**Innovation of Diffractive Optically Variable Image Device for Electronic ID Cards (eID)**

Specification of quality inspection

ANNEX 4 to the Framework agreement for supply of security elements for Czech electronic ID cards

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# General description

The technical specification of the security element for the Czech ID card is included in the Annex\_1 of the Framework agreement. The security element is placed on 100 micron polycarbonate sheets, with 15 positions on one PC sheet 295x330 mm. The position tolerance of the security element is ± 1 mm in x and y axis (tolerance of the center of the DOVID to the right registration mark, closer to the reference sheet corner).

Deliveries of the foils with security element cannot start before the approval of the design, the MasterHologram and Pilot sheets by the Client.

## Nominal, Limit and Quality Samples

For the purpose of this Annex\_4 the terms “Nominal Sample”, “Limit Sample” and “Quality Sample” shall have the following meaning:

Nominal, Limit and Quality Sample are laminated samples to do quality tests. The Contractor will provide to Client sheets for preparing Nominal and Limit Samples. During the First Delivery both Contracting parties shall jointly approve sheet samples, Nominal and Limit samples for a Defect catalogue which will be used as the basis for evaluation of possible claim. These samples will be used as a standard to compare the quality of the delivered Sheets.

“Nominal Sample(s)” shall mean the nominal quality reference.

“Limit Sample(s)” shall mean the quality reference which is agreed upon by the Parties as still acceptable.

“Quality Sample(s)” shall mean samples which are produced from each production batch by the Client.

## Defects and defects catalogue

If any new defect arises during the Sheet production and application, the Contractor has to notify the Client without any delay. The Client than will evaluate if the new defect will be added in defect catalogue. If a new quality limit will be approved, the defect catalogue has to be supplemented by the new Limit samples. The validity date for the new quality limit must be mutually agreed by the Parties.

# Test procedures

Before the first delivery of sheets and production of Nominal and Limit samples the Client requires from the Contractor a proof of performance of the quality test – at least: the resistance to climatic conditions ISO 24789-2 and the resistance to light aging ISO/IEC 7810:2019, ISO 105-B02.

Before each delivery of the Sheets, the Contractor has to perform the output control in minimum scope of parameters included in the Certificate of Conformance which is described below in Chapter 4.

After each delivery the Client will perform the standard AQL quality inspection and will make a lamination test (will prepare Quality Samples), which will evaluate.

During the first delivery, the Client will produce test cards, which will be used for the quality tests according to ISO/IEC 7810 and ISO/IEC 10 373-1, in the accredited laboratory to get a certificate of quality for the eID cards.

# Acceptance of deliveries

## Outgoing Inspection Contractor

The Contractor will provide the quality control for each production batch and results will be forwarded to the Clients in form of a Certificate of Conformance. The Certificate of Conformance will be delivered to the Client with each delivery.

## Receiving Inspection Client

Client shall ensure that the Control Numbers and labels attached to packages remain unaltered and undamaged.

The delivered Sheets shall be subject of receiving inspection tests of the Client. The sheets for receiving inspection are performed by the ISO 2859-1, the single sampling plans for normal inspection, general inspection level II. The sheets are controlled according to parameters specified in the Certificate of Conformance. The result of each inspection test shall be supplied to Contractor on request.

## Procedure for defects

If the actual results during the Client quality control or production deviate from the target, the Client will immediately inform the Contractor without any delay. In such a case, information regarding type of defect, the control number (label with detailed batch number) and photos of the defects will be electronically sent to Contractor.

The Client shall send back defective Sheets, as well as laminated Quality Samples on request by Contractor. The material will tread according the security rules and limited people do have access to the material from the Client.

Control Numbers, subject to a notice of defect, will not be released for production, but will be stored separately until the Complaint is closed.

## Client in-process inspection

Client will carry out at regular intervals in-process inspections during production. In case of any deviation of the actual values from the target values will be the Client production parameters examined and adapted. In case such deviation continues the material will be removed from the machine and the procedure according the Chapter 3.3 will be performed.

# Attachment No. 1 – Certificate of Conformance, AQL report

**Attachment No. 1 to the Annex 4**

**Certificate of Conformance**

Date …………. Our reference …………

Your contact …………. Direct tel. …………

E-Mail …………. Direct fax …………

E-Mail to: ……………………………………………….

Project:

Batch number:

Batch size:

Inspection level: Normal test method, test level II

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | |  |  |  |  |  | | |  | | | |
| **Defect classification** | **Defect description/Test method** | **AQL** | | **Limit values** | | | | | | **Test results** | | |  | |
| Critical | Amount of patches per Sheet | **0.025** | | 15 ± 0 pcs | | | | | |  | | |  | |
| Main | Negative Flaking | **0.65** | | ≤ 0.1 mm | | | | | |  | | |  | |
| Positive Flaking | ≥ 0.2 mm | | | | | |  | | |  | |
| Dimension Product | According to Technical drawing | | | | | |  | | |  |
| Application Tolerances | ± 1 mm | | | | | |  | | |  |
| Lamination Test | Limit sample | | | | | |  | | |  |
| Contamination | Max 1 loose particle ≤ 0.1 mm2 each sheet | | | | | |  | | |  |
| Optical Defects | Single defects ≤ 0.1 mm2 | | | | | |  | | |  |
| \*Control of a polycarbonate sheet with an applied diffractive element according the ISO 2859-1, acceptance plan AQL for each delivery control. | | | | | | | | | | | | | | |
| **Note:** | |  | | | |  |
| **Acceptance:** | |  |
|  |  |  |  | |  |  |  |  |  | | |
| **Controlled by:** | | Name | | |  | |  | Signature |  | | |