



Contract for works

pursuant to Section 2586 et seq. of Act No. 89/2012 Coll., the Civil Code, as amended (hereinafter the “**Civil Code**”)

I. THE PARTIES:

1. Client:

Fyzikální ústav AV ČR, v. v. i.

(Institute of Physics of the Czech Academy of Sciences, public research institution)

with its principal office at Praha 8, Na Slovance 2, PSČ 182 00

represented by: RNDr. Michael Prouza, Ph.D., the Director

Registered in the Registry of public research institutions kept by the Ministry of Education, Youth and Sports of the Czech Republic

Id. No.: 68378271

Tax Id. No.: CZ68378271

(hereinafter the “**Client**”)

and

2. Contractor:

OptiXs, s. r. o.

with its principal office at Křivoklátská 37, 199 00 Praha 9

represented by: Ing. Martin Klečka, CEO

Id. No. (if any): 02016770

Tax Id. No. (if any): CZ02016770

(Hereinafter the “**Contractor**”; the Client and the Contractor are hereinafter jointly referred to as the “**Parties**” and each of them individually as a “**Party**”).

enter, on the present day, month and year, into this Contract for works (hereinafter the “**Contract**”)

II. Fundamental Provisions:

- 2.1 The Client is a beneficiary of a subsidy granted by the Ministry of Education, Youth and Sports of the Czech Republic within the Operational Programme “Research, Development and Education”.
- 2.2 The Contractor has been awarded the public contract entitled “Coating of L4 periscope mirrors TP20_113” (hereinafter the “**Public Contract**”).

III. Subject of the Contract

- 3.1 Under this Contract the Contractor shall provide coating of six existing substrates M4, M4.5, M5, L4n M1, L4n M2 and L4n M1 spare (“**Existing Substrates**”) as specified in this Contract (especially in Annex 1 to this Contract) and deliver the coated substrates (“**Coated Substrates**”) back to the Client and the Client shall pay to the Contractor the Price, all under the terms and conditions specified in this Contract.
- 3.2 The Client shall deliver on its own cost and risk the Existing Substrates to the Contractor within 2 months from the effectiveness of this Contract.



- 3.3 The Contractor shall provide all needed assistance and advice regarding formal procedures related to transport of the Existing Substrates to its site.

IV. Risk of Loss and Ownership Title

The risk of loss or damage to the Existing Substrates to be coated shall pass to the Contractor upon overtaking them from a carrier designated by the Client at the Contractor's site.

The Client shall retain the title to the Substrates while being processed by the Contractor.

V. Price and Payment Terms

- 5.1 The total price for the subject matter of this Contract is 59 300 EUR excl. VAT (hereinafter the "Price").
- 5.2 The Price is exclusive of VAT payable in the EU. VAT shall be paid in accordance with applicable legal regulations.
- 5.3 The Price includes all costs related to the performance of the subject-matter of this Contract of which the Contractor knew or should have known including all design and manufacturing costs, packaging (where the package has not been already provided by the Client), any taxes applicable in the country of origin of the Contractor and any other direct or indirect costs needed to perform this Contract duly and in time (but excluding VAT payable in the EU). The Price for the subject-matter of this Contract is the maximum permissible price. The Price is independent of the development of prices (costs of the Contractor) and currency exchange rates.
- 5.4 The Price shall be paid based on tax documents – invoices, to the account of the Contractor designated in the invoice.

The Contractor is entitled to invoice the Price as follows:

- 30 % of the Price upon approval by the Client on the coating design (as defined in Art. 7.1.2. of Annex 1 hereto) and on related documentation and information;
- 70 % of the Price upon execution of the acceptance protocol for all Coated Substrates by the Parties (Art. 7.3 hereof).

Should any of the delivered Coated Substrates not be accepted but the Client decides to accept the remaining Coated Substrates, a proportionate share of this instalment shall be paid by the Client.

