

भारत सरकार  
अंतरिक्ष विभाग (अं.वि.)  
लियोस-इसरो  
पीन्या औद्योगिक संपदा  
लियोस



GOVERNMENT OF INDIA  
DEPARTMENT OF SPACE (DOS)  
LEOS-ISRO  
PEENYA INDUSTRIAL ESTATE  
LEOS

फोन नं Ph No. 080-28398836 / Fax. 080-28391964 / ईमेल e-mail: purchase@leos.gov.in

निविदा आमंत्रण  
INVITATION TO TENDER

मैसर्स  
M/s

00000

हमारी संदर्भ सं  
Our Ref. No.

LELD 2025-000945-01

निविदा अंतिम तिथि  
Tender Due at

16:00 hrs IST on 27/05/2026

महोदय

Dear Sirs,

कृपया निम्नलिखित मदों की आपूर्ति के लिए अनुलग्नक (फार्म सं. संलग्न ) में उल्लिखित निबंधन एवं शर्तों के अनुसार संलग्न निविदा प्रपत्र में वर्णनात्मक सूचीपत्र/पैम्फलेट/साहित्य सहित हमारी संदर्भ सं. एवं अंतिम तिथि (मोटे अक्षरों में) ऊपर लिखते हुए अपनी मुहरबंद निविदा प्रस्तुत करें।

Please submit your sealed quotation , in the Tender Form enclosed here along with the descriptive catalogues /pamphlets /literature ,superscribed with Our Ref.No. and Due Date for the supply of the following items as per the terms & conditions mentioned in Annexure(Form No. AS PER ENCLOSURE )

क्र.सं. Sl. No.	विनिर्देशों सहित मद का विवरण Description of items with Specifications	इकाई Unit	मात्रा Quantity
1	PRECISION MECHANICAL FABRICATION AS PER ENCLOSED SPECIFICATION	LOT	1

सुपुर्दगी स्थल

Delivery At LEOS STORES

प्रेषण की विधि

Mode of Despatch ON SITE

शुल्क छूट

Duty Exemptions

विशेष अनुदेश

Special Instructions NIL

विशेष निबंधन

Specific Terms AS PER ENCLOSURE

निविदाकारों को अनुदेश

Instructions to Tenderers

R

KIRAN KUMAR R

PURS. & STORES OFFICER

भारत के राष्ट्रपति के लिए एवं ओर से  
For and on behalf of the President of India

क्रेता / The Purchaser

भारत सरकार  
अंतरिक्ष विभाग  
विद्युत प्रकाशिकी तंत्र प्रयोगशाला  
प्रथम स्टेज, प्रथम क्रॉस  
पीण्या औद्योगिक सम्पदा  
बेंगलुरु-560 058.  
दूरभाष सं०-080 28398836.  
फैक्स सं०-080-28391964  
ई मेल : purchase@leos.gov.in



Government of India  
Department of Space  
LABORATORY FOR ELECTRO-OPTICS SYSTEMS  
1<sup>ST</sup> STAGE, 1ST CROSS,  
PEENYA INDUSTRIAL ESTATE,  
BENGALURU-560 058.  
Phone No.080 28398836  
Fax No:080-28391964  
Email:purchase@leos.gov.in

Ref No: LELD 2025000945/EoI/2025-26

07.04.2026

Invitation for Expression of Interest [EoI]  
for Precision Mechanical Fabrication-Reg

Laboratory For Electro-Optics Systems [LEOS], of Indian Space Research Organization [ISRO] under Department of Space, Government of India is responsible for Design, Development, Production And Delivery Of Electro-Optic Sensors And Optics To Spacecrafts. LEOS is currently inviting indigenous Industry Partners for Precision Mechanical Fabrication.

This proposal is to invite Expression of Interest exclusively from Indian industries having technical infrastructure and capability for Precision Mechanical Fabrication. Those vendors which are interested to qualify & deliver the Precision Mechanical Fabrication may respond to this enquiry, detailed EOI document attached.

In this regard, LEOS invites the Expression of Interest [EoI] from Indian Industries/Vendors who have or are in the process of establishing full-fledged Precision Mechanical Fabrication and deliver the acceptable fabricated material to LEOS.

The EOI will be evaluated on the basis of bidder's experience, understanding of scope of work, facility infrastructure, proposed methodology and work plan, skilled manpower and the financial strength of the industry.

LEOS reserves the right to cancel/re-issue the process of EOI if the necessity so arises or to seek further information/details.

Companies/Firms, if found to have indulged in any corrupt or fraudulent practices, will be debarred taking part in the Tendering process and their EOI Document will not be taken up for consideration.

Along with "Expression of Interest" Suppliers/ Firm[s] should furnish the following information also in detail:

1. Registered address of the Companies with Phone, Fax, Email, Web etc.
2. Company/Organization Status (Proprietary/Partnership/Private/Public Ltd. etc.) with Name and Address of Proprietor, Partners, Board of Directors, etc.
3. Associates: (a) Indian (b) Foreign.
4. List of Major Customers during the last 3 Years with full address and their Contact Persons.
5. Details of Infrastructure Facilities owned / available.
6. Names and addresses of the major Shareholders of the Company and the percentage of their share capital.
7. Capital and Turnover for the preceding 3 Financial Years with copy of latest Annual Report.
8. Financial Capacity/Credit facilities available.
9. Name and Address of Bankers.
10. Trade Association to which Industry/ies belong to.
11. Establishment/Sales/Service Tax Registration Number.
12. Nature of Business
13. Solvency/Financial capacity of the Firm issued by their Bankers.
14. Any other information the Industry/ies consider relevant.
15. The Profile of the Company/ies clearly bringing out the areas of Strength and Weaknesses.
16. Self-Assessment Technical and Organizational Competence to take part in the EOI.
17. Response forms as mentioned in the Eoi

Completion of the EOI Response:

- a. Company/Firms are advised to study all the instructions; Terms and Conditions; Forms; Requirements and other information in the EOI documents carefully. The submission of EOI shall be deemed to have been done after a careful study and examination of the EOI documents with full understanding of its implications.
- b. The response to this EOI should be full and complete in all respect. Failure to furnish all the information required by the EOI document or submission of proposal not substantially responsive to the EOI documents to every aspect will be at the risk of the Company/Firms and may result in rejection of the document.
- c. All the pages of the EOI submitted must be numbered and signed by the authorized signatory.
- d. Canvassing in connection with the EOI be strictly prohibited and such canvassed EOI submitted by the Agency are liable to be rejected.

