VA Application Note No. V - 137

Title:	**Suppressor «Cupraspeed» in acid copper baths (Atotech)**

Summary:	Determination of suppressor «Cupraspeed» in acid copper baths by dilution titration (DT) using cyclic voltammetric stripping (CVS).

Sample:	Acid copper electroplating bath
Sample preparation:	None

Analysis of suppressor «Cupraspeed»

Electrolyte

Virgin make-up solution (VMS)

$CuSO_4$, H_2SO_4 and NaCl concentrations according to the supplier specifications.

Measuring solution

100 mL VMS

Working electrode (WE)

Pt-RDE:
Drive shaft 6.1246.000
+ Pt tip for CVS 6.1204.160

Auxiliary electrode (AE)

Pt.....6.0343.000

Reference electrode (RE)

Reference system: Ag/AgCl/KCl (3 mol/L) 6.0728.020
Intermediate electrolyte: KNO_3 sat.:H_2O (3:1) ..6.1245.010

Parameters

Working electrode	RDE (hydrodynamic measurement)
Stirrer speed	2000 rpm
Mode	CVS
Calibration technique	DT
Start potential	1.575 V
First vertex potential	-0.25 V
Second vertex potential	1.575 V
Voltage step	0.006 V
Sweep rate	0.1 V/s
Peak potential (Cu)	0.2 V ± 0.2 V
Evaluation ratio (Q/Q(0))	0.7

Determination of suppressor «Cupraspeed»