COMPARISON OF SIZE WITH STRENGTH UNDER PRESSURE BETWEEN SEASONED ROUND MINING TIMBER AND GREEN SPLIT MINING TIMBER.

By R.I. Button.

At present green split Jarrah is being used in the Collie Deep Coal Mines, at the rate of approximately six hundred pieces every day.

This high consumption will soon exhaust the small quantity of readily available and economical split Mining timber left in the Collie District. Young dense pole areas being plentiful, it was decided that some research should be undertaken to determine the size of the average pieces of split mining timber acceptable by the Mines Department, compared with the size of seasoned round timber of equivalent breaking strength.

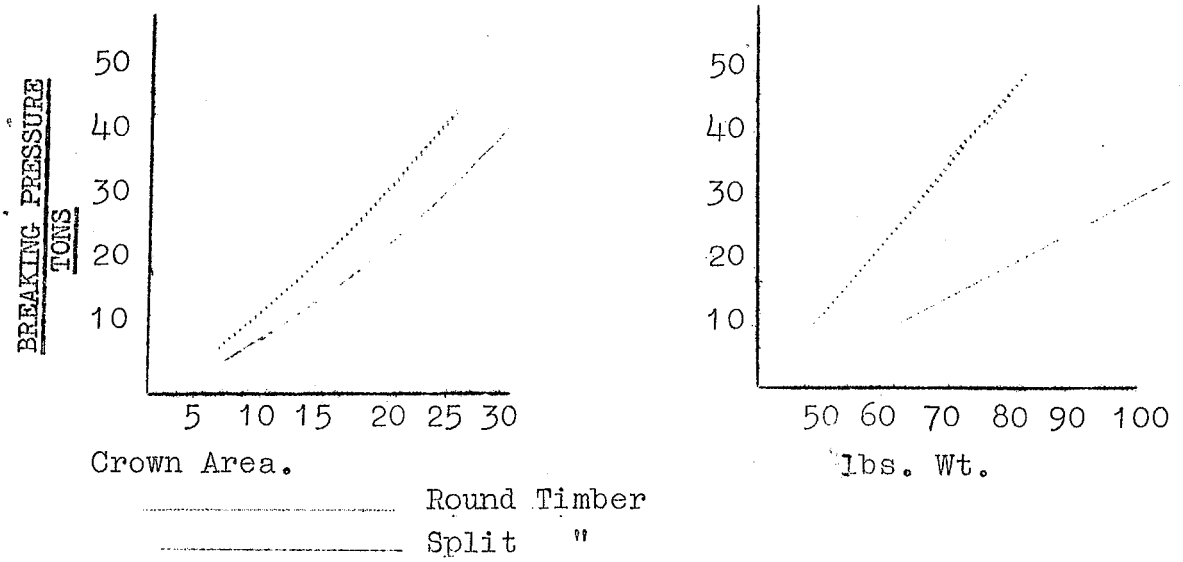
MATERIAL COLLECTED.

Thirty pieces of barked freshly cut green split Jarrah props, chosen at random from a Mine dump. Ninety pieces of barked, round, timber with less than 23% moisture content chosen at random from the three most common species, Jarrah, Marri and Yarri. Each piece being eight feet long, the crown area varying from eight square inches to thirty square inches, with no faults unacceptable to the Mine specifications.

THE EXPERIMENT.

Each piece was marked for identification, weighed, crown area measured, and then broken under pressure.

The recordings were graphed as below.



EQUIPMENT USED.

A H draulic Caterpillar Ram with dial showing tons breaking pressure connected to a press. A modern weighing table (at the railway goods yard).

CONCLUSIONS.

From the graphs, we find that the round timber is stronger than the split mining timber, separating the species the strongest in sequence was round Marri, round Jarrah, round Yarri, and lastly green split Jarrah. This indicates that a smaller piece of round timber, in w ght and crown size, can fulfil the same purpose as a piece of split green Jarrah.

Due to the rapid sap decay in Marri and Yarri, round Jarrah is the only species that can be used without preservative pressure treatment.