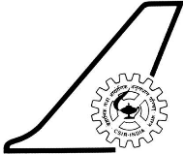


Date of Publication: 29 August 2024



Council of Scientific and Industrial Research
NATIONAL AEROSPACE LABORATORIES
P.B. No.1779, HAL Airport Road, Kodihalli, Bengaluru – 560 017

Advt. No. 1/2024

APPLY OFFLINE ON OR BEFORE 30 Sept 2024
(Website: www.nal.res.in)

National Aerospace Laboratories (NAL) is a premier research laboratory under the Council of Scientific and Industrial Research (CSIR). In addition to many Research, Development and Technology Programs in Aerospace, CSIR-NAL is actively involved in supporting the National Aerospace Programs of ADA, DRDO, ISRO, HAL and IAF. Further, CSIR-NAL has a strong program in Civil Aircraft development including the nationally important project of design and development of a multirole Light Transport Aircraft (SARAS Mk2) and the Regional Turbo-Prop Aircraft (RTA). CSIR-NAL is also developing several aerospace technologies into spin-off industrial applications.

NAL is looking for a Specialist Consultant (individuals only) for review of Engine mount and Nacelle structural assembly for light transport aircraft.

SPECIALIST DESIGN CONSULTANT FOR ENGINE MOUNT AND NACELLE

STRUCTURAL DESIGN REVIEW (1 POST):

A. Objective:

CSIR-National Aerospace Laboratory (NAL) is developing a light transport aircraft of high wing configuration with wing mounted engines. It is desired to review, in online mode, the newly designed Nacelle and Engine mount structure of this aircraft. In order to carry-out this review, NAL seeks the assistance of a Specialist Design Consultant having the following experience.

B. Educational Qualification:

PhD/ MPhil/ M.E/ M.Tech/ MS (Mechanical/ Aerospace/Aeronautical or Equivalent)

C. Experience:

1. Minimum 20 years of experience in aircraft engine installation design preferably turboprop installations.
2. Should have handled Nacelle and engine mount structural design projects from concept to integration and testing on aircraft
3. Should have working experience of airframe design using both metallic and composite materials
4. Should have worked in engine specific LRU interface like vibration isolators selection and related analysis, engine plenum seal design, door mechanisms
5. Should be well versed with fatigue load spectrum generation and fatigue analysis of Engine Mount and Nacelle structure.

6. Should have knowledge of certification requirements as per FAR/CS guidelines for Engine mount and Nacelle design

D. Scope of work:

Detail technical evaluation of design proposed by NAL. Provide solutions/pointers for design improvement/optimization. The evaluation also should identify any potential design deficiencies in order to correct it before design finalisation. The following technical aspects should be considered:

1. Detail structural integrity Evaluation - Engine Mount and Nacelle Assembly, suggestions for improvement. Check for compliance to FAR-23 requirements
2. Evaluate structural arrangement for ease of engine removal and installation, maintainability, ease of assembly
3. Design and analysis compliance check of Nacelle and Engine mount design for certification requirements as per FAR 23 guidelines
4. Adequacy check of welded structure for design, analysis, manufacturability and assembly.
5. Adequacy check for the material selected to comply structural and engine functional requirements.
6. Structural Design compliance check for Fail-safe design philosophy
7. Structural design compliance checks for Fireproof and Fire resistance requirement of Nacelle and its interface with wing, system routings in fire zone.
8. Structural arrangement checks for Plenum firewall seal for its efficient functioning during operation.
9. Recommendations for standard parts of Nacelle like latches, gas springs, seals, coatings, etc
10. Review of Structural arrangements of Nacelle integrated to Wing
11. Engine mount structure design adequacy check for selected vibration isolator
12. Procedure to develop fatigue load spectrum for Engine mount structure
13. Special design requirements if any, pertaining to high wing, wing-mounted turboprop engine configuration, Engine mount and Nacelle structure.

E. Deliverables:

1. Agreed upon Minutes of the Meeting (MoM) after every review meeting conducted online.
2. Report containing findings and suggestions for the items listed in D(1) through D(13) in MS word Format

F. Inputs provided to the consultant:

1. CSIR-NAL shall provide documents containing details, as applicable, for carrying out the tasks mentioned in section D.
2. The CAD and Finite Element models will be used and shown by NAL team during review meetings. They will be shared with consultant only if required.

G. Duration of engagement:

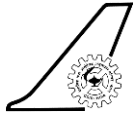
200hours of consultancy or 12 months from start date whichever is earlier. The hours of consultancy include meeting hours, report review hours and report preparation hours spent by the consultant.

