NOMENCLATURE

A	Area-surface of electrode or x-section of pipe, m^2
Ar,Am	riser and manifold cross-sectional area, m^2
a	area ratio, ratio of cross-sectional areas of riser to manifold, dimensionless
B	effective film thickness, m
C	concentration of electrolyte,g.mole m^{-3}
Cm,k	element of a circuit matrix as defined in Fig. 3.7
Cp	specific heat, $Jkg^{-1}K^{-1}$
ceffs	collector array eficiency in eqn 3.60
d	density, kgm^{-3}
dT	temperature rise in a collector,° C
D	diameter,m
DL	diffusivity, m^2s^{-1}
f	friction factor, dimensionless
FR	collector heat removal factor, dimensionless
F′	collector efficiency factor, dimensionless
F	Faraday's constant
G	collector flow rate per unit collector area, $kgs^{-1}m^{-2}$
i	rate of ionic discharge.
I	solar radiation, Wm^{-2}
Il	limiting current, ampere

k	pipe roughness factor, m
k_L	mass transfer coefficient, kg.mole $m^{-2}s^{-1}$
K	loss coefficient, dimensionless
$K_c(i,j)$	Tee loss coefficient for combining flow related to branches i and j
$K_d(i,j)$	Tee loss coefficient for dividing flow related to branches i and j
K_{ij}	Tee loss coefficient related to branches i and j
L	length, m
n	total number of branches in hydraulic network
n_i	number of ions reacting at an electrode
n_r	no. of risers in a collector array
NUF	Non-uniformity factor defined in eqn 3.58
θ	angle of tee junction
p_i	pressure at node i, Nm^{-2}
$p_b(i)$	pressure change in branch i
q	flow ratio,branch to total flow in a tee, dimensionless
q_i	the ratio of the i^{th} riser flow rate to the total flow rate defined in eqn 3.50
q_m	Hardy-Cross correction factor
Q_i	Volumetric flow rate in branch i,m^3s^{-1}
Q_{in}	total inlet volumetric flow rate in to the collector, m^3s^{-1}
Q_u	Useful heat gained in a solar collector, $W\ m^{-2}$
r	ratio of radius of tee to branch diameter
Re	Reynolds number, dimensionless
R_i	resistance of branch i in a hydraulic network

U	velocity, ms^{-1}
U_L	collector overall loss coefficient, $Wm^{-2}K^{-1}$
u	mobility, ms^{-1} (Volt $m^{-1})^{-1}$
T	temperature, °C
(ta)	transmitivity-absorptivity product of collector