TEST REPORT

NO.1129

Project code:TI/0163-Cxxxxx

Test Report for Test Block Type HRTB01,
Manufactured by Hamyan Fan Co.

According to Customer Ducument

Tehran, 28/11/83

By order of Hamyan Fan Co, at Tehran, Iran

No. of pages 17

Issue date 83/11/28

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This test report does not include an assessment of the manufacturer`s production. Conformity of his production with the specimen tested by E.P.I.L is not the responsibillity of E.P.I.L

CONTENTS

1. GENERAL INFORMATION

1.1 Product Information

Equipment under test	: Test Block Type HRTB 01
Normative document	: According to Customer Ducument

1.2 Client Information(Manufacturer)

Applicant	: Hamyan Fan Co.
Contact person	: Mr.Ahmadi
Telephone	: +98 21 2017692-3
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Adress	: No.10. , Sayeh St, Vali-e-Asr Ave., Tehran 19677 Iran

1.3 Tests performed

Dry heat Test	:83/09/28
Cold Test	:83/09/30
Humidity Test	:83/10/02
Enclosure protection Test(IP 5X)	:83/10/07
Insulation Test	:83/09/28&83/09/30&83/10/02
Current Withstand Test	:83/10/02&83/10/06
Impact test	:83/10/21
Free Fall	:83/10/21

1.4 Result of test

Passed	: See page 4 to 17

2 PERFORMANCE AND RESULTS OF TESTS

2.1 Dry heat Test

2.1.1 Test data

Location	: EPIL
Date	: 83/09/28
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to IEC 60068-2-2
Type of EUT	: Test Block Type HRTB 01

2.1.2 Instrument used for the test

Heating Cabinet	Pars Azma

2.1.3 Ambient conditions

Ambient air temperature	: 21.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 34 %

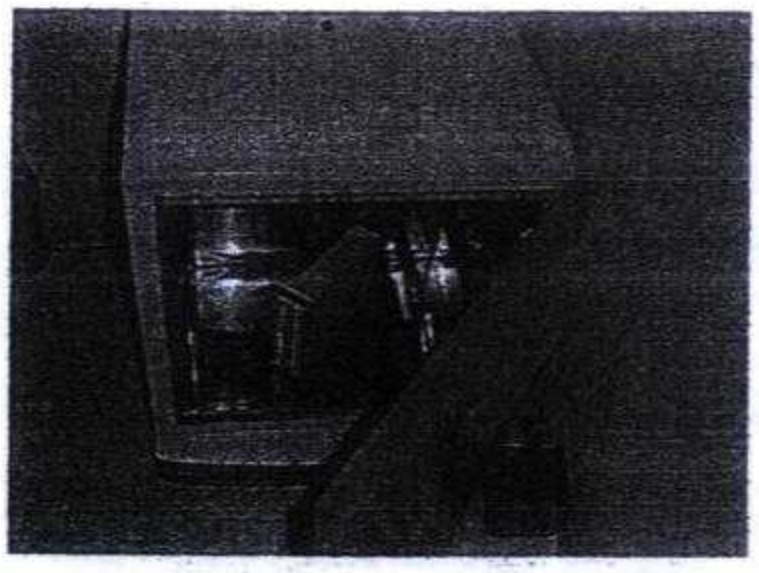
2.1.4 procedure of test

The specimen was placed in heating cabinet for 168 h (7 days) in temperature 55°C.

2.1.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

2.1.6 Photo



The equipment under dry heat test

2.1.7 Result of test

✓ passed

2.1 Cold Test

2.2.1 Test data

Location	: EPIL
Date	: 83/09/30
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to IEC 60068-2-1
Type of EUT	: Test Block Type HRTB 01

2.2.2 Instrument used for the test

Old chamber :Manufacture pars teb novin

2. 2.3 Ambient conditions

Ambient air temperature	: 22.7°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 33 %

