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Wood Technology Transfer Fact Sheet

***Balanocarpus* spp.**

Chengal

Penak

Family: Dipterocarpaceae

Other Common Names: Takiem-chan (Thailand), Kong, Karakong (India), Mindanao Narek, Narek (Philippines).

Distribution: *B. heimii* is widely distributed in the Malay Peninsula including Thailand south of Pattani. Other species reported in India and the Philippines.

The Tree: Stem diameters over 3 ft are common; boles mostly well-shaped and clear for 100 ft or more. A very large specimen with a diameter of 13 ft is reported.

The Wood:

General Characteristics: Heartwood light yellow brown with a distinct green tinge when fresh, changing on exposure to a dark brown or dark purple brown; sharply demarcated from the pale yellow sapwood. Luster moderate; grain usually only shallowly interlocked; texture fine and even; odor and taste not distinctive.

Weight: Basic specific gravity (ovendry weight/green volume) 0.76; air-dry density 58 pcf.

Mechanical Properties: (2-in. standard)

Moisture content Bending strength Modulus of elasticity Maximum crushing strength

(%) (Psi) (1,000 psi) (Psi)

Green (10) 17,680 2,630 10,000

16% 21,560 2,840 10,900

Janka side hardness 2,085 lb for green material and 2,130 lb for dry.

Drying and Shrinkage: The wood is slow drying and prone to surface checking. Shrinkage is reported to be low. Kiln schedule T2-C2 is suggested for 4/4 stock. Air-drying prior to kiln-drying is recommended.

Working Properties: Easy to work with both hand and machine tools but there is some tendency for saws to gum up; planes to a smooth surface and takes a very good polish.

Durability: Heartwood is very resistant to insect and fungal attack; but is reported as vulnerable to marine borers.

Preservation: Heartwood is reported as not treatable.

Uses: Heavy construction, railroad cross-ties, boatbuilding, utility poles, industrial flooring, vats, casks, and tanks.

Additional Reading: (10), (11), (63)

10. Desch, H. E. 1941. Dipterocarp timbers of the Malay Peninsula. Malayan Forest Records No. 14.

11. Desch, H. E. 1941-54. Manual of Malayan timbers. Malayan Forest Records No. 15.2 vol.

63. Thomas, A. V. 1955. Malayan timbers. . . Chengal. Malayan Forester 18:103-105.

From: Chudnoff, Martin. 1984. *Tropical Timbers of the World*. USDA Forest Service. Ag. Handbook No. 607.