

## TEST REPORT

1. **Report Number** KR16-YYP0095-A
2. **Applicant**
  - Name Hanwha Techwin Co., Ltd
  - Address 1204, Changwon-daero, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
  - Date of Receipt September 21, 2016
3. **Manufacturer**
  - Name Hanwha Techwin Co., Ltd
  - Address 1204, Changwon-daero, Seongsan-gu, Changwon-si, Gyeongsangnam-do, Korea
4. **Use of Report** For Quality management
5. **Test item description**
  - Product Name 2M 32x NW Explosion-proof Fixed Camera
  - Model Name TNO-6320E
6. **Test method used** IEC 62262: 2002
7. **Date of Test** September 27, 2016
8. **Environment**
  - Temperature (15~35) °C
  - Relative Humidity (25~75) % R.H
  - Air pressure (86~106) kPa
9. **Test Results** No abnormal was found

※ This test results apply only to the test sample supplied by applicant and do not guarantee the whole product quality. This test report shall not be reproduced except in full, without the written approval by the KCTL Inc.

Affirmation	Tested by	Technical Manager
	Name : Young min, Jang (Signature)	Name : Do hong, Choi (Signature)

September. 29. 2016

**KCTL INC.**

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## 1. Test Laboratory

### 1.1 General

Name of Test Laboratory	KCTL INC.
Address	52-20, Sinjeong-ro 41 beon-gil, Giheung-gu, Yongin-si, Gyeonggi-do 446-599, Korea
TEL	82 31-326-6700
FAX	82 505-299-8311
Home page	www.kctl.co.kr

### 1.2 Certificate of Designated Testing Laboratory

Mark.	Registration No.
NRRA	KR0040
KOLAS	No. KT231
IEC(CB-Scheme)	TL512
TUV-SUD	CARAT 15 08 93040 001
VCCI Council	R-3327, C-3706, T-1849, G-198
DSP Research, Inc.	G039
FCC	Test Firm Registration No. 687132
INDUSTRY CANADA	Company Address Code: 8035A

## 2. Test equipment

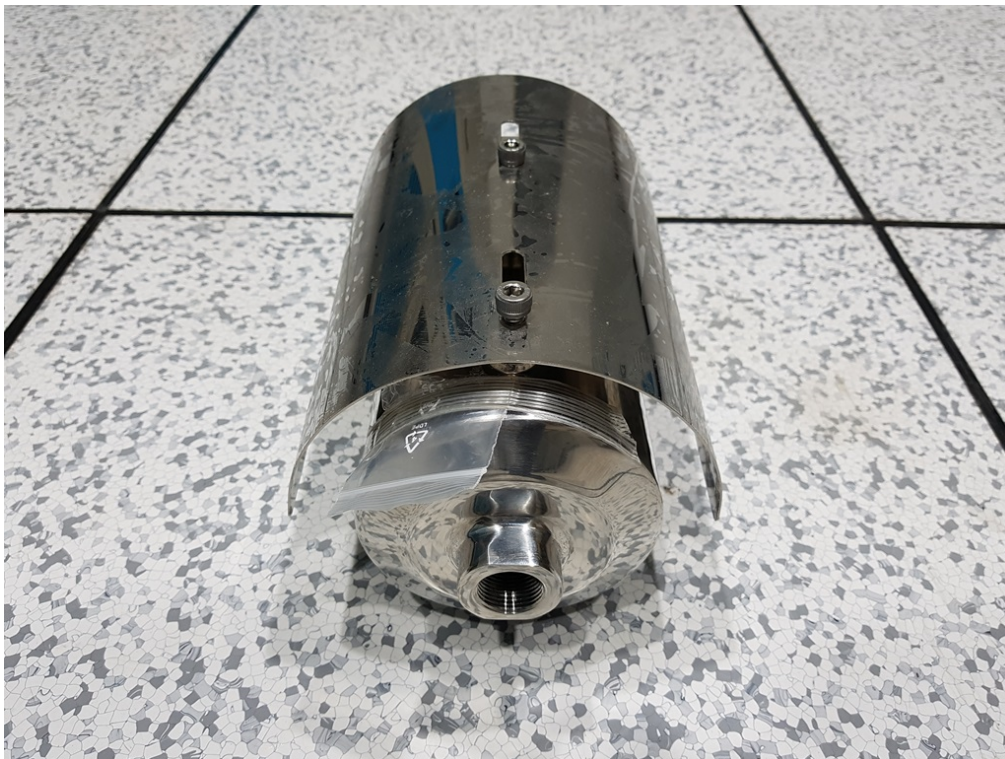
### 2.1 Specification

Division	Specification
Product Name	2M 32x N/W Explosion-proof Fixed Camera
Model Name	TNO-6320E

