



**RETURN RESPONSES TO:  
RETOURNER LES RÉPONSES À :**

Defence Research and Development Canada  
9 Grove Street, Dartmouth, Nova Scotia  
Attn: Jennifer Beamish, Head of Procurement and Contracting

jennifer.beamish@forces.gc.ca  
1-902-407-0356 (phone/téléphone)

**LETTER OF INTEREST  
LETTRE D'INTÉRÊT**

**CLOSING - DATE DE CLÔTURE**

At – à : 14 :00h ADT  
On - le : 13 December 2018

<b>Title/Titre:</b> Advanced Non-Destructive Testing – Les Essais Avancés Non Destructifs	<b>Solicitation No – N° de l'invitation</b> 2018-21566
<b>Date of – Date de l'invitation</b> August 21, 2018	
<b>Address Enquiries to – Adresser toutes questions à</b> Name: Jennifer Beamish Title: Head of Procurement and Contracting Department: Defence Research and Development Canada Address: 9 Grove Street, Dartmouth, Nova Scotia Email: jennifer.beamish@forces.gc.ca	
<b>Telephone No. – N° de telephone</b> 1-902-407-0356	<b>FAX No – N° de fax</b>
<b>Destination</b>	

**Instructions:** See Herein

**Instructions:** Voir aux présentes

Delivery required - Livraison exigée	Delivery offered - Livraison proposée
Vendor Name and Address - Raison sociale et adresse du fournisseur	
Name and title of person authorized to sign on behalf of vendor (type or print) - Nom et titre de la personne autorisée à signer au nom du fournisseur (caractère d'imprimerie)	
Name/Nom _____	Title/Titre _____
Signature _____	Date _____



**REQUEST FOR INFORMATION  
FOR  
ADVANCED NON-DESTRUCTIVE TESTING**

**1. DECLARATIONS**

This is not a bid solicitation, and no contract will result from this Request for Information (RFI).

The issuance of this RFI does not create an obligation for Canada to issue a subsequent Request For Proposal (RFP), and does not bind Canada legally or otherwise, to enter into any agreement or to accept or reject any suggestions.

No payment will be made by Canada for costs incurred in the preparation and submission of your response.

There will be no short listing or pre-qualification of firms for purposes of undertaking any future work as a result of this RFI. Similarly, participation in this RFI process is not a condition or prerequisite for participation in any future potential RFP.

Respondents are encouraged to identify, in the information they share with Canada, any information that they feel is proprietary, third party or personal information. Please note that Canada may be obligated by law (e.g. in response to a request under the Access of Information Act and the Privacy Act) to disclose proprietary or commercially-sensitive information concerning a Respondent (for more information: <http://laws-lois.justice.gc.ca/eng/acts/a-1/>).

Respondents are asked to identify if their response, or any part of their response, is subject to the Controlled Goods Regulations.

**2. ACRONYMS**

COTS	Commercial Off-the-Shelf
DRDC	Defence Research and Development Canada
NDT	Non-destructive Testing
RFI	Request for Information
RFP	Request for Proposal

**3. PURPOSE**

3.1. Defence Research and Development Canada (DRDC) currently has a requirement to develop, validate and deliver a portable advanced non-destructive testing (NDT) system. The system will need to detect and measure physical corrosion wastage (e.g., cracks, thinning, pitting) and metallurgical disparities (e.g., welding) on the surface of 10-35mm thick HY80 steel plates, without the removal of thick overlayers (from 10-35mm liftoff). Overlayers are non-conductive materials that vary in thickness and may include corrosion products, paints/coatings, adhesives, rubber and thermal insulation.

3.2. The intent of this RFI is to solicit information from industry, focusing on portable detection of corrosion wastage. In particular, research and development efforts are currently under way to identify commercial off-the-shelf (COTS) NDT technologies, and to develop advanced NDT technologies that allow for the detection of corrosion wastage at large liftoff. One technology, pulsed eddy current, shows promise for measuring corrosion wastage, but other technologies (e.g., electromagnetic, ultrasonic, acoustic, x-ray, etc.) shall be considered as well.



#### 4. REPLIES TO INVITATION

4.1 Respondents are requested to provide the following in their Responses:

- (a) Completion of Appendix 1 - Criteria Matrix for **both** current capacity and future potential of the NDT technology. Each box must contain a Yes or No response.
- (b) A written overview of the technology that demonstrates how the *current* NDT technology has the capacity to operate within the ranges outlined in Appendix 1 – Criteria Matrix.
- (c) A written overview of the *future potential* for the NDT technology, through short-term research and development, has the potential to operate within the ranges outlined in Appendix 1 – Criteria Matrix.
- (d) A detailed description of one or two successful applications.
- (e) A detailed written response to the questions outlined in Appendix 2 - Questions. Answers to these questions shall provide information regarding the technical challenges as well as important commercial and budget considerations.

