

## corrosion rate

**Also contains definition of:** corrosion current

The amount of substance transferred per unit time at a specified surface. Using Faraday's law, the corrosion rate,  $v_{\text{cor}}$ , can be formally expressed as an electric current which at the corrosion potential is called the corrosion current,  $I_{\text{cor}}$ , e.g. for the anodic dissolution of one component of a material with  $v_{\text{cor}}$  in  $\text{mol s}^{-1}$  and  $I_{\text{cor}}$  in A one obtains  $I_{\text{cor}} = n F v_{\text{cor}}$ ,  $n$  being the charge number of the electrode reaction and  $F$  the Faraday constant.

**Source:**

PAC, 1989, 61, 19 (*Electrochemical corrosion nomenclature (Recommendations 1988)*) on page 20