A Pre-Eol meeting will be arranged by Laboratory For Electro-Optics Systems [LEOS], Bengaluru in order to have a better understanding of the activities involved, clarify doubts, if any. Subsequently, the vendor(s) shall submit the response to Expression of Interest.

Interested Vendor[s] may please provide the details of the representative[s] taking part in the Pre-Eol meeting well in advance prior to dates specified in Table-1 to the Focal Point in order to arrange for Security clearance. Vendor[s] representative shall carry an "Authorization Letter" for attending the Pre-Eol meeting. Member Representative shall be limited to maximum of two (2) per bidder/company/organisation

Pre-EOI Queries from vendor [s] shall reach LEOS 5 days prior to date of Pre-EOI meeting to Mail ID: purchase@leos.gov.in. Please note that request for "Pre-ponement/postponement of Pre-Eol meeting" will not be entertained under any circumstances.

"Expression of Interest" with all the above information shall reach the address given below, quoting the above Reference Number on or before the due date & time.

क्रय एवम भंडार अधिकारी / Purchase & Stores officer  
विद्युत प्रकाशिकी तंत्र प्रयोगशाला (लियोस)  
Laboratory For Electro-Optics System(LEOS)  
भारतीय अन्तरिक्ष अनुसंधान संगठन  
Indian Space Research Organisation  
अन्तरिक्ष विभाग, भारत सरकार Dept. of Space, Govt of India  
बेंगलूरु - 58 Bengaluru-58  
कर्नाटक, भारत/Karnataka, India

Please address your clarifications quoting the EOI number to E-mail: purchase@leos.gov.in. Request for participation in Pre-Eol meeting shall reach on or before 05.05.2026 14:00 @ Hrs IST to the Email mentioned herein. However, response to EOI (hardcopy) shall be sent to above mentioned postal address only). E-mail & Fax quotations are not acceptable. Quotation received after due date & time are not acceptable.

तालिका 1

Table 1:

ई ओ आई विवरण की प्रस्तुति Submission of EOI Details	
स्पष्टीकरण प्रस्तुत करने की अंतिम तिथि Last date of submission of clarification	30.04.2026 16:00 Hrs IST
Pre-EOI meeting (at Conference Hall, Reception (CISF), LEOS)	06.05.2026 11:00 Hrs IST
ईओआई प्रस्तुत करने की अंतिम तिथि	27.05.2026 16:00 Hrs IST

Last date for submission of EOI	
ई ओ आई की खोलने की तिथि Opening date of EOI	28.05.2026 14:00 Hrs IST

"Expression of Interest" with all the above information shall reach the undersigned, Quoting above Reference Number on or before 27.05.2026 @16:00 Hrs IST. This proposal is initiated as a Pre-EOI Qualification. LEOS reserves the right to accept or reject all or any such "Expression of Interest" without assigning any reasons what so ever.

हस्ता/sd-  
क्रय एवम भंडार अधिकारी / PSO

2026

# **EXPRESSION OF INTEREST**

**FOR PRECISION MECHANICAL FABRICATION**

**MECHANICAL SYSTEMS GROUP**

**LABORATORY FOR ELECTRO-OPTICS SYSTEMS**

<b>1. MODUS OPERANDI:</b> .....	<b>1</b>
<b>2. EOI OBJECTIVE:</b> .....	<b>3</b>
<b>3. INTRODUCTION TO SENSOR &amp; OPTICS SUBSYSTEMS:</b> .....	<b>4</b>
<b>4. INTRODUCTION TO PRECISION MECHANICAL FABRICATION:</b> .....	<b>4</b>
<b>5. PROCEDURE FOR FINALISING CONTRACT:</b> .....	<b>5</b>
5.1. Procedure.....	5
5.2. Trial Work.....	5
<b>6. DESCRIPTION AND SCOPE OF WORK FOR THE RATE CONTRACT:.</b> 8	
6.1. General Scope of work.....	8
6.2. Vendor Performance Evaluation .....	10
<b>7. TERMS AND CONDITIONS:</b> .....	<b>11</b>
7.1. Terms and Conditions .....	11
7.2. Terms & Conditions: Organization Portfolio .....	11
7.3. Terms & Conditions: General.....	12
<b>8. EOI RESPONSE FORMAT:</b> .....	<b>15</b>
8.1. General Details of the Vendor .....	17
8.2. Supporting Documents.....	18
8.3. Form A Compliance Matrix to be filled by Vendors .....	19
8.4. Form B- Compliance Matrix to be filled by Vendors with respective to Organization, Experience and Infrastructure.....	20
8.5. Form C- Compliance Matrix to be filled by Vendors with respective to Additional Infrastructure .....	22
8.6. Eoi Response Format Contents .....	24
8.7. Drawings for Trial Job .....	25

## **1. MODUS OPERANDI:**

The intending Vendor is advised to read the Eol documents, Terms and Conditions and other details carefully relating to the work contemplated for Precision Mechanical Fabrication. The intending Vendor shall mean Single Vendor only and no consortium is entertained. The Vendor shall be deemed to have known the nature, scope and magnitude of the work. Vendor should express the interest only if he considers himself eligible and if it is in possession of all documents required as per the Eol. The Vendor is required to study Eol document and express interest after carefully examining all instructions, eligibility criteria, forms, terms, standards and specifications as per the Eol document with full understanding of its implications.

If the Vendor is found ineligible after opening of the Eol, this Eol document shall become invalid *ipso facto*, and costs of the tender document and processing fees, as applicable shall not be refunded. Eol which are not in compliance with our Eol conditions shall be rejected, without assigning any reasons thereof. Failure to furnish all requisite information and/or documents shall result in repudiation of the Eol notwithstanding the fore going. Laboratory for Electro-Optics Systems [LEOS], Indian Space Research Organization, Govt. Of India, Bengaluru reserves the right to assess the capability of the Vendor to execute the Contract, keeping in view the overall interest of LEOS. In the event, the Vendor capability and capacity are found to be unsatisfactory; LEOS reserves the right to reject the Eol document, without assigning any reasons thereof.

Any neglect or omission or failure on the part of the Vendor in obtaining necessary information as stated above or in any other matter affecting the Vendor, shall not relieve him from any risks or liabilities or the entire responsibility for completion of the Rate Contract/ Purchase Order for Precision Mechanical Fabrication in accordance with the Eol documents followed by the Request for Proposal (RFP) documents and clearance by LEOS as and when it happens.