4.2 While a more comprehensive list of criteria and questions are provided in Appendix 1 – Criteria Matrix and Appendix 2 - Questions, in general, consideration in each of the following categories will be given, upon reviewing the Responses received.

1. Detection Limits
  - a. general corrosion wastage (e.g., cracking, thinning and pits)
  - b. shallow and deep defects from 1-10mm
  - c. at increased liftoff from 10-35mm
2. Portability
  - a. portable (requires single operator/user)
  - b. semi-portable (requires two or more operators/users)
  - c. not portable at all
3. Destructive nature
  - a. non-intrusive (does not require any overlayer removal)
  - b. minimally intrusive (identification of corrosion through overlayer, but accurate measurement requires some overlayer removal)
  - c. intrusive (requires most overlayers to be removed)
  - d. destructive (requires steel sample to be extracted)
4. Other considerations
  - a. regions with changes in atmospheric temperature, pressure and humidity
  - b. seawater to depths of 10 or 20 meters
  - c. other applications (e.g., surface crack detection)

#### 5. FORMAT OF RESPONSES

**Cover Page:** If the response includes multiple volumes, respondents are requested to indicate on the front cover page of each volume the title of the response, the solicitation number, the volume number and the full legal name of the respondent.



**Title Page:** The first page of each volume of the response, after the cover page, should be the title page, which should contain:

- I. the title of the respondent's response and the volume number;
- II. the name and address of the respondent;
- III. the name, address and telephone number of the respondent's contact;
- IV. the date; and
- V. the RFI number.

**Numbering System:** Respondents are requested to prepare their response using a numbering system corresponding to the one in this RFI. All references to descriptive material, technical manuals and brochures included as part of the response should be referenced accordingly.

**Number of Copies:** Canada requests that respondents submit 2 electronic copies (word or pdf) of their responses. Documents can be submitted in either of Canada's official languages.

## 6. SECURITY

There is no security requirement associated with this RFI. However, Respondents should note that potential follow-on procurement activities will require Public Services and Procurement Canada (PSPC) classified clearances of at least REALIABILITY for applicable staff and facilities.

## 7. ADDITIONAL INFORMATION REQUESTS

After review of all the information packages, additional information may be requested by the Contracting Authority to individual respondents.

## 8. NOTES TO INTERESTED RESPONDENTS

- a. This RFI is neither a call for tender nor a RFP. No agreement or contract will be entered into solely as a result of this RFI. This announcement does not constitute a commitment by Canada. Canada does not intend to award a contract on the basis of the notice or otherwise pay for the information solicited. Any and all expenses incurred by the Respondent in pursuing this opportunity are at the Respondent's sole expense.
- b. Any discussions on this subject with project staff representing DRDC or any other Government of Canada representative, or other personnel involved in project activities, shall not be construed as an offer to purchase or as commitment by DRDC or the Government of Canada as a whole.
- c. The documents / information / data collected may be provided as commercial-in-confidence; however, Canada reserves the right to use the information to assist them in drafting performance specifications and for budgetary purposes in consultation with both national and international stakeholders. Requirements are subject to change, which may be as a result of information provided in response to this RFI. Respondents are advised that any information submitted to Canada in response to this RFI may, or may not, be used by Canada in the development of the potential subsequent RFP. The issuance of this RFI does not create an obligation for Canada to issue a subsequent RFP, and does not bind Canada legally or otherwise, to enter into any agreement or to accept or reject any suggestions.



- d. There will be no short-listing of Respondents for the purposes of undertaking any future work, as a result of this RFI. Similarly, participation in this RFI is not a condition or prerequisite for the participation to any potential subsequent RFP.
- e. Respondents responding to this RFI should identify any submitted information that is to be considered as either company confidential, proprietary or if the response contains controlled goods.

## 9. **ENQUIRIES**

- a. All enquiries and other communications related to this RFI shall be directed, in writing, exclusively to the DRDC Contracting Authority. All enquiries must be submitted to the Contracting Authority no later than fifteen (15) calendar days before the closing date. Enquiries received after that time may not be answered. Because this is not a bid solicitation, Canada will not necessarily respond to enquiries in writing or by circulating answers to all potential suppliers.
- b. Care should be taken by Respondents to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the questions or may request that the Respondent do so, so that the proprietary nature of the question is eliminated, and the enquiry can be answered with copies to all Respondents.
- c. Changes to this RFI may occur and will be advertised on the Government Electronic Tendering System (GETS) in the form of an amendment. Should such a need arise, it is each interested party's responsibility to verify changes to their responses, if any, to the Contracting Authority.

