

**PROCEEDINGS OF THE PRE-BID CONFERENCE HELD 30<sup>th</sup> NOVEMBER 2022 THROUGH WEBEX, TOWARDS FABRICATION AND ASSEMBLY OF TEST BOX.**

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

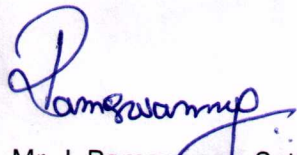
Sl. No.	Name & Designation		Role
1	Dr. Ramesh Kumar. M	Chief Scientist, ACD	Chairman (T&PC)
2	Mr. T.C.Subba Reddy	Sc/Engineer 'G', ADA	External Member (TSC)
3	Mr. Ravikumar.P	Chief Scientist, ACD	Member (TSC)
4	Mr. J. Ramaswamy Setty	Chief Scientist, ACD	Member (TSC)
5	Mr. Satish S Nimbal	Sr. Principal Scientist, ACD	Member (TSC)
6	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.

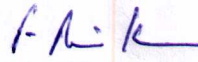
At the outset, the Chairman welcomed all the Members and the representatives of the Bidders and briefed in general the scope of the Project. The Indenting Officer ~~to~~ read out the clarification sought by the bidders and ~~the~~ replied ~~there to~~ as detailed in Annexure-II (Part A: Technical Clarification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



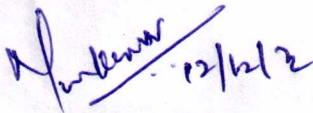
Mr. J. Ramaswamy Setty  
Member



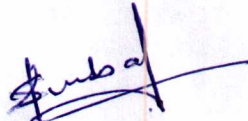
Mr. Ravikumar.P  
Member



T.C. Subba Reddy  
External Member



V. Mukesh  
Member - Convener (TSC)



Mr. Satish S Nimbal  
Member



Dr. M. Ramesh Kumar  
Chairman-T&PC

## CSIR-NATIONAL AEROSPACE LABORATORIES

BENGALURU - 560 017

TENDER NO.: NAL/PUR/ACD/512/21-Z


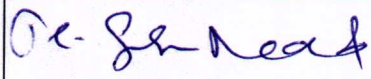
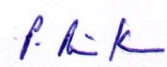
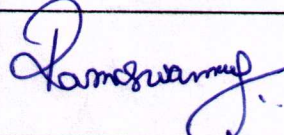
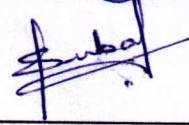

ANNEXURE - I

DATE &amp; TIME : 30-November-2022 @ 11.00 AM

VENUE: THROUGH WEBEX

Pre-Bid Conference for Fabrication and assembly of Test Box

## ATTENDANCE SHEET - T&amp;PC and TSC MEMBERS

Sr. No.	Name			Signature
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. P. Ravikumar	Chief Scientist, ACD	Chairman (TSC)	
4	Mr. J. Ramaswamy Setty	Chief Scientist, ACD	Member (TSC)	
5	Mr. Satish S Nimbal	Sr. Principal Scientist/ ACD	Member (TSC)	
6	Mr. V. Mukesh	Principal Scientist/ ACD	Member - Convener (TSC)	 30/11/22

NATIONAL AEROSPACE LABORATORIES

BENGALURU - 560 017

TENDER NO.: NAL/PUR/ACD/512/21-Z		ANNEXURE - I		
DATE & TIME : 30-November-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 Limited Gujarat	Jayesh Mewada Manager	Yes	jayesh.mewada@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 Limited Bangalore	Mr. Venkata Ranga Head Business Development	Yes	venkata.ranga@valdelat.com
		Mr. Sheel Kumar Srivastava Head Engineering		sheel.srivastava@valdelat.com
4	TATA Advanced Systems Limited	Mr.Muralidhar Nayak Manager - Tooling	Yes	muralidhar@tasl.aero
		Mr.Dharnesh AR Asst.Manager		dharnesh.ar@tasl.aero
		Mr.Mukund Bhambure Business Development		mukund.bhambure@tasl.aero
		Mr. Gagandeep Manager		
5	Kineco Limited	Mr. Rajiv Hubli Senior Vice-president	Yes	rajiv@kinecogroup.com
6	Larsen and Tourbo Limited	Mr. Karan Kosambi Assistant General Manager	Yes	KARAN.KOSAMBI@larsentoubro.com

