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ANGELIM VERMELHO

Bot. Name : Dinizia Excelsa (Ducke)

*This specie has been erroneously called Hymenolobium for a long time, but is NOT.

Family : Mimosoidae, however usually classified as Leguminosae.

Com. Names : ANGELIM VERMELHO, Angelim Falso, Angelim Ferro, Dinizia Parda, Faveira Dura, Faveira Ferro.

Growing areas : Through the whole Brazilian Amazone-bassin in all the northern states so Amapa, Para, Amazonas, Roraima, Acre, Rondonia, Mato Grosso and the Guyanas.

Trees : Abundantly growing in the lower Amazon regions, varying in height from : 30 up to sometimes 60 meters and trunk-diameters of 130-180cms are no : exception. Straight, cylindrical boules of 15-25 meters are fairly normal.

Description : Heartwood reddish to reddish brown with an orange-yellowish hue, sometimes slightly veined; when freshly sawn the heartwood is light red/yellowish and not very distinctly demarcated from the whitish-grayish light red sapwood. Exposure to the air darkens the heartwood to dark red, reddish brown.

Structure : Distinct growth rings, hard to very hard, of medium texture, sometimes coarse.

Grain : Interlocked, usually reasonably straight but sometimes roey.

Odor+Taint : This specie has a disagreeable odor when fresh/wet, however diminishing in time, when exposed in the open.

Working : Normal to plane but with good and heavy machinery. Has a blunting effect on knives/tools so needs Stellite or similar to give a good finish, due to its hardness. When turning it gives an excellent finishing. No specific problems when drilling. Receives paint, varnish, polish very well.

Drying : when seasoning in the air, this specie dries fairly rapidly; Kiln-dries fairly slow and needs to be taken care off. Moderate tendency for twisting in thin boards; slight tendency for collapse. Submitted to drying-schedule nr. 3, so fairly slow. Heavy sections are liable to splits

Fixation : Has to be pre-drilled before screwing. Hold screws/nails very well. Glues well. *When wet, iron fixations will cause gray-blue discoloration around the fixation-areas.

Durability : Class I, very high resistance to Funghi, BrownWhite Rot, good resistance to Dry-wood insects and Termites.

Availability : This specie is plenty available on all the Amazon-bassin forests.

*) This specie from the upper slopes of the amazons is usually of better quality, trees having less cracks.



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Tecnical Description ANGELIM VERMELHO

Natural Durability	Class I
Impregnation	Untreatable
Specific Weight : Green	1350 kg/m ³
KD at 12% MC	1050 kg/m ³
Shrinkage Radial (R%)	5,7% <i>oven dry</i>
Tangential (T%)	9,5% <i>oven dry</i>

Mechanical Properties at 12% MC (Source: CTFT).

Bending Modulus	159 N/mm ²
Elasticity modulus	19410 N/mm ²
Compression	90 N/mm ²

Mechanical Properties Green and at 12% MC(Source: IBAMA).

	Fresh		12% MC	
Static Bending: Modulus of rupture	1220	kgf/cm ²	1600	kgf/cm ²
Static Bending: Modulus of elasticity	153	1000kgf/cm ²	173	1000kgf/cm ²
Max. Compression : Pararellel to the grain	615	kgf/cm ²	873	kgf/cm ²
Compression : Perpenducular to the grain (Stress at proportional limit)	105	kgf/cm ²	151	kgf/cm ²
Tension: Perpenducular to the grain (max. compression)	53	kgf/cm ²	39	kgf/cm ²
Shear: Max. Compression	134	kgf/cm ²	180	kgf/cm ²
Janka Hardness Parallel	1019	kgf	1460	kgf
Janka Hardness End	1108	kgf	1381	kgf

Uses : Naval- and civil heavy constructions, posts, beams, deckings, bridges, waggonbottoms, shipbottoms, cross-ties, hydraulic works, cofferdams etc.

Remark : Considered a suitable substitute for Azobe.

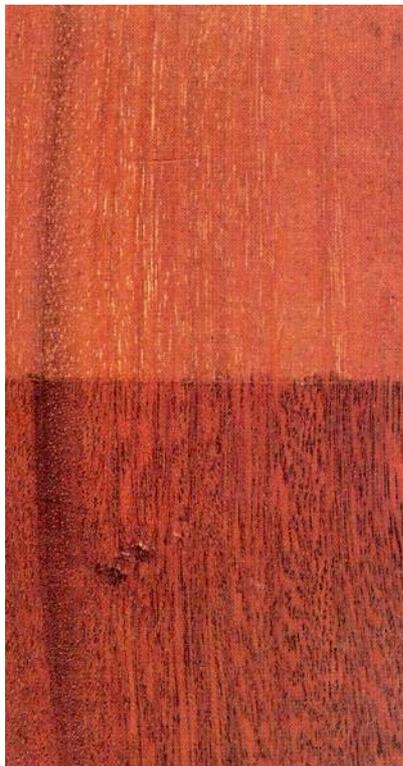
Sources : 'Timbers of the New World', Yale University Press., Instituto Brasileiro de Desinvolvimento Florestal. CTFT Atlas de Mad. Trop. Am. do Sul. Arvores e Plantas Uteis. Madeiras da Amazonia Biblioteca Bras. de Madeiras, IBAMA, Fichas de caracteristicas de Mad.Bras, I.P.T.



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ANGELIM VERMELHO PICTURES



Seção transversal (x 10)
Cross section (x 10)

