

Electrolysis of sulfuric acid in the lead-acid battery

Cathode Potential E_c (V)	Anode Potential E_a (V)	$E_c - E_a$ (V)	Log (i_a/i_c) [Equation (8)]	i_a/i_c	i_c A (if i_a assumed 10A)	Gas evolution per second			Composition of generated gas(%, v/v)	
						Oxygen ($i_a \times$ 11200)/(2x96500)	Hydrogen (10 i_c / i_a)x 0.1160	Total	Oxygen	Hydrogen
2.30	2.20	+0.10	0.8455	7.0065	1.427246	0.5803	0.1655605	0.7459	77.8	21.2
2.30	2.22	+0.08	1.0764	4.7468	1.10668	0.5803	0.244375	0.8247	70.4	29.6
2.30	2.25	+0.05	0.42275	2.6470	3.77786	0.5803	0.438232	1.0185	57.0	43.0
2.30	2.28	+0.02	0.1691	1.4761	6.77461	0.5803	0.785855	1.3662	42.5	57.5
2.30	2.29	+0.01	0.08455	1.2149	8.23113	0.5803	0.954811	1.5351	37.8	62.2
2.30	2.295	+0.005	0.042275	1.10224	9.07243	0.5803	1.052402	1.6327	35.5	64.5
2.30	2.32	-0.02	0.1691	1.4761	6.77461	0.5803	0.785855	1.3662	42.5	57.5
2.30	2.35	-0.05	-0.4275	0.3778	26.46903	0.5803	3.070407	3.6507	15.929.6	84.1