



EDITOR'S MESSAGE

Medical applications: The ISM Band



In 1967, IMPI members were confident that the Industrial, Scientific and Medical (ISM) 915 MHz band was “always to be”. Since then we are familiar with documents related to the different frequencies allocated for this band, especially in the industrial and scientific areas. It can not be denied that the most well-known applications of microwaves and RF are in communication, and most recently wireless devices, whereas the best known non-communication application is the kitchen microwave oven.

Perhaps this is not happening in every conference covering electromagnetic power, but most of the attendees are engineers in different areas: chemistry, materials, electric ... in industry, academia and government, also some people in biology and almost no people dedicated to medicine.

The “M” part of ISM seems to be forgotten, and the major studies focus on health issues regarding the effect of this non-ionizing energy, not in health but in the modern life style, intensive in energy and surrounded by electromagnetic fields produced by mankind and nature itself, which cannot be eliminated.

There is a lack of discussion on this matter in the various conferences, other than the above mentioned health concern. There is a continuous search in the medical practice for finding non-invasive methods for treating cancer, perform analysis and other diagnosis techniques. Non-invasive means in many cases that treatments can be conducted without surgery, or even better, without pain.

There are medical devices whose effectiveness depends on the ability of microwaves to penetrate into living tissues. Still this is a function of the dielectric properties of the tissues and of the frequency of the microwaves.

This is the 174th issue of JMPEE, which includes an article of a kind that is not often presented, and that gives the opportunity to see that this area is also of the interest of persons working in other disciplines focusing on other microwave and RF applications.

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