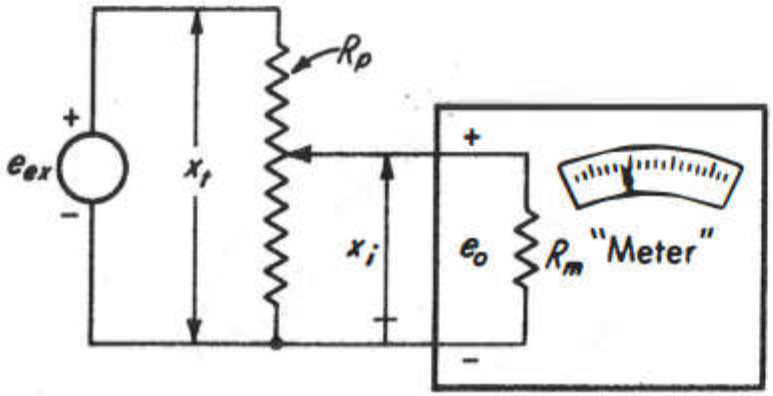
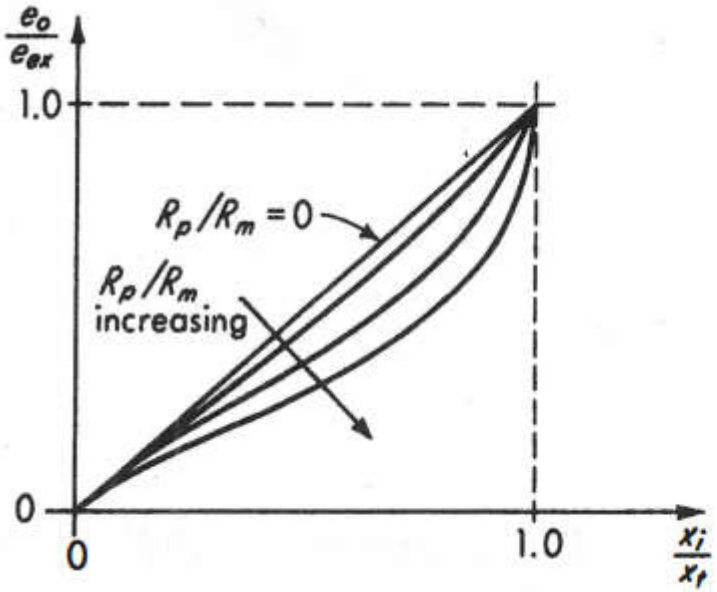
Theory of some important Transducers

Analysis of Potentiometer Circuit





$$\frac{e_o}{e_{ex}} = \frac{1}{1/(x_i/x_t) + R_p/R_m)(1 - x_i/x_t)}$$

For an ideal meter, Rm will be infinite then one may have Rp/Rm will be almost zero

Then one may write

$$\frac{e_o}{e_{ex}} = \frac{x_i}{x_t}$$