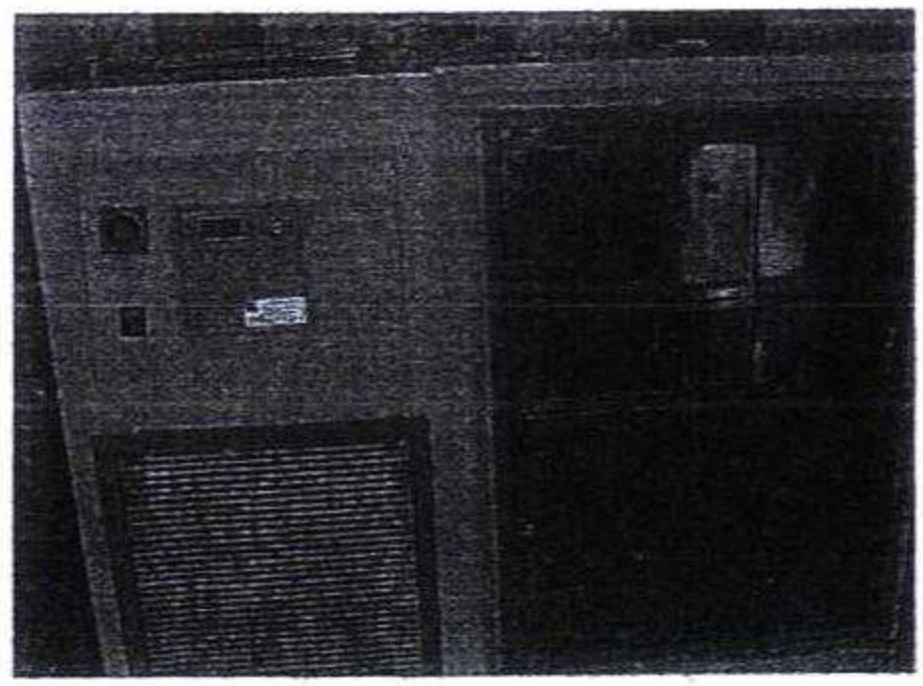
2.2.4 procedure of test

The specimen was placed in cold chamber for 168 h (7 days) in temperature -25°C.

2.2.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

2.2.6 Photo



The equipment under cold test

2.2.7 Result of test

✓passed

2.3 Humidity Test

2.3.1 Test data

Location	: EPIL
Date	: 83/10/02
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to IEC 60068-2-3
Type of EUT	: Test Block Type HRTB 01

2.3.2 Instrument used for the test

Heating Cabinet	Pars Azma

2. 3.3 Ambient conditions

Ambient air temperature	: 27.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 32.2 %

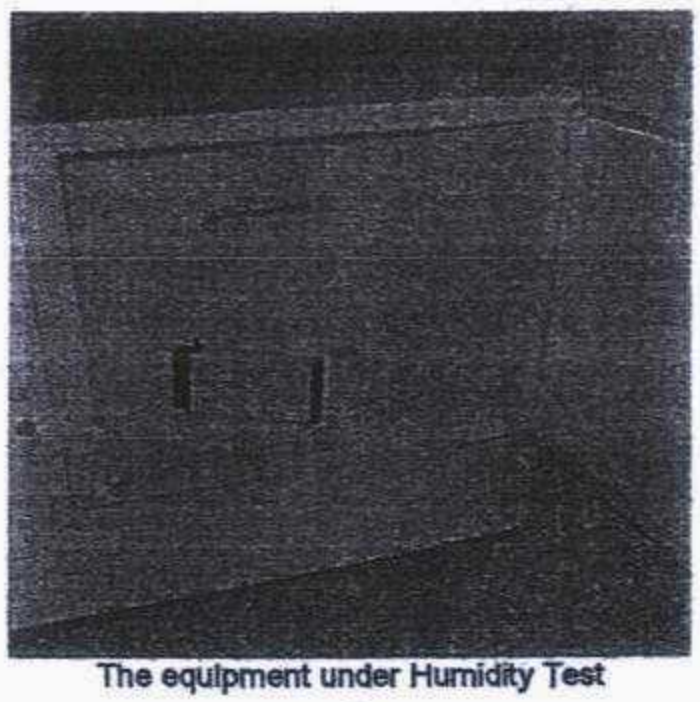
2.3.4 procedure of test

The equipment was placed in the most unfavorable position of nominal use ,in the humidity cabinet with a relative humidity 93% for 96 h (4 days)in temperature 40°C.

2.3.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

2.3.6 Photo



The equipment under Humidity Test

2.3.7 Result of test

✓ passed

2.4 Enclosure protection Test (IP 5X)

2.4.1 Test data

Location	: MIC
Date	: 83/10/07
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to IEC60529
Type of EUT	: Test Block Type HRTB 01

2.4.2 Instrument used for the test

Dust chamber

2. 4.3 Ambient conditions

Ambient air temperature	: 23.3°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 33 %