*[Handwritten Signature]*  
12/12/22  
MUKESH V

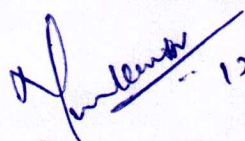
**CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU**

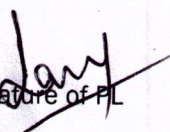
**TECHNICAL QUERIES & CLARIFICATION**

Tender No. : NAL/PUR/ACD/512/21-Z  
Item Description : Fabrication and Assembly of Test Box

Sr. No.	Query / Clarification Sought	Clarification/Amendment												
1	<b>Section 4.2.1 and 4.7:</b> Delivery period of 10 months requested in place of 8 months	Delivery period is amended to 10 months (Refer updated barchart - Annexure-A)												
2	<b>Section 4.2</b> Point no 8 is added	8. Thermocol stand / Jack Assembly as applicable will be provided by CSIR-NAL												
3	<b>Section 4.2.5</b> Point iii, iv and v is added	<p>iii. Anodizing of the Aluminum parts shall be carried out using chromic acid anodizing process followed by hot water sealing as per general guidelines of the standard MIL-A-8625. The anodised layer shall have thickness about 3 to 5 microns with good salt fog corrosion resistance and also meet electrical breakdown requirements. The anodised layer shall be free from any kind of defects. The anodized layer shall be compatible to primer and paint finish</p> <p>iv. NDT before machining: Carryout ultrasonic testing before machining of metallic raw materials having section thickness more than 12.5mm. The preferred frequency range is 2.5 to 6 MHz for Ferrous raw and non-Ferrous raw materials. The acceptance limit of raw materials is as follows:</p>												
<table border="1"> <thead> <tr> <th>Class</th> <th>Single Discontinuity dia . FBH . mm</th> <th>Multiple Discontinuity dia . FBH . mm</th> <th>Distance between acceptable discontinuities in mm</th> <th>Linear discontinuity in mm</th> <th>Loss of back wall echo permitted</th> </tr> </thead> <tbody> <tr> <td>B</td> <td>2.0</td> <td>25</td> <td>25</td> <td>1" of size 3/64</td> <td>50%</td> </tr> </tbody> </table>			Class	Single Discontinuity dia . FBH . mm	Multiple Discontinuity dia . FBH . mm	Distance between acceptable discontinuities in mm	Linear discontinuity in mm	Loss of back wall echo permitted	B	2.0	25	25	1" of size 3/64	50%
Class	Single Discontinuity dia . FBH . mm	Multiple Discontinuity dia . FBH . mm	Distance between acceptable discontinuities in mm	Linear discontinuity in mm	Loss of back wall echo permitted									
B	2.0	25	25	1" of size 3/64	50%									

3	Section 4.2.5 (continued) Point iii, iv and v is added	v. NDT after machining: Fluorescent Dye Penetrant test should be carried out on Aluminum alloy / metallic parts after machining / forming for any surface cracks. Apply the penetrant on the cleaned surface and dwell it minimum 20 minutes. Remove the excess penetrant and dry the part at 60-70 deg C for 15 minutes. Apply developer and inspect the part in dark room under black light for any surface cracks.
4	Section 4.2.6: Point h is added	Use the exploded view of the assembly for the design and development of assembly fixture (Refer - Exploded view of Assembly - Annexure-B)
5	Section 4.7:	Delivery of the items Days / Weeks / Months to be amended to 10 Months