## 2.2 Product Photograph



[Front]



[Rear]

### 3. Test Method and Result

#### 3.1 IK10 Impacts Test

##### 3.1.1 Test Equipment

Instrument description	Model Number	Manufacturer	serial number	Due Cal
20J IMPACT ELEMENT	N/A	CERTIS	N/A	2016-12-05
Measuring Tape	3.5 m	Komelon	N/A	2018-07-07
ELECTRONIC BALANCE	DB-150	CAS	IY1142	2016-10-02

##### 3.1.2 Reference Documents

IEC 62262: 2002

Degrees of protection provided by enclosure for electrical equipment against external mechanical impacts (IK code)

##### 3.1.3 Test Performed

Degree of protection provided by enclosure for external impacts IK10

##### 3.1.4 Test Conditions

According to standard IEC 62262: 2002

The verification of IK10 has been done positioning the enclosure on a rigid support.

5 impacts have been applied on each surface in sight with the enclosure.

For the test used Pendulum Hammer.

IK10 (Characteristics of impact test):

Energy: 20 Joule

Mass: 5.0 kg

High  $\Delta h$ : 400 mm

##### 3.1.5 Test Criteria

Visual inspection after impact test.

Check if breakage, Crack, separation occur.

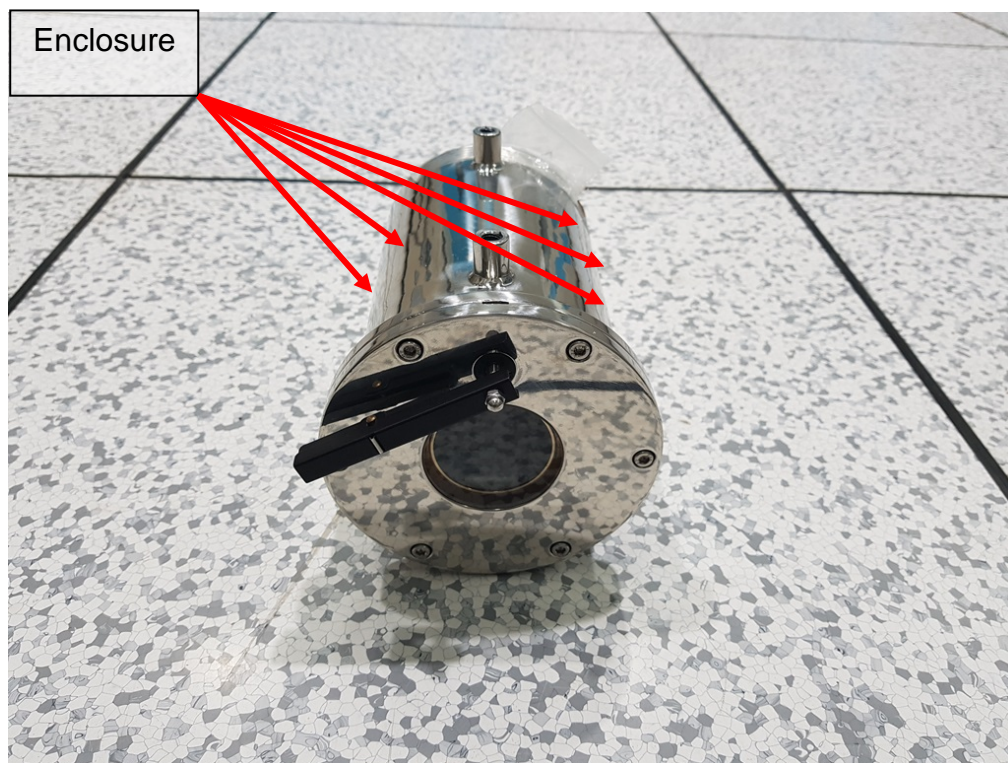
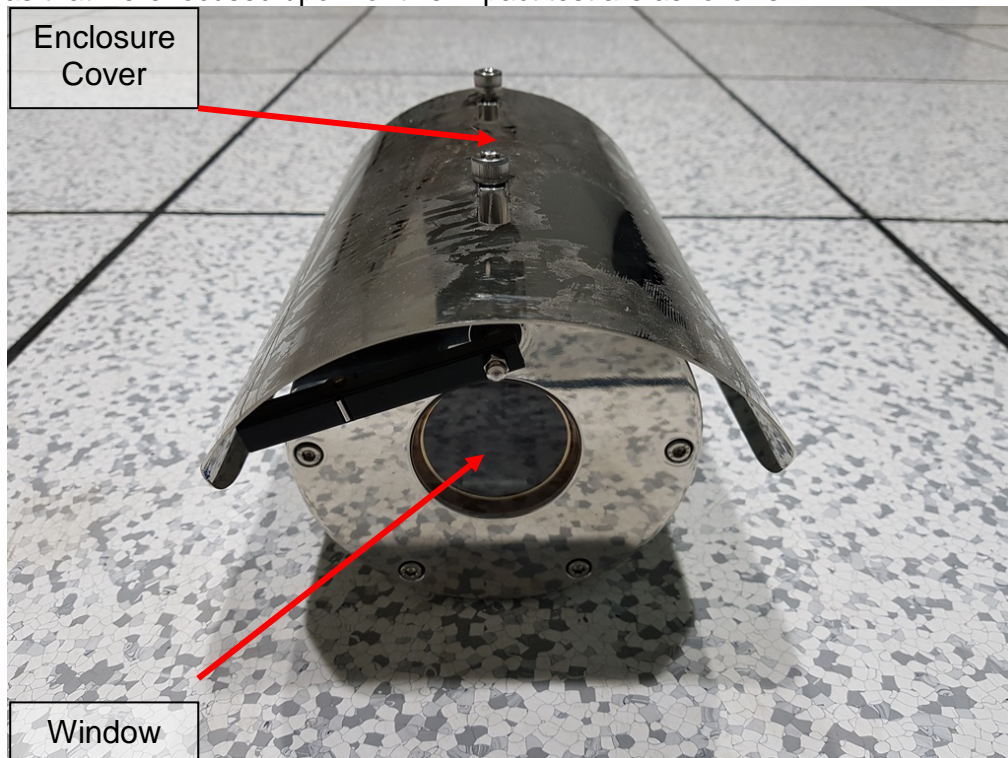
Protection against direct contact.

Allow extent of damage: Allow the damage of enclosure some scratch and deformation.