The requirements stated herein below are preferable specifications and LEOS reserves the right to request for any additional information and also reserves the right to reject the Eol

response of any Vendor, if in the opinion of LEOS, the qualification or data is incomplete or if the Vendor is found not qualified to satisfactorily execute the Contract. The Vendor shall bear all costs and expenses associated with preparation and submission of EoI document including post EoI clarifications, discussions, technical and other presentations and execution of trial work, and LEOS shall in no case be responsible or liable for such costs, regardless of the outcome of the EoI process. The Vendor shall also not be entitled to claim any costs, charges and expenses incidental to or incurred by him through or in connection with the submission of the EoI or its consideration by LEOS, even though LEOS may elect to modify or withdraw the Invitation to EoI or not to accept the EoI.

At any time prior to the deadline for submission of EoI, LEOS may for any reason on its own initiative modify the EoI document by an amendment. The amendment shall be uploaded online on the website. Notwithstanding the above, LEOS may at its discretion extend the deadline for submission of EoI in order to afford reasonable time to Vendor to take into account the amendment in preparing the EoI.

All the EoI must be submitted before the time and date fixed for the receipt of EoI as set forth in the EoI document. LEOS shall not be responsible for non-receipt of EoI due to any postal delays/loss of EoI documents in transit and delay due to customs/courier, etc. and it shall be the sole responsibility of the Vendor to ensure delivery of the EoI within the time fixed. LEOS reserves the right to accept or reject any of the EoI in full or part without assigning any reason thereof. EoI received after stipulated time and date shall be rejected.

EoI documents shall also be uploaded on the ISRO website i.e., [www.isro.gov.in](http://www.isro.gov.in). Interested Vendor may download the EoI document from website and submit their response to EoI as per details mentioned in the Tender Notification.

LEOS, on successful completion of the EoI process may release an RFP (to qualified vendors) based on the revisions in the specifications and other terms as may be agreed upon/felt necessary during the process of the EoI and EoI evaluation. LEOS reserves the right to make necessary modification(s) in the specifications/terms at the time of release of

RFP or not to release an RFP as a sequel of this EoI. All other standard commercial and regulatory terms and conditions will be released as part of the RFP, which need to be complied and responded by the vendors in the RFP response.

If the EoI opening date happens to be on an unidentified Holiday due to any reason, including *Force Majeure*, tender(s) shall be opened on the next working day.

Vendor shall submit EoI document only in sealed envelopes, super-scribing the Tender Number and the due date of opening of the Tender. The EoI shall be complete in respect of all technical specifications, instructions, drawings, pamphlets and catalogues, as per the EoI document. Failure to furnish all information as per the requirements of the EoI document and submission of EoI not substantially responsive to the EoI document shall render the EoI/Vendor liable for rejection. Any/all EoI by way of fax/e-mail shall not be accepted.

The Vendor should provide along with his EoI document the Name of his Bankers to LEOS.

*The Suppliers need to get enrolled in the ISRO E-PROCUREMENT portal to access tender and submit their offer online during Request for Proposal (RFP) stage. Vendor need to have Digital Signature Certificate as detailed on ISRO E-PROCUREMENT and corporate e-mail ID to register on the above portal.*

## **2. EOI OBJECTIVE:**

LEOS is planning for realization of sensors & optics systems mechanical parts, through industry participation for Precision Mechanical Fabrication. **LEOS is planning to involve technically competent & most competitive Vendors to take up the realization of subsystem mechanical parts within INDIA (preferably at a distance of overnight journey from Bengaluru for convenient flow of free issue material).**

The purpose of this EoI is to invite proposals from the potential Vendors for consideration. On successful completion of EoI and RFP stage, depending on the response of Vendors and their capabilities, most competitive Vendors shall be selected for entering into Rate Contract/ Purchase Order.

### **3. INTRODUCTION TO SENSOR & OPTICS SUBSYSTEMS:**

Laboratory for Electro-Optics Systems [LEOS] is situated at Peenya Industrial Estate, Bengaluru where first India satellite was fabricated in 1975.

LEOS, one of the vital units of Indian Space Research Organization [ISRO], deals with the design, development and production of Attitude Sensors for all Low Earth Orbit [LEO], Geostationary Earth Orbit [GEO] and interplanetary mission; develops and delivers Optical Systems for remote sensing and meteorological payloads. It is equipped with world class fabrication, testing and coating facilities. Next generation technologies such as 3-axis Fiber Optics Gyro, Optical Communication, MEMS, Nanotechnology, Detectors and Development of Science Payloads for future space missions are also being pursued.

All these subsystems mechanical hardware is proposed to be realized through outsourcing in addition to in-house facilities.

Vendor shall provide required support as per the scope of work without compromising on ISRO's quality standards. Interested Vendors shall express their interest for the same. The details of LEOS's requirements from Vendors are provided in the subsequent chapters.

### **4. INTRODUCTION TO PRECISION MECHANICAL FABRICATION:**

Sensor & Optics subsystem mechanical parts realization involves precision machining and dimensional inspection. Industries having spare capacity are requested to respond with regard to Precision Mechanical fabrication support.

This document describes the machines generally required and defines the prerequisites of the Vendor for short listing of Vendors for qualification.

## **5. PROCEDURE FOR FINALISING CONTRACT:**

### **5.1. Procedure**

The entire exercise of selecting viable vendors is for entering in to Rate Contract/ Purchase Order carried out in two stages i.e.,

- a) Expression of Interest (Eol) and qualification stage
- b) Request for Proposal (RFP) Stage.

The following is the work flow depicts the structure of process flow that would be adopted in the vendor selection process:

1. Call for Expression of Interest.
2. Pre Eol meeting (optional).
3. Eol Response Submission.
4. Eol Evaluation – initial short listing of vendors for trial work based on responses (Technical & Managerial Competence Audit with/without a facility visit).
5. Verification/Qualification trial work for the above short listed vendors– to evaluate their fabrication competence and final short listing to participate in the RFP process.
6. Release of Request for Proposal (RFP) for entering in to Rate Contract/Purchase Order for the above final qualified vendors.
7. RFP response submission.
8. Evaluation of offers.
9. Placing Rate contracts/Purchase Order through negotiation/Counter offer.
10. Operation of RC through individual work orders.

