

Test Pieces for X-Ray Foreign Objects Detector Operational Instruction

Ref. #: JIMA-D026-RF:2016

1. General

This instruction describes key points and warnings in using Test Piece for X-ray Detector of Foreign Objects (Hereafter called "Test Piece"). The operator must read this instruction prior to start using.

2. Purpose

These Test Pieces are prepared to maintain and calibrate the detectability of X-Ray Foreign Objects Detector.

- Test Piece can enable you to check sensitivity (detectability) periodically under your own standard for quality assurance.

3. Operational environment

Must be used within following range of temperature and humidity.

- Temperature: -10 to +60 degree C, Humidity: Less than 85%

4. Storage Environment

Must be stored within following range of temperature and humidity.

- Temperature: -10 to +60 degree C, Humidity: Less than 85%
- Direct sunshining and Ultra-Violet may cause damage. Must be stored under dark area.

5. Note

- Before use, Test Piece must be checked damage, crack, delamination, loss of object(s).
If any damage is found, do not use it immediately, but replace to new one.
- Do not fold or curve, otherwise Test Piece may get delamination and objects may be taken away.
- Do not place Test Piece directly onto foods, water, oil and chemicals. Those materials will cause delamination of the package.
(In such cases, please put Test Piece into a sealed plastic bag for food in junction with sanitary consideration.)
- If Test Piece are used or stored out of above recommended Operation environment or Storage environment, it may be damaged or worn.
- Test Piece must be sterilized before every use and periodically.
- When Test Pieces are disposed, please follow Law for Industrial Waste or local rules appropriately.

6. Operation

- X-ray system must be calibrated with Test Piece at certain timing such as when the system is going to be used after no use for long time, after certain hours, at the start of operation, at the end of operation, at change of production line or change of specimen and etc.
- Test Piece must be checked its damage before use.
- The calibration must be done under the same condition as actual inspection for environment temperature, humidity and object temperature.
- Depend on each test case, it may cause difference in sensitivity and result by positioning and direction of Test Piece.
*** Detectability will be affected by following parameters. So, calibration must be done repeatedly by changing those parameters to meet with actual condition.**
*** Test parameters, selection of materials of Test Piece, positioning of Test Piece and test procedure must be considered carefully and established before starting use.**
 - Position of Test Piece in specimen (X, Y and Z position).
 - Direction of Test Piece to be placed if the shape is not round ball.
 - Material of the Test Piece
 - Size (Diameter and Length) of Test Piece
 - Distance between X-Ray source and Test Piece, and between Test Piece and the detector.
 - Speed of belt conveyor
 - Set up condition of X-Ray system (Voltage, Current, time of exposure and etc.)
 - Must use same materials as foreign objects.

*** Details and actual usage of Test Piece must be advised by the manufacturer of the X-ray system.**

*** Test Pieces are consumption material. They must be replaced periodically or if necessary or if damaged.**



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