

**PROCEEDINGS OF THE PRE-BID CONFERENCE HELD 24<sup>th</sup> May 2022 THROUGH WEBEX, TOWARDS DESIGN AND FABRICATION OF MOLDS FOR AIR-INTAKE AND DUCT ASSEMBLY.**

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

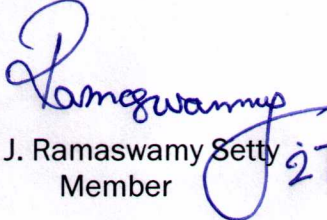
Sl. No.	Name & Designation		Role
1	Dr. Ramesh Kumar. M	Chief Scientist, ACD	Chairman (T&PC)
2	Mr. T.C.Subba Reddy	Sc / Engineer 'G', ADA	External Member (TSC)
3	Mr. J. Ramaswamy Setty	Sr. Principal Scientist, ACD	Member (TSC)
4	Mr. V. Mukesh	Principal Scientist, ACD	Member - Convener (TSC)

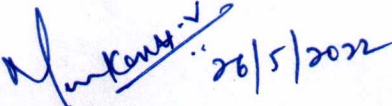
The list of Prospective bidders who attended the Pre-bid Conference is as per Annexure-I.

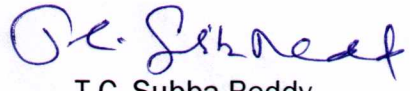
At the outset, the Chairman welcomed all the Members and the representatives of the Bidders and briefed in general the scope of the Project. The Indenting Officer to read out the clarification sought by the bidders and the replied there to as detailed in Annexure-II (Part A: Technical Clarification and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

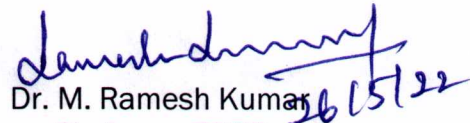
The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of CSIR-NAL and all prospective bidders are required to take cognizance of the proceedings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

  
Mr. J. Ramaswamy Setty  
Member  
27/05/22

  
V. Mukesh  
Member - Convener (TSC)  
26/5/2022

  
T.C. Subba Reddy  
External Member  
26/5/2022

  
Dr. M. Ramesh Kumar  
Chairman-T&PC  
26/5/22

CSIR-NATIONAL AEROSPACE LABORATORIES				
BENGALURU - 560 017				
TENDER NO.: NAL/PUR/ACD/481/21-Z				ANNEXURE - I
DATE & TIME : 24-May-2022 @ 11.00 AM				
VENUE: THROUGH WEBEX				
Pre-Bid Conference for Design and Fabrication of Molds for Air-intake and Duct Assembly				
ATTENDANCE SHEET - T&PC and TSC MEMBERS				
Sr. No.	Name			Signature
1	Dr. Ramesh Kumar. M	Chief Scientist, ACD	Chairman (T&PC)	<i>[Signature]</i> 24/5/22
2	Mr. T.C.Subba Reddy	Sc / Engineer 'G', ADA	External Member (TSC)	<i>[Signature]</i> 24/5/2022
3	Mr. J. Ramaswamy Setty	Sr. Principal Scientist/ ACD	Member (TSC)	<i>[Signature]</i> 24/5
4	Mr. V. Mukesh	Principal Scientist/ ACD	Member - Convener (TSC)	<i>[Signature]</i> 24/5/2022