- 5.5 Invoices shall be payable within thirty (30) days from their delivery to the Client (hereinafter the "**Maturity Period**"). If the Contractor indicates any shorter maturity period in an invoice, such other period is deemed irrelevant and the period set out herein applies. Payment of the invoiced amount is considered executed on the date of its remitting to the Contractor's account. In conformity with the applicable tax regulations of the Czech Republic, the tax documents – invoices issued by the Contractor hereunder shall include particularly the following details:
- a) the business name/designation and registered office of the Client
 - b) the tax identification number of the Client
 - c) the business name/designation and registered office of the Contractor
 - d) the tax identification number of the Contractor
 - e) the registration number of the tax document
 - f) the scope and object of the taxable supply
 - g) the date of issue of the tax document
 - h) the date of the supply or the date of acceptance of the consideration, whichever is earlier, if it differs from the date of issue of the tax document
 - i) the price of the supply
 - j) a declaration that the invoiced performance is provided for the purposes of the "Advanced Research Using High Intensity Laser Produced Photons and Particles" project, reg. No. CZ.02.1.01/0.0/0.0/16_019/0000789 or any other project in accordance with instructions provided by the Client in advance



and must also be in conformity with any double taxation treaties applicable to this Contract.

- 5.6 Invoices shall be submitted to the Client only in the electronic form to the email address: efaktury@fzu.cz

VI. Production Deadline and Place of Delivery

- 6.1 The Contractor shall complete coating of the Existing Substrates so that the last Coated Substrate is ready (including all documentation needed for verification) for verification at the Contractor's site within 3 months from the receipt of all the Existing Substrates from the Client by the Contractor.
- 6.2 The place of delivery of the Coated Substrates shall be the ELI Beamlines facility, Za Radnicí 836, ZIP 252 41, Dolní Břežany, district Prague-west, the Czech Republic (hereinafter the "Place of Delivery").

VII. Production Phasing, Acceptance and Transport of the Substrates

7.1 Qualification of Design of the Substrates

The Contractor shall submit to the Client information and documentation required in Art. 7.1.2. of Annex 1 hereto for approval before executing the coating.

The Client shall provide a statement (approval or any comments) on the coating design (as defined in Art. 7.1.2. of Annex 1 hereto) and related documentation and information submitted by the Contractor within 10 business days from receiving them. Potential necessity of implementation of any comments of the Client does not postpone the production deadline stipulated hereby if the Client meets the 10-business-day deadline. Should the deadline for provision of the statement not be met by the Client, the production deadline shall extend accordingly.

7.2 Production and Verification

The Contractor shall carry out verification of the Coated Substrates at the Contractor's site in line with Art. 7.1.3. of Annex 1 hereto. If the Coated Substrates comply with all requirements stipulated herein and the results of the verification process are documented through documentation requested under this Contract, the Client shall approve the verification results with a verification protocol. The Client is entitled to take part personally in the verification process at its own costs.

7.3 Delivery and Acceptance of the Coated Substrates

The inspection of the Coated Substrates in terms of potential damage incurred during transport shall be carried out by the Client after delivery of the Coated Substrates to the Place of Delivery.

Upon delivery of the Coated Substrates to the Place of Delivery free of obvious transport damage including complete required documentation (including documentation needed for verification) the Client shall issue an acceptance protocol.

VIII. Defects of the Substrates and Warranty Claims

- 8.1 A Coated Substrate shall be deemed defective if it does not conform to the requirements stipulated herein. The Contractor shall be liable for (i) any defects in the Coated Substrates at the time of their acceptance in the Place of Delivery (non-conformity with requirements of this Contract or transport damage) and (ii) for defects that occur in the Coated Substrates during the entire warranty period (quality guarantee).

Defects Detected during Verification at the Contractor's Site

- 8.2 If any defects of the Coated Substrates are detected during verification process at the Contractor's site, the Contractor shall present a defect removal schedule under which the defects are to be removed with all reasonable expedition and promptly. The Client may (but is not obliged to) agree to such additional time for removing the defects. If the Contractor removes the defects within the agreed additional time, the additional time for defects removal shall not be taken into account in terms of meeting the production deadline (Art. 6.2 hereof).
- 8.3 The Client is also entitled based on its discretion to approve verification of the Coated Substrates despite defects in them without removing the defects if the Parties agree on an adequate price discount.



