Study of Radio Absorbing Properties of Layered Oxide and Carbon Containing Composite Materials

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Abstract : The regularities of changing of the values of electromagnetic radiation absorption coefficient of layered oxide and carbon containing composite materials and electromagnetic radiation absorption losses, provided by these ones, depending on this radiation frequency values, varying in the range from 0.7 to 142.8 GHz, have been established. The results of the experimental substantiation of the technique for such materials manufacturing have been presented by the authors in earlier published scientific papers. Based on the established regularities, it was determined that layered oxide and carbon containing composite materials absorb the energy of electromagnetic radiation, interacting with them, to the greatest extent if the frequency value of this radiation varies from 16.7 to 26.0 GHz and from 54.0 to 78.0 GHz. It was defined, that the studied materials are suitable for use to ensure the high accuracy and electromagnetic compatibility of microwave measuring equipment.

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