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TEST REPORT

Name of product: Intercom

Type of product: 2N® Helios IP Force 9151101CK,
2N® Helios IP Safety 9152101W,
2N® Helios IP Uni 9153102,
2N® Helios IP Verso 9155101,
2N® Helios IP Vario 913716KU

Ratings: ---

Serial number: 54-0542-0863, 54-0473-1074, 54-0482-0005,
54-0828-0033, 54-0653-0050

Manufacturer: **2N TELEKOMUNIKACE a. s.**
Modřanská 621/72, 143 01 Praha 4, Czech Republic

Production site: dtto manufacturer

EZÚ product coding system: 06

Ordering firm: **2N TELEKOMUNIKACE a. s.**
Modřanská 621/72, 143 01 Praha 4, Czech Republic

Number of tested samples: 5

Samples submitted on: 6. 5. 2014

Location of testing: EZÚ

Tested from 16. 5. 2014 **through** 26. 6. 2014

Other data: ---


The product was tested according to: ČSN EN 62262:1997 +A1:1999,
ČSN EN 60068-2-75:1999

The test results contained in this report refer to the tested items only. The values presented in this report were measured with the accuracy specified in the testing regulations. All measuring instruments used are properly traceable.

This Report shall not be reproduced except as a whole.


Compiled by: J. Šašek




Approved by: J. Bažant
Testing laboratory technical manager

1. Specimen description

Five intercoms were provided for testing:

- a) 2N® Helios IP Force 9151101CK
- b) 2N® Helios IP Safety 9152101W
- c) 2N® Helios IP Uni 9153102
- d) 2N® Helios IP Verso 9155101
- e) 2N® Helios IP Vario 913716KU

For purpose of testing, the specimens were fixed to an artificial wall.