2.4.4 procedure of test

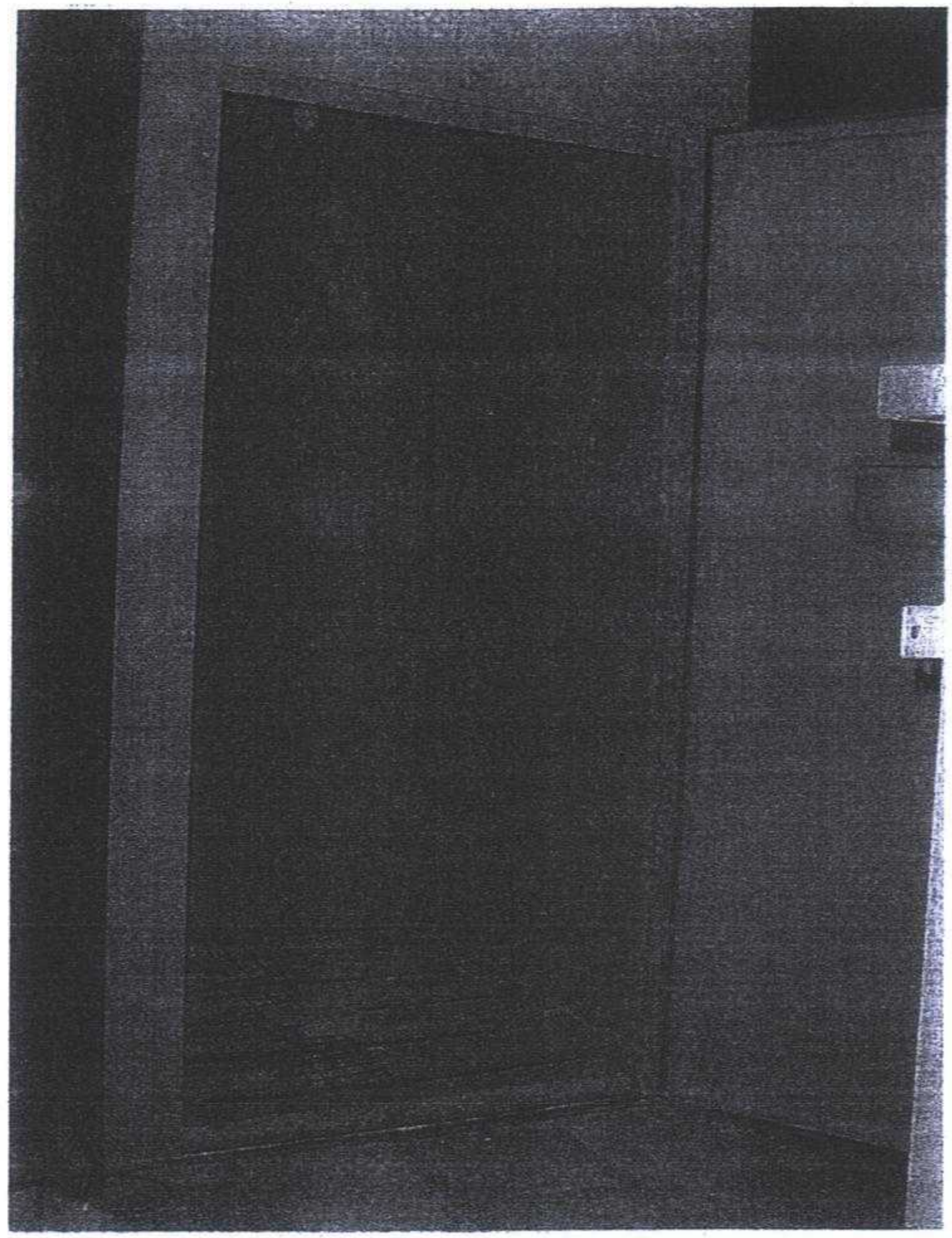
i.The enclosure under test is placed in its normal operating position in dust chamber and the powder circulation pump may be worked.talcum powder shall be used.the talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50 µm and the nominal width of a gap between wires 75 µm .the amount of talcum powder to be used is 2 kg per cubic metre of the test chamber volume.it shall not have been used for more than 20 tests.(according to IEC 60529)

ii.The duration of the test was 8 h . .(according to IEC 60529)

2.4.5 Acceptance conditions of test

The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.

2.4.6 Photo



2.4.7 Result of test

✓ passed

2.5 Insulation Test

2.5.1 Test data

Location	: EPIL
Date	: 83/09/28 &83/09/30
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to IEC 60255-5
Type of EUT	: Test Block Type HRTB 01

2.5.2 Instrument used for the test

CPC 100	:OMICRON

2. 5.3 Ambient conditions

Ambient air temperature	: 21.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 31 %

2.5.4 procedure of test

The applied test voltage :

1- 5kV rms for 1 minute between all case terminals connected together and the case earth terminal.

2- 5kV rms for 1 minute between any contact pair and either adjacent alternate contact pair ,provided the intermediate contact pair is not used.

