Testing Equipment

Introduction

This Request for Information (RFI) is not a bidding opportunity, it is a means by which industry can provide information. Any resulting procurement activity will be conducted competitively. This RFI is an information gathering exercise, and no further discussions with industry are planned at this stage. However, any future procurement activity will be advertised in line with the current procurement regulations.

A previous RFI was published for similar information in 2021. Due to the changing market, this further RFI is to get an up to date understanding of the current market and what industry can provide for the requirement.

Background

There exists an emergent requirement to replace a range of Non-Destructive Testing Equipment currently in use by the United Kingdom Ministry of Defence. Associated with this document is a list of questions which we would like a response to. We would be interested in any Commercial off the Shelf (COTS) equipment which could fulfil these requirements and future technical solutions. Any solutions must be supported for at least 10 years.

RFI Intended Outcomes

This RFI aims to achieve 4 outcomes:

- Explore the market to see if existing products or technology could meet the requirements, to establish which direction the market is going in and how quickly.
- Further develop the procurement strategy that will deliver best Value for Defence.
- Implement an enduring solution that allows the Authority to plan its requirement against an assured continuity of supply.
- To inform a future procurement strategy that enables implementation of an enduring solution, for commencement between July 2025 and July 2028.

RFI Procedure

Responses to this RFI will be reviewed by the DE&S Deca Managed Services Team. Any details provided in the response to this RFI will be used for information purposes only and will not be used to determine the potential suppliers who may be invited to bid, should the Authority proceed to tender.

The results and analysis of this RFI shall not constitute any form of pre-qualification exercise.

Any formal procurement process will be undertaken in accordance with the relevant Procurement Law.

Nothing in this RFI, or any other engagements with industry prior to a formal procurement process, shall be construed as a representation as to the Authority's ultimate decision in relation to the future requirements.

How to submit responses to this RFI

Responses should provide information in accordance with the format provided in Annex A to this RFI below. This should be in PDF format, quoting the RFI reference on all documentation. If upon review of your submission, any clarifications or additional information that is required, will be communicated through the Defence Sourcing Portal (DSP) messaging area.

Do not submit additional documents such as company reviews, as the purpose of this RFI is to collect information related to the technical solution. Any additional documents will not be

included as part of the review process. Responses to the below questions should be limited to 100 words per answer.
Any responses received after the deadline will be passed to the team for information, however they may not be included in the RFI.
Review meetings will be held shortly after the return date deadline.
Once completed, please return electronically on the DSP for the requirement, no later than 14th January 2025 at 1500hrs.

Confidentiality and Proprietary Information

No information included in your response, or in discussions connected to it, will be disclosed to any other third party.
Proprietary information, where included, should be kept to a minimum and must be clearly marked.
For the purpose of this RFI, any documentation must not be classified above OFFICIAL SENSITIVE.

Costs of preparing your RFI response

Any costs relating to the preparation and submission of a response to this RFI are the sole responsibility of the responder.

Contact

All clarification questions and enquiries are to be submitted on the Defence Sourcing Portal (DSP) messaging area for the RFI.

Further Information

Any resulting procurement from this RFI will require the supplier to be ISO 9001:2015 certified with the appropriate scope for Non-Destructive Testing Equipment supply.
More detailed descriptions of the requirements will form part of the procurement, as the below is a Top-Level Specification at this time.

Annex A

Request	Response
Company Name	
Company Address	
Name of Company representative completing the RFI	
Contact Details (Email and Telephone Number)	
Company Website Address	
Main products/service/line of business	
Main market sector	
Number of years in this market sector	
Is the company currently contracting with any MOD organisation on other contracts?	
Does your company currently hold a valid ISO 9001:2015 certificate with the appropriate scope for this requirement?	
Does your company provide Certificate of Conformity (CofC) for all equipment?	
Are your products CE or CA UK Marked?	
Can you comply with the Logistics Commodities Services Transformation (LCST) Manual? Equipment will be shipped to the MOD Depot in Donnington, therefore this will be mandated in any contracts for these requirements Logistic Commodities and Services Transformation (LCST) Supplier Manual - Commercial Toolkit - Knowledge in Defence	
Social Value – Which theme's would your company be invested in from the Social Value requirement? Procurement Policy Note 06/20 – taking account of social value in the award of central government contracts - GOV.UK (www.gov.uk)	