  
 Signature of IO  
 (MUKESH.V)  
 12/12/2012

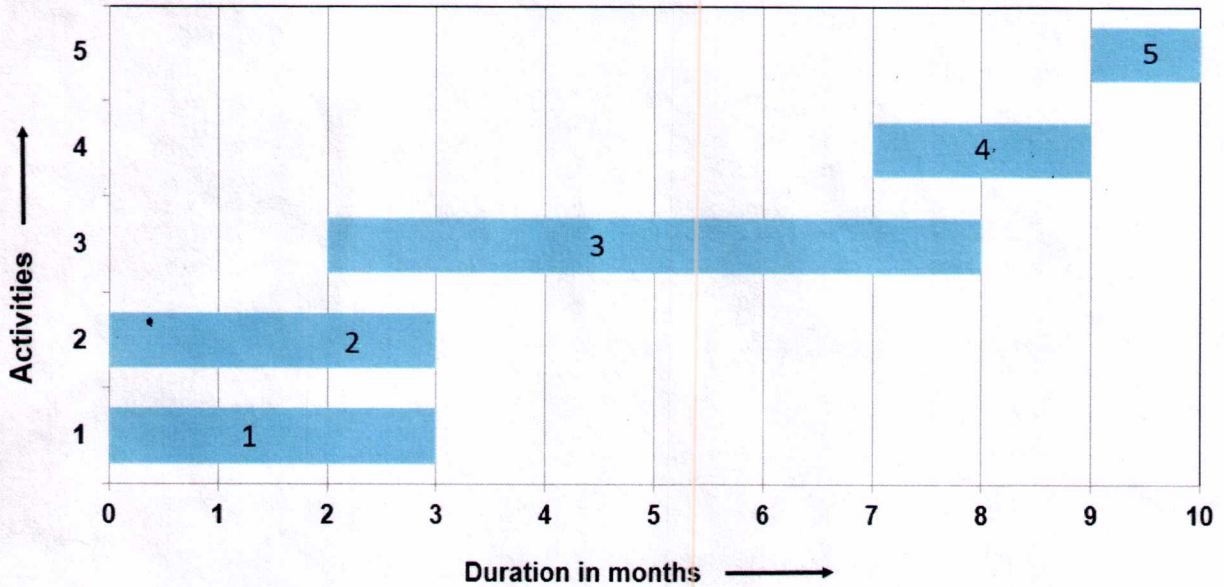
  
 Signature of PL

## Annexure-A

### Updated Bar Chart

#### **4.2.1 Time Lines for the Development Activity (Refer bar chart)**

- i. Time for design and release of drawings for tools and assembly fixture: 03 months (To + 3 month)
  - ii. Time for procurement of consumables and fasteners: 03 months (To + 3 months)
  - iii. Time for fabrication of parts and assembly fixture: 06 months (T2 to 6 months)
  - iv. Acceptance of parts and assembly fixture by NAL QA: 2 months (T7 + 2 months)
  - v. Integration of test box and test article, followed by delivery to designated test centre at Jodhpur: 01 month (T9 + 1 month)
- ("To" denotes the date of release of purchase order from CSIR NAL)*