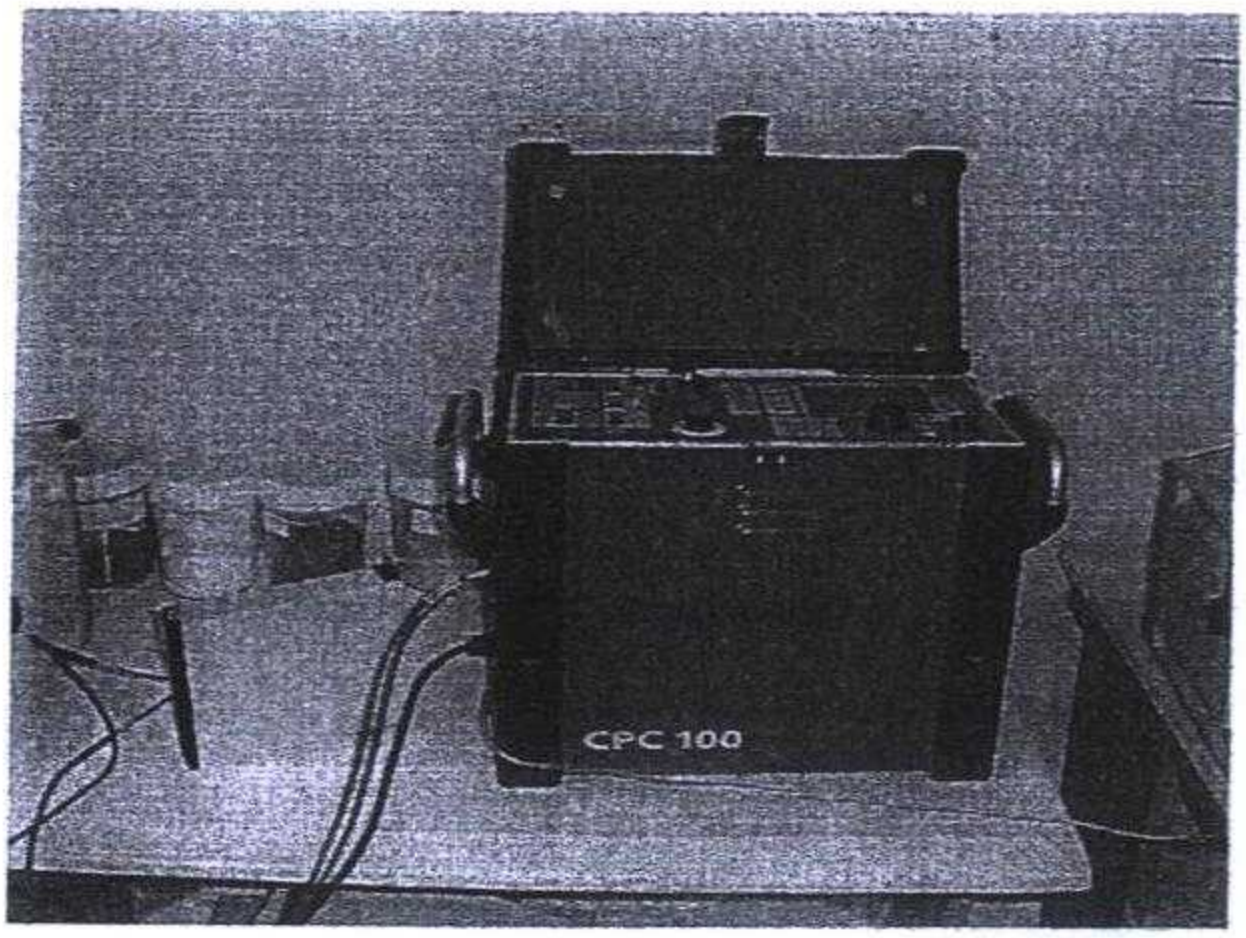
3- 2kV rms for 1 minute between any contact pair and either adjacent contact pair.