Fig. 1 - specimen 2N® Helios IP Force 9151101CK

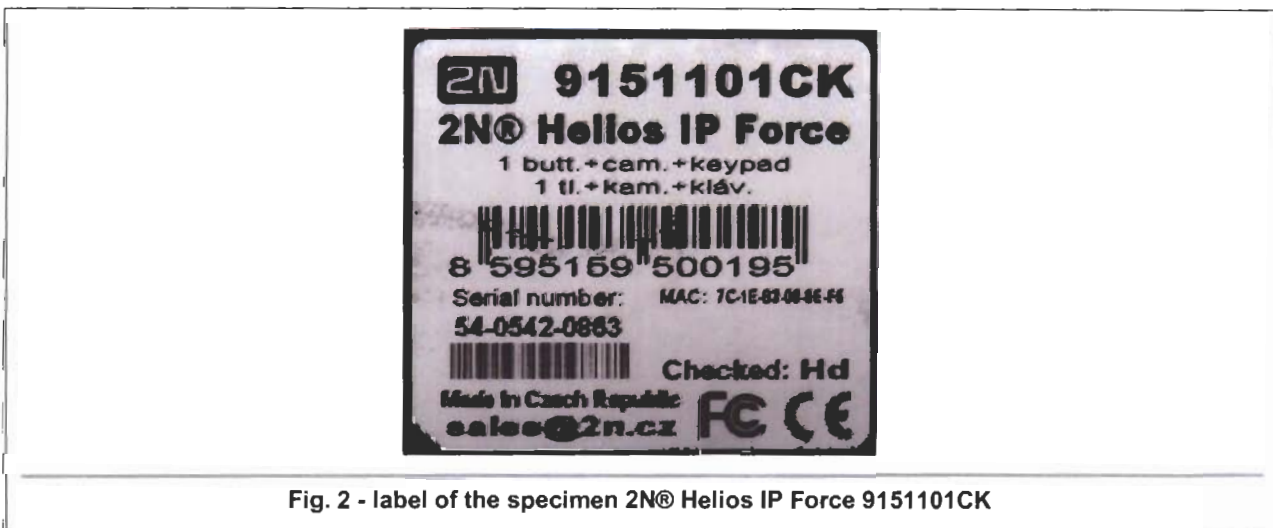


Fig. 2 - label of the specimen 2N® Helios IP Force 9151101CK



Fig. 3 - specimen 2N® Helios IP Safety 9152101W



Fig. 4 - label of the specimen 2N® Helios IP Safety 9152101W

B

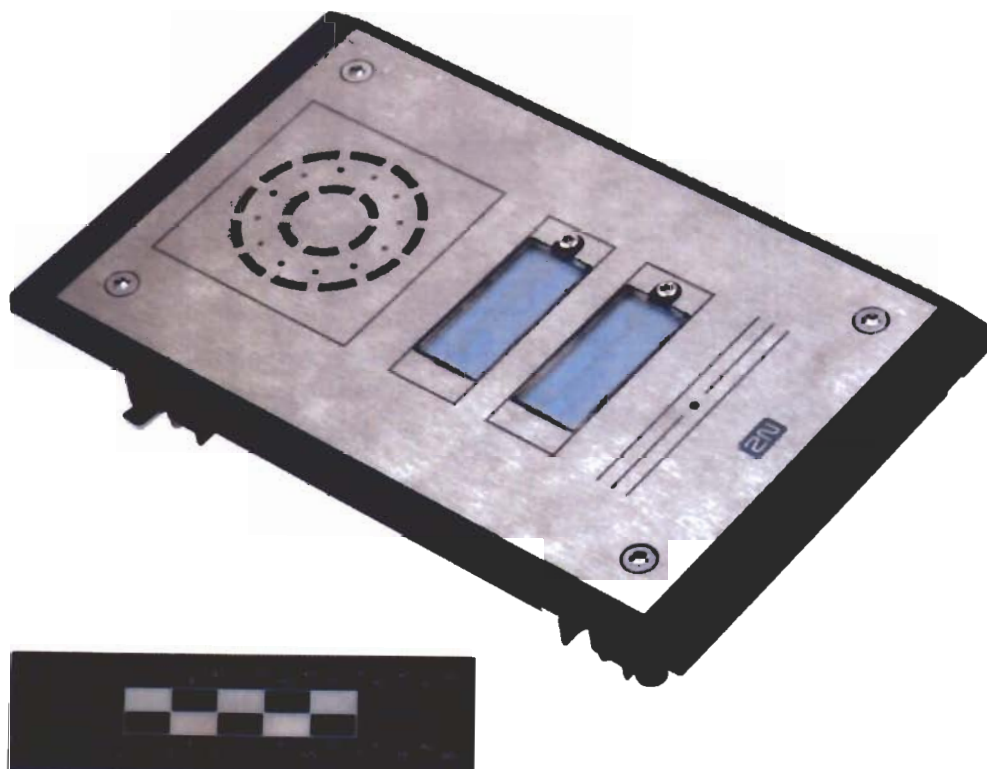


Fig. 5 - specimen 2N® Helios IP Uni 9153102



