

	<p>INSTITUT PRO TESTOVÁNÍ A CERTIFIKACI, a.s.</p> <p>zkušební laboratoř elektrických výrobků Sokolovská 573 686 01 Uherské Hradiště</p>	 
<p>(Institute for Testing and Certification, Inc.) Trial Laboratory of Electrical Appliances Sokolovská 573 686 01 Uherské Hradiště</p>		

TEST LABORATORY No. 1004.3

Document no: 3664/07

Accredited by the Czech Institute for Accreditation

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TEST DOCUMENT

of electromagnetic compatibility of the electro-impedance computer mamograph MEIK



Accredited test laboratory

-logo-

no. 1004.3

Institute for Testing and Certification Inc.



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Date of issue: 12 September 2007

Distribution: Institute of testing and certification Inc.
Institute of testing and certification Inc. 360
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 *All the comparisons of the measured and required values are above the requirements of the accreditation norm ČSN EN ISO/IEC 17025.

1 GENERAL INFORMATION

1.1 Contracting authority

Institute of Testing and Certification Inc.

Centre no. 360

Tř. T. Bati 299

764 21 Zlín

Identification no. 47910381

Tax code CZ47910381

Commission no. 803600225

Date: 18 June 2007

1.2 Dealer

POLYX TRADE INTERNACIONAL Ltd.

Sreznevského 17

831 03 Bratislava

Slovakia

1.3 Time range and tests procedure

The tested sample was delivered to the Institute of Testing and Certification Inc., 4th division, on 19 June 2007 and it was registered to be tested under the number IK 144/07.

Date of initiation of test: 19 June 2007

Date of termination of test: 19 June 2007

The parameters of normal climatic conditions were being checked during the individual tests and no diversions were measured.

Normal climatic conditions:

Temperature of surrounding environment (+15 to +35) °C

Atmospheric pressure (86 to 106) kPa

Relative humidity (25 to 75) %

1.4 Denomination and characterization of tested samples

An electro-impedance computer mamograph MEIK No. 302 was delivered to be tested.

1.5 List of used norms (ČSN = Czech State Norm)

ČSN EN 55022 : 1999

(Czech version EN 55022 : 1998)

ČSN EN 61000 -4-2 : 1997

(Czech version EN 61000 -4-2 : 1995)

ČSN EN 61000 -4-3 : 2003

(Czech version EN 61000 -4-3 : 2002)

ČSN EN 61000 -4-6 : 1997

(Czech version EN 61000 -4-6 : 1996)

1.6 List of used tools and appliances

Spectral analyst Anritsu MS 2601A 9 kHz to 2.2 GHz

Production no. MT 10773

Selective preamplifier Anritsu NM 1602A 9 kHz to 2.2 GHz

Production no. MO 5345

Log periodic antenna Frankonia BTA-H
Signal generator Rohde&Schwarz SMH
VF amplifier AR 10W 1000B
Field meter PMM OR 03 EP 300
ESD generator SRG 200K

