EQUIVALENT CIRCUIT OF A WINDING WITH A MAGNETIC CORE

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ABSTRACT An equivalent circuit of the winding that is based on the magnetic core circuit has been proposed. The obtained inductance matrix with consideration of the capacitance one leads to the winding model that enables to determinate its circuit functions. This model can be useful for investigations of the core influence on the winding frequency response. The equivalent circuit under consideration can be also employed for the evaluation process of the frequency response sensitivity on the core parameters as well as for accuracy estimation of determination of winding parameters.

Keywords: modelling, frequency response, magnetic core