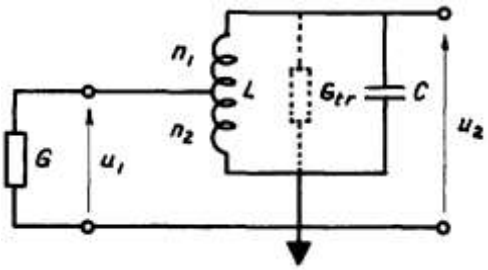
Impedance transformation by an inductor.

It is possible to transform impedance, by use of an inductor or capacitors. It is called inductive or capacitive transformation.

The circuit shows how to make transformation by an inductor.



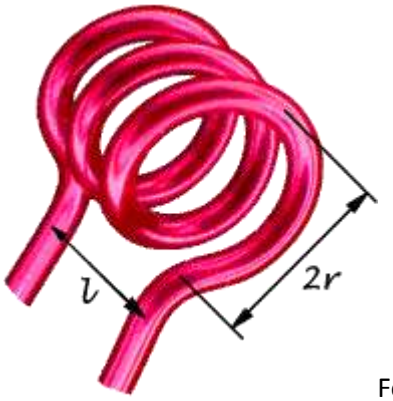
n (tot)=n1+n2

$$G_{tr} = G\left[\frac{n_2}{n_1 + n_2}\right]^2$$

G=1/R G (Siemens) and R (Ω)

$$u_2 = u_1 \frac{n_1 + n_2}{n_2}$$

Formula for air inductor:



Formula for self induction: L= (2r*n*n) / [(l/2r+0.43)*100]

Where: L (uH) 2r (diameter in cm) n (number of windings) l (length in cm)

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