Review of: "The Application of Adjustable Magnetic Devices in Electric Power Systems"

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Potential competing interests: No potential competing interests to declare.

The manuscript“The Application of Adjustable Magnetic Devices in Electric Power Systems” by Michał Gwóźdź is devoted to the study of the possibility of using tunable magnetic devices with adaptive characteristics in electrical power systems, and gives a complete explanation of the principle, as well as the model and test results of power system based on the device. In my assessment, this manuscript is methodologically and experimentally sound and valid, which may be of widespread research interest to power systems with adaptive characteristics. I would like to suggest publishing this manuscript on Qeios, pending some minor revisions or responses.

(1) The diagram note in Figure 4 should be the relationship between phase shift and “a”, not “g”. Please check it carefully.

(2) It is indicated in article 5.1 that the resistance TI can be ignored when calculating the inductance. Please give a detailed analysis of the corresponding inductance value and the corresponding error value with and without the resistance TI.

(3) Below equation (15), the author points out that “This statement was confirmed experimentally, based on a wide range of tests of numerous types of inductive devices.” Please give previous references to confirm the correctness of the statement.

(4) The moment of parallel resonance can be clearly seen in Figure 11, where the author mentions: “This results from the given value of the equivalent inductance (reactance) of the TI, which is a function of the gain factor.” May I ask the author, what is the specific functional relationship between the occurrence time of parallel resonance and the gain factor? What parameters of the device can adjust the occurrence time of parallel resonance?

(5) As a small suggestion, in FIG. 3 and FIG. 11, the color identification of the two ordinates in the same coordinate system should be consistent with the curve color in the figure, and the corresponding content of the curve color in the figure should be explained in detail in the note.