### **5.2. Trial Work**

1. After initial shortlisting of vendors based on Eol responses and facility visits, if any; trial work for evaluation shall be given to the shortlisted vendors.

2. This work is a **trial work** for evaluation (**fabrication of all the components is mandatory**) for empanelment in vendor list. **No payments** would be made for the execution of this trial work.
3. 2D drawings & CAD model of the components for trial work would be supplied by LEOS
4. Study the drawing thoroughly, any clarifications required with regard to View, Dimensions, Clarity & Understanding, the same may be obtained from focal point/Engineer, in writing. CAM Programming to be done by the vendor, wherever required.
5. Components should be fabricated **only** out of raw material supplied for execution of this trial work by LEOS. **Use of any other material is strictly prohibited**. Raw Material for each job will be supplied **only once**. **Rejection** of components would lead to **disqualification of the vendor**. Also, components fabricated from raw material other than that supplied by LEOS would lead to **disqualification of the vendor**. Raw material signature would be taken by LEOS and it would be compared with that of the finished components.
6. No emery to be applied on the components, at any stage of machining. Exposed surface should have machining finish only. Blending of sharp edges to be done by Burr tool/formed blades only.
7. Laser Marking / Engraving of the component at defined location is important. It should be neat and legible.
8. All dimensions/parameters (including surface finish) mentioned in the drawing need to be measured. Also, maximum & minimum readings of measured values against specified nominal values to be reported. Any deep scratches, dents, tool marks or any other deviations to be reported in the 'Remarks' column. Instruments used for measurement to be indicated against each dimension and instrument number/code to be mentioned for each instrument used, at the end of the report.
9. Utmost care to be taken while handling the component.

10. Components to be properly packed (avoid usage of plastic sheet less than 40 microns) and dispatched in order to avoid any damages during transportation.
11. Raw Material to be collected from LEOS Stores by authorized person (with proper authorization) & finished components to be delivered to LEOS Stores along with drawings and inspection reports. No payment would be made for collection of raw materials and delivery of the components. Vendor shall provide a Bank Guarantee/ Fixed Deposit/ Indemnity Bond in lieu of the Free Issue of Material for the trial work (approx. value of INR 11,000) in favour of Accounts Officer, LEOS. Vendor has to provide Bank Guarantee/ Fixed Deposit/ Indemnity Bond with 15 days of intimation about the execution of trial work from LEOS.
12. Vendor is requested to collect the raw material and part drawings for three components from LEOS within **7 days** of receipt of communication. The intimation to the vendor would be sent only after the confirmation regarding Bank Guarantee/ Fixed Deposit/ Indemnity Bond from the concerned bank.
13. Delivery of the all-finished components with proper documents (ballooned drawings and inspection reports) should be made within **45 days** from the date of collection of Raw material. **Failing to do so would lead to disqualification of vendors.**
14. **Basis of acceptance of jobs:**
  - a. For Trial Job-1 & Trial Job-2, all toleranced dimensions have to be achieved without any deviation. For Trial Job-3, maximum of 5% are allowed to be out of specification by 50% of specified tolerance.
  - b. All Geometrical accuracies and surface finish to be achieved without any deviation.
  - c. A maximum of 15% of all other dimensions are allowed to be out of specification by 50% of their general tolerance value or 0.1 mm, whichever is lower.
  - d. LEOS reserves the right to reject the components having tool dig, dent marks, emery marks and any other noticeable defects.

## **6. DESCRIPTION AND SCOPE OF WORK FOR THE RATE CONTRACT:**

### **6.1. General Scope of work**

Sensor & Optics subsystem mechanical components having close geometrical and dimensional tolerances which are used for on-board flight, generally fabricated/machined from light alloys like Aluminium Alloys, Titanium Alloys, Stainless steel, INVAR, non-metals like PTFE (Teflon), Delrin, CFRP/GFRP, etc. Three typical part drawings are attached to this EoI for reference purpose.

1. Fabrication involves General Milling, CNC (Computer Numerical Control) Milling, General Turning, CNC Turning, CNC-EDM (Electrical Discharge Machining)-Spark Erosion, CNC-EDM Wire-cut, Surface Grinding, Cylindrical Grinding, Bench work, Hacksaw cutting, Laser Marking and other machine tools. Dimensional Inspection including measurement with electronic digital height master, two dimensional measurements with optical comparator/video measuring machine with data processor, form and roughness measurement, CNC-CMM (Co-ordinate Measuring Machine), different plain and plug gauges etc.
2. Most of the jobs can be carried out with 3 axis machining with simple fixtures, but at times it calls for special fixtures/4 axes/ 5 axes CNC machine tools.
3. The components need to be fabricated out of Aerospace materials like Aluminum Alloys 6061, 7075, Titanium Alloys-6Al4V, Stainless Steel in 300 & 400 series, INVAR & Non-metals like GFRP, CFRP, PTFE, Delrin, Nylon etc.
4. Fabrication of components involves large material removal of the order of 70-90 percent, thin-walled sections, deep hole drilling on slender components, complicated profiles, and deep rectangular pockets. The size of the components is generally 10 to 500 mm, rarely the part sizes up to 1500mm.
5. Generally, drawings with CAD models are supplied by LEOS. However, Vendor should have clear interpretation/understanding of fabrication drawing and CAD model.
6. Process Planning (PP) & Quality Plan (QP): Detailed PP & QP to be made by Vendor to meet all quality requirements specified in the drawing including schedule. Wherever

required such PP & QP to be brought it to the notice of LEOS. However, responsibility of achieving all the quality requirements rests with the Vendor.