Fig. 6 - label of the specimen 2N® Helios IP Uni 9153102

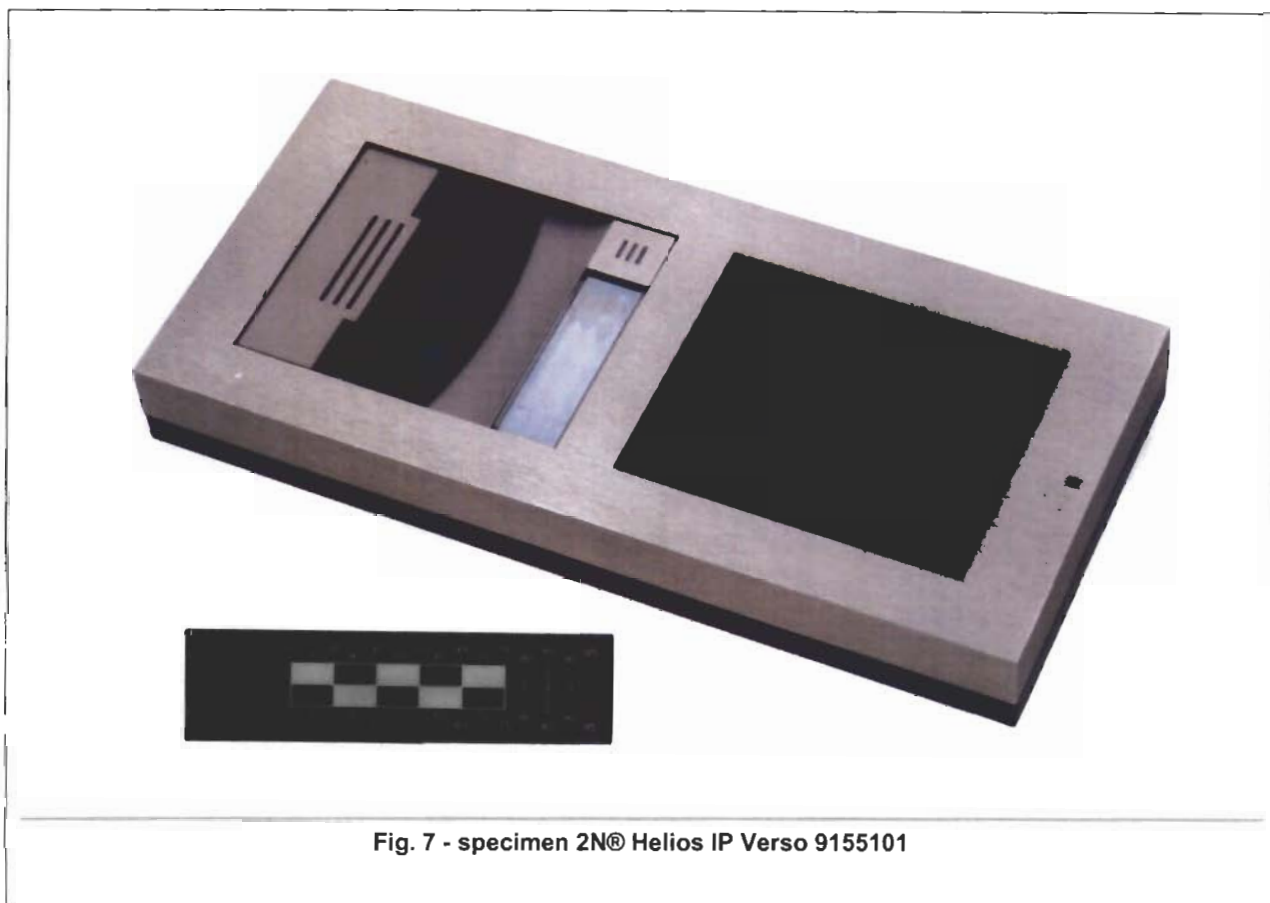


Fig. 7 - specimen 2N® Helios IP Verso 9155101

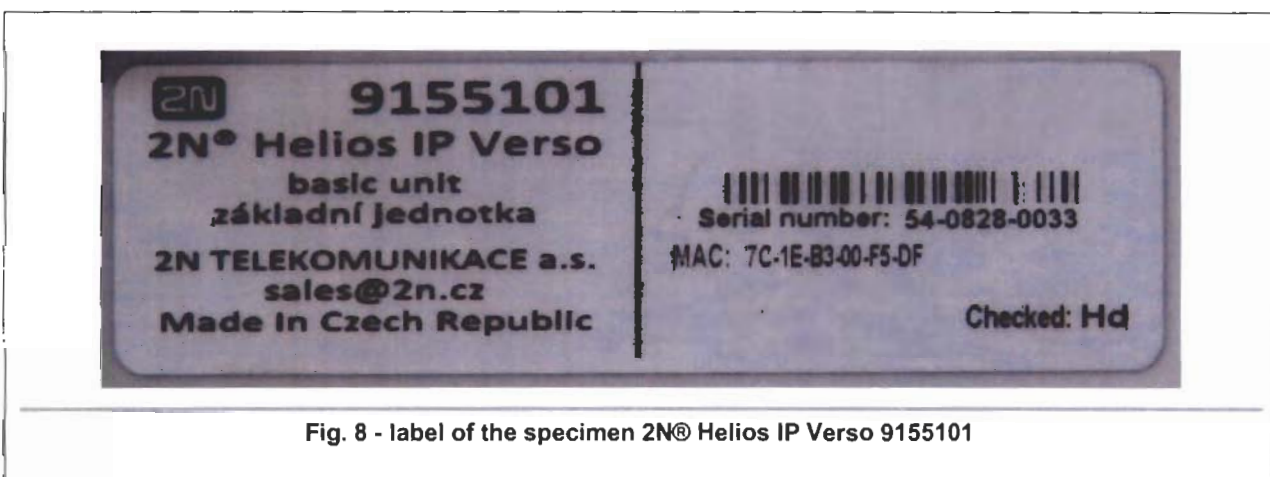


Fig. 8 - label of the specimen 2N® Helios IP Verso 9155101

A handwritten mark or signature in blue ink, located at the bottom right of the page.