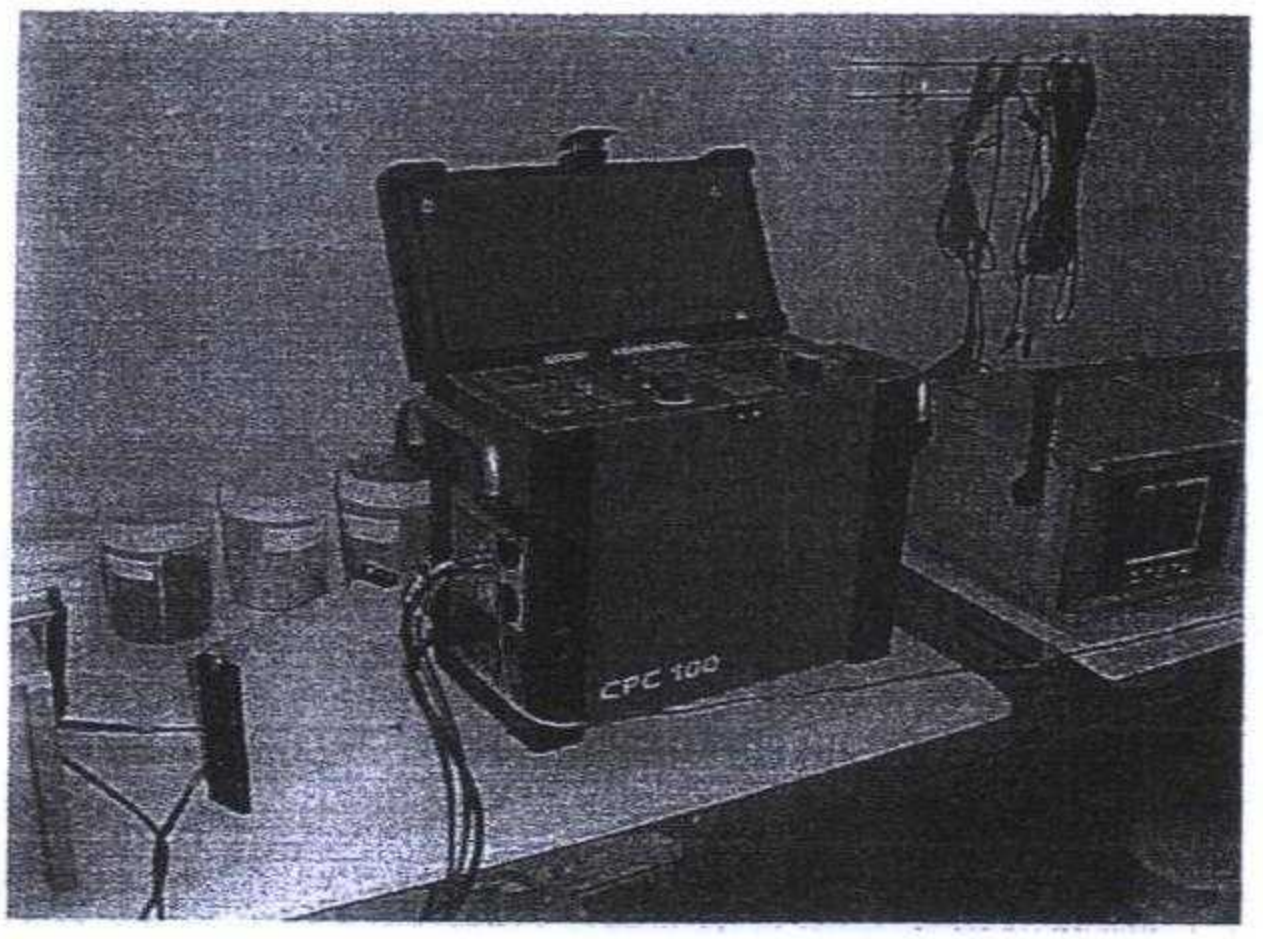
4- 1kV rms for 1 minute between terminal 13 and 14 when the cover is removed.

2.5.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

2.5.6 Photo





2.5.7 Result of test

✓ passed

2.6 Current Withstand Test

2.6.1 Test data

Location	: EPIL
Date	: 83/10/02 & 83/10/06
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to Customer Ducument
Type of EUT	: Test Block Type HRTB 01

2.6.2 Instrument used for the test

CPC 100	:OMICRON

2. 6.3 Ambient conditions

Ambient air temperature	: 22.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 32.3 %