7. Quality requirements of the hardware realized out of aerospace materials having:
  - i. Dimensional accuracies in the range between 5 microns to 100 microns.
  - ii. General Tolerance as per ISO 2768-F fine grade shall be applicable.
  - iii. Geometrical accuracies like Flatness, Parallelism, and Perpendicularity etc. in the range between 5 microns to 50 microns.
  - iv. Positional accuracies in the range between 5 microns to 200 microns.
  - v. Surface finish (Ra Value) of the order of 0.4 microns.
8. In process Inspection & Final Dimensional inspection:
  - i. Required in-process inspection/stage inspection to be carried out by the Vendors as per the process plan and maintain such records for audit by LEOS.
  - ii. Dimensional Inspection of the fabricated/machined part to be carried out by Vendor indicating the nominal dimension with tolerance and measured value for each of the dimension of the part. The inspection report to contain the instrument used for each of the dimension with instrument identification number, to track its calibration status during audits by LEOS.
9. Generally, the quantity for fabrication will be of job order type and not of a large production batch. Raw material will be supplied by LEOS against equivalent bank guarantee, as the materials are qualified after due testing. Vendor should collect the raw material within **two-days** of intimation by LEOS. Vendors who are willing to take up such type of jobs only need to respond for this EoI.
10. Delivery of hardware to LEOS: After clearance by Vendor Quality Control (QC), hardware to be dispatched to LEOS with a proper packing, to avoid any damages during transportation at free of cost. However, based on relevant inputs from LEOS, vendor should obtain inspection report and certificate from third party inspection agency (NABL certified/ certified for ISO 17020 standard/ certified for any other equivalent standard). Identification of the certified third-party inspection agency lies in the scope of the vendor.
11. In addition to manufacturing facility, the Vendor should have an inspection facility so that all the parameters mentioned in drawings, like geometrical & dimensional

accuracies of fabricated components, can be measured and recorded in inspection reports.

## 6.2. Vendor Performance Evaluation

The performance of the vendors would be evaluated on periodic basis, based on the principles laid down by the standard IS 12040:2016.

The Overall Supplier Rating would be an arithmetic sum of Quality Rating and Delivery Rating, i.e.,

$$\text{Overall Supplier Rating} = W_1 \times Q_R + W_2 \times D_R$$

$W_1$  - Weightage for Quality Rating

$W_2$  - Weightage for Delivery Schedule Rating

$Q_R$  - Quality Rating

$D_R$  - Delivery Schedule Rating

The aforementioned Ratings would be calculated using the following formulae:

### 1. Quality Rating ( $Q_R$ ):

$$Q_R = \frac{Q_1 + x_1 Q_2 + x_2 Q_3}{Q} \times 100$$

$Q_1$  – Quantity accepted as per specifications

$Q_2$  – Quantity accepted with deviation

$Q_3$  – Quantity accepted with rework

$Q = Q_1 + Q_2 + Q_3 + Q_4$

$Q_4$  – Quantity rejected

$x_1$  – demerit factor (0.5) when material is accepted with deviation

$x_2$  – demerit factor (0.5) when material is accepted with rework

### 2. Delivery Schedule Rating ( $D_R$ ):

$$D_R = \frac{Q_A}{Q} \times \frac{T}{T \times p + T_1 \times q} \times 100$$

$Q$  – Total quantity to be supplied within the stipulated delivery time

$Q_A$  – Actual quantity supplied within stipulated delivery time

$T$  – PO delivery time for the full consignment

$T_1$  – Actual delivery time for the full consignment

$p = Q_1/Q$

$q = 1 - p$

The weightage ( $W_1$ ) for Quality Rating in Overall Rating is 50%, while that of Delivery Schedule Rating ( $W_2$ ) is 50%.

The values of various demerits used would be decided by 'Work Order Committee for Entering into Rate Contract for Precision Mechanical Fabrication Works' and would be fixed for the period of the Rate Contract/Purchase Order.

LEOS reserves the right to terminate the Purchase Order with the vendors if their two consecutive half-yearly performances are less than 50%, arrived at using the above methodology.

## **7. TERMS AND CONDITIONS:**

### **7.1. Terms and Conditions**

1. Participation of Vendor (or authorized representative) in Pre-EoI Meeting is optional. However, vendors are recommended to attend the meeting to get a better clarity of the work and nature of jobs.
2. All vendors who want to execute precision mechanical fabrication jobs under Rate Contract/Purchase Order shall participate in EoI.

### **7.2. Terms & Conditions: Organization Portfolio**

1. The applicant may be a Proprietorship, Registered Partnership Firm, Indian Company/Domestic Company-Private or Public Company-Listed or Unlisted. Vendor shall submit the interest in the given EoI response sheet.
2. An Indian Company would be deemed to be owned by Indian Citizen and by an Indian Company if more than 51 percent of equity interest in the company is beneficially owned by Resident Indian Citizens and Indian Companies that are, in turn, ultimately owned and controlled by Resident Indian Citizens.
3. Control has been defined as the right to appoint the majority of the Directors or to control management and policy decisions, including by virtue of their shareholdings or management rights or shareholders or agreement or voting arrangements.

4. The applicant must be registered in India as required by law with minimum three years of continuous operation up to the date of publication of this Eol.
5. An undertaking (self-certificate) is to be submitted that, the Organization hasn't been blacklisted by any Central/ State Government Department/ Central Government funded organizations/ State Government funded organizations/ World Bank, or other World Bank organizations and is not under any illegal expression by Government of India.
6. The applicant, should not have, during the last three years, either failed to perform on any agreement, or been expelled from any project or agreement or have any agreement terminated for breach by the applicant.
7. Persons who are individually or institutionally, in any manner, involved with the selection/screening process of the EOI, and employees of ISRO are ineligible for applying.
8. Vendor shall provide solvency certificate from Chartered Accountant / Bank

### **7.3. Terms & Conditions: General**

1. This Eol is not an offer and is issued with no commitment. LEOS reserves the right to withdraw the Eol or change or vary any part thereof at any stage. LEOS also reserves the right to disqualify any Vendor/proposal, should it be so necessary at any stage.
2. Timing and sequence of events resulting from this Eol shall ultimately be determined by LEOS.
3. By submitting a proposal, each vendor shall be deemed to acknowledge that the Vendor has carefully read all chapters of this Eol, and has fully informed himself as to all existing terms and conditions.
4. The proposal and all correspondence and documents shall be written in English.
5. Vendor shall compulsorily fill up the Response format and compliance matrix (Part- 1 & Part- 2) as given in Chapter 8 in the Eol.
6. **Participation of Vendors for Pre-Eol Meeting:** A Pre-Eol Meeting will be arranged at Laboratory for Electro-Optics Systems, Peenya, Bengaluru in order to have a better

understanding of the Eol document with regard to Technical and Commercial aspects, clarify doubts if any, and other allied details.

