In this research, based on the design results presented through the IH Jar heating coil's new analysis method and its optimum design, the practical effectiveness of a heating coil was verified. Design through equivalent circuits shows results similar to those of FE analysis, and allows fast analysis. A heating coil test sample was created through the heating coil design optimized using equivalent circuits. This was applied to an induction heating electric rice cooker and tested, obtaining a 0.8% efficiency improvement.