Electronic Seal for Containers
Circular No. 36/2017-Customs

F. No: 450/08/2015-Cus.IV
Government of India
Ministry of Finance
Department of Revenue
(Central Board of Excise and Customs)

Room No.227-B, North Block,
New Delhi, 28th August, 2017

To,

All Principal Chief Commissioner/Chief Commissioner of Customs & Central Excise
All Principal Commissioner/Commissioner of Customs & Central Excise
All Principal Chief Commissioner/Chief Commissioner of Customs/Customs (Preventive) All
Principal Commissioner/Commissioner of Customs / Customs (Preventive)

Subject: Implementing Electronic Sealing for Containers by exporters under self-sealing
procedure prescribed vide circular 26/2017-Customs dated 1st July 2017-reg.

In continuation of the Board circular 26/2017-Customs dated 1.7.2017 regarding self-sealing
of containers by exporters using electronic seals, the Board has approved the following procedure
which shall be adhered to by exporters opting for self-sealing.
Based on the notification (Circular No. 36/2017- Customs) i-TEK has developed the 4r Seal Web Portal.

The 4r’s signify Read, Record, Report, Real-Time.

The 4r Seal web portal will have functionality as follows:

- Online KYC of Exporter.
- Online ordering of seal.
- Association of self sealing data by exporter using internet.
- Bulk association using MS Excel file upload facility.
- Activity / Status Dashboard for Exporter.
- Online support, help desk and FAQ.
- Report for Exporter and Customs.

The registered exporters will get login credentials for access to the 4r Seal Web Portal.

i-TEK will provide UHF Reader-Scanner to Custom department of various ports where Exporters will ship the containers with i-TEK seal.
Process Flow

1. Seal Order Request
2. Seal Delivery
3. Self Sealing Data association (in 4r Seal web portal from i-TEK)
4. Seal verification

i-TEK

Exporter

Customs
(using i-TEK UHF Reader-Scanner)

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1 Seal Request from Exporter

➢ i-TEK has developed web portal by the name of “4r Seal”.
➢ Registered exporters would login on 4r Seal web portal to place order for seals.
➢ New exporters needs to register with IEC number and required to go through KYC process to get login credentials. Registration and KYC are one time processes.
➢ Exporters would fill-up required details (Quantity etc.) and place the order.

4r Seal Web Portal

Click below link for:
Container Seal order request
Seal Delivery to Exporter

- Received order would be confirmed to exporter.
- i-TEK would do thorough testing & confirm all Seals would be in good condition before dispatch.
- i-TEK would associate all seal serial numbers to exporter on 4r Seal portal before dispatch.
- Seals would be shipped to exporter.
- i-TEK assures 100% working seals. Defective seals if any would be replaced free of cost.
Self Sealing Data Association

- Exporter would open 4r Seal Web Portal and login to fill-up following information related to self sealing data association:
  - IEC No. (would come automatically after login)
  - Shipping bill No.
  - Shipping Bill Date
  - e-seal number (validation for valid seal number)
  - Date of sealing
  - Time of sealing
  - Destination Customs station
  - Container No.
  - Trailer-Truck Number

- This self sealing data association would be stored on 4r Seal Portal.

- Alternatively exporter can bulk upload self sealing data from MS Excel using import utility on 4r Seal Web Portal.

- Best practice is to attach seal to the container first and then enter the self sealing data for the association on 4r Web Portal.
Sealed containers would reach parking plaza or authorized location or verification station at Port.

Customs would do verification of seal using UHF Reader-Scanner.

Upon reading seal RFID tag, all information would be fetched from 4r Seal web portal through Wi-Fi / GPRS interface.

Customs officer would verify seal details displayed on UHF Reader-Scanners.

Verified Seal date-time would be updated to 4r Seal portal.

i-TEK would give formal training to Customs officers.

i-TEK would equip Customs officers with UHF Reader-Scanner.
Sample Screenshot of UHF Reader-Scanner Used by Customs

Before Seal Read

RFID Seal Details
- IEC
- Shipping Bill No
- Shipping Bill Date
- e-Seal No
- Date of Sealing
- Time of Sealing
- Destination Customs Station
- Container No
- Trailer-Truck No

Read RFID Seal

Clear
Save

After Seal Read

RFID Seal Details
- IEC: 3101001765
- Shipping Bill No: 1075234
- Shipping Bill Date: 28-Aug-2017
- e-Seal No: iTEK000000001
- Date of Sealing: 27-Aug-2017
- Time of Sealing: 15:35 hrs
- Destination Customs Station: Port
- Container No: PCIU3948627
- Trailer-Truck No: MH02BA3468

Clear
Save
Stop
i-TEK Seal - Technical Specifications

**Electrical Characteristics**
- Confirms to ISO 17712 : 2013 (H)
- **Air Interface Protocol**: ISO/IEC 18000-6C, EPC Class 1 Gen 2
- **Chip Used**:
  - Alien Higgs 4
  - Unique TID : 96 bit
  - EPC : 128 bit
  - User Memory :128 bit
  - Data retention of 50 years
  - Write endurance 100,000 cycles
- **Operating Frequency**: 860-960MHz
- **Operating Mode**: Passive (Battery-less transponder)

**General Characteristics**
- **Ingress Protection**: IP66
- **Operating Temperature**: -30°C to +80°C
- **Storage Temperature**: -30°C to +80°C

**Mechanical Characteristics**

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**Bolt**

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<td>Material</td>
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**Lock**

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**Attachment Method**

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Salient Features

**Features for Exporter:**
- Tamperproof RFID Seal Tag.
- Secured login based authentication for Exporter.
- User friendly and Bulk data upload using MS Excel.
- Inhouse sealing which avoid time and documentation work.
- Data being online, it is secure and preserved.
- Zero Maintenance.
- Speed up logistic processes.
- Traceability of seal read by Customs at Port.
- Reports are available in one click with secure authentication login.
- Customized reports.

**Features for Customs:**
- RFID seal activates only upon locking.
- RFID seal data cannot be read before attachment to container to avoid any kind of security breach.
- RFID seal data can’t read after seal is tampered with or damaged.
- Significant increase in inspection rate with accuracy.
- Minimize container seal tampering and thefts.
- Secured data communication and validation using API (Application Programming Interface).
- UHF Reader-Scanners device can be supplied considering the customs requirements.
- Works over Wi-Fi or GPRS interface.
- Data being online, it is secure and preserved.
- On site support & tanning for handholding hardware & software.
- Reports are available in one click with secure authentication login.
- Customized reports.
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Thank You...!

THE RFID SYSTEM INTEGRATOR