

PROCEEDINGS OF THE PRE-BID CONFERENCE HELD ON 20TH MAY 2019 AT ACD CONFERENCE HALL, CSIR-NAL TOWARDS PROCUREMENT OF AUTOMATIC HYDRAULIC HOT PRESS COMPRESSION MOLDING MACHINE AND AUTOMATED BLANK HEATING FOR COMPOSITES PROCESSING.

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

Sl. No.	Name & Designation		Role
1	Mr. TC Subba Reddy	Sc/Engr 'G', ADA	Chairman
2	Mr. Ramaprasad	Senior Manager, Maintenance, ACD-HAL	Expert Member
3	Dr. S Ravishankar	Chief Scientist/ Head, APMF	Expert Member
4	Dr. Ramesh Sundaram	Chief Scientist/ Head, ACD	Member
5	Mr. Ramaswamy Setty	Principal Scientist, CSMST	Member
6	Dr. A Anil Kumar	Senior Scientist, ACD	Member-Convener(TSC)
7	Dr. M. Ramesh Kumar	Chief Scientist, ACD	Invitee
8	Mr. Gaddokeri Kotresh	Sr. Principal Scientist, ACD	Invitee
9	Mr. H.V. Sundar	CoSP	Member
10	FAO or his representative		Member
11	SPO or his representative		Member - Convener (T&PC)

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

At the outset, ~~the~~ Dr. M. Ramesh Kumar, representing ACD division 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)**.

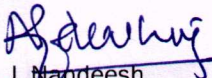
The representatives present were satisfied with the replies given and it was informed that the corrections / additions / clarifications given, as discussed during the Pre-Bid Conference would be hosted on the website of CSIR-NAL and all prospective bidders are required to take cognizance of the proceedings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


The revised dates for Bidding:

	Date	Time (Hrs)
Submission of Bid	20-June-2019	10:00
Opening of Bid	21-June-2018	11:00


The meeting thanks to the Chair.


Encl: as above.



M. J. Mandeesh
SPO-Member
Convener -T&PC

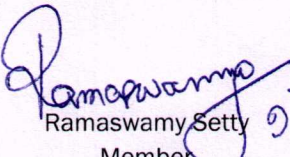

H.V. Sundar
CoSP-Member

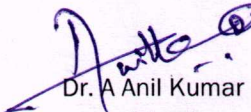

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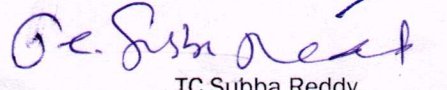

Ramaprasad
Member


Dr. S Ravishankar
Member


Dr. Ramesh Sundaram
Member


Ramaswamy Setty
Member


Dr. A Anil Kumar
Member


TC Subba Reddy
Chairman 20/5/19

**CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU - 560 017**

TENDER NO.: NAL/PUR/ACD/195/18-Z

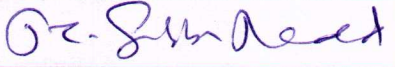
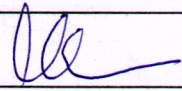
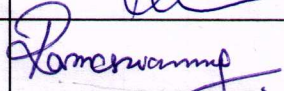
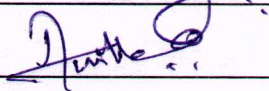
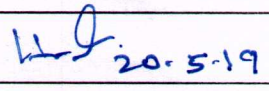
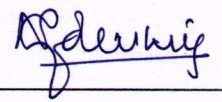
ANNEXURE - I

DATE & TIME : 20-05-2019 @ 10.30 AM

VENUE : ACD Conference Hall CSIR-NAL, Kodihalli, Bengaluru

Pre-Bid Conference towards Procurement of Automatic Hydraulic Hot Press Compression Molding Machine and Automated Blank Heating for Composites Processing.