## NATIONAL AEROSPACE LABORATORIES

BENGALURU - 560 017

BENGALURU - 560 017				
TENDER NO.: NAL/PUR/ACD/481/21-Z				ANNEXURE - I
DATE & TIME : 24-May-2022 @ 11.00 AM				
VENUE: THROUGH WEBEX, CSIR-NAL, HAL Airport Road, Kodihalli, Bengaluru-560017				
Pre-Bid Conference for Design and Fabrication of Molds for Air-intake and Duct Assembly				
Sr. No.	Name of the Firm	Name & Designation of Representative	E-tender Registration (Yes/No)	Email ID
1	Indutch Composites Technology PVT Ltd Gujarat	karthik Oza Asssitant Manager	Yes	kartik.oza@indutch.in
		Mukesh Patil Manager		mukesh.patil@indutch.in
		Madan Mohan Process Engineer		madan.mohan@indutch.in
2	RR Industries Hyderabad	Mr. V. Sreenivasa Rao Chief Executive Officer	Yes	vsrao_rr@yahoo.com
		Mr. M.Ramesh Designer		-
3	Valdel Advanced Technologies Pvt Ltd Bangalore	Mr. Air Marshal Kanakaraj Chief Operating Officer	Yes	kanakaraj@valdelat.com
		Mr. Venkata Ranga Head Business Development		venkata.ranga@valdelat.com
		Mr. Sheel Kumar Srivastava Head Engineering		sheel.srivastava@valdelat.com
4	TATA Advanced Systems Limited Bangalore	Mr.Rajesh.T Sr.Manager - Tooling	Yes	rajesht@tasl.aero
		Mr.Muralidhar Nayak Manager - Tooling		muralidhar@tasl.aero
		Mr.Dharnesh AR Asst.Manager		dharnesh.ar@tasl.aero
		Mr.Mukund Bhambure Business Development		mukund.bhambure@tasl.aero
		Mr.V.Mohana Rangam Business Development		mohanarangam@tasl.aero
5	Micronel Global Engineers Pvt Ltd Bangalore	Mr. Mohammed Shariff Manager Sales		p1@micronel.net
		Mrs. Anuradha Manager (Services)		amq@micronel.net

**CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU**

**TECHNICAL QUERIES & CLARIFICATION**

Tender No. : NAL/PUR/ACD/481/21-Z  
Item Description : Design and Fabrication of Molds for Air-intake and Duct Assembly

Sr. No.	Query / Clarification Sought	Clarification/Amendment
1	<b>Section 4.2, 4.2.1 and 4.7:</b> Delivery period of 9 months requested in place of 4 months	Delivery period is amended to 7 months (refer updated barchart-Annexure-1)
2	<b>Section 4.2.5:</b> (point No a, b and c Point d is added)  a) Required thermocouples to be provided by CSIR-NAL b) Required autoclave consumables to be provided by CSIR-NAL c) Removal of gel coat application on mold surface d) One tool to be checked for thermal survey and vacuum integrity before fabricating the remaining tools	a) Thermal survey (+/- 3° C) at 185° C for two hours, to be demonstrated at CSIR-NAL. Required thermocouples will be provided by CSIR-NAL b) Vacuum integrity check to be demonstrated at 185° C for minimum 2 hours under 7 bar pressure at CSIR-NAL. Required autoclave consumables will be provided by CSIR-NAL c) Tool surface has to be applied with gelcoat of minimum 0.3mm thickness to obtain smooth surface finish. d) One tool out of twelve tools can be fabricated and checked for thermal survey and vacuum integrity at CSIR-NAL, based on the results remaining tools can be fabricated.
3	<b>Section 4.2.6:</b> (point No 5, 18 and 20) a) Minimum test for acceptance of tooling resin and carbon fabric used in development of tools b) Delivery of master models and tools c) NDA from bidder's partner	a) Along with material COC and incoming inspection tests, bidder should fabricate a laminate of the chosen tooling resin and carbon fabric. Test coupons for tension test, ILSS and Flexure tests are to be made out of this laminate and tested as per ASTM standards. Results of the test has to be shared with CSIR-NAL for approval.  b) Deliver master models and tools with suitable packing and labelling to Central stores, NAL with NAL-QA accepted tag.  c) Bidder has to sign a non-disclosure agreement (NDA) before the commencement of work. Bidder has to inform CSIR-NAL about outsourcing of any

		work to bidder's partner and have a NDA signed with them.
4	<p><b>Section 4.2.8:</b> Part A (point No4) and Part B (point No 6 &amp; 7)</p> <p>Availability of CNC/NC machines and operators with the vendor</p>	<p>Should have CNC / NC machining capabilities in their premises or his partner of minimum dimensions 3m length X 2m width X 1.2 m height (Z movement)</p> <p>Vendor or his partner should have the required machine operators/ NC programmers of at least 05 trained in operating / programming in CNC/NC machine for machining of master model / tool in its present pay roll with minimum 3 years of experience in operating of CNC machine.</p> <p>Vendor or his partner should have CNC/NC machines. (minimum required is two) Specify the length, width and height of the tool that can be machined in single setting using the respective specified machine.</p>
5	<p><b>Section 4.5:</b> Warranty on master model and tools</p>	<p>Master models and Tools manufactured by the bidder should be able to deliver minimum of 02 tools and 10 parts respectively or 1 year whichever is earlier.</p>

Signature of IO

(MUKESH.V)