### 3.1.6 Drop Zones:

The areas that were focused upon for this impact test are as follows



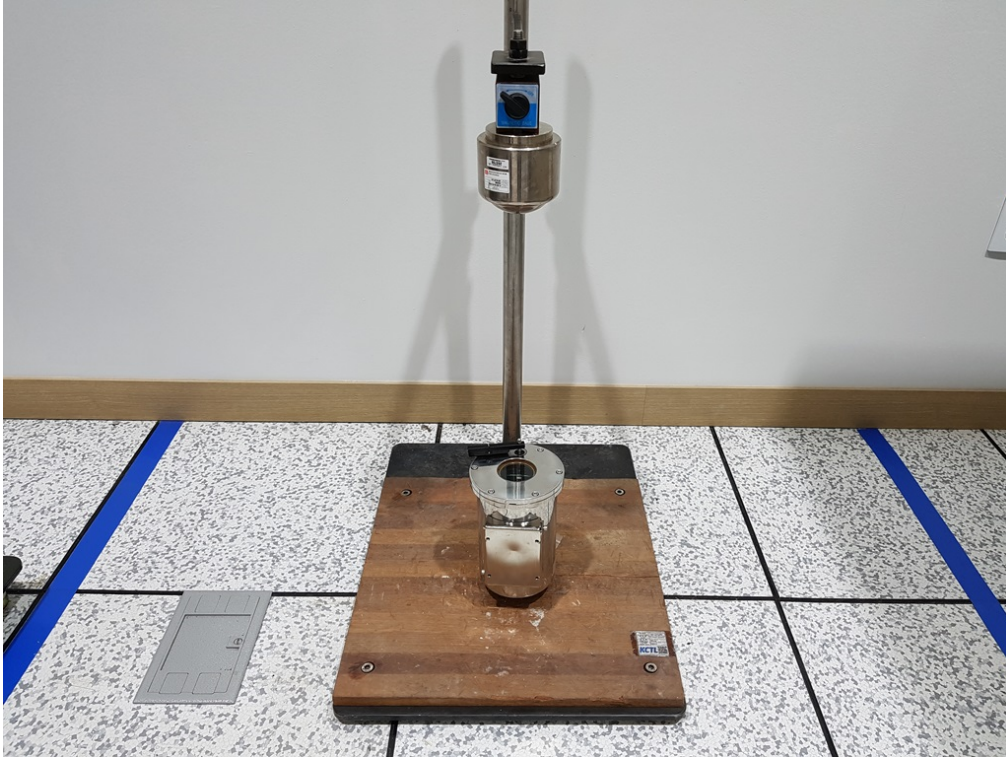
## 3.1.7 Test Results

Drop Zone: Window		
Drop #	Orientation	Results
Drop 1	Vertical drop onto center of Window.	No abnormal was found

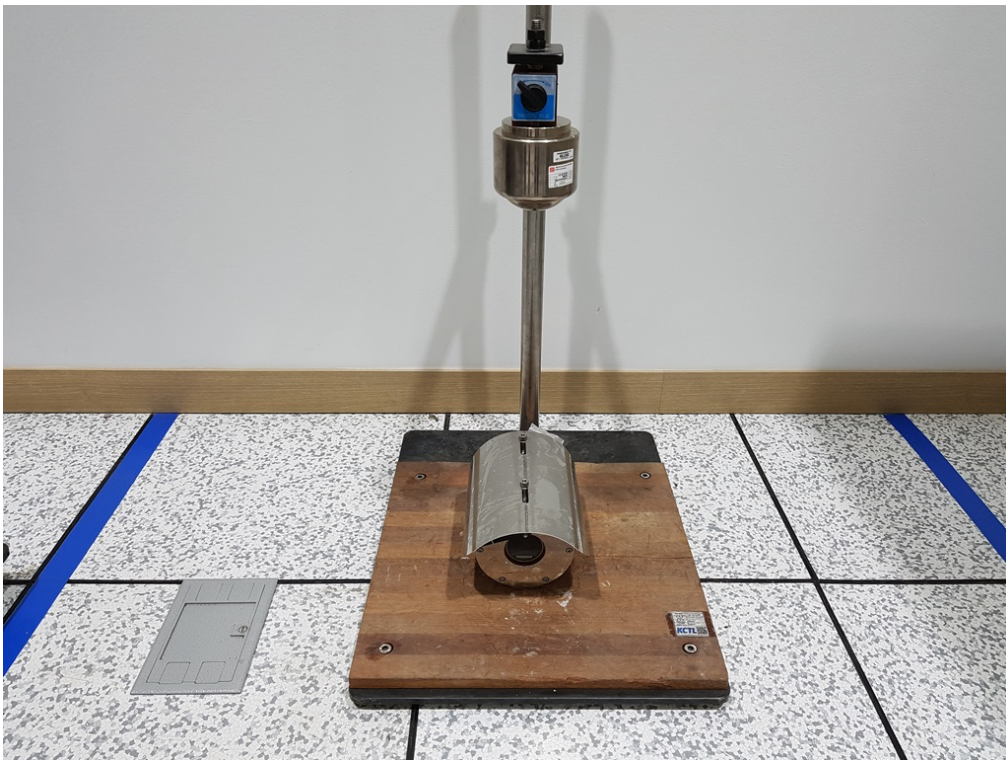
Drop Zone: Enclosure		
Drop #	Orientation	Results
Drop 1	Normal to surface of enclosure.	No abnormal was found
Drop 2	Normal to surface of enclosure.	
Drop 3	Normal to surface of enclosure.	
Drop 4	Normal to surface of enclosure.	
Drop 5	Normal to surface of enclosure.	
Drop 6	Normal to surface of enclosure cover.	No abnormal was found Refer to 3.1.9