2.6.4 procedure of test

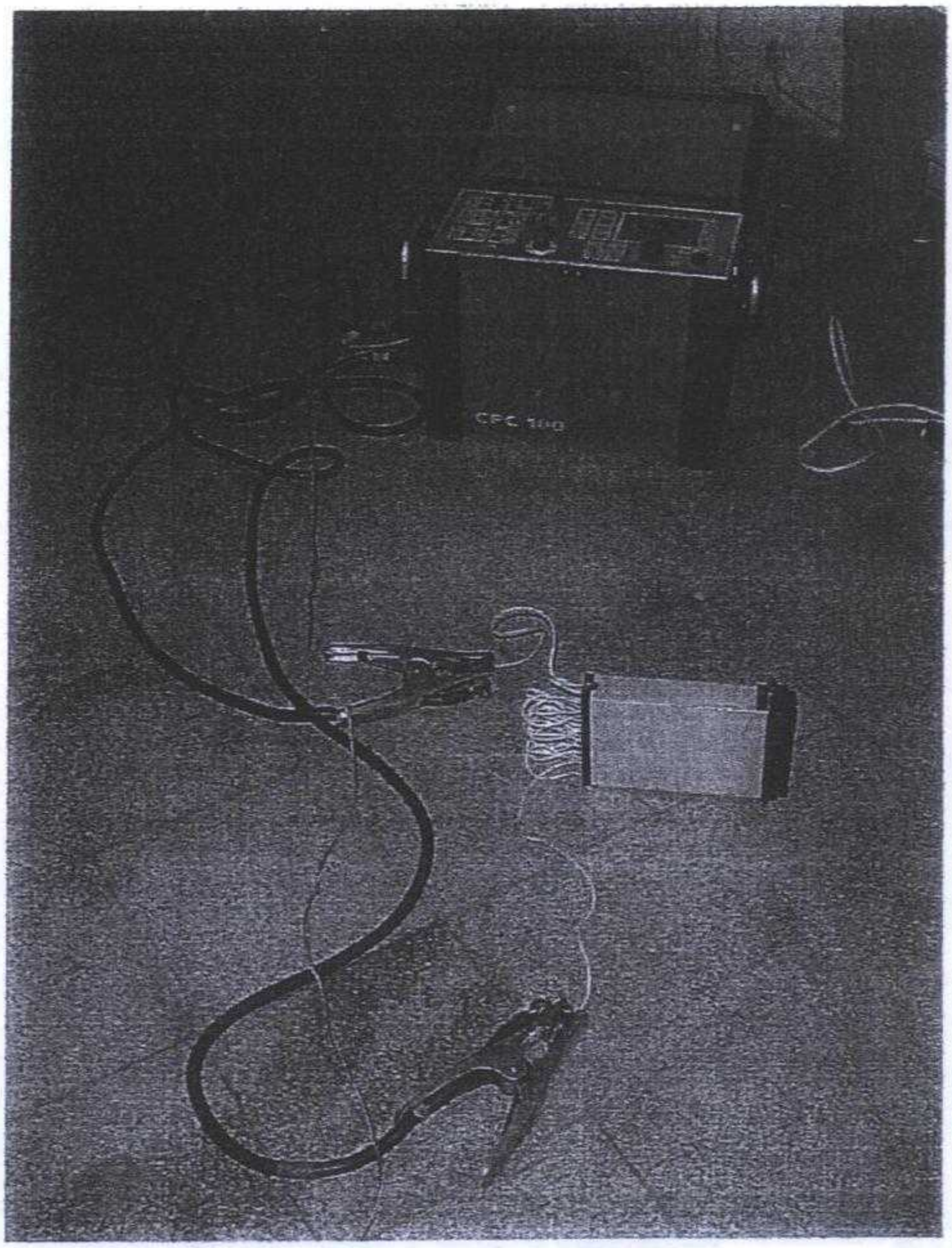
i.400 A for 1 s was applied to all contact circuits.

ii.20 A continously was applied to all contact circuits for 6 h.

2.6.5 Acceptance conditions of test

- The equipment and other articles after the above test should operate correctly.

2.6.6 Photo



The EUT under the Current Withstand test

2.6.7 Result of test

✓ passed

2.7 Impact test

2.7.1 Test data

Location	: EPIL
Date	: 83/09/08
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to Customer Ducument
Type of EUT	: Test Block Type HRTB 01

2.7.2 Instrument used for the test

Impact apparatus	:Manufactured by EPIL

2. 7.3 Ambient conditions

Ambient air temperature	: 22.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 32.3 %