7. **Predatory Pricing:** The Vendor shall specifically take note that "Predatory Pricing" at the Request for Proposal [RFP] stage will not be accepted and such Bids not meeting even the basic cost of input i.e., quoting unreasonably low prices to undercut and obtain the Contract are liable to be ignored/rejected, in order to obtain quality products.
8. **Non-Disclosure Agreement (NDA):** All documents/part drawings part of this Eol and subsequent documents/part drawings issued for evaluation and execution of works and any other communication revealed during the project will be exclusive property of LEOS and Vendor shall have no right whatsoever on them and shall not disclose to any other person/party not involved in the execution of the allotted work. The qualifying vendor must take an undertaking on NDA as per the prescribed format.
9. Further, the Vendor must not quote any of these works in any publications or to any of their customers/public domain without explicit permission from LEOS and adhere to strict confidentiality.
10. **GST Registration:** Government of India has implemented Goods and Services Tax (GST) w.e.f. 01.07.2017. The Vendor should mandatorily possess a valid GSTN along with GST registration Certificate. The Vendor should submit Self attested copy(ies) of the Certificates of Incorporation and other certificates that are legally required for carrying out its business activities in India
11. The certificates should be valid at the time of Eol submission and should be certified by an authorized signatory. A copy of PAN Card should also be submitted.
12. Income Tax Returns of the last three assessment years and Solvency Certificate from an authorized Chartered Accountant / Bank has to be submitted.
13. The Vendor shall ensure that the persons involved in working on jobs for LEOS are aware of the following:
  - a. Their contribution to product or services conformity.
  - b. Their contribution to product safety.

c. The importance of ethical behavior.

14. The Vendor shall plan, implement and control processes for the prevention of counterfeit or suspect counterfeit part use and their inclusion in components delivered to LEOS.

**8. EOI RESPONSE FORMAT:**

Cover Letter

(Company letterhead)

[Date]

To,

**PURCHASE & STORES OFFICER  
LABORATORY FOR ELCTRO-OPTICS SYSTEMS  
1<sup>ST</sup> STAGE, 1<sup>ST</sup> CROSS  
BANGALORE - 560058  
KARNATAKA**

Dear Sir,

**Ref: Expression of Interest for “Rate contract for Precision Mechanical Fabrication”**

Having examined the Expression of Interest (Eol), the receipt of which is hereby duly acknowledged, we, the undersigned, intend to submit a proposal in response to the Expression of Interest (Eol).

We attach hereto the response as required by the Eol, which constitutes our proposal. Primary and Secondary contacts for our company are:

	Primary Contact	Secondary Contact
Name		
Title		
Company Name		
Address		
Phone No.		
Mobile No.		
FAX No.		
Email ID		

We confirm that the information contained in this response or any part thereof, including its exhibits, and other documents and instruments delivered or to be delivered to LEOS is true, accurate, verifiable and complete. This response includes all information necessary to ensure that the statements therein do not in whole or in part mislead LEOS in its short-listing process.

We fully understand and agree to comply that on verification, if any of the information provided here is found to be misleading the short-listing process, we are liable to be dismissed from the selection process or termination of the contract during the execution of the contract.

We agree for unconditional acceptance of all the terms and conditions set out in the Eol document.

It is hereby confirmed that I/We are entitled to act on behalf of our company/ corporation/ firm / organization and empowered to sign this document as well as such other documents, which may be required in this connection.

Dated this  
(Signature) (In the capacity of)  
(Name)

Duly authorized to sign the Eol Response for and on behalf of:  
(Name and Address of Company) Seal / Stamp of Vendor

Witness Signature:  
Witness Name:  
Witness Address:

**CERTIFICATE AS TO AUTHORIZED SIGNATORIES**

I, ....., the Company Secretary of .....,  
certify that ..... Who signed the above response to Eol is  
authorized to do so and bind the company by authority of its board / governing body.

Date:  
Signature:

(Company Seal)

## Part-1

### 8.1. General Details of the Vendor

8.1.1.	Name of the Vendor	
8.1.2.	Year of Establishment	
8.1.3.	Core capabilities of the Vendor, Standard products from vendors if any	Type brief profile of the Vendor in Annexure – A (without referring to attachment of any report/s)
8.1.4.	Head office location and address with contact number & email id:	
8.1.5.	Local address in Bangalore if any with contact number & email id:	
8.1.6.	Addresses of manufacturing and/or operational setup in India <b>(Highlight the address where LEOS representative shall visit for audit)</b>	1. 2. 3.
8.1.7.	Corporate website URL, if any:	

## 8.2. Supporting Documents

Auditor certified statements for the last three years, FY 2022-23, FY 2023-24 and FY2024-25 in Annexure-B (please provide the profit and loss statement and balance sheet).

	<b>FY 2022-23</b>	<b>FY 2023-24</b>	<b>FY2024-25</b>
Net Revenue from Operations (in INR Crores)			
EBTD [Earnings Before Tax and Depreciation]			
Percent of Revenue from Aerospace Segment/Unit			
Net worth			
Share Capital			
Percent of shareholding by Indian entities			
Percent of shareholding by foreign entities			

**Part-2**

**8.3. Form A Compliance Matrix to be filled by Vendors**

<b>Refer Chapter No</b>	<b>Description</b>	<b>Understanding and Compliance (Yes/No)</b>	<b>Remark</b>
1	Modus Operandi		
2	Eol Objective		
3	Introduction to Sensor & Optics Subsystems		
4	Introduction to Precision Mechanical Fabrication		
5	Procedure For Finalizing Contract		
6	Description and Scope Of Work		
7	Terms & Conditions		
8	Eol Response Format		

**8.4. Form B- Compliance Matrix to be filled by Vendors with respective to Organization, Experience and Infrastructure**

Sl. No	Description	Compliance /Non-Compliance	Remarks*/ Supporting documents
1.	<b>In-house experience</b> having completed similar nature of work of <i>purchase orders of total worth, preferably Rs.50 Lakhs or more in a year during the last 3 years.</i> (Provide copies of the orders clearly showing the scope of work, magnitude of the work involved, proof of completion and delivery)		Attach as per Annexure - C.
2.	<b>Past experience</b> in handling fabrication of thin-walled structure work, large material removal, thin-walled section, deep hole drilling on slender components, complicated profiles, and deep rectangular pockets etc.		Provide the detail about work, and work order value with relevant purchase order copies if any. Attach as Annexure - C.
3.	<b>In-house availability</b> of qualified work force and Management structure (Please provide a table of the available workforce with details of trade, qualification, number, years of total experience, years of employment/experience with the vendor etc.)		
4.	<b>In-house expertise</b> of CAM programming software/package. Specify the CAD/CAM package being used.		
5.	<b>In-house availability</b> of either 3 (or) 4 (or) 5 axis CNC Milling machines. Specify number of machines available. Attach details like make, model, size and features of machines with photographs.		
6.	<b>In-house availability</b> of either CNC Turning or CNC Turn mill machines. Specify number of machines available. Attach details like make, model, size and features of machines with photographs.		
7.	<b>In-house or outsourced availability</b> of CNC EDM Spark erosion machine. Specify number of machines available.		

