Industrial Uses

Pallets

New Zealand pine has been used with great success in New Zealand and overseas for many years for the manufacture of pallets. Even without preservative treatment, pool (re-usable) pallets often have an economic life of over five years.

Worldwide, more than half of all pallets are used by pallet "pools". Many users agree that the performance of New Zealand pine is comparable with that of American southern yellow pine.

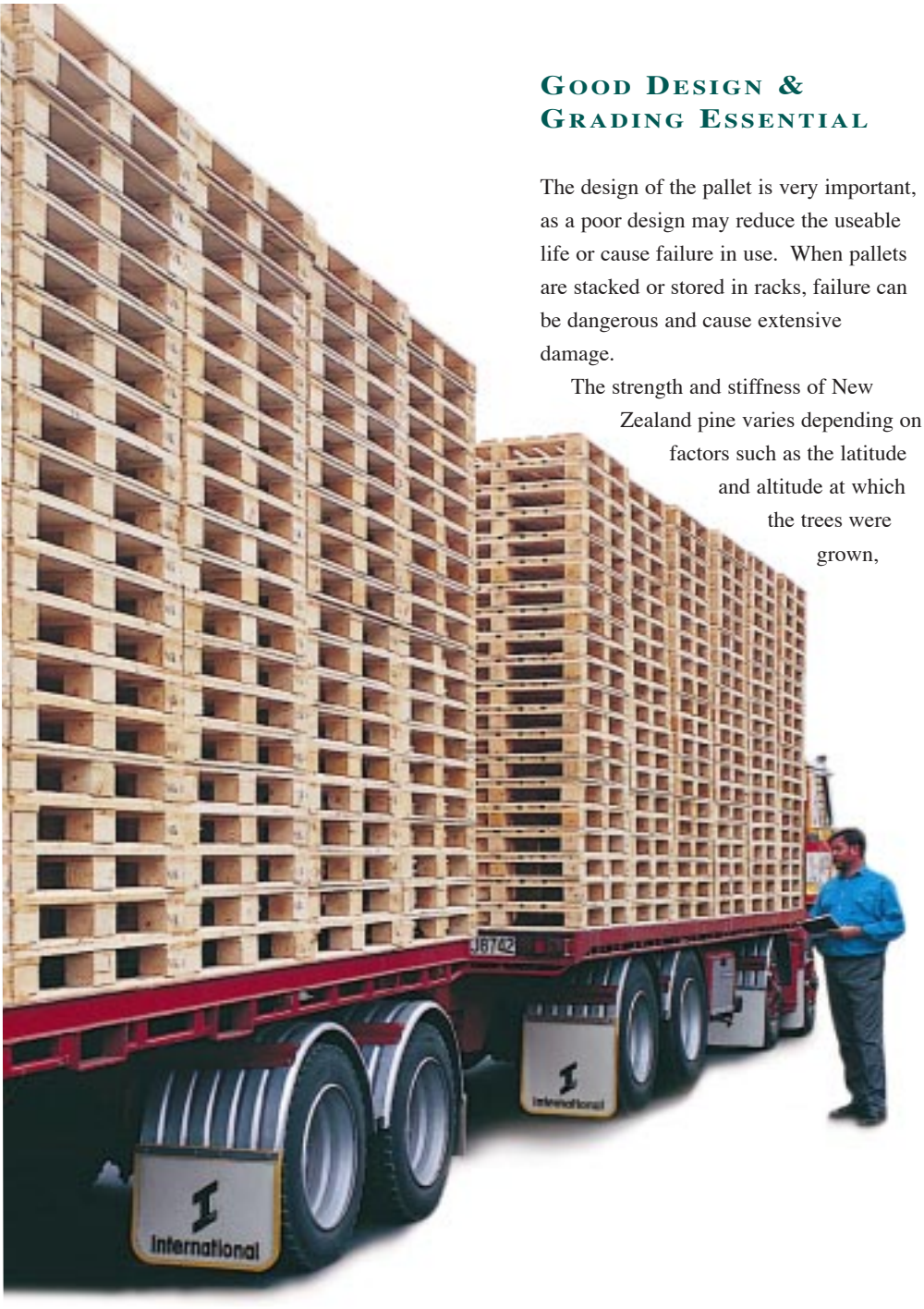
Good Design & Grading Essential

The design of the pallet is very important, as a poor design may reduce the useable life or cause failure in use. When pallets are stacked or stored in racks, failure can be dangerous and cause extensive damage.