ATTENDANCE SHEET - T&PC MEMBERS

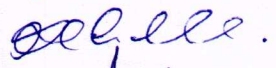
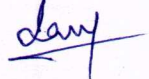
Sr. No.	Name		Signature
1	Mr. TC Subba Reddy, Sc/Engr 'G', ADA	Chairman	
2	Mr. Ramaprasad, Senior Manager, Maintenance, ACD-HAL	Expert - Invitee	
3	Dr. S Ravishankar, Chief Scientist/ Head, APMF	Expert - Invitee	
4	Dr. Ramesh Sundaram, Chief Scientist/ Head, ACD	Member	
5	Mr. Ramaswamy Setty, Principal Scientist, CSMST	Member	
6	Dr. A Anil Kumar, Senior Scientist, ACD	Member- Convenor -TSC	
7	FAO or his representative	Member	
8	Mr. H.V. Sundar, CoSP	Member	
9	Mr. M. J, Nandeesh, SPO	Member-Convenor T&PC	

10 Mr. Kotresh M. Gaddikeri

Invitee

④ Dr. RAMESH KUMAR. M

Dy. Head.

NATIONAL AEROSPACE LABORATORIES
BENGALURU - 560 017

TENDER NO.: NAL/PUR/ACD/195/18-Z




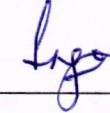
ANNEXURE - I

DATE & TIME : 20-05-2019 @ 10.30 AM

VENUE : ACD Conference Hall CSIR-NAL, Kodihalli, Bengaluru

Pre-Bid Conference towards Procurement of Automatic Hydraulic Hot Press Compression Molding Machine and Automated Blank Heating for Composites Processing.

ATTENDANCE SHEET - PROSPECTIVE BIDDERS

Sr. No.	Name of the Firm	Name & Designation of Representative	Mobile No. & Email ID	Signature
1	ISGEC HEAVY ENGINEERING LTD,	MEENAKSHI SUNDARAM AGM - SALES & MKTG	9446964107 meenakshi.sundaram@isgce.com	
2	Electropneumatic & Hydraulics India Private Limited	AJAY MULIK Sr. Manager - Sales.	9828446626 ajay@electropneumatic.com	
3	HIND HYDRAULICS & ENGINEERS	SUKHDEV SINGH DIRECTOR	9811070485 sukhdevsingh@hindpress.co.in	
4	Uniq Automation UNIQUE Automation	Umesh Ingole CEO	9890994958 unique.automation@gmail.com	
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CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU

TECHNICAL QUERIES & CLARIFICATION

Tender No. : NAL/PUR/ACD/195/18-Z
Item Description : Procurement of Automatic Hydraulic Hot Press Compression Moulding Machine and Automated Blank Heating for Composites Processing.

Sr. No.	Query / Clarification Sought		Clarification/Amendment
	Chapter 4 4.1 A		
(i)	1c	8 point adjustable and temperature compensated GIB Guiding Arrangement at four corners of the slide with self-Lubricating, graphite/PTFE impregnated bronze replaceable wear strips.	4 point adjustable and temperature compensated GIB Guiding Arrangement at four corners of the slide with automatic lubricating, graphite/PTFE impregnated bronze replaceable wear strips.
(ii)	1g	The press should be mounted on passive vibration isolators for error free performance of the press.	The machine shall be grouted on to the floor. Foundation bolts should be supplied with level adjustment provision. Civil works will be carried out by CSIR-NAL as per vendor drawings.
(iii)	1h	The noise level during operation, should not exceed 75dB when measured 1m distance from the machine.	The noise level during operation, should not exceed 80dB when measured at a distance of 1m from the machine.
(iv)	1f	The machine shall be built according to the International standards/ guidelines and should meet all safety standards as per EN692-2000/OSHA 1910.217/CSA-Z142 102/ ANSI B11.2 (Latest version), meant for such machinery.	The machine shall be built according to the International standards/ guidelines and should meet all safety standards as per EN 693-2001/OSHA 1910.217/CSA-Z142 102/ ANSI B11.2 (Latest version) meant for such machinery.
(v)	2a	Frame shall be fabricated out of Carbon steel as per IS: 2062-FE 410 -W / Equivalent, reinforced, welded. material test certificates should be furnished at the time of PDI.	Frame shall be fabricated out of Carbon steel as per IS 2062/FE 410 W / Equivalent, reinforced welded. Material test certificates should be furnished at the time of PDI.
(vi)	3c	Material of the main Hydraulic cylinder: Fabricated from seamless tube conforming to IS: 2062/226 duly ultrasonic and x-ray tested. Proof of quality testing shall be produced during the PDI. Hydrostatic test of the hydraulic cylinders has to be performed at minimum of 1.5 times the operating pressure. Third	Material of the main Hydraulic cylinder: Fabricated from ASTM A106/IS: 2062/226/Equivalent duly ultrasonic and x-ray tested. Proof of quality testing shall be produced during the PDI. Hydrostatic test of the hydraulic cylinders has to be performed at minimum of 1.5 times the operating pressure. Third party certificate in this regard to be provided at the PDI stage.

