

**PROCEEDINGS OF THE PRE-BID CONFERENCE HELD ON 26<sup>TH</sup> NOVEMBER 2018 AT ACD CONFERENCE HALL, CSIR-NAL TOWARDS PROCUREMENT OF ACTIVE THERMAL IMAGING SYSTEM.**

The Pre-bid Conference was held and the following T&PC members attended the meeting: -

Sl. No.	Name & Designation		Role
1	Mr. G. Ramesh	Technical Director (S&RE), GTRE	Chairman
2	Mr. N. Naveen Kumar	Manager-NDT, ACD-HAL	External Expert Member
3	Dr. S. Kalyan Sundaram	Principal Scientist, STTD	Member
4	Mr. S. Sanjeev Kumar	Senior Scientist, ACD	Member- Convenor (TSC)
5	FAO or his representative		Member
6	Mr. M. J. Nandeesh	SPO	Member - Convenor (T&PC)

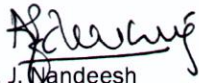
The list of Prospective bidders who attended the Pre-bid Conference is as per Annexure-I.

At the outset, the Chairman welcomed all the Members and the representatives of the Bidders and briefed in general the scope of the Project and thereafter requested SPO to brief the Bidders on the salient features of the commercial terms. The Indenting Officer to read out the clarification sought by the bidders and the replied thereto as detailed in Annexure-II (Part A: Technical Clarification and Part B: Commercial Clarification, if any).

The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of CSIR-NAL and all prospective bidders are required to take cognizance of the proceedings of the Pre-Bid Conference before formulating and submitting their bids as stipulated in bidding Documents.

The meeting ended with a vote of thanks to the Chair.


Encl: as above.


  
M. J. Nandeesh  
SPO-Convenor-T&PC

  
S. Sanjeev Kumar  
Member-Convenor-TSC

  
N. Naveen Kumar  
Member

  
Dr. S. Kalyan Sundaram  
Member

  
S. Sanjeev Kumar  
Member-Convenor-TSC

  
G. Ramesh  
Chairman

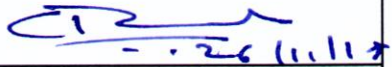


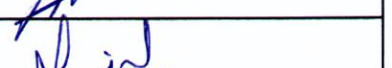
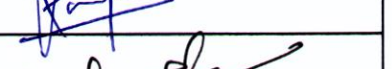

CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU - 560 017

TENDER NO.: NAL/PUR/ACD/209/18-Z  
DATE & TIME : 26-11-2018 @ 10.30 AM  
VENUE: ACD Conference Hall

ANNEXURE - I

Pre-Bid Conference for procurement of Active Thermal Imaging system.

ATTENDANCE SHEET - T&PC MEMBERS

Sr. No.	Name		Signature
1	Mr. G. Ramesh, Technical Director (S&RE), GTRE	Chairman	
2	Mr. N. Naveen Kumar, Manager-NDT, ACD-HAL	External Export Member	
3	Dr. S. Kalyan Sundaram, Principal Scientist, STTD	Member	
4	Mr. S. Sanjeev Kumar, Senior Scientist, ACD	Member- Convenor -TSC	
5	FAO or his representative	Member	
6	Mr. M. J, Nandeesh, SPO	Member-Convenor T&PC	


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ANNEXURE - I

Pre-Bid Conference for procurement of Active Thermal Imaging system.

ATTENDANCE SHEET - PROSPECTIVE BIDDERS

Sr. No.	Name of the Firm	Name & Designation of Representative	Email ID	Signature
1	ATOS Instrument AT- Automation technolgy	ANAND VAZHAPPILY ENGINEER	anand@atosindia.com	
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**CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU**

**TECHNICAL QUERIES & CLARIFICATION**

Tender No. : NAL/PUR/ACD/209/18-Z

Item Description : Procurement of Active Thermal imaging System

Sr. No.	Query / Clarification Sought	Clarification/Amendment
1.	<u>Scope Item #2:</u> To support all known measurement techniques (Lock-in, Pulse, Transient, Vibro-Thermography, TSA) with all kinds of excitation sources (electrical, optical, ultrasound, eddy current, laser etc.).	<u>Scope Item #2:</u> To support all known measurement techniques (Lock-in, Pulse, Transient, Vibro-Thermography, TSA) with different types of excitation sources (electrical, optical, ultrasound, eddy current, laser etc.).
2.	<u>Scope:</u> Active Thermal Imaging NDT system consisting of: a cooled, large format, high speed, scientific model Infrared Camera, Universal Hardware Controller, Flash Generators, Flash and Halogen Lamps, Data Acquisition and Control Computer & Laptop, Compatible Software, all necessary mountings & accessories and standard Thermography NDT CFRP reference panel.	<u>Scope:</u> Active Thermal Imaging NDT system consisting of: a cooled, large format, high speed, scientific model Infrared Camera, Universal Hardware Controller, Flash Generators, Flash and Halogen Lamps, Data Acquisition and Control Computer & Laptop, Compatible Software, all necessary mountings & accessories.
3.	5a.1) Flash power: Min 12 KJ or better	5a.1) Flash power: Min 12 KJ or better, as a combination/set of two lamps of equal power.
4.	11.3) Complete toolkit for maintaining the entire system to be provided	11.3) To be deleted
5.	13.1) Pre-dispatch inspection, demonstration of system capabilities and training to CSIR-NAL engineers on the following aspects - system operation, Inspection capabilities, electrical & electronic maintenance and troubleshooting.	13.1) Pre-dispatch inspection and training to CSIR-NAL engineers on the following aspects - system operation, Inspection capabilities, electrical & electronic maintenance and troubleshooting. Demonstration of system capabilities to be carried out on NAL Thermography NDT CFRP Monolithic Reference Panel (Thickness 3mm) with programmed defects (Teflon Inserts of sizes, dia 10, 15 & 20mm) at the interface of every second layer.
6.	14.1) Inspection of NAL composite NDT test samples to be carried out at CSIR-NAL after installation and commissioning of the machine.	14.1) Inspection of NAL composite NDT test samples to be carried out at CSIR-NAL after installation and commissioning of the system.
7.	14.2) Proving out standard system and its	14.2) Demonstration of standard

	inspection features to be done at CSIR-NAL on standard reference CFRP panel supplied by vendor	system, software, inspection features and acceptance tests to be done at CSIR-NAL on NAL Thermography NDT CFRP Monolithic Reference Panel (Thickness 3mm) with programmed defects (Teflon Inserts of sizes, dia 10, 15 & 20mm) at the interface of every second layer.
8.	To be added	14.3) The performance of Active Thermal Imaging system capabilities in combination with existing FLIR SC 3000 IR Camera to be also demonstrated.
9.	15.3) Vendor to produce list of customers to whom similar augmentation schemes have been implemented with FLIR SC3000 or other similar FLIR scientific cameras.	15.3) Vendor to produce list of customers to whom similar schemes have been implemented with FLIR SC3000 or other similar FLIR scientific IR cameras.



Signature of IO & PL

**CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU**

**COMMERCIAL QUERIES & CLARIFICATION**

Tender No. : NAL/PUR/ACD/209/18-Z

Item Description : Procurement of Active Thermal imaging System

Sr. No.	Query / Clarification Sought	Clarification/Amendment
<p>— NIL —</p>		

  
Stores & Purchase Officer