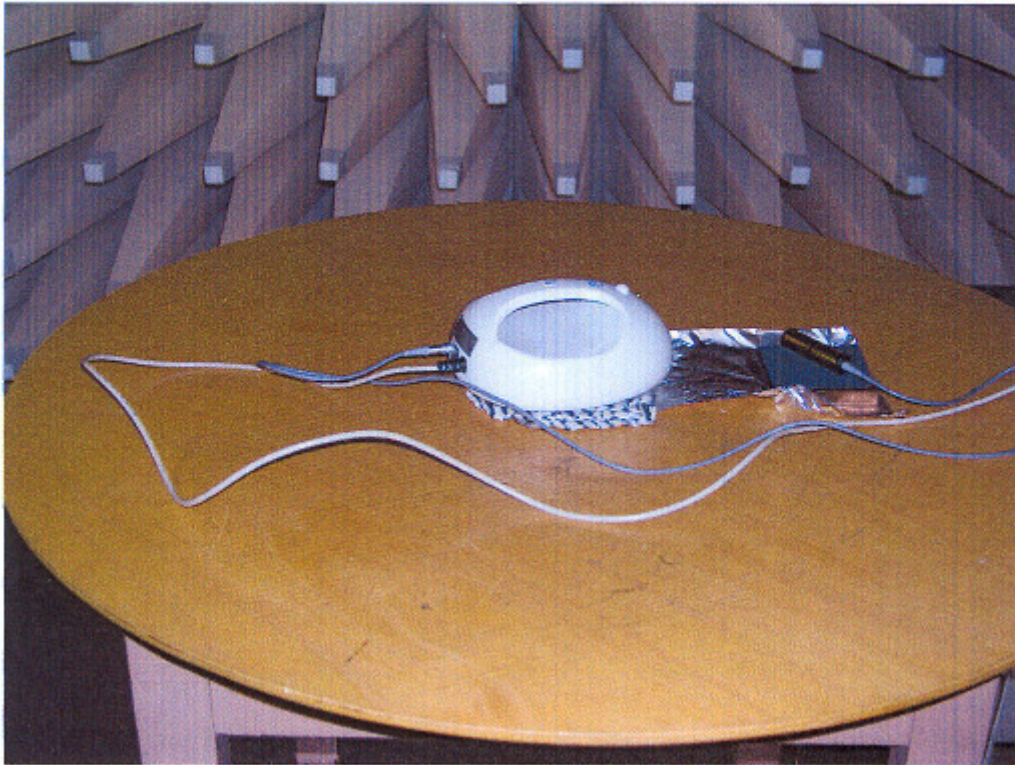
Production no. 97061002
Production no. 862490/007
Production no. 21532
Production no. 010WJ31008
Production no. 03

Tools and appliances undergo regular metrological checks and were periodically checked and acknowledged correct.

2 RESULTS OF INDIVIDUAL TESTS

Description of tested product

An electro-impedance computer mamograph MEIK powered up by 5V USB computer cord of 400 centimetres of length was delivered to be tested. The appliance was placed on a wooden desk with an earthing field at 80 centimetres above the base of the chamber.



2.1 High-frequency energy radiation

2.1.1. Measuring of radiation field

According to the norm ČSN EN 55022 art. 10, the amount of radiation field which the appliance issues into the surrounding space in the 3 ÷ 1,000 MHz frequency band were measured.

Measuring was performed in an insulated chamber at the distance of 3 metres and recalculated for 10 metres. A measuring transceiver with a quasi-peak detector was attached to a measuring antenna and values of issuing electromagnetic field for horizontal (H) and vertical (V) polarizations of the measuring antenna were taken.

Measurement uncertainty $U = \pm 5,2\text{dB}$.

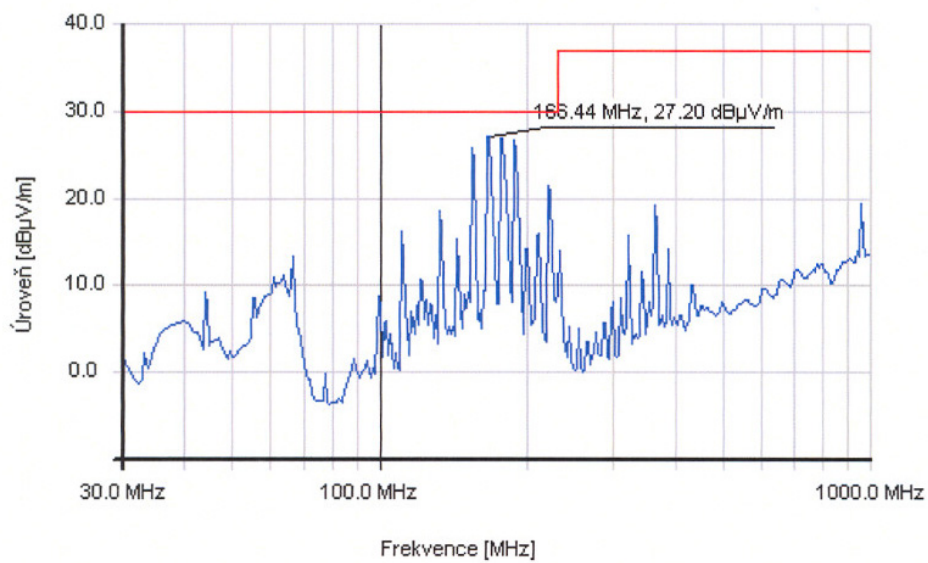
The stated combined standard expanded uncertainty U is given for the coverage coefficient $k = 2$ and the confidence level for probability 95%.