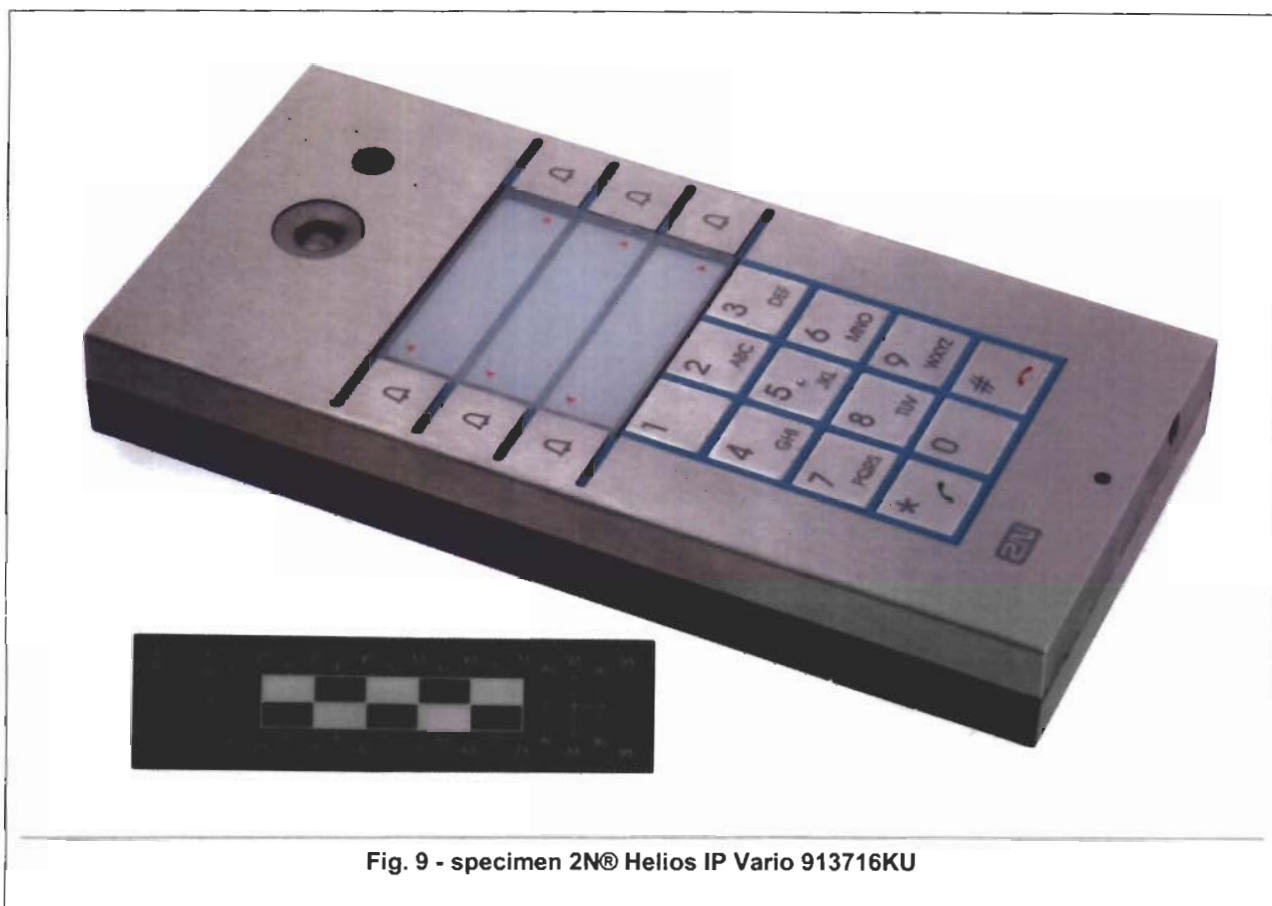


Fig. 9 - specimen 2N® Helios IP Vario 913716KU

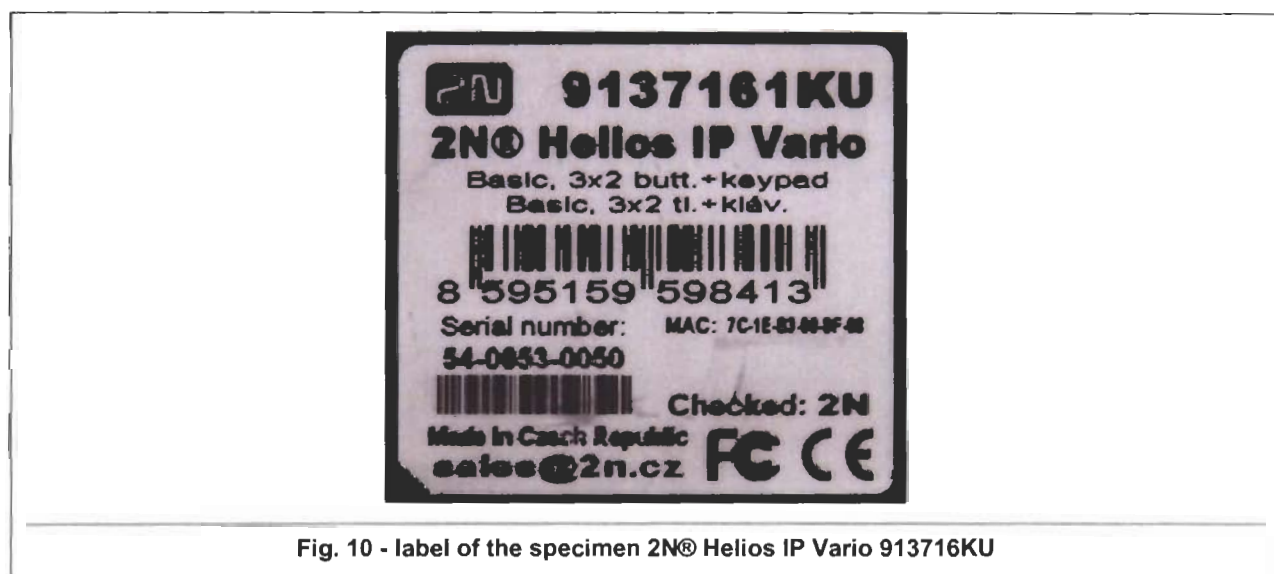


Fig. 10 - label of the specimen 2N® Helios IP Vario 913716KU

2. Testing

2.1 Tests of protection against external mechanical impacts - IK10

according to ČSN EN 62262:1997 +A1:1999

2.1.1 Pendulum hammer test

according to ČSN EN 62262:1997 +A1:1999

ČSN EN 60068-2-75:1999, cl. 4, tab. 1 and tab. 2

Tested specimens:

- a) 2N@ Helios IP Force 9151101CK
- b) 2N@ Helios IP Safety 9152101W
- c) 2N@ Helios IP Uni 9153102

Test apparatus:

striking element for IK10 (D = 100 mm, R = 50 mm)
clinometer CLINOTRONIC PLUS, inv. No. 551976

Test parameters:

energy of impact: 20 J
mass of the arm: 0,903 kg
combined mass of striking element: 5,013 kg
equivalent mass: 5,4645 kg
height of fall: 366 mm
test scheme: see Fig. 11
impact places: all accessible external surfaces
testing: see Fig. 12

Findings:

During the test, some deflections of the enclosures occurred (see Fig. 13, 14, 15 and 16). Except the deflections, no further mechanical damage occurred.

