

Unit 1 Strength and Stability

External Exam component

Unit 1 Strength and Stability

Name the types of loads on a house.



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Loads on buildings video

<https://www.youtube.com/watch?v=a9UOwDjBZH0&t=16s>

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Building structures and loads within them

<https://www.youtube.com/watch?v=xsuhqi5Qjnl>

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What is concrete?

Where is it used?

Why is it used?

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Understanding concrete, cement and mortar

https://www.youtube.com/watch?v=CJlk453_j0I

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Concrete slump test

<https://www.youtube.com/watch?v=yzpWGrh9j6Y>

Why Test Concrete?

Concrete testing is carried out for many reasons:

- **Evaluation** new materials or products
- **Check compliance** before, during or after construction
- **Assess condition** for change of use or service life prediction
- **Failure investigation**

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Stress Grading Timber

What does this mean?

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Stress grading refers to how much load a particular piece of lumber can handle.

The longer a board the more it will flex, thus less load it can take.

Different sizes and species will vary in their abilities. Such as Douglas fir is stronger than SPF. Laminated beams (LVL) is stronger than Douglas fir.

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Website with varying timber gradings

<https://www.ryderservices.co.uk/stress-grade-timber/c24-timber>

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Softwood – Coniferous (C24)

Hardwood – Deciduous (D50,60,70)

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What is Concrete, Cement & Mortar?

Where is it used?

Why is it used?

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Stress Grading Timber

Why is timber graded?

What different grades are there?

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Plenary:

What is the Concrete slump test?

What is the stress grading test?

What material is it for?