few in number to allow any final conclusions to be drawn. The work was done in co-operation with a Wanganui firm—New Zealand Coal-tar Products (Limited)—which donated a quantity of creosote corresponding to Grade 2 of the American Wood-preservers' Association's specification.

For general guidance Table 2 has been drawn up to give an indication of the treatment required by various woods, but frequent tests of penetration and absorption are necessary to adapt the treatment to the varying physical characteristics of the wood. In the case of the more porous woods, such as *Pinus radiata* and *P. muricata*, the times of treatment may possibly be considerably shortened.

Table 2.—Open-tank Treatment of Exotic Timbers.

Species.	Butt.		Top.	
	Hot Bath.	Cold Bath.	Hot Bath.	Cold Bath.
	Hours.	Hours.	Hours.	Hours.
Pinus Murrayana	1	1	..	1
P. muricata	1	2	..	2
P. pinaster	1½	3	..	3
P. radiata	1½	3	1½	1
P. Laricio	1½	3	..	1
P. Austriaca	2	4	2	4
Larch (on two successive days) ..	8	16	8	16
Eucalypts	2½	3	2½	3

P. Austriaca was the most difficult of the pines to treat. Larch was difficult to impregnate, and the results indicate that the English practice of two series of hot and cold baths of eight and sixteen hours respectively are required for effective treatment. All the eucalypts examined, including *E. ovata, E. risdoni, E. coriacea,* and *E. amygdalina,* required approximately the same treatment. Stephens (6) finds that other eucalypts respond to this treatment.

Absorptions are best measured by weighing sample posts before and after treatment, and penetrations by drilling auger-holes several days after treatment, as the creosote has a tendency to spread even after extraction from the cold bath. The auger-holes require to be stopped with creosoted plugs. The treatment must be varied until the desired absorptions and penetrations are obtained. If the penetration is not sufficient, either the hot or the cold bath should be lengthened; whereas with a satisfactory penetration accompanied by too heavy an absorption the cold bath should be shortened. To secure the best results the temperature of the hot bath should increase slowly up to the maximum. Fluctuations of temperature should be avoided.

For those timbers requiring the same treatment in both butt and top the posts are completely immersed for both the hot and cold baths. Where the top requires a cold bath alone, only the butt is given a hot bath, the whole post being later immersed in the cold bath. Sometimes, as in *Pinus radiata,* the top requires a shorter cold bath than the butt. This is conveniently secured if the depth of the long tank is sufficient to allow the post to be stood upright at the end of the