Defects Caused during Transport

- 8.4 If any defect is detected by inspection of the Coated Substrates in the Place of Delivery, the defect shall be documented and immediately reported to the Contractor. Articles 8.7 – 8.9. hereof apply on the defect removal. The Client is also entitled based on its discretion to accept the defective Coated Substrate as is in line with Art. 8.3 hereof.

Hidden defects

- 8.5 Acceptance of the Coated Substrates in the Place of Delivery does not prevent the Client from making a later claim for removal of a hidden defect (that was present in a Coated Substrate at the time of acceptance but could not have been detected during verification at the Contractor's place or by the inspection upon delivery or during the acceptance procedure due to the nature of the verification and inspection methods). In such a case, Art. 8.7 – 8.9. hereof apply.

Warranty (Quality Guarantee)

- 8.6 The Contractor provides the warranty of quality for each Coated Substrate for the period of 12 months from the date of acceptance of the Coated Substrate. The Client shall raise a warranty claim against the Contractor without undue delay after detecting a defect, but not later than on the last day of the warranty period, by means of a written notice sent to the Contractor's authorised representative for technical matters set out herein.
- 8.7 The Contractor shall carry out the defect removing works to which it is obliged under this Art. VIII. free of charge.
- 8.8 The Contractor undertakes to remove any defect within a deadline agreed with the Client. If the Parties do not reach an agreement, the Contractor shall remove the defect within two months from the receipt of the warranty claim.
- 8.9 The Parties shall execute a record on removal of the defect, in which they shall confirm that the defect has been removed.
- 8.10 The warranty shall not apply to defects caused by non-compliance with written rules of operation and maintenance of the Coated Substrates provided by the Contractor, manipulation errors or by normal wear and tear.

IX. Penalties, vis major circumstances and liability limitation

Penalties

- 9.1 If the Contractor is in delay with finalization of production of any of the Coated Substrates within the production deadline stipulated in Art. VI hereof, the Contractor shall pay to the Client a contractual penalty for delay in the amount of 0,05% of the Price (without VAT) per each delayed Substrate for every (even commenced) day of delay.
- 9.2 The total contractual penalty for delay with finalization of manufacturing of the Coated Substrates shall not exceed 5% of the Price (without VAT).
- 9.3 If the Contractor is in delay with the removal of a defect in case of hidden defects (Art. 8.5) or a warranty claim (Art. 8.6), the Contractor shall pay to the Client a contractual penalty for delay in the amount of 0,01 % of the Price (without VAT) for every (even commenced) day of delay.
- 9.4 The total contractual penalties for delay with removal of defects under this Contract shall not exceed 2% of the Price (without VAT).
- 9.5 Contractual penalties stipulated in Art. 9.1 and 9.3 above do not apply if the delay on the side of the Contractor is caused by documented impacts of the covid_19 pandemic on the Contractor that could not have been reasonably foreseen and which can be overcome only with unreasonable additional effort or costs. Every such impact must be documented by the Contractor, mainly the cause, when it occurred and how long it lasted.



- 9.6 The Contractor shall pay contractual penalties within fifteen (15) days from the day, on which the Client enumerated its claim. The payment by the Contractor of contractual penalties for delay to which the Client is entitled under this Art. IX hereof shall be the sole indemnification due by the Contractor to the Client because of such delay. The Client has the right to terminate the present Contract for default of the Contractor in application of the Art. 10.2 iii) hereof.
- 9.7 The Client is entitled to unilaterally set off claims arising from the contractual penalties against the claim of the Contractor for the payment of the Price (or any part of it). The Client is not obliged to take into account objections of the Contractor raised against the enumeration of the contractual penalties should the Contractor fail to document, within 30 days from receipt of the notice of penalties, that the application of penalties is groundless or that it is not liable for the delays.

Vis major circumstances

- 9.8 Circumstances constituting vis major shall be deemed to have been constituted by such circumstances / obstacles which arose independently of the will of the obliged Party, and which prevent fulfilment of that Party's obligation, provided that it could not be reasonably expected that the obliged Party could overcome or avert this obstacle or its consequences, and furthermore that such Party could foresee such obstacle when it entered into the respective covenants. Vis major shall not be constituted by obstacles that arose only after the obliged Party was in default with fulfilment of its obligations, or which arose in connection with its economic situation.

