

[RUSSIAN VERSION](#)

SEARCH

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TECHNICAL CONSULTING ON THE OPERATION OF LOW VOLTAGE ELECTRIC POWER SUPPLY SYSTEMS

PROTECTION FROM BIOLOGICAL EFFECTS OF ELECTROMAGNETIC FIELD

SCIENTIFIC RESEARCHES

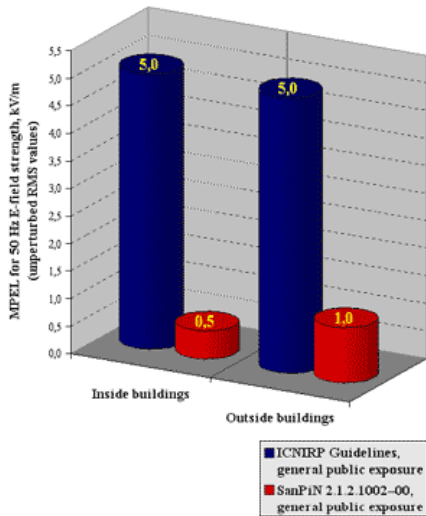
Standards

- [Measurements and monitoring of environmental and occupational exposure to EMF](#)
- [EMF hygienic and ecological audit](#)
- [Delivery of EMF measuring instruments](#)

EMF health effect studies were initiated in Russia since 1948. During the following 55 years, comprehensive hygienic, clinical, physiological, and experimental studies were carried out. The contemporary Russian electromagnetic safety standards (sanitary and epidemiological norms and regulations, SanPiN) are developed basing upon the analysis of these study results. These studies (including chronic (long term) EMF exposure) have given the opportunity to identify most sensitive systems of the human body: **nervous, endocrine, immune, cardiovascular and reproductive** systems. These critical system reactions were obligatory taken into account, when assessing the risk of negative EMF effects in human health to develop Russian standards of the electromagnetic safety. It was also demonstrated that EMF health effects under the long term exposure within many years are cumulated, so the resultant late effects are possible including degeneration processes in the central nervous system, leukemias, brain tumors, cardiovascular and hormonal diseases. EMF can be essentially dangerous in children, pregnant women, patient with diseases of central nervous, hormonal, and cardiovascular systems, allergy, and persons of weakened immunity.

The basic requirement for EMF permissible levels established in Russia is the absence of even transient homeostasis disorder (including reproductive function) as well as the tension of protective and adaptive-compensatory mechanisms both at nearest and late periods of time (which is different from EMF regulation system adopted in Western Europe and the United States).

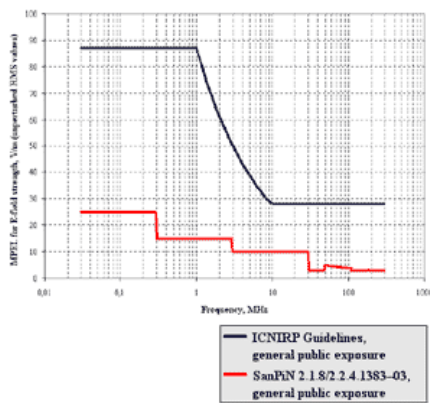
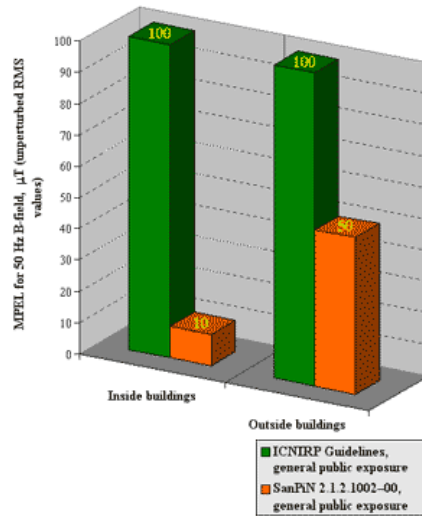
Thus, EMF maximum permissible levels established by Russian national standards at 0 Hz - 300 GHz frequency range are the strictest ones in worldwide and provide the maximal protection of human under the EMF exposure.



The comparison of maximum permissible values established for the power frequency (50 Hz) electric fields exposure (MPEL, maximum permissible exposure level) as the obligatory standard for the general public in Russia versus similar values recommended by International Commission on Non-Ionizing Radiation Protection (ICNIRP).

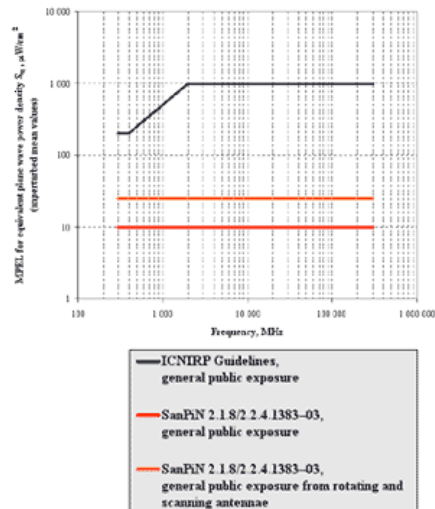
The comparison of maximum permissible values established for power frequency (50 Hz) magnetic fields flux density as the obligatory standard for the general public in Russia versus similar values

recommended by ICNIRP.



The comparison of maximum permissible values of the electric field exposure at frequency range of 0.03-300 MHz established as the obligatory standard for the general public of Russia versus similar values recommended by ICNIRP.

The comparison of maximum permissible values of the power flux density at 0.3-300 GHz frequency range established as the obligatory standard for the general public of Russia versus similar values recommended by ICNIRP.



The more detailed information (in English) regarding Russian EMF safety standards can be found at WHO web site: http://www.who.int/peh_emf/standards/en/

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phone/fax
(095) 193-0187
e-mail
info@tesla.ru

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