2.7.4 procedure of test

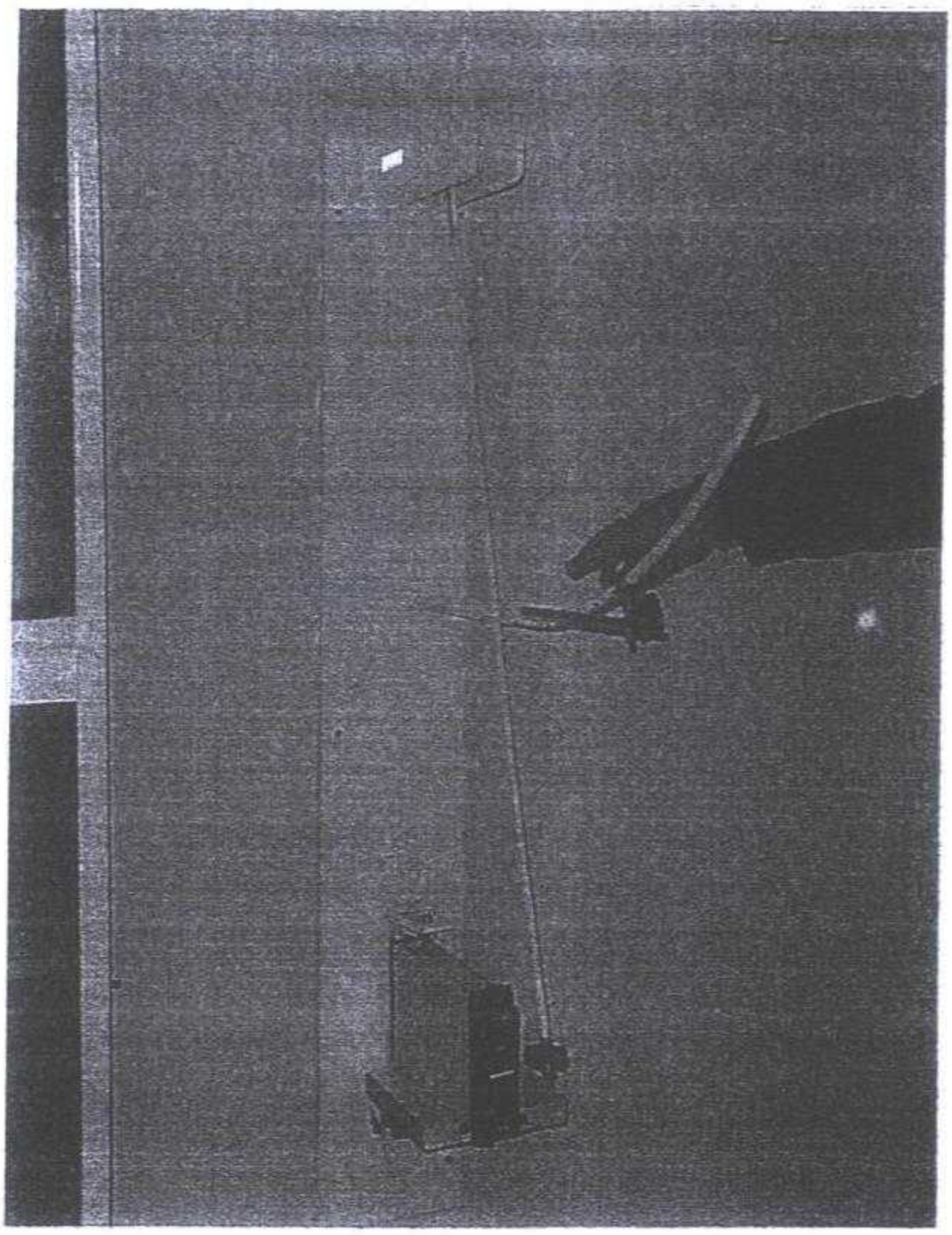
The test consists of exposure to impact(s) of defined energy and defined velocity applied parallel to the normal surface of mounting of the specimen at normal room temperature.the specimen shall be mounted on a rigid support by its normal mounting means. The striking element is allowed to fall from a height of 105 cm (According to customer request).
The height of fall of the vertical distance between the position of a checking point when the pendulum is released and the position of that point at moment of impact .the checking point is marked on the surface of the striking element where the line through the point of intersection of the axes through both axes ,meets the surface .
The sample of subjected to ten blows which of evently distributed over the sample .
In general ,five of the blws are applied as follows:
For flush type connecting devices ,one blow in the centre ,one at each extremity of the area over the recess in the block and the other two approximately midway between the previous blows, preferably on the ridge, if any the sample being moved horizentally ;
For other connecting device ,the blow in the centre ,one of each side of the sample after it has been turned as far as possible, but not through more than 60 degree ,about a vertical axis and the other two approximatly midway between the previous blows, preferably on the ridg, if any.
The remaining blows are then applied in the same way ,after the sample has been turned through 90 degree about its axis ,prependicular to the plywood.
Cover plate are treaded as through they were the corresponding number of separate covers but only one blow is applied to any one point.
After the test ,the samples shall shown no damage within the meaning of this standard.in particular ,live parts shall not become accessible .

In case of doubt,it is verified that it is possible to remove and replace external parts such as boxes,enclosure,covers and cover plates without these parts or their insulating lining being broken.
If ,however, a cover plate backed by an inner cover is broken ,the test is repeaded on the inner cover ,which shall reamain unbroken.