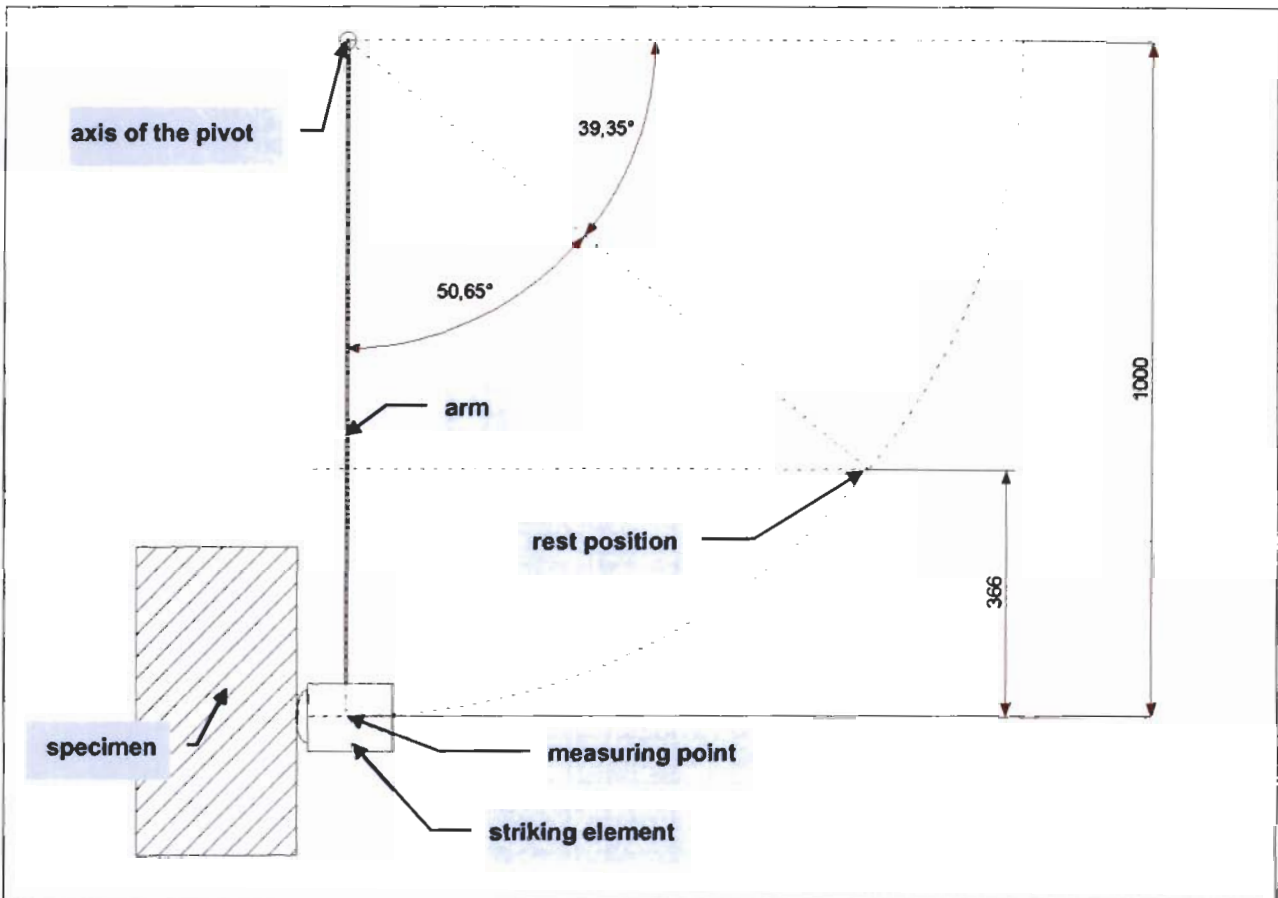


Fig. 11 - pendulum hammer test scheme for IK 10



Fig. 12 - IK 10 pendulum hammer test (specimen 2N® Helios IP Force 9151101CK)



Fig. 13 - enclosure deflection on the specimen 2N® Helios IP Force 9151101CK

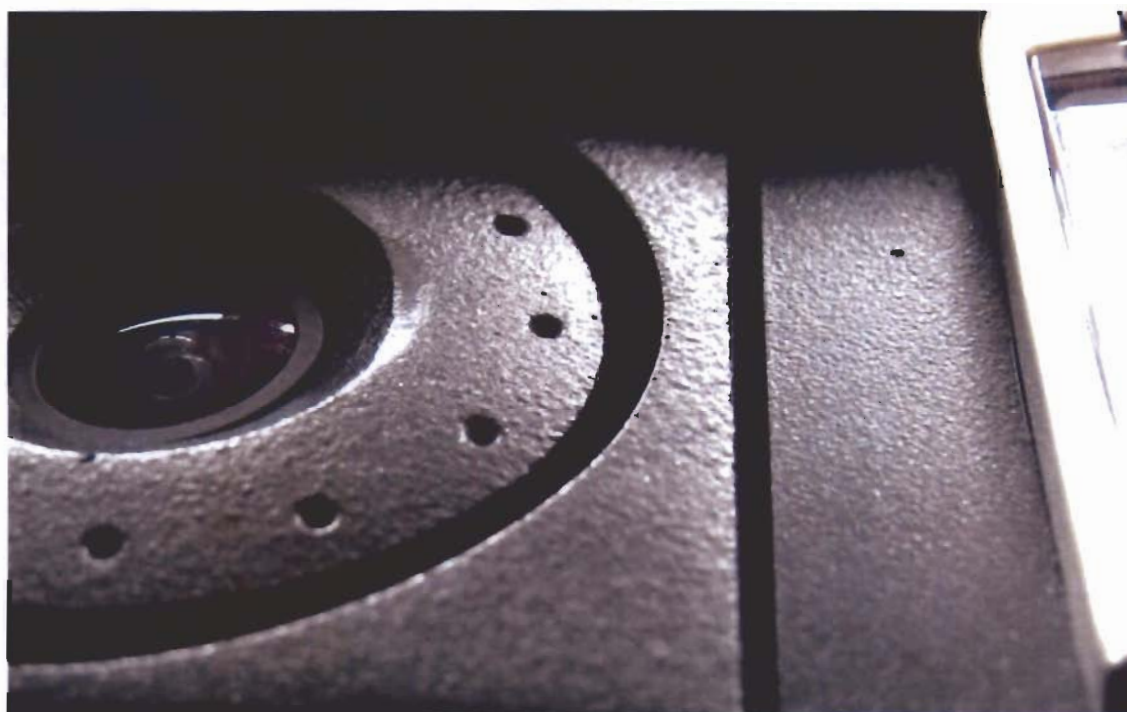


Fig. 14 - enclosure deflection on the specimen 2N® Helios IP Force 9151101CK

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Fig. 15 - enclosure deflection on the specimen 2N® Helios IP Safety 9152101W

