

Test PC2/F14 - Stage grind to 100% -75  $\mu$ m at 60% solids (7 $\frac{1}{2}$  min.; 500 g charge); deslime at 7  $\mu$ m; sulphide pre-float; stage tin rougher floats with S-3903 as collector.

(a) Flotation Conditions and Reagents

Stage	Conditions			Reagent Addition kg/t			
	Time (min.)		pH	SSBX	S-3903	H <sub>2</sub> SO <sub>4</sub>	MIBC
	Conditioning	Flotation					
Sulphide Ro Float 1	2	5	6.4	0.01	-	-	0.04
Sulphide Ro Float 2	2	5	6.4	0.01	-	-	0.02
Tin Ro Float 1	2	5	4.5	-	0.01	0.130	0.01
Tin Ro Float 2	2	5	4.5	-	0.01	0.022	0.01
Tin Ro Float 3	2	5	4.5	-	0.01	0.022	0.01
Tin Ro Float 4	2	5	4.5	-	0.01	0.008	0.01
Tin Ro Float 5	2	5	4.5	-	0.01	0.008	0.01
Tin Ro Float 6	2	5	4.5	-	0.01	0.006	0.01

(b) Results

Test Product	Weight %	Assay % Sn	Distribution % Sn
Sulphide Ro Conc	10.00	0.34	11.15
Tin Ro Conc 1	1.20	1.29	12.23
Tin Ro Conc 2	1.69		
Tin Ro Conc 3	2.20	1.84	26.20
Tin Ro Conc 4	2.14		
Tin Ro Conc 5	2.41	1.29	24.00
Tin Ro Conc 6	3.26		
(Tin Ro Conc 1 to 6)	(12.90)	(1.48)	(62.43)
Tin Ro Tail	71.41	0.10	23.43
Slime -7 $\mu$ m	5.69	0.16	2.99
Calc Head	100.00	0.30	100.00
Assay Head		0.29	

(c) Comments

(i) Results obtained in this test using S-3903 as collector were considerably inferior compared to that obtained in Tests PC2/F12 and F13 with PTAA and SPA respectively as collector.

(ii) It appears that collector S-3903 is to be applied sparingly and perhaps in conjunction with suitable depressants in order to achieve selectivity but with decrease in recovery in flotation.