

DETERMINATION OF LOSS IN THE CORE OF THE LOW POWER INDUCTION MOTOR, TAKING INTO ACCOUNT THE MATERIAL AREA DAMAGED IN RESULT OF A MECHANICAL PUNCHING

Summary - In this paper the iron losses in low power induction motor are estimated and analysed using time-stepping Finite Element Method (FEM) under sinusoidal supply. The iron losses calculation has been carried out by add up the iron losses produced by orthogonal components of the flux density, as if the iron losses produced by these components were independent phenomena. The rotational hysteresis loss has been calculated applying a correction factor based on experimental data. Applied model takes into account the presence of damaged zones of the ferromagnetic, as a result of punching.