Limits of the interference field at measuring distance of 10 metres to be listed into class B according to ČSN EN 55022 art. 6.

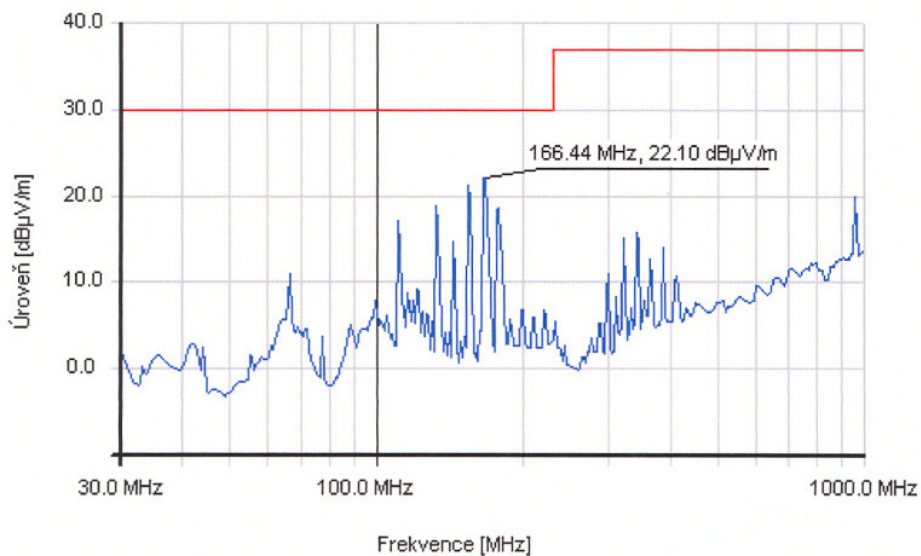
Frequency amplitude (MHz)	Quazi-peak limits dB ($\mu\text{V}/\text{m}$)
30 – 230	30
230 – 1000	37

Note 1: For frequency values at the boundary line lower values should be applied.
Note 2: In the case of interference occurrence, other measures should be taken.

Interference field according to the norm ČSN EN 55022 class B quasi-peak, horizontal polarization



Interference field according to the norm ČSN EN 55022 class B quasi-peak, vertical polarization



The appliance fulfils the requirements of the norm ČSN EN 55022 art. 6 class B on interference field.

2.2 Electromagnetic compatibility – Resistance

During the tests, the appliance was used in the mode of measuring impedance and toleration of measured values was checked.

2.2.1. Resistance against electrostatic discharge

According to the norm ČSN EN 61000-4-2, electrostatic discharge tests were carried out – air method on nonconductive surface and contact method discharges on the conductive parts of the appliance.

Degree of accuracy: 4kV – contact method

Degree of accuracy: 8kV – air method

The equipment was placed on the floor. A insulation mat was placed underneath.

Electrostatic discharge did not influence the functioning of the appliance by more than the tolerance of measured values.

The appliance fulfils the requirements of criteria A of the norm ČSN EN 61000-4-2.

2.2.2. Electromagnetic field resistance

A test of resistance within the 80 – 200 MHz band, AM 80%, 1 kHz was conducted, horizontal and vertical polarizations, according to the norm ČSN EN 61000-4-3.

Degree of accuracy: 3 V/m

Electromagnetic field did not influence the functioning of the appliance by more than the tolerance of measured values.

The appliance fulfils the requirements of criteria A of the norm ČSN EN 61000-4-3.

2.2.3 Directed electromagnetic interference resistance

A test of directed electromagnetic interference resistance was conducted, within the 150 kHz – 80 MHz frequency, AM 80%, 1 kHz, according to the norm ČSN EN 61000-4-6.

A directed interference signal was carried into the power supply cable with coupling pliers MEB-KEMZ 801.

Degree of accuracy: 1V

Directed electromagnetic interference does not influence the functioning of the appliance by more than the tolerance of measured values.

The appliance fulfils the requirements of criteria A of the norm ČSN EN 61000-4-6.

3 CONCLUSION

The electro-impedance computer mamograph MEIK no. 302 fulfils the requirements of the following norms:

- ČSN EN 55022 – class B
- ČSN EN 61000-4-2 criteria A
- ČSN EN 61000-4-3 criteria A
- ČSN EN 61000-4-6 criteria A

The test results apply to the tested appliance only.