In addition and for the sake of clarity, the Parties agree that any particular effects or impacts on the Contractor or his performance under this Contract of the Covid-19 epidemic that meet the conditions set out above in this Art. 9.8 will be considered as vis major cases despite the fact of the existence of the epidemic outbreak on the date of the signature of this Contract.

- 9.9 Should a situation occur, which a Party could reasonably consider to constitute vis major, and which could affect fulfilment of its obligations hereunder, such Party shall as soon as possible notify the other Party and attempt to continue in its performance hereunder in a reasonable degree. Simultaneously, such Party shall inform the other of any and all its proposals, including alternative modes of performance, however, without consent of the other Party, it shall not proceed to effect such alternative performance.
- 9.10 If a situation constituting vis major occurs, the deadlines imposed hereunder shall be extended by the period of the documented duration of the said vis major. The obliged Party shall properly document to the other Party the start and the finish of the vis major period.

X. Termination of the Contract

- 10.1 This Contract may be terminated by withdrawal from the Contract on the grounds stipulated by law or in the Contract.
- 10.2 The Client is entitled to withdraw from the Contract without any penalty from Contractor in any of the following cases:
- i) material breach of the Contract is committed by the Contractor and the Contractor has not remedied such breach within 1 month (or another longer period agreed to by the Client if to remedy the breach in 1 month is impossible for reasons documented by the Contractor) following the sending of a written notice by the Client;
 - ii) insolvency proceedings are initiated against the Contractor's assets;
 - iii) the Contractor is in breach of the production deadline stipulated in Art. 6.1 hereof by more than 3 months.
- 10.3 The Contractor is entitled to withdraw from the Contract without any penalty from Client in the event of material breach of the Contract by the Client.



- 10.4 Either Party is entitled to withdraw from the Contract without any penalty in case of a vis major event (Art. 9.8 hereof) that lasts more than six months.

XI. Representatives, Notices

- 11.1 The Contractor has appointed the following authorised representative for communication with the Client in technical matters:

Ing. Martin Klečka

E-mail: klecka@optixs.cz, tel.: +420 607 014 278

- 11.2 The Client has appointed the following authorised representative for communication with the Contractor in technical matters:

Dr. Daniel Kramer, e-mail: Daniel.Kramer@eli-beams.eu, tel.: +420 266 051 423.

The appointed representative of the Client is also authorized to approve technical documents (such as Qualification of Design) under this Contract, acceptance protocols and/or other protocols foreseen by this Contract.

- 11.3 Unless this Contract stipulates otherwise, any and all notices that are to be or may be made between the Parties under this Contract must be made in writing and delivered to the other Party by an internationally renowned courier service (Federal Express, DHL, etc.), in person (with written confirmation of acceptance) or by registered post.

XII. Choice of Law and disputes resolution

- 12.1 This Contract and all the legal relationships arising out of it shall be governed by the laws of the Czech Republic.
- 12.2 The Parties acknowledge and note that the provisions of the Czech Civil Code shall apply in matters that are not explicitly regulated by this Contract.
- 12.3 Any and all disputes arising out of this Contract or the legal relationships connected with the Contract shall be resolved by the Czech courts.

