

# Indian Institute of Technology, Kanpur

## National Wind Tunnel Facility

Inquiry no: IITK/NWTF/2016/01A

May16, 2016

**Date of Closing: May31, 2016**

**Subject: Quotation for design and fabrication of wind tunnel model of Rustom-II UAV( Revised)**

With reference to the above mentioned subject you are invited to submit the quotation to reach us before the closing date in a sealed cover to the address mentioned below. To get the details on the UAV model and for any other queries please send a request to **Mr Brajesh Chandra** at [bchandra@iitk.ac.in](mailto:bchandra@iitk.ac.in)

The prospective suppliers are requested to send the quotation in two parts as **“Technical Bid”** and **“Financial Bid”**.

The Technical Bid should contain the detailed technical specifications of the model to be designed and fabricated. It should also include the details of the machine bed size, specification and methodology to be followed for CMM analysis and contents of the CMM analysis report. **It is mandatory to provide past experience for wind tunnel model design, fabrication, and wind tunnel testing.** ISO and AS9100 certification is also mandatory.

The Financial Bid should contain the detailed cost of design, analysis, and fabrication including the taxes, service charges if any, shipping and handling charges.

For both parts the quotations should be clearly and appropriately marked as **“Technical Bid”** and **“Financial Bid”**. They should be sealed in two separate envelopes which in turn are enclosed in a bigger envelope.

### **Terms and Conditions**

1. Wind Tunnel Model has to be designed, analyzed for factor of safety and deflections, fabricated and assembled in all respects with required inspections.
2. The schedule to be followed from the date of receipt of PO must be clearly defined. NWTF reserves the right to negotiate the proposed schedule.
3. Vendor should have prior experience of carrying out design and fabrication of Wind Tunnel model for scaled down aircraft configuration. He should provide the required documents as a proof.
4. Vendor also should have carried out wind tunnel testing and wind tunnel data analysis at any major aero test facilities in India such as IIT, Kanpur or IISC Bangalore.
5. Vendor should have in-house facilities or external support from reliable fabricators with CNC milling machine capable of machining components of length up to 2m at once.
6. Vendor should have ISO and AS9100 certification.
7. Acceptable Tolerances:

- a. Wing span: +/- 0.5mm
  - b. Wing chord: +/- 0.2mm
  - c. Contour profilarity: +/- 0.05mm
  - d. All other features as per IS 2102(medium)
8. Surface finish has to meet the following requirements:
- a. All Aluminum components to be anodized.
  - b. All steel components to be electroplated.
  - c. Surface roughness should be less than 1 Ra.
9. Model will be accepted only after demonstration of its dimensional accuracy and overall integrity as per the specifications.
10. A report has to be submitted on the dimensional accuracy and overall integrity of the fabricated model based on CMM inspection.
11. Inspection is to be in two stages. Inspection of individual components at fabrication site as well as inspection of the complete model after integration at supplier's site form the first stage. The model received by NWTF at the test site will also need to be assembled, inspected and certified by the vendor.
12. Validity of the quotation should be atleast 90 days.
13. 40% payment will be released after completion of model design and submission of design, analysis, inspection plan documents and fabrication drawings and the remaining 60% will be released after acceptance of the complete model and preliminary test runs are completed in the tunnel.

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