2.7.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

2.7.6 Photo



The EUT under the impact test

2.7.7 Result of test

✓ passed

2.8 Free Fall

2.8.1 Test data

Location	: EPIL
Date	: 83/09/08
Engineer of Hamyan fan	: Mr.Ahmadi
Engineer of EPIL	: Mr.E.Akhlaghi
Normative document	: According to Customer Request
Type of EUT	: Test Block Type HRTB 01

2.8.2 Instrument used for the test

A smooth surface of concrete or steel

2. 8.3 Ambient conditions

Ambient air temperature	: 22.2°C
Air Pressure	: 962.5 mbar
Relative humidity of air	: 32.3 %

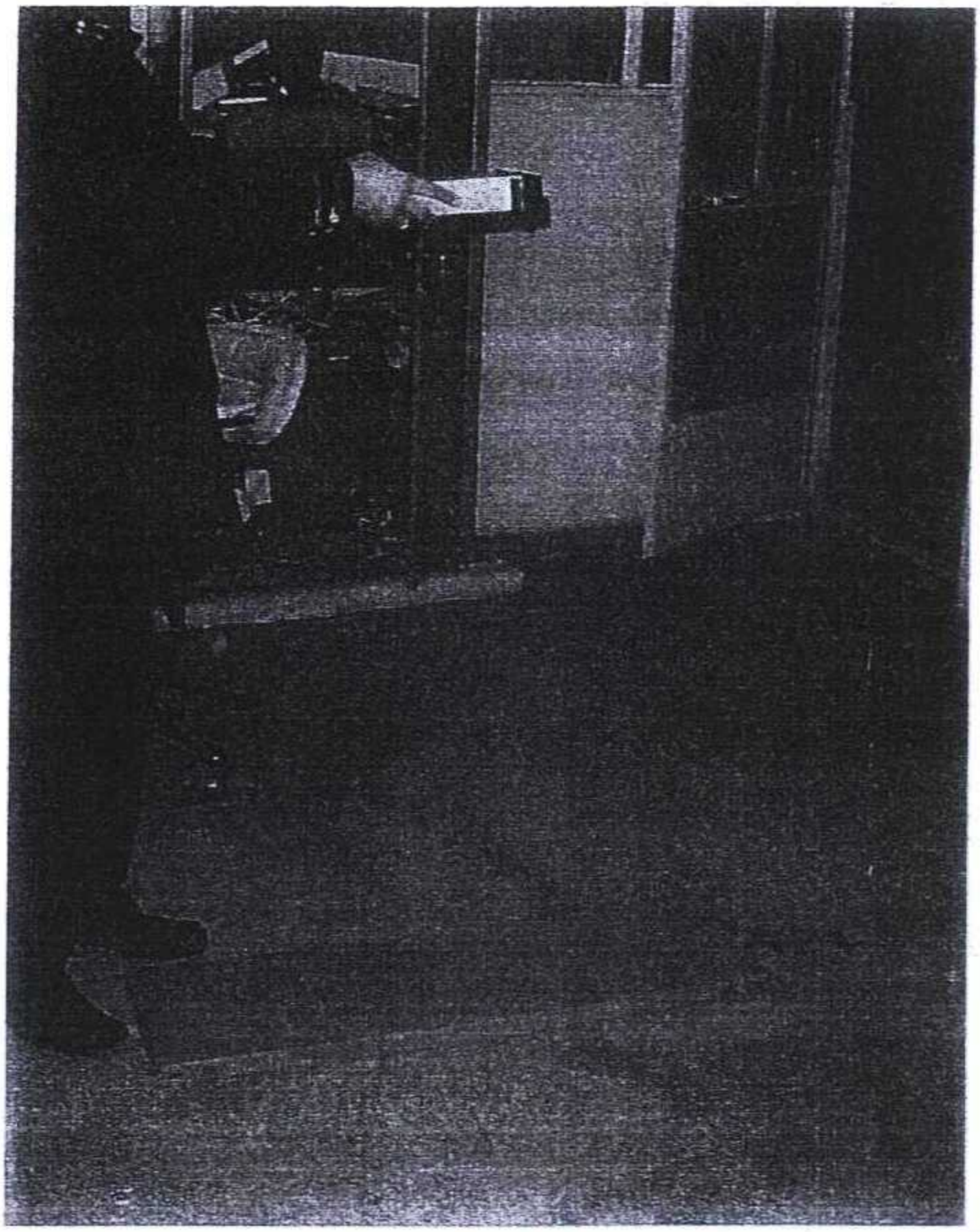
2.8.4 procedure of test

The test consists of two exposures to free fall from the specified height on to a smooth surface of concrete or steel.The orientations of the specimens at the moment of release shall be those considered to be most unfavourable.The specimen need not be operating during the test.
Falling height =120 cm

2.8.5 Acceptance conditions of test

The equipment and other articles after the above test should operate correctly.

2.8.6 Photo



The EUT under the Free Fall test

2.8.7 Result of test

✓passed

3 Conclusion

Test	Result
Dry heat test	Passed
Cold test	Passed
Humidity test	Passed
Enclosure protection test(IP 5X)	Passed
Insulation test	Passed
Current withstand test	Passed
Impact test	Passed
Free fall	Passed

Overall result : Passed