XIII. Final provisions

- 13.1 The Client hereby declares that it is not with respect to the subject hereof an entrepreneur and that the subject of the Contract doesn't fall within the scope of any of its entrepreneurial activities.
- 13.2 The Contract represents the entire and comprehensive agreement between the Client and the Contractor.
- 13.3 In the event that any of the provisions of this Contract shall later be shown or determined to be invalid, ineffective or unenforceable, then such invalidity, ineffectiveness or unenforceability shall not cause invalidity, ineffectiveness or unenforceability of the Contract as a whole. In such event the Parties undertake without undue delay to replace after mutual agreement such invalid, ineffective or unenforceable provision of the Contract by a new provision, that in the extent permitted by the laws and regulations of the Czech Republic, relates as closely as possible to the intentions of the Parties to the Contract at the time of creation hereof.
- 13.4 This Contract shall be valid on the date of the signature of both Parties and effective on the day, on which it was published in the register of contracts within the meaning of the Act no. 340/2015 Coll., on the Register of Contracts.
- 13.5 This Contract may be changed or supplemented solely by means of numbered supplements in writing, furnished with the details of time and place and signed by duly authorised representatives of the Parties.
- 13.6 The following Annex forms an integral part of the Contract:
Annex No. 1: Requirements Specification Document (RSD)
- 13.7 The Parties, manifesting their consent with its entire contents, affirm the Contract with their signature.



EUROPEAN UNION
European Structural and Investing Funds
Operational Programme Research,
Development and Education



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

For: Fyzikální ústav AV ČR, v. v. i.

For: OptiXs, s. r. o.

Name: RNDr. Michael Prouza, Ph.D.
Title: Director

Name: Ing. Martin Klečka
Title: CEO



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European Structural and Investing Funds
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Development and Education



MINISTRY OF EDUCATION,
YOUTH AND SPORTS

Annex No. 1 Requirements Specification Document (RSD)

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[RSD product category C]

Coating of L4 periscope mirrors

TP20_113



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	Position	Name
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1. Introduction

1.1. Purpose

This Requirements Specification Document (RSD) lists the technical requirements and constraints on products applying in RA1 program of ELI project. This leads to the identification of interfaces with the ELI science-based technology. This RSD also acts as the parent document for the technical requirements that need to be addressed in lower level design description documents (see chapter 1.4).

1.2. Scope

This RSD contains functional, performance and design, cleaning, packaging and delivery, safety and quality requirements for the following products (tender number: TP20_113): **Coating of L4 periscope mirrors** within RA1 / L4 and L4n.

In total, **6 substrates provided by CA** shall be **coated** within this contract.

In addition to the requirements specified in this RSD, the CIS mirrors substrates shall comply completely with the requirements given in the Reference documents (see **RD-01**; chapter 1.4).

The products are integral parts of the L4 laser system and will be used in the L4c Laser halls at the ELI Beamlines facility. These products are registered in the PBS software under the following PBS codes:

RA1.L4.CMP1.CIS.O.FM.6; RA1.L4.CMP1.CIS.O.FM.7; RA1.L4.CMP1.CIS.O.FM.14;
RA1.L4BT.L4N.BO.FM.10; RA1.L4BT.L4N.BO.FM.11; RA1.L4BT.L4N.BO.FM.12.

1.3. Terms, Definitions and Abbreviations

For the purpose of this document, the following abbreviations apply:

Abbreviation	Meaning
CA	Contracting Authority (Institute of Physics AV CR, v. v. i.)
CIS	Compressor Imaging System
ELI	Extreme Light Infrastructure
GDD	Group Delay Dispersion
I	Inspection (as a verification method)
LIDT	Laser Induced Damage Threshold
NCR	Nonconformity Report
PET-G	Polyethylene terephthalate glycol
QR	Quality report
R	Review (as a verification method)
RA1	Research activity 1
RD	Reference Documents
RMS	Root Mean Square

Abbreviation	Meaning
RSD	Requirements Specification Document
T	Test (as a verification method)
VCD	Verification Control Document

1.4. Reference documents

Number of document	Title of Document/ File
RD-01	00280679 - CIS M4 periscope coated mirror type
	00280680 - L4n M1 coated periscope mirror type

Detailed list of drawings included within **RD-01**:

Drawing Name	File Name	Sheets	File format
M4 periscope mirror	M4_1c_rev02	1	PDF
L4n M1 periscope mirror	L4nM1_1c_rev02	1	PDF

Mirror name	Specification drawing	Substrate Serial number
M4	M4_1c_rev02	18061432
M4.5	M4_1c_rev02	18061433
M5	M4_1c_rev02	18061434
L4n M1	L4nM1_1c_rev02	20030360
L4n M2	L4nM1_1c_rev02	20030361
L4n M1 spare	L4nM1_1c_rev02	20030362

1.5. References to standards

If this document includes references to standards or standardized/ standardizing technical documents the CA allows/permits also another equal solution to be offered. If a supplier offers another equal solution the CA shall not reject its bid, once the supplier by appropriate means in the bid proves that the offered supplies, services or works meet in an equivalent manner the requirements including references to standards or technical documents.