	QUESTIONS						
Are you able to provide the following equipment? (Top level specifications detailed in specified below)	**Yes/No**	**If yes, will any part of the requirement be sub-contracted? I.e. maintenance Y/N**	**Are you the OEM of the equipment? Y/N**	**Is the equipment already used for aircraft maintenance? If so, how widely? I.e. multiple aircraft or one specific aircraft type Commercial or military only**	**When was the equipment first introduced?**	**What is the expected end of life date for support for the equipment?**	**Additional Comments (100 words maximum)**
1.Bond Tester Capability (Advanced)							
2.Bond Tester Capability (Basic)							
3.Eddy Current Testing (ET) Rotary Gun							
4.Ultrasonic Flaw Detection A Scan							
5.Ultrasonic Flaw Detection C Scan							
6.Ultrasonic Thickness Gauges							
7.Radiography Testing (RT) – X-Ray Tubes and Accessories							
8.Conductivity Measurement							

Support Solution		
Are you able to provide support for the following equipment?	**What support solution would you consider offering for your product? Your answer should consider; through-life configuration control, technical queries, repair, spares, and calibration.**	**Are you able to provide calibration, maintenance and repair documents for the equipment? This is for information purposes only.**
1.Bond Tester Capability (Advanced)		
2.Bond Tester Capability (Basic)		
3.Eddy Current Testing (ET) Rotary Gun		
4.Ultrasonic Flaw Detection A Scan		
5.Ultrasonic Flaw Detection C Scan		
6.Ultrasonic Thickness Gauges		
7.Radiography Testing (RT) – X-Ray Tubes and Accessories		
8.Conductivity Measurement		

Innovative solutions are most welcome, even if they do not meet all of the requirements above, we would welcome the opportunity to consider further options.

1. Top Level Specifications of the equipment for Bond Tester Capability (Advanced)

Heading	Requirement(s)
Application/usage	Suitable for NDT (ultrasonic bond testing) on aerospace materials, inclusive of CFC, Honeycomb composites, metal to metal bond delamination, crushed cores: (a)On Aircraft (b)Off Aircraft on the Flight line (c)Off Aircraft
Electrical	Operate from internal battery and charge from standard 230v 50/60Hz AC and NATO single phase 230v 50/60 Hz. 100VAC-120VAC 200-240VAC.
Temp range	Able to operate in conditions -10 degrees - +40 degrees Celsius
Weight of main equipment	Ability to be portable. Maximum weight of instrument 5 kg (not inc lead, maximum weight of probe 0.5 kg.)
Display	Minimum display size 115mm x 140mm. Display is to be colour LCD and with the ability to capture display image and export. Ability to log readings and export. Ability to store settings.
Modes of unit/probes supported	Pitch catch (with multiple frequency profiles: eg RF, Impulse, Swept), MIA and Resonance (suitable probes to be supplied).
Equipment Gain range	Minimum range 0dB – 100dB
Connectivity	Data storage and ability to transfer files to computer, USB 2.0 capable, HDMI/VGA. Ability to defect size and export data.

2. Top Level Specifications of the equipment for Bond Tester Capability (Basic)

Heading	**Requirement(s)**
Application/usage	Suitable for NDT (ultrasonic bond testing) on aerospace materials, inclusive of CFC, Honeycomb composites, metal to metal bond delamination, crushed cores: (a)On Aircraft (b)Off Aircraft on the Flight line (c)Off Aircraft
Electrical	Operate from internal battery and charge from standard 230v 50/60Hz AC and NATO single phase 230v 50/60 Hz. 100VAC-120VAC 200-240VAC.
Temp range	Able to operate in conditions -10 degrees - +40 degrees Celsius
Weight of main equipment	Ability to be portable. Maximum weight of instrument 4 kg (not inc lead, maximum weight of probe 0.5 kg.
Display	Minimum display size 100mm x 80mm. Ability to log readings and export. Ability to store settings.
Modes of unit/probes supported,	Pitch catch, MIA and Resonance (suitable probes to be supplied).
Equipment Gain range	Minimum range 0dB – 100dB

