

obtained were treated individually by superpanner to secure a series of table/superpanner concentrates and tailings. All test products generated in this section of the testwork were assayed for total and acid soluble Sn for metallurgical calculations. Test results obtained are presented in Appendix I. These test products were also submitted for mineralogical examination and the report is presented in Appendix J.

### 7.3.2 Discussion

The performance of tabling/superpanning tests conducted on the sulphide middling and tailing products of Composites PC1, PC2, SC1 and SC2 is shown in Figs 12 to 15 respectively. Some of the features observed in these plots are outlined as follows.

Tin distributions in the five sized fractions of table feed were very similar to that of the superpanner feed used in the previous section for all composite samples. Test charges of 500 g and 10 kg samples were used to prepare the sized fractions for superpanner and table feeds respectively.

For PC1 and PC2, the overall tin recoveries obtained for tabling/superpanning test were very similar to those obtained in the superpanning tests. The table concentrate grade was generally low for all sized fractions. There was some improvement both in recovery and grade in table/superpanner concentrates of the finer sized fractions. The major contaminants of these concentrates were pyrite and non-opaque gangue with a very small amount of iron oxide and arsenopyrite. The liberation of cassiterite in table/superpanner concentrates for sized fractions +250 to -53  $\mu\text{m}$  ranged from 42 to 45% and 55 to 90% for PC1 and PC2 respectively, with the cassiterite being mainly locked with non-opaque gangue and to a lesser extent with sulphides and iron oxides.

For SC1, the tin recoveries in table/superpanner concentrates were generally higher than those of the superpanning tests throughout the size range. However, the grade of these concentrates was considerably lower, particularly in the finer sized fractions. The major contaminants in the concentrates were pyrrhotite and non-opaque gangue with a small amount of pyrite, arsenopyrite, sphalerite and iron oxides. Liberation of cassiterite was very poor in the coarse sized fractions of the concentrates and it ranged from 6 to 86% for +250 to -53  $\mu\text{m}$  sized fractions respectively. The cassiterite was locked mainly with sulphides and non-opaque gangue.