	Attach details like make, model, size and features of machine with photographs.		
8.	<b>In-house or outsourced availability</b> of CNC EDM Wire cut machine. Specify number of machines available. Attach details like make, model, size and features of machine with photographs.		
9.	<b>In-house availability</b> of Bench work facility containing Bench drilling, tapping etc. Also, availability of Jigs/ Fixture and tooling, tool holders etc. Describe the same separately.		
10.	Available Machine shop floor area.		
11.	<b>In-house availability</b> of dimensional Inspection infrastructure like surface plate, Electronic Digital Height Master, Digital micrometer, Digital caliper, protractor, cylindrical pin gauges up to 6mm in steps of 0.01mm, Thread plug gauges & Thread Ring gauges up to M6, Radius gauges, slip gauges set etc., Specify the details of all inspection facility.		
12.	<b>In-house or outsourced availability</b> of CNC-CMM (Coordinate Measuring Machine),		
13.	Certificates held like ISO 9001, AS 9100, NABL Accreditation, or any equivalent		Provide documentary proof. Attach as Annexure -D
14.	List of aerospace Customers within the State/Country/abroad		
15.	Specify standard product(s) of the company, if any		

Signature:

Name of the authorized signatory for the company:

Date:

Place:

Note: Vendors failing to meet the above requirements would not be considered for trial work.

**8.5. Form C- Compliance Matrix to be filled by Vendors with respective to Additional Infrastructure**

Sl. No	Description	In-house / Outsource facility	Compliance /Non-compliance	Remarks*
1.	3/4/5 axis CNC Milling machines of large sizes (above 800 mm). Attach details like make, model, size and features of machines with photographs.			
2.	CNC Turning/CNC Turn mill machines of large sizes. Attach details like make, model, size and features of machines with photographs.			
3.	Plano milling machine, Vertical Turret lathe, ultrasonic machining etc. Advanced fixtures like vacuum fixture, tool holders like shrink fit tooling etc. Any other information / Facilities related to Laser hole drilling/machining. Attach details like make, model, size and features of machines with photographs.			
4.	Dimensional Inspection infrastructure like large size surface plate (more than 1000mm), profile projector with data processor/Video measuring machine, CNC-CMM (Coordinate Measuring Machine), surface roughness tester, Cylindrical PIN gauges up to 6 mm in steps of 0.005mm, thread gauges above M6. Metal sorter for identifying raw material to maintain traceability.			

**\* Remarks:**

1. Provide Documentary Proof as supporting documents to the topics in the above table.
2. Clearly fill the column with the regard to the availability of facilities in-house (OR) outsourcing.
3. In case of outsourcing, mention the full address, details and their expertise shall be mentioned.

Signature:

Name of the authorized signatory for the company:

Date:

Place:

## 8.6. Eol Response Format Contents

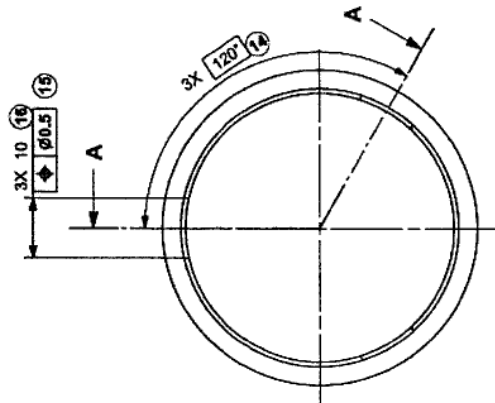
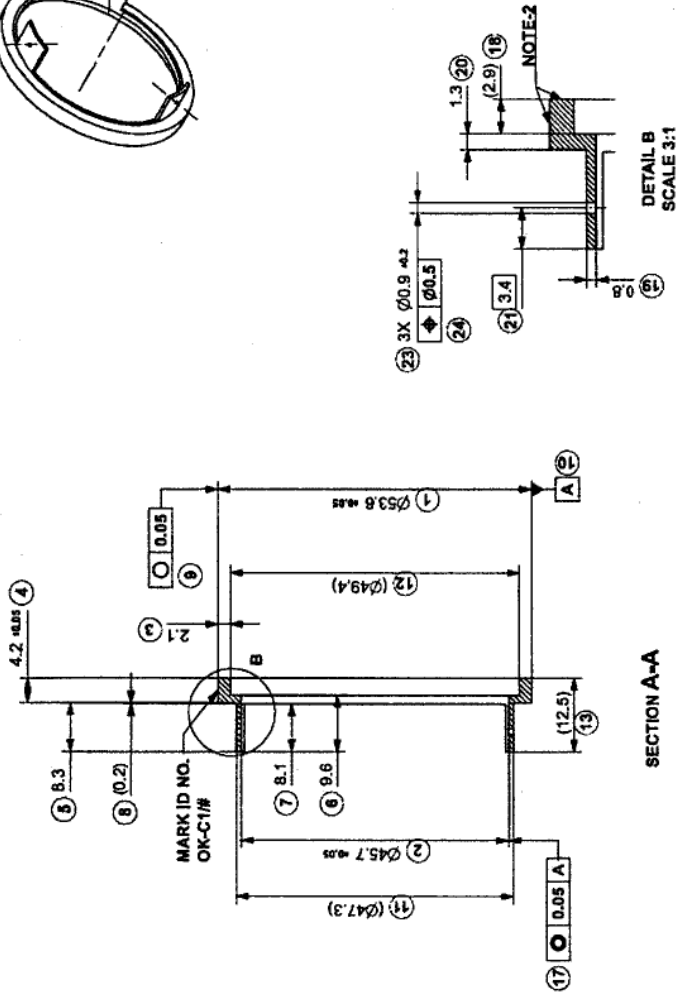
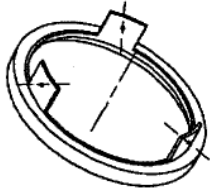
The proposal should be submitted as an Expression of Interest (Eol) as a collation of the following table of contents as below, in the enclosed format, clearly providing the details requested below with documentary proof/supporting documents as Annexure.