3. Top Level Specifications of the equipment for Eddy Current Testing (ET) Rotary Gun

Heading	Requirement(s)
Compatibility	The rotary drive must connect seamlessly and operate with the ETher AeroCheck+
Connection	Rotary drive connection to probes must be compatible with the industry standard 4 Pin Fischer
Speed range	The rotary drive must be capable of operating at a range of speeds between 600 and 3000 RPM
Frequency range	The system must be able to operate at a range of frequencies, between 200kHz and 2MHz
Probes	Supplied probes should be adjustable and cover a range of sizes, with a minimum range of 4 – 30mm

4. Top Level Specifications of the equipment for Ultrasonic Flaw Detector A Scan

Heading	Requirement(s)
Application/usage	Portable. Suitable for NDT (basic A scan ultrasonic inspections) on aerospace materials, inclusive of CFC, metal: (a)On Aircraft (b)Off Aircraft on the Flight line (c)Off Aircraft
Electrical	Operate from internal battery and charge from standard 230v 50/60Hz AC and NATO single phase 230v 50/60 Hz. 100VAC-120VAC 200-240VAC. Ingress protection IP 64 or better.
Temp range	Able to operate in conditions 0 degrees - +40 degrees Celsius
Weight of main equipment	Ability to be portable. Maximum weight of instrument 5 kg (not inc lead, maximum weight of probe 0.5 kg.
Display	Display is to be colour, with minimum display size 150mm x 80mm. Ability to capture screen image, export and mirror on external display (eg via HDMI/VGA). Ability to log readings and export. Ability to store settings.
Modes of unit/probes supported, display and operating frequencies	Energy settings from 0-400v, damping to be between 0-400 ohms. Pulse echo, dual and through transmission. Colour screen desirable but not essential
Equipment Gain range	Minimum range 0dB – 100dB
Probe connection types,	BNC and number 1 Lemo.
Fault sizing &reporting ability	Ability to log readings and export. Ability to store settings. Ability to defect size.
Probe kit	Probe kit for each instrument, consisting of suitable probes for standard UT inspections: Metallic compressional, Metallic shear, Composite compressional, Composite through transmission Suitable probe case to at least the same IP specs as the instrument.
Calibration	Through-life support for annual calibration.

5. Top Level Specifications of the equipment for Ultrasonic Flaw Detector C Scan

Heading	Requirement(s)
Application/usage	Portable. Suitable for NDT (advanced ultrasonic inspections) on aerospace materials, inclusive of CFRP, GFRP, Honeycomb composites, metal to metal bond delamination, blindside metal corrosion: (a)On Aircraft (b)Off Aircraft on the Flight line (c)Off Aircraft
Electrical	Operate from internal battery and charge from standard 230v 50/60Hz AC and NATO single phase 230v 50/60 Hz. 100VAC-120VAC 200-240VAC.
Temp range	Able to operate in conditions 0 degrees - +40 degrees Celsius
Dimensions of main equipment	Probe unit (with any position encoder assembly) must be able to fit inside aircraft compartments typically sized to allow hand access. Major dimension 175 mm maximum. Max weight 1.8 kg (not inc lead). Head unit must be able to fit inside aircraft compartments typically sized to allow upper body access. Head unit major dimension 400 mm maximum. Max weight 8 kg (not inc lead).
Display	System shall display UT data in the following scan presentations: A-Scan, B-Scan Horizontal, B-Scan Vertical (aka D- scan), C-Scan. Display is to be colour, with minimum diagonal dimension of 10 inches (254 mm). Ability to capture screen image, export and mirror on external display (eg via HDMI/VGA). Ability to log readings and export. Ability to store settings.
Equipment Gain range and frequency range	Minimum range 0dB – 100dB Operating Frequency 1 Mhz to 10Mhz
Probe kit	System shall be supplied with array probe(s) with a minimum of 64 discrete elements. Probes shall cover the following operating frequencies: • 2.5 +/- 0.5 MHz • 3.5 +/- 0.5 MHz • 5.0 +/- 1.0 MHz • 8.0 +/- 2.0 MHz
C-scan data	Encoder capability for probe position recording. C-Scan ‘stitching’ capability for large area mapping. Data storage and ability to transfer files to computer.
Calibration	Through-life support for annual calibration.