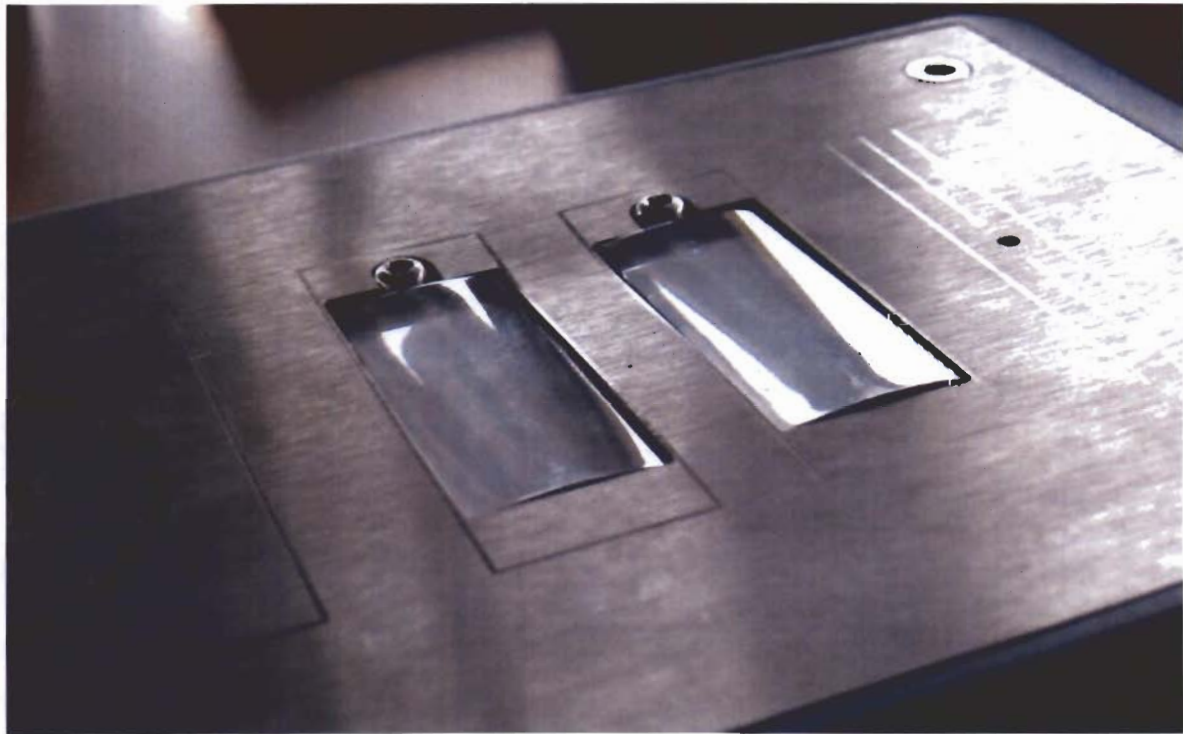


Fig. 16 - enclosure deflection on the specimen 2N® Helios IP Uni 9153102

2.2 Tests of protection against external mechanical impacts - IK08

according to ČSN EN 62262:1997 +A1:1999

2.2.1 Pendulum hammer test

according to ČSN EN 62262:1997 +A1:1999

ČSN EN 60068-2-75:1999, cl. 4, tab. 1 and tab. 2

Tested specimens:

- d) 2N® Helios IP Verso 9155101
- e) 2N® Helios IP Vario 913716KU

Test apparatus:

striking element for IK08 (D = 60 mm, R = 25 mm)
clinometer CLINOTRONIC PLUS, inv. No. 551976

Test parameters:

energy of impact: 5 J
mass of the arm: 0,214 kg
combined mass of striking element: 1,7 kg
equivalent mass: 1,808 kg
height of fall: 0,277 m
test scheme: see Fig. 17
impact places: all accessible external surfaces
testing: see Fig. 18

Findings:

During the test, some deflections of the enclosure occurred on the specimen 2N® Helios IP Verso 9155101 (see Fig. 19). Except the deflections, no further mechanical damage occurred on this specimen.

During the test, some deflections of the enclosure (see Fig. 20) and inner cracking of the nameplate (see Fig. 21) occurred on the specimen 2N® Helios IP Vario 913716KU. Except these damages, no further mechanical damage occurred on this specimen.

