

CONSTRUCTION THEORY

Module No: TARC 503A
Date: 12 May 2006 - Week 12



TIMBER

1. What do we use timber for?

2. What does Lignin do?

3. Where does the growth in a tree occur?

How does it do this?

4. What is the difference between a Hard wood and a softwood?

5. Name common softwood family?

6. Common hardwood family?

7. What determines 'fine', 'coarse' or uneven texture?

8. What is the "grain"?

9. What is a knot?

10. What is reaction wood?

11. Draw Back Cut / Quarter cut

12. What does silica do in a tree?

13. Abrasion resistance relates to flooring. What characteristics wear better?

14. Hardness

15. Strength Strength grade

16. Moisture / shrinkage

17. Seasoning

18. Colour

19. Visual Grade

20. Durability (H1 etc) Heartwood durability.

21. Construction practice

TIMBER

OH

1. What does Lignin do? (**bonds the components of the cells together to provide rigidity to allow the plant to grow – it is mostly carbon 65% oxygen 29% and hydrogen 6%**)
2. Where does the growth in a tree occur? (**in the cell forming layer of the cambium a layer just between wood and bark.**)
3. How does it do this? (**photosynthesis to make lignin, cellulose**)
4. What is the difference between a Hard wood and a softwood?
(**Harwoods have the vessels for the conveyance of nutrients with fibre supporting the tree. Softwoods are simpler and the cells convey the nutrients and support the structure at the same time. softwoods do not have vessels**) – OH.
5. Name common softwood family? (**conifers, firs, oregon, pine**)
6. Common hardwood family? (**balsa, turpentine**)
7. What determines 'fine', 'coarse' or uneven texture? (**the cells**)
8. What is the "grain"? **The direction of growth**
9. What is a knot? (**are the tissue of the branches they are harder and darker in softwoods more thick walled cells and resin in hardwoods additional fibres.**)
10. What is reaction wood? (**where the tree has suffered from stress. It is harder but is less strong, and behaves erratically when sawn.**)
11. Draw Back Cut / Quarter cut
12. What does silica do in a tree? (**blunts saws but makes it resistant to borers and termites, Turpentine has a high percentage 0.33% followed by Kanuka box and tee tree**)
13. Abrasion resistance relates to flooring. What characteristics wear better? (**quarter cut wear better than Back cut Harwoods of high density fine even texture and small pores. Adding a surface sealer that fills the pores increases life**)
14. Hardness. **Boole:**
15. Strength **Boole strength grade (brochure)**
16. Moisture / shrinkage
17. Seasoning
18. Colour
19. Visual Grade
20. Durability (H1 etc) Heartwood durability.
21. Construction practice
(do specification as revision)