

LAUNCESTON, 19th December, 1944.

*Duplicate**N<sup>o</sup> 129*INVESTIGATION NO. 478/44.Identification Label- "X"Investigation.

Sample of tailings stated to be obtained from the dam at the Tasmanian Amalgamated Tin N. L. Mill was received from Mr. P. O'Dea for sizing analysis and determination of the manner in which the cassiterite occurs.

Sizing Analysis.

Minus 200 mesh fractions sized in Haultain Infrasizer. B.S. Screens.

<u>Fraction</u>	<u>Weight</u>		<u>Tin</u> <u>Percent</u>	<u>Tin</u> <u>Percent</u>	<u>Distribution</u>	
	<u>Percent</u>	<u>Percent Cum.</u>			<u>Percent</u>	<u>Percent Cum.</u>
+ 85	12.35	12.35	0.39	5.55	5.55	
+100	3.06	15.40	0.42	1.48	7.03	
+120	6.62	22.02	0.42	3.21	10.24	
+150	12.65	34.67	0.44	6.42	16.66	
+200	3.16	37.83	0.56	2.04	18.70	
I.S. 1	16.80	54.63	0.98	18.98	37.68	
" " 2	8.95	63.58	0.94	9.70	47.38	
" " 3	7.54	71.12	1.69	14.69	62.07	
" " 4	5.56	76.68	2.39	15.33	77.40	
" " 5	4.90	81.58	2.02	11.42	88.82	
" " 6	4.28	85.86	1.14	5.63	94.45	
" " 7	14.14	100.00	0.34	5.55	100.00	
Composite	100.00		0.87			

I. S. fraction 3 has a nominal range size for cassiterite of 30-20 microns or 500 to 700 mesh size. The sizing analysis shows 38 percent of the cassiterite in fractions I.S. 4 to 7.

Examination Of The Cassiterite.

The sample was divided into two products for this examination as follows. The plus 200 mesh material was examined for composite grains of cassiterite, followed by concentration tests by vanning. The minus 200 mesh material was submitted to vanning tests only as an indication of recoverable cassiterite by gravity concentration. The reason for this being that should cassiterite be present as composite grains it is unlikely that grinding beyond 200 mesh size would result in additional recovery.