

Structure and surface composition of Mn-Zn ferrites after laser and electron beam modification

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Comparative results of changes in the structure and composition of Mn-Zn ferrites after modification of their surface by concentrated CO₂ laser radiation in an air atmosphere and a flow of low-energy electrons with an energy of 10 keV at a pressure of 5–20 Pa are presented. In both cases, the modification consisted in melting the ferrite surface to a depth of 50–100 microns, followed by secondary recrystallization of the molten layer. It was found that during electron beam treatment, zinc losses and the degree of deferritization of the surface layer are higher than during laser treatment.

Keywords: laser and electron beam modification, Mn-Zn ferrite, X-ray phase analysis.

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