FIEA Timber Preservation 2006
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Recent and Planned Changes to Standards
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Relevant Standards

- AS 1604.1:2005
- AS/NZS 1604.2:2004
- AS/NZS 1604.3:2004
- AS/NZS 1604.4:2004
- AS/NZS 1604.5:2005
- AS/NZS 1605:2006
- NZS 3640:2003
- NZS 3602:2003
### AS 1604.1:2005 Amnd 1

**Sawn and round timber**

- Only applies to Australia or treated timber imported into Australia
- Boron introduced in H2
  - Retention 2.0% m/m BAE
  - Only south of Tropic of Capricorn
  - Preservative Code 09
  - Treatment only in industrial plants as defined in AS/NZS 2843
- Propiconazole + Tebuconazole for H3
  - Retention 0.06% m/m Prop+Teb

### AS/NZS 1604.2:2004 Amnd 1

**Reconstituted wood-based products**

- Envelope penetration means minimum of 80% of cross-section penetrated
- Propiconazole + Tebuconazole introduced for H3
  - Retention 0.06% m/m Prop+Teb
**AS/NZS 1604.3:2004 Amnd1**

**Plywood**

- **Envelope penetration**
  - Face and back veneers fully penetrated in both sapwood and heartwood
  - Inner veneers fully penetrated within 150 mm of ends and edges

- **Veneer penetration**
  - All sapwood and heartwood shall show evidence of penetration in each veneer

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**AS/NZS 1604.4:2004 Amnd1**

**Laminated Veneer Lumber**

- **Penetration - sapwood**
  - Within 10 mm from surface and back veneers
  - Within 20 mm from edges
  - Within 150 mm from ends

- **Penetration – heartwood and sapwood**
  - As above plus evidence of penetration in any veneer
Glue laminated lumber

- Penetration
  - At least 80% of the cross-section of the product (both sapwood and heartwood) shall be penetrated

Typical penetration into radiata pine using DV schedule
Penetration into slash pine using Rueping schedule
(c. 70 L/m³Uptake)
Standard amended to avoid this

AS/NZS 1605:2006
Methods for sampling and chemical analysis

- Split into 4 parts
- Updated with new methods for analysis of new preservatives
- Highly technical
- No great interest to producers of treated timber
NZS 3640:2003 Amnd 3
Chemical preservation of round and sawn timber

- Proposed
  - H3.1 copper naphthenate retention of 0.05% Cu
  - Only for timber less than 30 mm thick, i.e. not framing
  - Continuous face branding
  - Reduced retention based on field test data

LOSP Decking 17 years exposure (TBTN 16 years)
NZS 3640:2003 Amnd 3
Chemical preservation of round and sawn timber

- Proposed
  - Reinstate boron in H 3.1 at retention of 0.80% m/m BAE
  - Original intention for weatherboards and fascia only
  - Extended to H3.1 framing
- Issues
  - Core loading requirement
  - Pre-priming at treatment plant

H3.1 boron core loading

- What is the rationale for this?
  - Core loadings have only ever applied to insecticidal treatments, not fungicidal
- What retention?
- Would need to apply to all H3.1 treatments
- Very high cost of analyses of organic preservatives
- Would increase compliance costs
- Conclusion – not relevant
Pre-priming

- OK for weatherboards and fascia
- Always done in 60s and 70s (before LOSP) when boron treatment was the norm for these products
- Impractical for framing
  - Opaque primers would cover MSG grade information essential for truss and frame manufacturers and builders

Uses for H3.1

- Covers two distinct types of products and exposures
  - Non-structural, above ground exposed to weather, requiring 15 years durability, e.g. weatherboards
  - Structural, inside, not intentionally exposed to weather, requiring 50 years durability, e.g. framing
H3.1 and H1.2 framing

- Both require 50 year durability
- Both not intended to get wet
- Situations where H3.1 required are perceived to be at greater risk of occasional wetting than where H1.2 required, or they are more critical
  - E.g. framing in enclosed balconies, and framing supporting these
Timber Preservation 2006

[Image of damaged timber structure]

[Image of parchment-like material on a wooden beam]
Accelerated framing trials

- After 4.5 years in warm, wet environment, with the exception of IPBC, there is little difference in performance of H3.1 LOSP and H1.2 boron
So;

Why not replace H1.2 and H3.1 framing with a single level of treatment?
And let’s call it

H2

Rationale for H2

- H2 framing in USA and Europe is for framing which *might* get wet
  - Same as H1.2 and H3.1 framing in NZ
- Only in Australia is H2 specifically for dry framing subject to termite attack
- If only tin LOSP and boron approved for NZ H2, framing treatment options are reduced from 7 to 3
  - Reduced stock lines
  - Less confusion
Amendments to Hazard Classes

- Revert to H1 for where H1.1 is currently specified
- H2 for all other framing
- H3.1 for exterior above ground non-structural, non-critical, 15 year durability
- H3.2 for exterior (rarely, interior) above ground, structural, critical, 50 year durability

Rationale

- 50 year durability for framing is principally achieved through timber remaining dry
- Treatment is only a back-up during inadvertent and temporary wetting
- 50 year durability of weather exposed, structural timber is principally achieved through H3.2 preservative treatment
The way forward

- One framing retention level (H2) where 50 year durability relies chiefly on low moisture content
- H3.2 in other *critical* situations where consistently low mc is unlikely to be achievable
- Revise NZS 3602 and NZBC accordingly