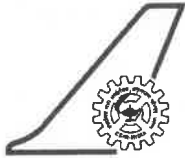


Date of Publication: 23.12.2022



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

Advt. No. 10/2022

APPLY OFFLINE ON OR BEFORE 09.01.2023
(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 exploiting several aerospace technologies into spin-off industrial applications. It has excellent facilities in all the aerospace disciplines.

NAL is looking for a Specialist Consultant with significant experience in turbo-prop aircraft aerodynamics, flight mechanics and certification with keen insight in problem solving to participate in the RTA and SARAS Mk2 design and development activities.

SPECIALIST CONSULTANT:

A. Education and Experience:

1. A Master's degree or equivalent in Aerospace Engineering with at least 20 years of experience in aerodynamic design, sizing of control surfaces, stability and control analyses, high-lift device optimization, wind tunnel testing and data reduction, flying qualities, flight simulation, development and certification flight tests.
2. The consultant should have worked for aircraft OEM of international repute and experienced in providing consulting services in design evaluation.
3. The consultant should be recognized by a learned professional body for his expertise (e.g., AIAA, Royal Aeronautical Society etc.)
4. The consultant should have experience certifying aircraft to the FAR/CS Part 23 and Part 25 regulations or equivalent and be familiar with the compliance requirements. Any experience as Certification Verification Engineer (CVE) in aircraft projects would be an added advantage.

Number of Consultants :1 (One)

Scope of work

1. Review the work carried in the areas of Configuration design, Aerodynamic characteristics (CFD and/ or Wind Tunnel measurements) and suggest improvements if any for configuration optimization including drag reduction and aerodynamic efficiency improvement.
2. Review flight control system configuration including control surface characteristics, and hinge moments. Advise on pilot controls and flight deck ergonomics to cater for acceptable control forces in a conventional (reversible) mechanical flight control system and also powered control system with Fly-By Wire implementation.

3. Review of high-lift configuration design: flap geometry, deflection, gap-overlap optimization and mechanization considerations.
4. Control surface forces, hinge-moments prediction and measurement; address non-linearities and suggest geometry modifications to achieve acceptable hinge moment characteristics.
5. Review estimated performance characteristics. Advise on handling qualities evaluation and improvements to meet certification requirements (MIL and FAR 23 and FAR 25 requirements) including simulation setup.
6. Stall and pitch break characteristics, warning and protection: defining the requirements for stall protection from stall and deep stall considerations and impact on field performance.
7. Review wind tunnel test procedures and data on need basis: power effects testing, power/thrust scaling factors, boundary layer tripping and Reynolds number effects.

Deliverables:

Consultant is expected to review independently the design and analysis calculations carried out by CSIR-NAL and provide solutions/recommendations to address specific design issues.

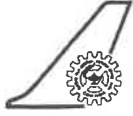
GENERAL CONDITIONS:

1. The Consultant is purely temporary and open to Specialist Consultant (s) only.
2. The engagement will be in the 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. The contract is for a duration of 12 months.
4. Age should not be more than **64 years**, 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 dependent upon experience and specialization in the field.
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. In the event of engagement of the Consultant, the Consultant has to execute an agreement in the format on Non-judicial stamp paper.
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. 10/2022 ON OR BEFORE 09.01.2023** addressed to:

**The Sr. Controller of Administration
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 THE SR. CONTROLLER OF ADMINISTRATION, NATIONAL AEROSPACE LABORATORIES, P.B.No.1779, AIRPORT ROAD, KODIHALLI, BENGALURU - 560017 on or before 09.01.2023

1. Advertisement No. : **10/2022**
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>			<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>			<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>				
	DAY	MONTH	YEAR								
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>			<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>			<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>				
	YEARS	MONTH	DAYS								

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. Prior assignments of Consultant:

Sl. No.	Aircraft Name and Type	Area of Consultancy/ Nature of work	Organization	Date of Start	Cost of work	Reference document (work order/work completion certificate) to be attached

15. Remuneration Details:

Duration of Contract: 12 months

Expected remuneration:

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. 14 of the application)	<input type="checkbox"/>
4.	Prior assignment reference documents (Refer Sl. No. 13 of the application form)	<input type="checkbox"/>