2. Functional, Performance and Design requirements

Functional, performance and design requirements for the **Coating of L4 periscope mirrors** are summarized within reference drawings **RD-01** (see chapter 1.4).

2.1. General requirements

REQ-031149/A

The Supplier shall provide the coating design (as defined in par. 7.1.2 of this RSD) for the **Coating of L4 periscope mirrors** in conformity with reference drawings **RD-01** (see chapter 1.4) for the review as agreed with the CA (see REQ-031165/A).

Verification method: R - review

REQ-031150/A

The parameters of the **M4, M4.5 and M5** coated mirrors shall correspond to the requirements given in the reference drawing **RD-01** (M4_1c_rev01; see chapter 1.4).

Verification method: R - review, T - test (QRs - I, II, III, IV; see REQ-031157/A)

REQ-031151/A

The parameters of the **L4n M1 and M2 type** coated mirrors shall correspond to the requirements given in the reference drawing **RD-01** (L4nM1_1c_rev00; see chapter 1.4).

Verification method: R - review, T - test (QRs - I, II, III, IV; see REQ-031157/A)

3. Environmental requirements

REQ-031152/A

The Supplier and the CA shall agree on the cleaning methods to clean coated mirrors without decreasing the coating properties and to avoid contamination of clean space.

NOTE: The cleaning methods may use high gas flow (dry air) and specialized chemical cleaning liquids (i.e. detergent, isopropyl alcohol, deionized water).

Verification method: R – review

4. Cleaning, Packaging and Delivery requirements

4.1. General requirements

REQ-031153/A

The transportation to the final destination of the coated CIS mirrors shall be conducted by the Supplier within time stipulated in the contract.

NOTE: The Supplier is fully responsible for the delivery of undamaged mirrors.

NOTE: The bid price shall include transportation costs, if applicable.

Verification method: I – inspection

REQ-031154/A

All the coated mirrors shall be cleaned and packaged in a clean environment of class 6 according to ČSN EN ISO 14644 (or equivalent, e.g. EN ISO 14644) or cleaner.

NOTE: Regarding the referred to standard/s or technical documents the CA allows/permits also another equal solution to be offered.

Verification method: R - review, I - inspection

REQ-031155/A

Each coated mirror shall be placed in a PET-G container supplied together with the CIS mirrors substrates. The Supplier shall clean the containers to assure compatibility with class 6 clean room. The PET-G containers shall be placed in appropriate packaging with sufficient padding suitable for transport. The innermost wrapping has to be compatible with class 6 clean room handling.

Verification method: R - review, I - inspection

5. Safety Requirements

REQ-031156/A

The Supplier shall supply a Declaration of Conformity or any other equivalent document legally recognized and accepted in the Czech Republic for each product type if the appropriate legislation determines the Supplier's obligation to have a Declaration of Conformity (or the equivalent document) for the purposes of a Device sale in the Czech Republic to fulfil the requirements of 2001/95/EC directive or applicable Czech law.

Verification method: I – inspection

6. Quality requirements

6.1. Quality Reports (QRs)

REQ-031157/A

The Supplier shall perform following tests of product quality and provide corresponding **specific quality reports (I - IV)** listed in chapter 2.1:

- I. S-D report listing the main defects;
- II. Reflectivity curve at s and p polarization;
- III. LIDT report unless data are provided for a very similar coating type.
- IV. GDD curve measurement; (can be measured by CA if necessary)

Verification method: R - review, I - inspection

6.2. Witness samples

REQ-031158/A

The Supplier shall provide at least one 2" witness sample for each coating run. The material shall be UV grade fused silica.

Verification method: I - inspection

6.3. Documentation and data control

REQ-031159/A

For each coated substrate, the Supplier shall provide a Declaration of Conformity (or the equivalent document) with technical requirements defined by the product RSD and ensure completeness of the products.