### 3.1.8 TEST Photograph



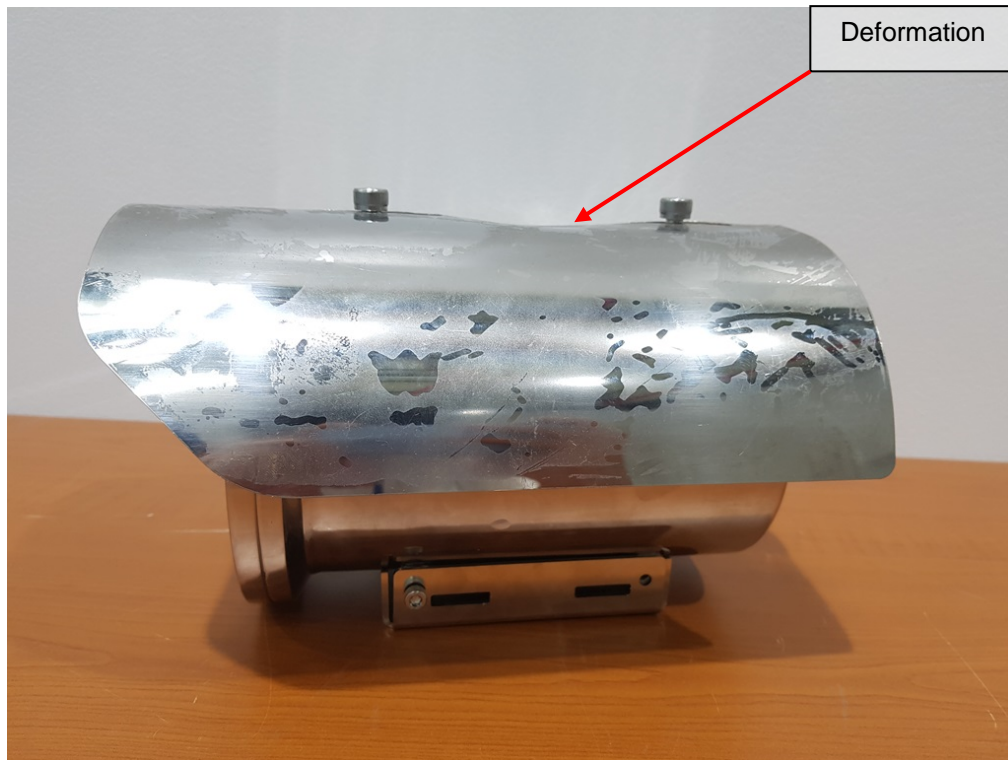
[During the test\_Window]



