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SUPPRESSION OF CURRENT HARMONICS FEEDING POWERFUL SINGLE-PHASE LOADS

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Abstract

The hybrid filter of harmonics of the mains current of the power source of the electrothermal installation for the production of basalt super thin fiber (BSTF) in the heating mode of the draw plate is described. The filter uses a combined circuit of a passive broadband LMC filter cascaded with a transistor active filter. Mathematical modeling of such a filter and experimental verification of the effectiveness of harmonic suppression of the mains current are carried out. Experimental spectrograms and current diagrams were compared with similar simulation results, the models were confirmed to be adequate and can be used in the development of single-phase hybrid current-harmonic filters. References 8, figures 9, tables 3.

Key words: current harmonic factor, THDi, LMC-filter, active filter of parallel type, hybrid filter, thyristor controller, transformer, distortion compensation.

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