## 10. **LANGUAGE**

Responses and consultation are to be provided in one of the two Official Languages of Canada (English or French).

## 11. **CLOSING**

Responses to this RFI are to be submitted to the DRDC RFI Authority identified below, on or before the date indicated on Page 1 of this document.

RFI Authority:

Name: Jennifer Beamish  
Title: Head of Procurement and Contracting  
Department: Defence Research and Development Canada  
Address: 9 Grove Street, Dartmouth, Nova Scotia  
Telephone: 1-902-407-0356  
Email: jennifer.beamish@forces.gc.ca

Responsibility for Timely Delivery: Each Respondent is solely responsible for ensuring its response is delivered on time to the correct location.

Identification of Response: Each Respondent should ensure that its name and return address, the RFI number and the closing date appear legibly on the outside of the response.



Appendix 1 - Criteria Matrix

Current Capacity

			Average Diameter of Corrosion Wastage					
			general thinning		corrosion pit			
			< 25mm	< 50mm	< 2.5mm	< 5mm	< 7.5mm	< 10mm
Average Depth of Corrosion	22-35 mm liftoff	< 1mm						
		< 2mm						
		< 3mm						
		< 5mm						
		< 10mm						
	10-22 mm liftoff	< 1mm						
		< 2mm						
		< 3mm						
		< 5mm						
		< 10mm						

**Notes:** The NDT technology must operate within the specified liftoff range, but not necessarily over the entire range.



**Future Potential**

			Average Diameter of Corrosion Wastage					
			general thinning		corrosion pit			
			< 25mm	< 50mm	< 2.5mm	< 5mm	< 7.5mm	< 10mm
Average Depth of Corrosion	22-35 mm liftoff	< 1mm						
		< 2mm						
		< 3mm						
		< 5mm						
		< 10mm						
	10-22 mm liftoff	< 1mm						
		< 2mm						
		< 3mm						
		< 5mm						
		< 10mm						

**Notes:** The NDT technology must operate within the specified liftoff range, but not necessarily over the entire range.



## Appendix 2- Questions

**(Please support responses in detail)**

### 1. Technical Questions related to this RFI

- a) Is it possible to measure corrosion wastage on the surface of 10-35mm thick HY80 steel plate through 10-22mm thick overlayers?
- b) Is it possible to measure corrosion wastage on the surface of 10-35mm thick HY80 steel plate through 22-35mm thick overlayers?
- c) What are the trends in advanced NDT technologies related to detecting and sizing corrosion damage on HY80 steel plates under insulation and paint?
- d) What COTS NDT technologies have the capacity to meet the identified goal and falls within the Requirement?
- e) What developing technologies are expected to have the capacity to meet the identified goal and falls within the scope of the work?
- f) Are the criteria (current capacity Table 1 and future potential Table 2) achievable?
- g) Can you identify other important technical aspects that should or must be considered?

### 2. Technical Questions related to your NDT technique

- a) Describe your company's expertise in designing and fabricating advanced NDT systems?
- b) Is your NDT technique supported by scientific or engineering manuscripts, patents or standards?
- c) Is your NDT technique a COTS system or does it require development?
- d) Is your NDT system portable, semi-portable, or not portable?
- e) Is your NDT system non-intrusive, minimally intrusive or intrusive?
- f) Is your NDT system designed to be employed in seawater (at depths to 20 meters)?
- g) Is your NDT technique affected by variations in the density of the overlayer?
- h) What are the other advantages, disadvantages and engineering challenges with your NDT technique?
- i) What other inspection capabilities are offered by this technology (e.g., surface crack detection)?





### 3. Budgetary and Commercial Questions

- a) What would you estimate as the cost and time frame to design/develop (if needed) validate and supply a working system? This is to be a rough order of magnitude for planning purposes only.
- b) Are there other shared costing initiatives (e.g., government incentives) that could reduce the cost of the work?
- c) Would ownership of the developed intellectual property by the contractor reduce the cost of the work?
- d) Do you have any additional documentation (presentation, report and brochure) relevant to this development effort? If so, please include in your response.
- e) Can you identify other important commercial aspects that must be considered?