Question 18

Q: How does Femtet represent the current loss of a conductor?
(Magnetic analysis/Magnetic saturation/Current loss)

A: Femtet displays two times the current loss, P [W], in the result display file.

The equation, P=1/2*V, is well known and transferred to P=1/2*I^2*R.

Both sides are multiplied by 2 to give the equation of 2*P = I^2*R.

Assuming that the current, I, of 1 [A] flows through the coil, the equation above gives 2 * P = R.

The value of the current loss in the result display file will be equal to the resistance. To estimate the resistance with ease, two times the current loss is saved in the file.