The total man-power employed comprised 110 men and 40 women.

This operation was the most modern and appeared to be the most efficient visited in Finland.

With the exception of two other plants in Sweden comprising single-frame units, all other plants visited in Finland and Sweden were working on the tandem principle—that is, one log frame producing cants for a cant gang, followed by an edger, and these varied from single-line to six-line mills. All were working on logs sorted to 1 in. or ½ in. diameter classes.

As, in general, their mills were of a similar type, varying mainly in the number of lines operated, I believe it sufficient to detail only one or two of the most efficient of these units. Also as I am of the opinion that the smaller-type unit is of more application to New Zealand, I concentrated mainly on single- and two-line mills.

One of the most efficient mills was that of—

Marma Langors AB.

This is an integrated unit comprising sawmill, sulphate, and sulphite pulp mills.

The sawmill was a two-story ferro-concrete building, and all interior runways, steps, &c., were in steel, no wood being used in construction.

All logs were barked before entering the mill, this being done mainly in the forest.

It comprised a two-line mill on the tandem principle and consisted of—

Two log frames (1 Soderhamn 30 in. with a 26 in. sash and fitted with air lift on top rolls).
Two cant frames.
Two edgers.
Trimming-table.

It was fully mechanized, compressed-air-operated infeed trucks, reversible screw rolls for lining cants to shadow line, automatic rolls to take slabs and wane edge boards as soon as freed from the frame, automatic transfer of cants to cant frame, automatic separator for square-edge timber from cant gang, wane edge boards dropping off on to chain conveyer to edger, and square edger timber direct to trimming-table on belt conveyer. The trimming chain comprised two units, one above the other, the top one receiving square-edge timber from cant gangs, and the bottom one receiving timber from the edgers, each equipped with two saws. The bottom chain had a cross transfer to enable short pieces to be sent from one trim saw to the other, after docking one end.

There was also provision for the return of wane edge timber from trim saws to edger by way of belt.

From the trimming chain timber was discharged on to two separate belt conveyers to loading-point.

Slabs from each pair of frames were discharged on to two wide belt conveyers, each of which picked up the edging from their respective edgers and fed same to chippers.

Sawdust and rubbish were conveyed by cross conveyers to a separate line.

This mill was entirely electric, and had no steam plant, compressed air being used for all purposes normally done by steam.

It was driven by two 150 h.p. motors for each pair of frames, with a countershaft between, and other subsidiary motors.

The timber from this mill was loaded on to railway trucks by overhead belt, and transferred to a separate yard.