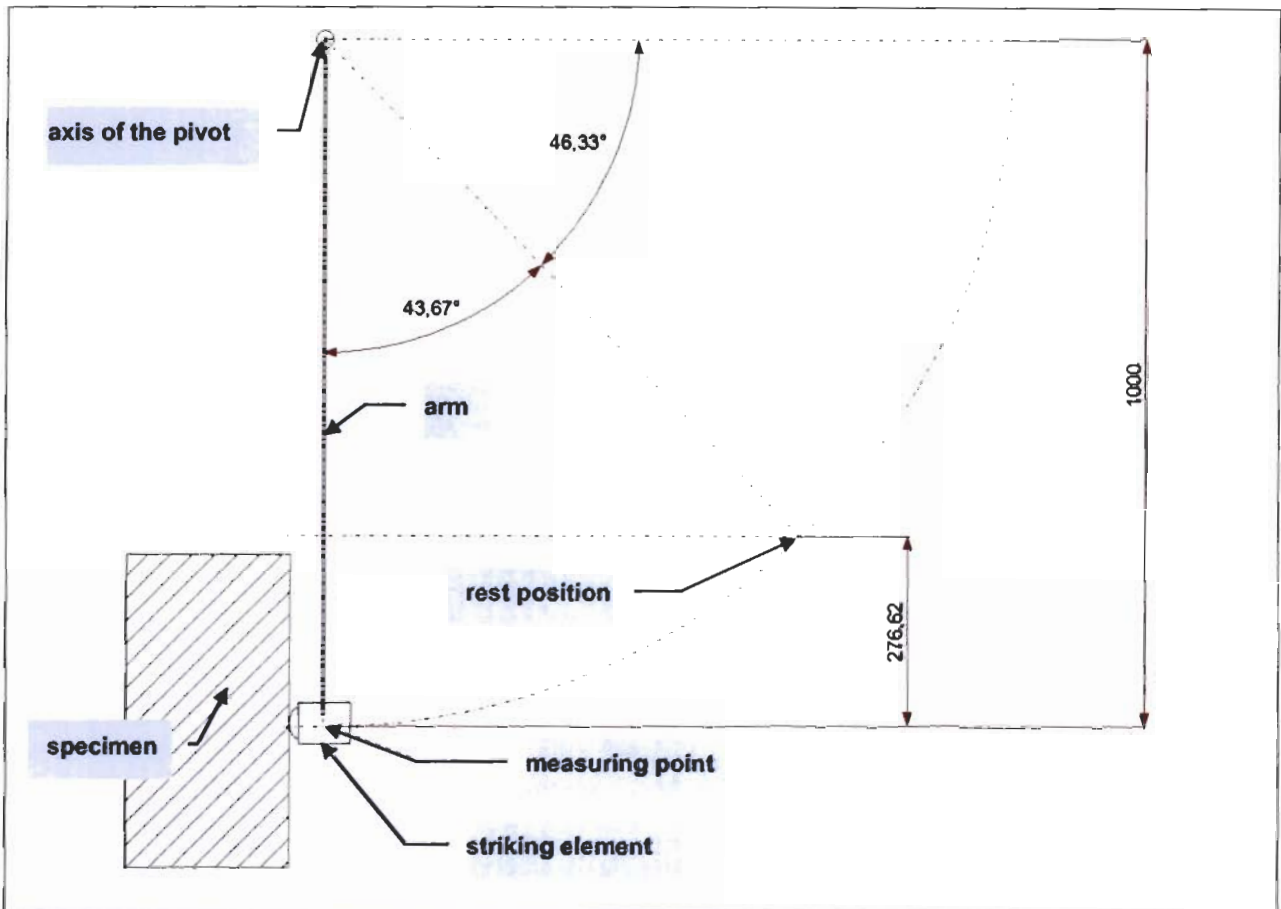


Fig. 17 - pendulum hammer test scheme for IK 08

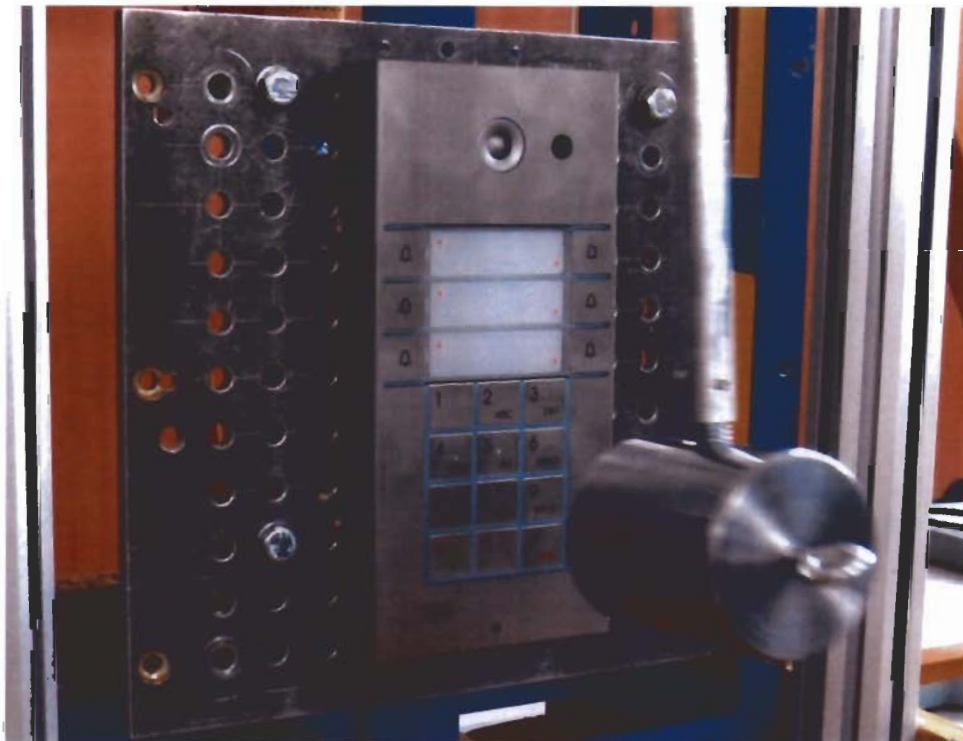


Fig. 18 - IK 08 pendulum hammer test (specimen 2N® Helios IP Varío 913716KU)