6. Top Level Specifications of the equipment for Ultrasonic Thickness Gauge

Heading	Requirement(s)
Application/usage	Portable. Suitable for NDT (ultrasonic dimensional measurement) on aerospace materials, inclusive of CFRP, GFRP, metal: (a)On Aircraft (b)Off Aircraft on the Flight line (c)Off Aircraft
Electrical	Operate from internal battery and charge from standard 230v 50/60Hz AC and NATO single phase 230v 50/60 Hz. 100VAC-120VAC 200-240VAC.
Temp range	Able to operate in conditions -10 degrees - +40 degrees Celsius
Dimensions of main equipment	Probe unit. Diameter 30 mm maximum. Max weight 0.5 kg (not inc lead). Head unit. Max dimensions 300 x 200 x 100 mm. Max weight 5 kg (not inc lead).
Display	System shall display UT data in the following scan presentations: Mandatory: Direct readout of dimensional thickness (user selectable: metric / imperial). Desirable: Basic A-Scan waveform, with adjustable Gain, Range and Delay Display minimum size 40 x 35 mm. Ability to log readings and export. Ability to store settings.
Performance	Operating range (in steel): 0.1mm to 500mm
Probe kit	System shall be supplied with single crystal (precision) probe and twin crystal (area mapping) probes, plus a range of standoffs if necessary for thin materials.
Resolution	0.01 mm or better
Calibration	Through-life support for annual calibration.

7. Top Level Specifications of the equipment for Radiography Testing (RT) – X-Ray Tubes and Accessories

Heading	Requirement(s)
Application	Suitable for industrial aerospace NDT radiography: on-aircraft, off-aircraft and enclosure (lead cabin)
X-Ray Generation	Constant potential, hot cathode type Line focus, directional beam (side window configuration)
Safety	Mains powered Key operation Fail-safe in use Remote control unit with exposure timer Remote warning beacon
Dimensions of head unit (inc handles)	Max Length 725mm Max Diameter 350mm Max weight 30 kg (uncased, without accessories)
Performance	High voltage range: 40 to 200 kV (max output optimum = 200 kV, but must not be lower than 160 kV;) Current range: 1.0 to 6.0 mA Exposure duration: Programmable between 5 seconds and 30 minutes, in steps of 1 second Focal spot size: 0.5 to 2.0 mm Beam angle: 35 to 65 degrees Ingress protection: IP54 minimum (inc tubehead, control unit and beacon)
Accessories	Adjustable stand (height & direction) Grab handles Laser pointer Lead plug Collimator Cables Transit case(s) Manual

8. Top Level Specification of the equipment for Conductivity Measurement

Heading	Requirement
Application/usage	Suitable for NDT: conductivity measurement of aerospace metals and metal alloys - on aircraft (flight line/hangar), on removed components (hangars/bays/workshops), on manufactured parts (workshops) and raw materials.
Electrical	Operate from internal battery and charge from standard 230v 50/60Hz AC and NATO single phase 230v 50/60 Hz. 100VAC-120VAC 200-240VAC. Battery life minimum 4 hours of operation.
Operating Temperature range	0 deg C to 40 deg C. Readings shall correct to a standard temperature of 20 deg C
Dimensions	Handheld/portable. Max dimension (corner to corner) of instrument 300mm. Max probe diameter 25mm.
Operating frequencies	60 kHz and 450-550 kHz (user selectable)
Measurement range (minimum)	Between 1 %IACS and 102 %IACS
Resolution (minimum)	At least 2 decimal places (0.01 or better)
Accuracy (minimum)	Below 20% IACS: +/- 0.1% IACS Above 20% IACS: +/- 1% of displayed value
Kit contents	Instrument, lead, probe, dual reference standards, transit case, manual, certificates of conformity
Calibration	Through-life support for annual calibration.