[Handwritten Signature]

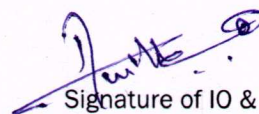
		party certificate in this regard to be provided at the PDI stage.	
(vii)	4e	Top and bottom plates should be provided with 16mm diameter threaded holes (thread inserts) at a grid spacing of (200mm X 200mm) as shown below. Holes in top and bottom plates are to be collinear in mounted position on the press.	Figure showing the hole arrangement in top and bottom platens is removed. The hole positions in top and bottom platens should be as stated below: <ul style="list-style-type: none"> • Top and bottom platens should be provided with threaded holes to match with bolt M20 x 2.5 pitch for minimum depth of 40 mm at the outside of 1m x 1m useful area. • The holes should be provided with 200 mm pitch intervals on all sides of both platens outside 1m x 1m useful area. Holes in top and bottom plates to be collinear in mounted position on the press. • All the threaded holes on the platens should be fitted with the bolts having following specifications: <ul style="list-style-type: none"> ○ M20X2.5 pitch ○ Socket head cap screws conforming to ISO898/1 Grade12.9 or BS6104 Grade 12.9 or Equivalent. ○ Should be capable of withstanding 450 deg. C ○ Number of bolts to be supplied 100 nos.
(viii)	4f	All threaded holes should be closed in flush with surface of the platens with studs made of out of platen material. Drawing of the platens with holes and studs to be approved by CSIR-NAL.	The drawing of the platens including its fixing arrangement has to be provided for CSIR-NAL appraisal.
(ix)	4h	Insulation should be provided between ram and top platen and fixed bed and bottom platen such that the outer skin temperature of the platens should not exceed 25 °C above ambient. Vendor to specify.	<ul style="list-style-type: none"> • Insulation should be provided between ram and top platen and fixed bed and bottom platen such that temperature of the outer skin of the ram (slide) should not exceed 25°C above ambient. • To meet the above requirement water cooling arrangement surrounding the ram and lower press bed may be provided.
(x)	5c	Load accuracy to be achieved: Within ± 100 kg of the programmed load for the entire range i.e. from 2 tonne to 300 tonne.	Load accuracy to be achieved: <ul style="list-style-type: none"> • Within ± 100 kg of the programmed load for the entire range i.e. from 2 tonne to 300 tonne.

