

Test PC2/F13 - Stage grind to 100% -75 μ m at 60% solids (7 $\frac{1}{2}$ min., 500 g charge); deslime at 7 μ m; sulphide pre-float; stage tin rougher floats with SPA as collector.

(a) Flotation Conditions and Reagents

Stage	Conditions		Reagent Addition kg/t					
	Time (min.)	pH	SSBX	SPA	H ₂ SO ₄ /NaOH	MIBC		
<u>Conditioning Flotation</u>								
Sulphide Ro Float 1	2	5	6.7	0.01	-	-	0.04	
Sulphide Ro Float 2	2	5	6.7	0.01	-	-	0.02	
Tin Ro Float 1	5	5	4.5	-	0.25	0.106/	-	0.02
Tin Ro Float 2	5	5	4.5	-	0.25	-	/0.016	0.01
Tin Ro Float 3	5	5	4.5	-	0.20	-	/0.016	0.01
Tin Ro Float 4	5	5	4.5	-	0.20	-	/0.020	0.01
Tin Ro Float 5	5	5	4.5	-	0.20	-	/0.024	0.01
Tin Ro Float 6	5	5	4.5	-	0.20	-	/0.028	0.01

(b) Results

Test Product	Weight %	Assay % Sn	Distribution % Sn
Sulphide Ro Conc	10.39	0.33	10.53
Tin Ro Conc 1	0.81	3.56	14.43
Tin Ro Conc 2	0.51		
Tin Ro Conc 3	0.30	10.0	19.34
Tin Ro Conc 4	0.33		
Tin Ro Conc 5	0.33	16.6	35.67
Tin Ro Conc 6	0.37		
(Tin Ro Conc 1 to 6)	(2.65)	(8.54)	(69.44)
Tin Ro Tail	80.71	0.07	17.34
Slime -7 μ m	6.25	0.14	2.69
Calc Head	100.00	0.33	100.00
Assay Head		0.29	

(c) Comments

- (i) As a result of desliming the flotation feed, the grade of the overall tin rougher concentrate was also improved from about 3 to 8.5% using SPA instead of PTAA as collector.