

Electromagnetic « Smog »?

The rapid growth and proliferation of wireless telecommunication systems, cellular telephony chief among them, has contributed to an equally rapid increase in the levels of RF radiation in our environment.

Numerous questions exist regarding the health effects of RF radiation: Is RF radiation dangerous? What level of RF radiation can be considered as safe? What methods of protection against excessive levels of RF radiation can be used?

Safety Code 6

Radiation Protection Bureau of Health Canada publishes «Limits of Human Exposure to Radiofrequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz».

These limits are based on a review of scientific work conducted over the last thirty years and are set at levels 10 times lower than the thresholds where potentially harmful effects begin. At YRH, we've been concerned for more than 10 years already, with the recommendations of that document, more commonly known as «Safety Code 6».

The exposure limits recommended by the Safety Code 6 are specified in terms of intensity of electromagnetic fields and different limit values are specified for people exposed in the course of their work (occupational exposure) and for the general public.

Safety Code 6 therefore also specifies limit values for induced body currents as well as contact currents. At lower frequencies, such as the FM band, electromagnetic fields can induce electric currents in the human body and in other conducting objects.

Compliance assessment

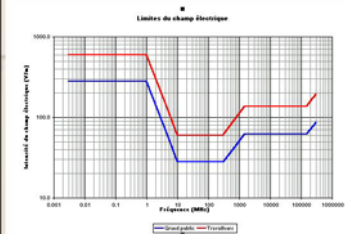
The evaluation of RF radiation levels in a given situation is necessary to determine if the RF levels respect the recommendations of Safety Code 6, either for the protection of the general public or for safe working conditions for RF workers.

RF field levels can be modelled theoretically, which allows to assess the RF field levels of existing installations as well as of future situations. Moreover, a theoretical assessment can evaluate RF field levels even for locations that are not easily accessible.

Whenever possible, on-site measurements should be performed to supplement the theoretical results. The type of measurements that need to be performed on a given site depends on the frequencies used at this site and different types of survey equipment can be selected accordingly.



Exposure limits



Maximum exposure values specified by Safety Code 6 vary with the frequency. In a multiple frequency environment this fact must be taken into account: the RF field level generated at each frequency must be compared to the maximum exposure value specified for this frequency in order to evaluate the total effect.

Theoretical Assessment



Green and yellow sections of the roof can be accessed by workers for unlimited time periods without any reduction of transmitter power. Red sections should not be accessed except under specific circumstances.



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