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			<ul style="list-style-type: none"> Accuracy and uniformity have to be proved for the useful range (during PDI) using 5 nos. of calibrated load cells/pressure transmitters. Load cells have to be arranged by vendor (during PDI and acceptance at CSIR-NAL). Load cells/pressure transmitters should give analogue voltage/current output in the range of 0-10V/2-20mA for the full scale.
(xi)	6a	Temperature uniformity across all zones to be within +/- 3 deg. C of set temperature for the entire temperature range during heating stage.	Temperature uniformity across all zones to be within +/- 3 deg. C of set temperature for the entire temperature range during heating stage after reaching steady state (10 minutes) at each set point.
(xii)	9a	The provision should be made to control the cooling rate as specified by using suitable thermic fluid-and cooling with thermic chiller system with a cool down rate of 5-50 °C/min over the entire platen area up to 80°C. Air cooled chiller plant shall be provided.	The provision should be made to control the cooling rate as specified by using suitable thermic fluid-and cooling with thermic chiller system with a cool down rate of 5-20 °C/min over the entire platen area up to 80°C. Air cooled chiller plant shall be provided.
(xiii)	13	<p>a) Maximum fast closing speed: 150 mm/sec</p> <p>b) Slow closing speed: 2 mm/sec or lower.</p> <p>c) Maximum fast opening speed: 150 mm/sec.</p> <p>d) Slow opening speed: 2 mm/sec or lower.</p>	<p><u>Closing/Opening speed:</u> Should be variable between 25 mm/sec and 250 mm/sec.</p>
(xiv)	13	Provision should be made for cushioning arrangement in the cylinder. The cushioning length should be programmable as per user requirement.	<ul style="list-style-type: none"> Provision should be made for cushioning arrangement in the cylinder. Cushioning should be not more than 10 mm. Provision should be made to vary cushioning speed between 2mm/sec and 5 mm/sec.
(xv)	14	Grounded flat plates	These items are removed from the scope of supply.
(xvi)	15c	Manual mode of operation: In this mode of operation, separate push buttons for platens/slide movement and ejection in forward & reverse direction shall be provided.	Manual mode of operation: In this mode of operation, separate push buttons for platens/slide movement should be provided.
(xvii)	16	Hydraulic power pack unit: (Make: Yuken/Vickers/Hydroline/Bosch/Parker/ Hawe)	Hydraulic power pack unit: (Make: Yuken/Vickers/Hydroline/Veljan/Bosch Rexroth/Parker/Hawe)

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(xviii)	19a	Anti-creeping Device: A hydraulically operated automatic slide locking arrangement to be provided to hold the moving slide positively so that it will not creep down or pose danger during operation/ maintenance.	A hydraulically operated automatic slide locking arrangement to be provided to hold the moving slide positively at home position so that it will not creep down or pose danger during operation/ maintenance.
(xix)	19g	The safety standard of the equipment shall conform to CE(EN693-2001).	The safety standard of the equipment shall conform to EN 693-2001/OSHA 1910.217/CSA-Z142 102/ ANSI B11.2 (Latest version).
Chapter 4			
4.1 B			
(xx)	4	1.1m X 1.1m X 30mm thick.(maximum blank weight is 100kg)	1.1m X 1.1m X 30mm thick composite material
(xxi)	7	Temperature requirement: • Up to 500 deg. C (+/- 5 °C).	Up to 500 deg. C (+/- 10 °C) in load condition.
(xxii)	9	<u>To be programmable as per user requirement:</u> Heat up rate 25 deg. C to 100 °C per minute. Programming in steps of 5 °C/minute or less.	<u>To be programmable as per user requirement:</u> • Heat up rate 25 deg. C to 100 °C per minute. • Programming in steps of 5 °C/minute or less. • Maximum blank holding time in IR oven will be around 30 minutes.
(xxiii)	10	<u>Oven construction</u> Note 2: Conveyor is not in the scope of the supply.	Revised Note 2) Blank conveyor system: Blank holder and transfer mechanism to be provided for loading and smooth transferring of blank between platens and IR oven. The blank conveyor system is to be adjustable in height based on the lower mould height. The drawing of conveyer system and its alignment with platens and IR oven has to be provided for CSIR-NAL appraisal.
Chapter 4			
4.1C			
(xxiv)	4.1C	Optional Item: Mould positioning system (To be quoted separately)	Instead of optional item, Mould positioning system is included in the main scope of supply.
Chapter 4			
4.4			
(xxv)	4.4	Additional Clause is added after the point no. 14	5 load cells have to be arranged by vendor for demonstrating the total load and uniformity of the load.


Signature of IO & PL

ANNEXURE - II
(PART-B)

**CSIR-NATIONAL AEROSPACE LABORATORIES
BENGALURU**

COMMERCIAL QUERIES & CLARIFICATION

Tender No. : NAL/PUR/ACD/195/18-Z
Item Description : Procurement of Automatic Hydraulic Hot Press Compression Molding Machine and Automated Blank Heating for Composites Processing.

Tender Clause No	Query / Clarification Sought	Clarification/Amendment
4.6	Delivery Schedule of the item: 7 months	Delivery Schedule of the item: 8 months from the date of PO/LC


Stores & Purchase Officer