The strength and stiffness of New Zealand pine varies depending on factors such as the latitude and altitude at which the trees were grown, silviculture and saw patterns used. For best results it is suggested that the lumber is kiln dried to a moisture content below 20% and either visually or machine graded. Suitable anti-sapstain chemicals can be applied beforehand to protect the light colour of the wood.

For most applications a simple mechanical bending test of deckboards, bearers and stringers will be sufficient.

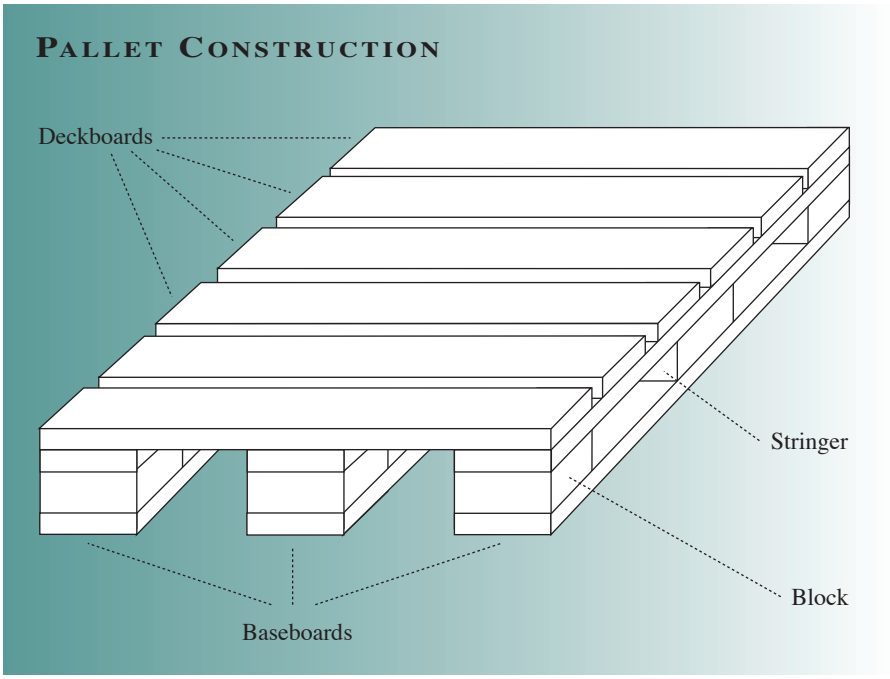
The relationship between deckboard deflection and lumber grade in terms of knot size and wood density for a standard kiwifruit pallet manufactured in New Zealand is illustrated. The maximum knot and knot group recommended is one-third of the board width, which is the same as for No. 1 framing grade as specified in New Zealand Standard NZS 3631:1988.



Wooden Crates & Boxes

A number of New Zealand sawmills specialise in sawing of thin boards and framing for industrial packaging crate and box uses to sawing tolerances of ±0.5 mm. As machinery sizes vary, sawmills are willing to cut lumber components to the sizes required by the crate manufacturers.

Pallet Construction



New Zealand's first major export of plantation grown New Zealand pine was to Japan for use as industrial wood. That was over 30 years ago & the species has since become a first choice in many parts of Asia.

The performance of New Zealand pine for crate and box uses is again a function of wood density and lumber grade, based on maximum allowable knot size and moisture content. In the box/crate sector there is ongoing potential for both New Zealand pine lumber and plywood, specifically in the one-way export sector.

Increasing use of CAD for box and crate packaging makes New Zealand pine an attractive wood material because of the species' known strength characteristics.

Throughout the whole range of industrial packaging, New Zealand pine has a unique advantage in its very good nailing properties. Its ease of nailing, resistance to splitting and the holding properties of ring shanked nails make it ideal for this end use.

Cable Drums

New Zealand pine accounts for much of the industrial lumber used for the manufacture of cable drums in Japan . Many New Zealand sawmills are equipped with facilities to saw industrial grade squares for resawing.

Knot size is not a limiting factor for drum sides, as the board thickness can be increased and double thicknesses used in load sharing situations on large cable drums. Relative to steel and plastic drums, wood has the advantages of low cost, ease of repair, workability and size/dimension flexibility.

The performance of New Zealand pine when used for pallet construction is a function of wood density and lumber grade based on maximum allowable knot size.

For a given density and grade, New Zealand pine is stronger but less stiff than several other species. This makes it very suitable for applications where shock loadings may occur.