GENERAL CONDITIONS:

1. The position offered through this advertisement is temporary and open to individual Specialist Consultant only.
2. The engagement will be for CSIR - National Aerospace Laboratories (NAL), Bengaluru, under the Council of Scientific & Industrial Research (CSIR) which is an Autonomous Body under Ministry of Science & Technology, Govt. of India.
3. Duration of the consultancy is 200hours or 12 months from start date whichever is early.
4. Age of the consultant should not be more than **64 years**. Age will be reckoned as on last date for receipt of applications.
5. Relaxation: The qualifications, age and experience can be relaxed in the case of exceptionally meritorious candidates with the approval of DG, CSIR/Competent Authority.
6. Remuneration: Remuneration is on par with Industry Standards and varies with experience and specialization in the field. The payment cycle is monthly, subject to fulfillment of the deliverables as mentioned in section E.
7. The period of experience in a discipline/area of work, where prescribed, shall be counted with effect from the date of acquiring the prescribed minimum educational qualifications for the post.
8. As the Screening/Shortlisting of applications will be done on the basis of information furnished through the Offline application form by the applicants, it is necessary that only accurate, full and correct information is furnished by the applicants. Furnishing of wrong/false information will be a disqualification and CSIR-NAL will **NOT** be responsible for any of the consequences of furnishing such wrong/false information.
9. The decision of CSIR-NAL/DG, CSIR in all matters relating to eligibility, acceptance or rejection of applications, mode of selection will be final and no enquiry or correspondence will be entertained in this connection from any individual or agency on behalf of the candidate.
10. Canvassing in any form and/or bringing in any influence political or otherwise will be treated as a disqualification for the post.
11. Selected Consultant has to execute an agreement for the engagement and Non Disclosure Agreement (NDA) in the prescribed format.
12. Eligible candidates may download the application form given below (**given at the end of full advertisement**). Application form duly filled in together with recent passport size photograph, copies of matriculation / Degree and above, Experience and certificate with reference to nature of work carried out etc., should be sent in a sealed cover superscribing **“Application for the post of Specialist Consultant** Advt. No. 1/2024 **ON OR BEFORE 30 Sept 2024** addressed to:

**Head, PBMD
National Aerospace Laboratories
P.B.No.1779, HAL Airport Road
Kodihalli, Bengaluru – 560 017 (Karnataka).**

INTERIM ENQUIRIES WILL NOT BE ENTERTAINED



(Council of Scientific and Industrial Research)
NATIONAL AEROSPACE LABORATORIES
BENGALURU – 560 017

Affix a signed copy of your recent passport size photograph

APPLICATION FORM

IMPORTANT: This application form duly completed in the candidate's own handwriting or neatly typed must reach Head, PBMD, NATIONAL AEROSPACE LABORATORIES, P.B.No.1779, AIRPORT ROAD, KODIHALLI, BENGALURU - 560017 on or before 30 Sept 2024

1. Advertisement No. : **1/2024**
2. Post : **SPECIALIST CONSULTANT**

3. Name of the candidate (in Block Letters)	
4. Sex (Male / Female)	
5. Father's Name	
6. Nationality (mention by birth / domicile)	
7. Present Postal Address (for communication purpose)	Pin Code <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Tel/Mobile No. _____, E-mail: _____
8. Permanent Address	Pin Code <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Tel/Mobile No. _____

09. Date of Birth (Either passport / Aadhar Card)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> <p align="center">DAY</p>			<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> <p align="center">MONTH</p>			<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> <p align="center">YEAR</p>				
10. Age (As on the closing date of application)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> <p align="center">YEARS</p>			<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> <p align="center">MONTH</p>			<table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:20px; height:20px;"></td><td style="width:20px; height:20px;"></td></tr> </table> <p align="center">DAYS</p>				

11. Educational/Professional Qualification etc.							
Examination Passed	Year of passing	Marks obtained / percentage of marks			Class / Grade obtained	Duration of Degree/ Diploma Course	Board / University / Institution
		Max Marks	Marks obtained	Aggregate %age			

12. Work Experience:					
Period		Name of Organisation & Place	Designation/ Post Held	Gross Pay Drawn	Permanent/ Temp. Post
From	To				

13. List of Awards/ Honours:

Sl. No.	Details of Awards/Honours	Professional Body	Citation of the Award

14. List of Publications

Sl. No	Title of Paper/Patent	Publisher	Year

15. Remuneration Details:

Duration of the consultancy is 200hours or 12 months from start date whichever is early.

Expected remuneration (hourly basis) :

Note:

1. Consultant to fill up expected remuneration above.
2. Total Remuneration is on par with Industry Standards and varies with experience and specialization in the field.
3. Remuneration will be decided by Competent Authority based on experience/expertise.

16. Willingness of the Consultant to be with the Project Team till the completion of certification on a payment basis Yes No

17. Any other details :

DECLARATION

I hereby declare that the information given above is correct, true to facts and nothing has been concealed / distorted. I am aware that, if at any time I am found to have concealed / distorted any information, my candidature/appointment is liable to be summarily terminated without notice.

Place: _____

Date: _____

Signature of the candidate

Check List:

Please tick the appropriate box and arrange the enclosures/information:

Sl. No.	Details	Check Box
1.	Qualifications, Experience, Expertise etc.	<input type="checkbox"/>
2.	Copy of Passport/AADHAAR Card (Personal Details)	<input type="checkbox"/>
3.	Remuneration details (Refer Sl. No. 15 of the application)	<input type="checkbox"/>
4.	Prior assignment reference documents (Refer Sl. No. 12 of the application form)	<input type="checkbox"/>