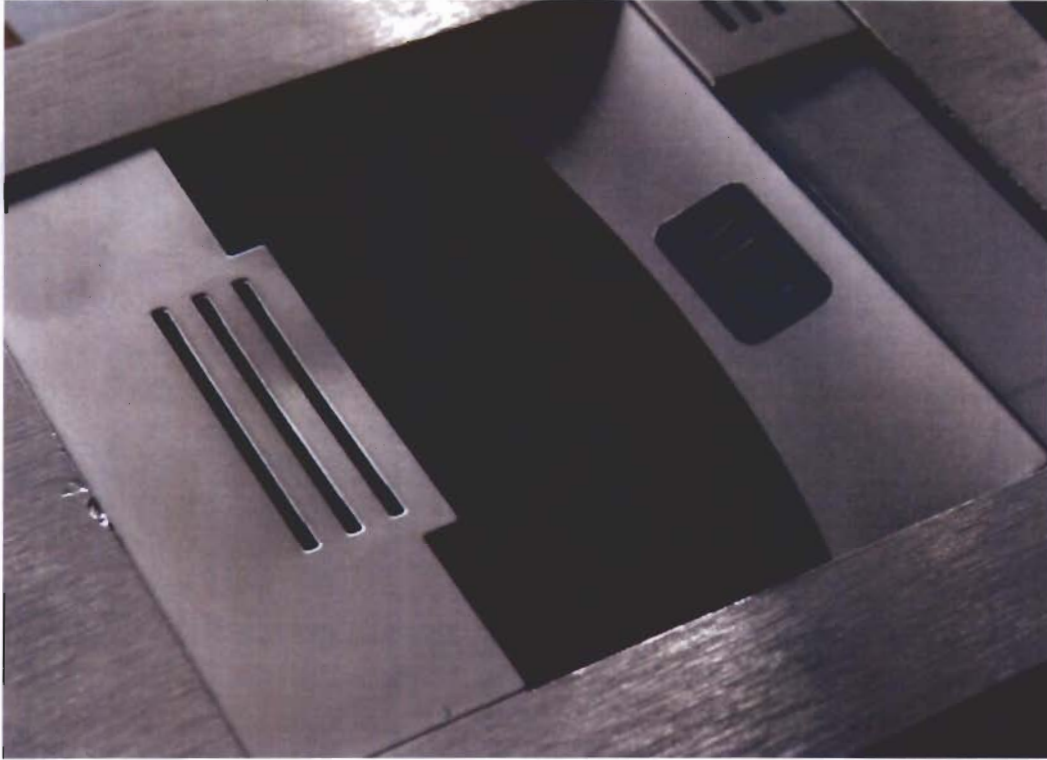


Fig. 19 - enclosure deflection on the specimen 2N® Helios IP Verso 9155101

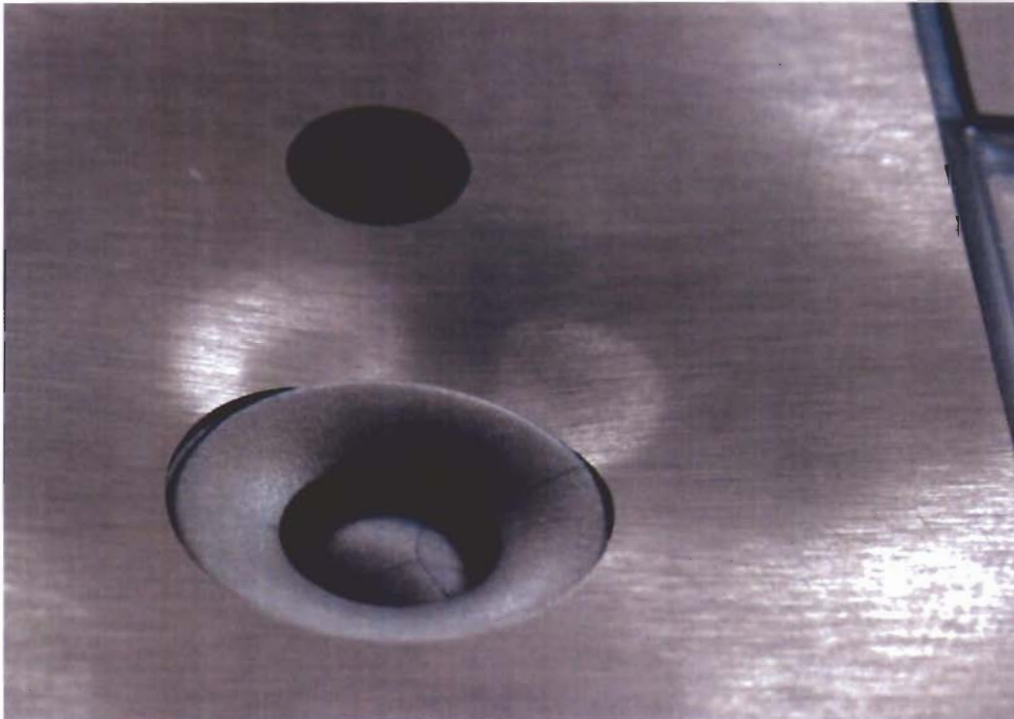


Fig. 20 - enclosure deflection on the specimen 2N® Helios IP Vario 913716KU

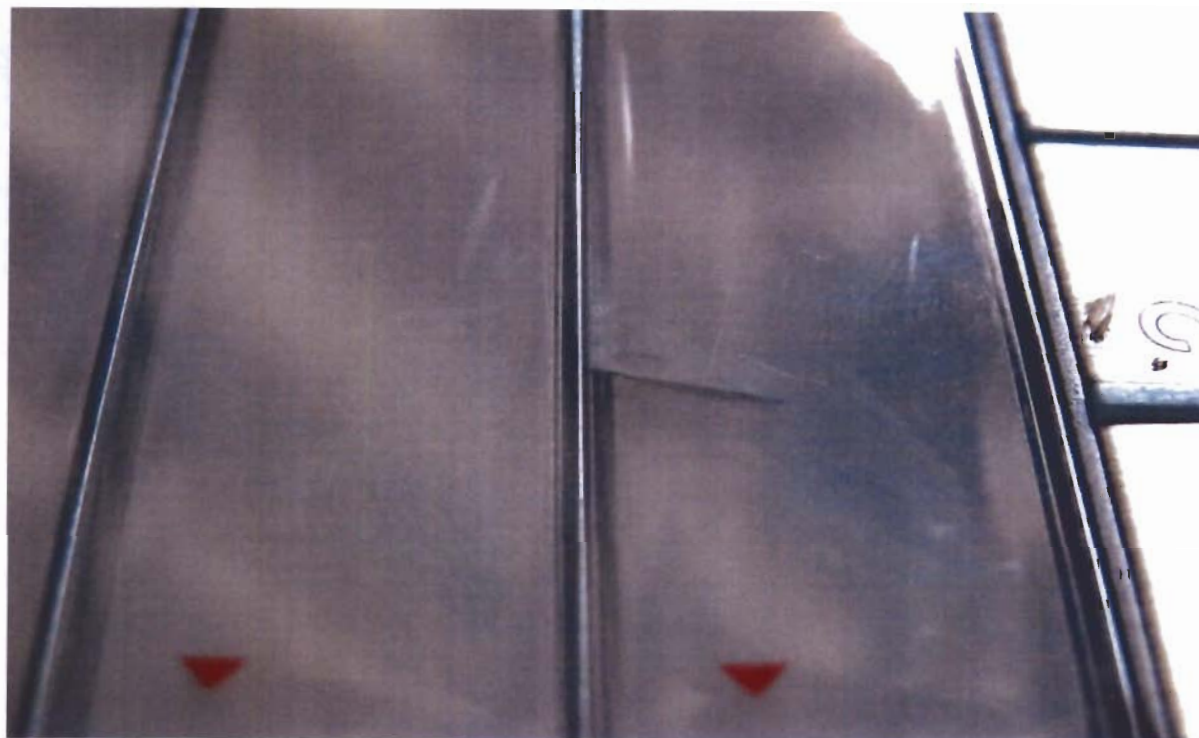


Fig. 21 - inner cracking of the nameplate on the specimen 2N® Helios IP Vario 913716KU

3. Test result

The submitted specimens

intercoms

- a) 2N® Helios IP Force 9151101CK
- b) 2N® Helios IP Safety 9152101W
- c) 2N® Helios IP Uni 9153102
- d) 2N® Helios IP Verso 9155101
- e) 2N® Helios IP Vario 913716KU

were subjected to tests of protection against external mechanical impacts - IK10 and IK 08 according to ČSN EN 62262:1997 +A1:1999 and ČSN EN 60068-2-75:1999.

The evaluation of the test results is in customer's competence.

Tested by: J. Šašek and J. Bažant

end of Test Report