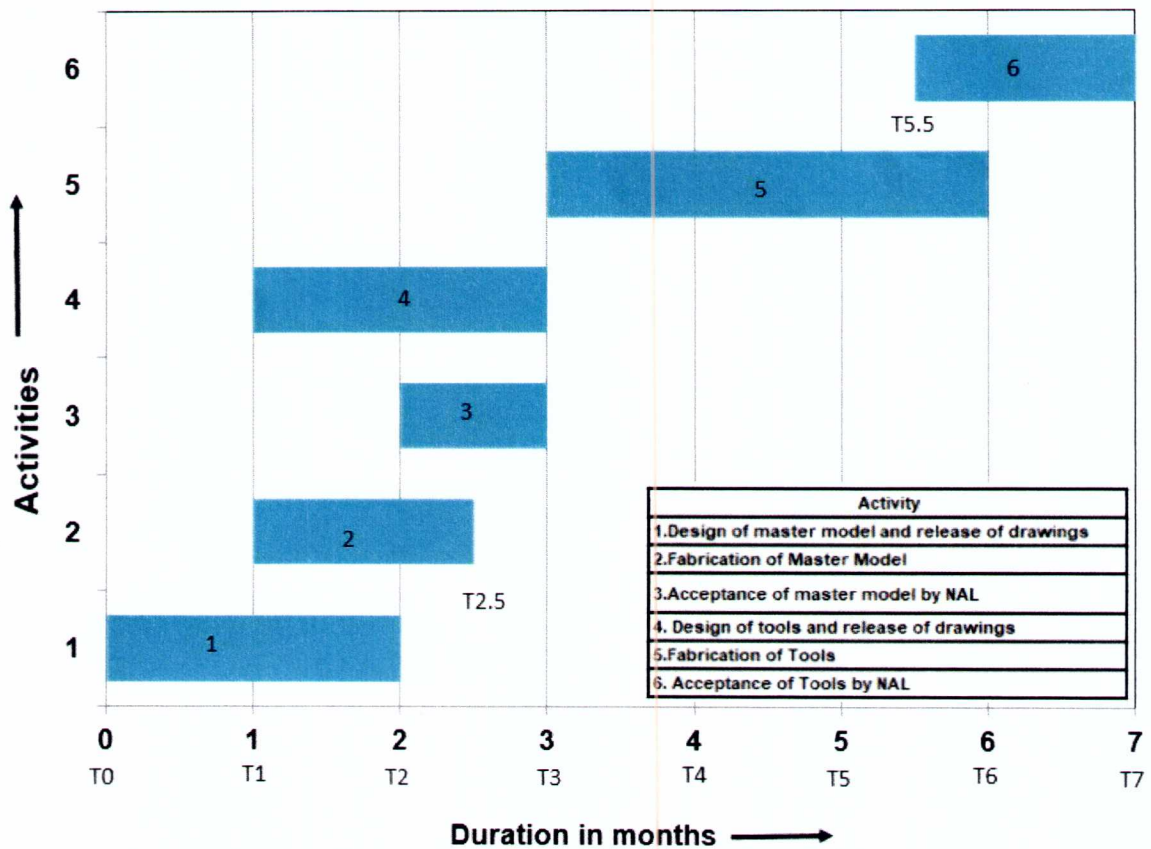
Signature of Pl



## Annexure-1

### 4.2.1 Time lines for the development activity (Refer barchart)

- i. "To" denotes the date of release of purchase order from CSIR NAL
- ii. Tools can be supplied to CSIR-NAL in two batches, instead of supplying all the tools in the stipulated time of 7 months from date of purchase order.
- iii. Time for design of master model & release of drawings : 02 month (To + 2 month)
- iv. Time for fabrication of master model : 1.5 month (T1 + 1.5 month)
- v. Time for acceptance of master model by NAL QA : 01 month ((T2 + 1 month)
- vi. Time for design of tools & release of drawings: 02 month (T1 + 2 month)
- vii. Time for fabrication of tools : 3 months (T3 + 3month)
- viii. Acceptance of tools by NAL QA : 1.5 months (T5.5 to 1.5 months)




Mukesh V ✓ 26/5/2022  
 (MUKESH-V)

**CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU**

**COMMERCIAL QUERIES & CLARIFICATION**

**Tender No.** : NAL/PUR/ACD/481/21-Z  
**Item Description** : Design and Fabrication of Molds for Air-intake and Duct Assembly

Sr. No.	Query / Clarification Sought	Clarification/Amendment
— NIL —		

  
27/05/2022  
Stores & Purchase Officer  
For and on behalf of CSIR-NAL