The vendor has to provide the information as per the formats as prescribed in chapter 8 Response Format. The overall compliance matrix as per section 8.3, 8.4, 8.5 should also be submitted as per the Eol proposal. All these inputs may be furnished in a neatly typed document in the said formats.

The proposal and all correspondence and documents shall be written in English.

Sl. No.	Contents	Page No
1	Covering Letter	
	<b>Part-1</b>	
2	General particulars of Vendor	
3	Mandatory Supporting Documents	
	<b>Part-2</b>	
4	Form A Compliance Matrix to be filled by Vendor	
5	Form B Compliance Matrix to be filled by Vendor	
6	Form C Compliance Matrix to be filled by Vendor	
<b>List of Annexure</b>		
	Annexure- A	Brief Profile of the vendor
	Annexure-B	Auditor certified statements
	Annexure-C	Copies of PO/Work order/Contract copy
	Annexure-D	Quality Certification copies (ISO 9001 : 2008 or equivalent)

# 8.7. Drawings for Trial Job



SECTION A-A

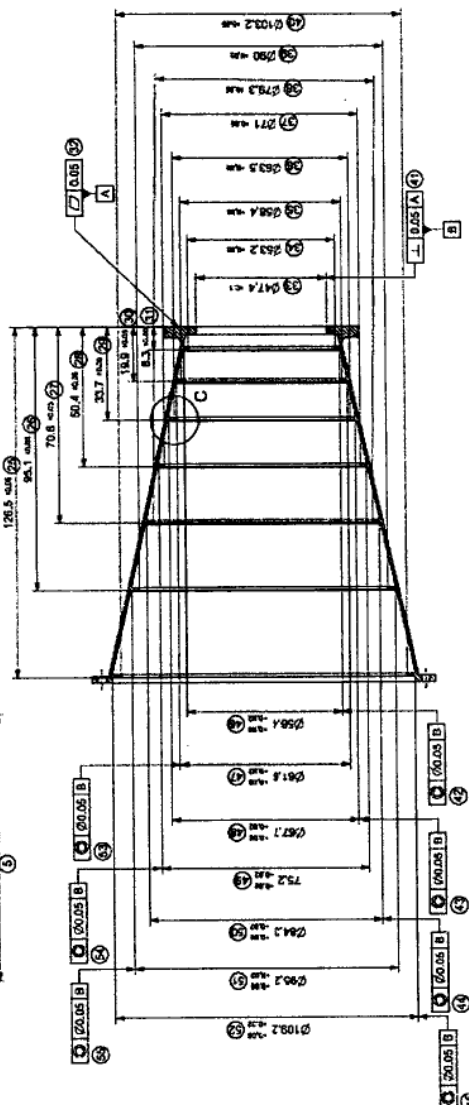
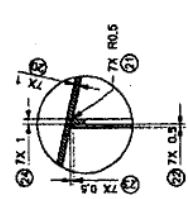
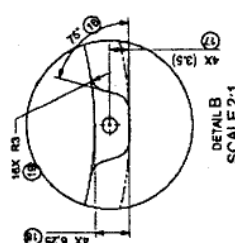
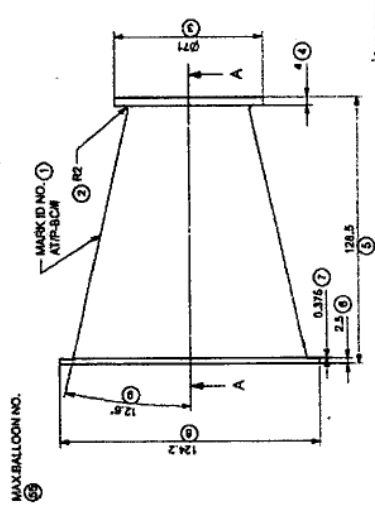
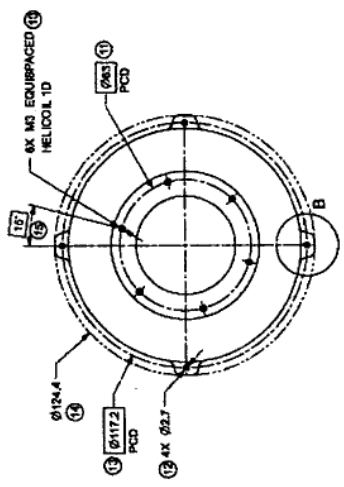
DETAIL B  
SCALE 3:1

Trial Job - 1  
Part Name: Cell  
Material: Ti6Al4V

DRAWING STANDARD: ISO-GPS					
GENERAL TOLERANCE AS PER ISO 2768-F UNLESS SPECIFIED OTHERWISE					
DIAMETERS AND LENGTHS	LENGTH OF SHORTER SIDE OF ANGLE				
OVER	LP1D	TOL.	OVER	LP1D	TOL.
0.5 - 6		±0.05			
6 - 30		±0.1	0 - 10		±1°00'
30 - 120		±0.15	10 - 50		±0°30'
120 - 400		±0.2	50 - 120		±0°20'
400 - 1000		±0.3	120 - 400		±0°10'
1000 - 2000		±0.5	OVER 400		±0°5'
2000 - 4000		±1.0			
4000 & ABOVE		±1.5			



REV. NO.	NOTES ON REVISION	ZONE	APPROVED
1	BASELINE DRAWING	N/A	



SECTION A-A

NOTE:  
 (1) FOR MISSING DATA AND OTHER DETAILS REFER CAD MODEL SUPPLIED IN IGES/STEP FORMAT  
 (2) FOR ALL HOLES (3) (20.3)

DRAWING STANDARD ISO-GPS GENERAL TOLERANCE AS PER ISO 2788-F UNLESS SPECIFIED OTHERWISE	
DIAMETERS AND LENGTHS	TOL.
OVER	UP TO
0.5 - 6	±0.05
6 - 30	±0.1
30 - 120	±0.15
120 - 400	±0.2
400 - 1000	±0.3
1000 - 2000	±0.5
2000 - 4000	±1.0
4000 & ABOVE	±1.5
LENGTH OF SQUARE SIDE OF ANGLE	TOL.
0 - 10	±0.05
10 - 50	±0.10
50 - 120	±0.15
120 - 400	±0.20
OVER 400	±0.5

Trial Job - 3  
 Part Name: Baffle cone  
 Material: AA6061-T6