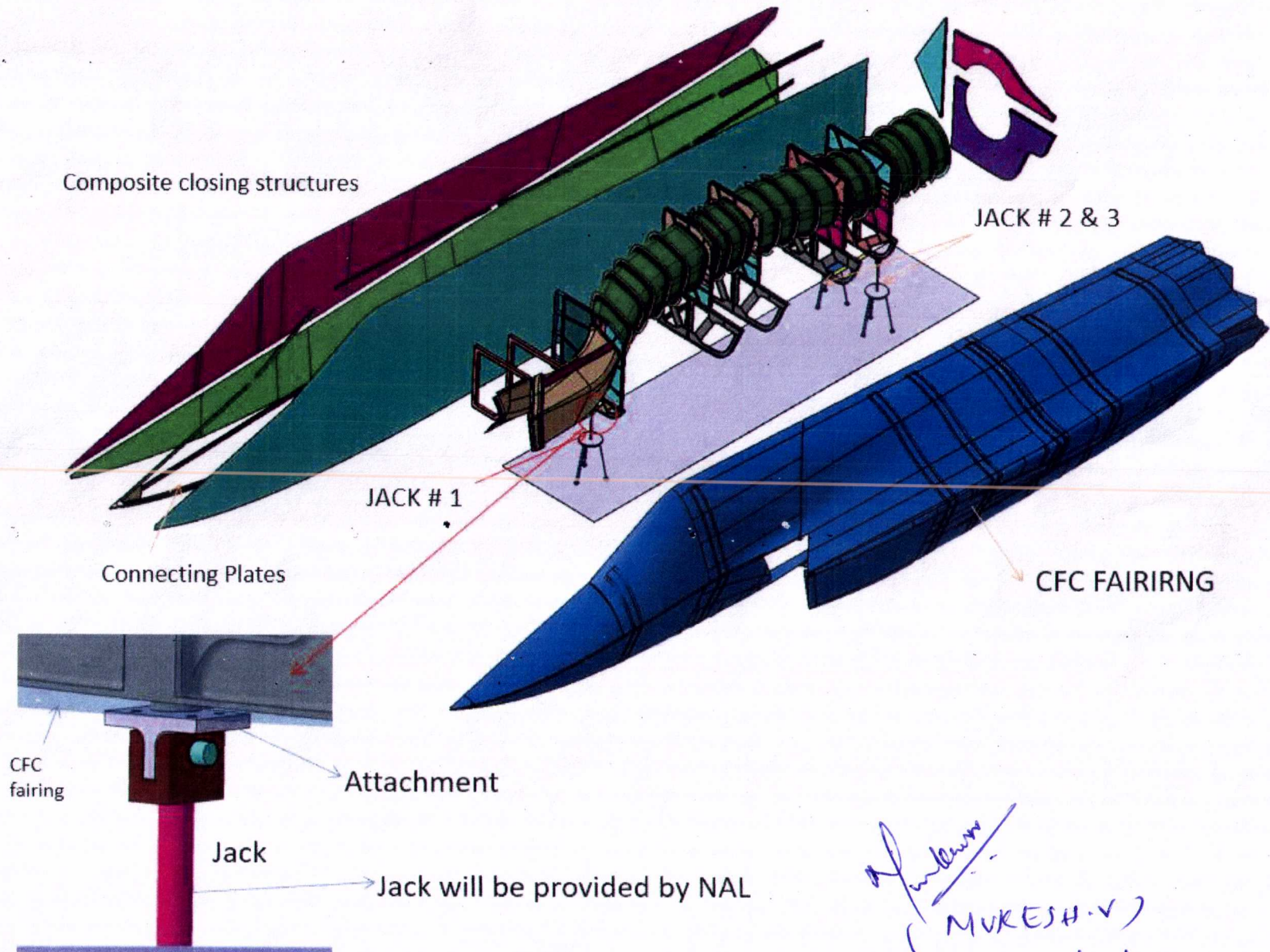
#### **List of Activities**

- |   |
|---|
| 1) Design of tools and assembly fixture and release of drawings             |
| 2) Procurement of consumables, fasteners etc                                |
| 3) Fabrication of parts (composite and metal) and assembly fixture          |
| 4) Acceptance of parts (composite and metal) and assembly fixture by NAL QA |
| 5) Integration of test box with test article                                |

*Mukesh V*  
(MUKESH-V)  
12/12/22

Annexure-B

Exploded view of the Assembly




*Murugesu*  
(MURESH.V)  
12/11/22

**CSIR-NATIONAL AEROSPACE LABORATORIES  
BENGALURU**

**COMMERCIAL QUERIES & CLARIFICATION**

**Tender No.** : NAL/PUR/ACD/512/21-Z  
**Item Description** : Fabrication and Assembly of Test Box).

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

  
13/12/2022  
Stores & Purchase Officer  
For and on behalf of CSIR