LOS P growth in the “Dry after Treatment” market.

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LOS P treatment is not New

• Unlike other wood preservatives, LOSP’s are based upon a wide range of active ingredients.

• Of all LOSP treatments, Copper Naphthenate has the longest history.

• First recognised in Russia in the 19th Century and used in Denmark in 1912.

• PCP based developed in 1936.

• TBTO (TBTN) based developed in 1959.

• Since 1960’s we have seen the introduction of preservatives containing synthetic pyrethoids, Metal carboxylates and Triazoles.
• In comparison, CCA was developed in India 1933
• CCA used in Australia since 1957
• In one form or another LOSP’s have been used in Australia since the 1960’s.
• 1980’s LOSP and Copper based preservatives developed in response to environmental legislation.
• 1990’s introduction of copper based waterborne preservatives (Tan E and ACQ)
• Recent years have seen some limitations put on the use of CCA in H3 applications.

Market Trends

• Based on market trends the non-aqueous market is where the current growth is.
  – Most of the producers have all moved to or are moving to non-aqueous preservative systems.
• High performance (fast) treatment plants
• R&D focus is on continual development and future proofing non-aqueous products.
  – New actives
  – Improved product appearance
  – Improving OHS&E characteristics
• Demand for faster turn around of resource to market
**LOSP Growth; Why?**

- Concerns and likely regulatory changes with some traditional preservatives (CCA)
- Continued move to dry after products
- Increased cost for fuels used to heat kilns and freight product make it more viable to treat with LOSP.
- The rise of Engineered Wood Products and Remanufactured products.
  - These products lend themselves to treatment in final shape and form.
- Environmental factors such as Carbon accounting and other “Whole of Life” assessment criteria of building materials.
  - Disposal, end of life and recycling of treated wood products.

**Benefits of LOSP**

- **No Re-dry required**
  - Very Suitable for a “dry after treatment”, above ground market, with Engineered Wood Products and remanufactured wood products
- **Dimensional Stability not affected.**
  - Products can be treated in final shape and form
  - Less reject at Merchant level
- **Structural Grading not affected.**
  - No degrade due to treatment and drying
Benefits of LOSP

- Non Corrosive to fixtures and fasteners
- Just in time treatment
  - Reduced WIP product
  - Reduced stock inventory
  - Faster to market with less delays in the production process
  - Less likelihood of damage through reduced stock movements
- Preservative delivered as RTU
  - No dilution on site
  - Less opportunity for operator error.
- Faster treatment times
  - H2 as low as 5-7 mins
  - H3 as low as 15-20 mins

Arch Wood Protection Range

Tanalith® T (H2F Blue)

- Application via Dip or Autoclave treatment
- 5mm envelope treatment designed for use South of the Tropic of Capricorn
- Used with internal framing and EWP manufacture.
**Vacsol ® T (H2 Red)**

- Application via Autoclave for use in whole of Australia
- Ideal for use with:
  - Framing
  - I-Beams
  - LVL
  - Plywood

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**Vacsol ® Azure (H3 Clear)**

- Application via Autoclave
- Ideal for use with:
  - Doors and trim
  - Windows and reveals
  - Hardwood Flooring/ screening
  - Plywood panels
  - Architraves
  - Cornices
  - Dowel / Quad
  - Picture frames / rails
  - Skirting Boards
  - Wall Trim / panels
  - Weatherboards
  - Balustrades, handrails
  - Decorative palings, External Moulding
Vacsol® Azure (H3Green)

- Application via Autoclave
- Ideal for use with:
  - Decking
  - Structural timber
    - Joists, bearers, posts
  - LVL
  - Plywood

Water-borne Timber Flow from Dry Mill

- **Dry Mill:** Timber strapped and moved to treatment area.
- **Fork or truck movement to Treatment Plant depending on location**
- **Treatment Plant:** Storage required on drip pad after treatment until drip free and for initial fixation period which can be finished in Kiln.
- **Product is moved, stickered and moved to storage area to be fixed and dried.**
- **Kiln:** Fixation and re-dry contributes to fall down and degrade of product.
- **Customer / Merchant:** Fall-down of stock that may have to be returned of producer.
- **Product movement to warehouse for dispatch**
- **Product movement to be de-stickered and strapped**

Up to 7-8 steps in process from Dry Mill to Customer
**LOSP Timber Flow from Dry Mill**

- **Dry Mill** – timber can be strapped for treatment.
- **Fork or truck movement to Treatment Plant depending on location.**
- **3 - 4 steps in process from Dry Mill to Customer**
  - Product movement to warehouse for dispatch or dispatched straight to customer/merchant. Less return from customer/merchant.
  - Treatment Plant – Product can be moved shortly after treatment as product does not require fixation.

**Indicative Cost Considerations**

For example costs for H3 can be compared as follows:

Cost of chemical  CCA  H3  < Cu Alternatives  H3  < LOSP H3

Waterborne bares additions cost of Re-dry which includes:

- Kiln
- Sticker and desticker of packs
- Degrade / fall down
- Fork movements
Indicative Cost Considerations cont.

LOSP benefits from reduced costs:

• Less Stockholding (WIP) and storage area
• Duel stocking
  – Reduced finished stock and storage for producer, wholesaler and merchant
• Time to market – reduced steps in processing.
• Cost of production for treatment
  – For similar size plants LOSP can treat up to 2 times volume per shift compared to waterborne.

Experience has shown that overall costs will be in most cases:

\[ \text{LOSP H3} < \text{CCA H3} < \text{Cu Alternative H3} \]