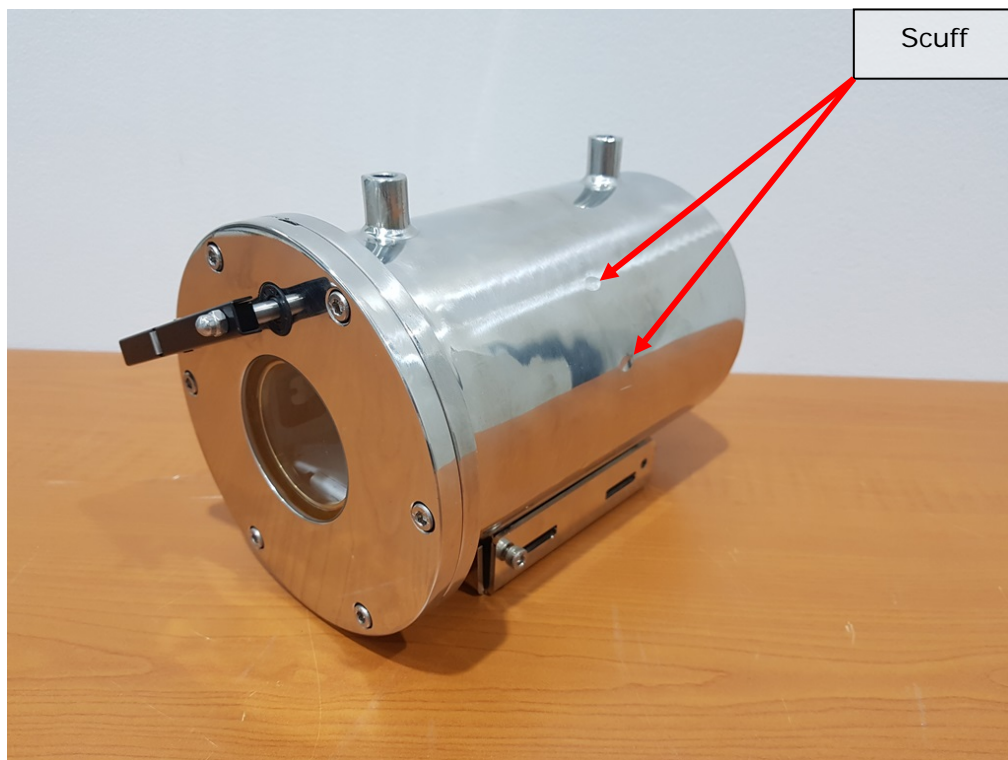
[During the test\_Enclosure]



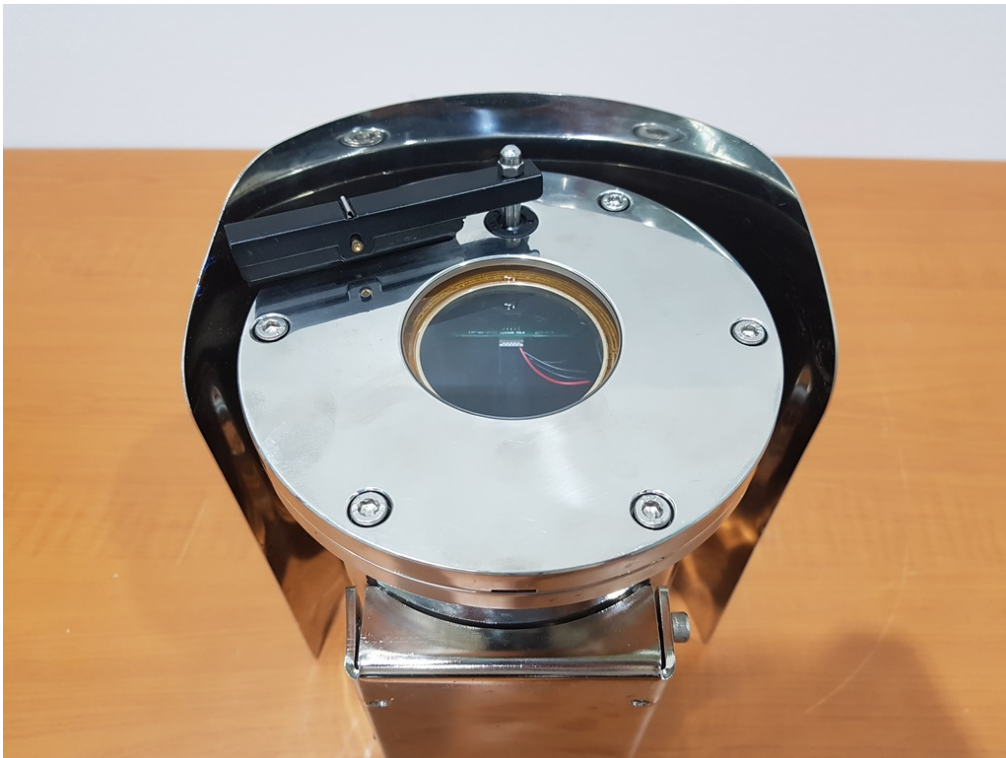
### 3.1.9 Test Result Photograph



[After the test 1]



[After the test 2]



[After the test 3]