Verification method: I - inspection

REQ-031161/A

The Supplier shall use the following data formats:

- *.dat (Zygo binary file format for interferograms)
- *.JPG, *.PDF/A, *.HTML
- CAD 2D: *.dwg
- CAD 3D: *.stp; *.ste; *.step or other 3D CAD formats agreed with the CA
- text processors *.doc, *.docx, OpenDocument Format
- spreadsheet processors *.xls, *.xlsx, OpenDocument Format
- presentations *.ppt, *.pptx; OpenDocument Format

REQ-031162/A

The Supplier shall provide the following type of documents:

- coating design (as defined in par. 7.1.2 of this RSD);
- Printable format for text documents.

6.4. Nonconformity Control System

REQ-031163/A

The Supplier shall establish and maintain a nonconformity control system compatible with ČSN EN ISO 9001 (or equivalent, e.g. EN ISO 9001).

7. Verification requirements for the Supplier

The verification process will be performed by the Supplier to demonstrate that the coated mirrors substrates meet the specified requirements of the CA.

7.1. Phasing of the delivery

This chapter is intended to briefly summarize basic milestones of the Contract delivery. These milestones represent gates (checkpoints) where the quality of the delivery is to be evaluated.

Delivery shall not proceed past these gates unless their satisfactory accomplishment is approved by the CA.

Delivery lifecycle shall contain at least the following phases (*quality gates*):

- **Provision of quality reports for the substrates by the CA**
- **Qualification of Design**
- **Manufacturing**
- **Acceptance**

7.1.1. Provision of quality reports for the substrates

The CA will provide the Supplier with the following quality reports for each substrate if requested:

- Interferometric report at normal incidence
- S-D report
- Substrate material report

7.1.2. Qualification of Design

Summary of what has to be provided by the Supplier in terms of information and documentation (QRs and coating design) before starting the manufacturing. The main goal is to approve by the CA the Theoretical spectral performances of the coated substrates calculated by the Supplier (hereinafter abbreviated as “**coating design**”).

The output of this phase is **Qualified Design**.

REQ-031164/A

Before completion of the Qualification Design phase the Supplier shall provide following information that shall be agreed by the CA:

- structure and content of the quality reports (see chapter 5.1);
- theoretical coating reflectivity and GDD curves

Verification method: R - review

REQ-031165/A

Before completion of the Qualified Design phase the Supplier and the CA shall agree on:

- final coating design of the coated parts provided by the Supplier (see REQ-031149/A);
- detailed procedures related to the testing during Manufacturing phase;
- common nonconformity control system (see REQ-031163/A).

Verification method: R - review

7.1.3. Manufacturing

The goal is to demonstrate that the manufactured products meet the specified technical requirements (RSD) of the CA.

This quality gate concerns primarily:

- **Testing at the Supplier's site** (factory testing);
- **Cleaning and Packaging**

The output of this phase is the **Verified Final Product**.

REQ-031166/A

The results of the Manufacturing phase of verification shall be recorded by the Supplier in corresponding QRs (see REQ-031157/A) and provided to the CA for approval.

Verification method: R – review

7.1.4. Acceptance

The Acceptance phase shall demonstrate the following:

- Final products have been successfully verified and this process has been documented in an appropriate way through QRs (see REQ-031157/A);
- All detected nonconformities have been solved in accordance with REQ-031163/A;
- Final products are free of fabrication errors.

In case of successful acceptance phase, the CA will provide to the Supplier signed acceptance protocol. In case of unsuccessful acceptance stage the CA will provide to the Supplier Nonconformity Report (NCR) and process in accordance with REQ-031163/A shall be applied.

REQ-031167/A

Verification process shall be carried out by the Supplier and it is successfully completed when the final products comply with all specifications and the results of this process are documented in an appropriate way through QRs (see REQ-031157/A).

NOTE: Acceptance will be carried out by the CA (or if required, representatives/contractors appointed by the CA) upon delivery of the CIS mirrors substrates not obviously damaged during transport.