



**Date :** Thursday 30 October 2008

**Title/Titre :** Temperature and humidity trials during intercontinental transport of wine in flexi tanks.

**Speaker/**

**Intervenant :** Martin Svendsen (Hillebrand Bulk)

**HillebrandBulk**

VinBulk technology by





## Description of trials

- 5 containers shipped with flexi tanks from Australia to Denmark
- 2 containers not insulated
- 3 containers fitted with insulation material
- 24 loggers placed in the 5 containers
- Containers fitted in Adelaide February 28th, 2008
- Containers loaded in Karadoc March 3rd and 4th
- Temperature in Karadoc ranging between 9,5 C to 39,4 C





## Description of trials - continued

- Containers arrived on terminal in Adelaide on March 4th and 5th
- Containers loaded onboard vessel in Adelaide on March 10th
- Containers discharged in Bremerhaven, Germany on April 19th
- Containers loaded on feeder vessel from Bremerhaven on April 23rd
- Containers arrived final destination port in Denmark on April 29th
- Loggers stopped measuring on May 23rd
- Temperature in destination port ranging between -0,5 C to 26,5 C (average temperature 12,3 C)



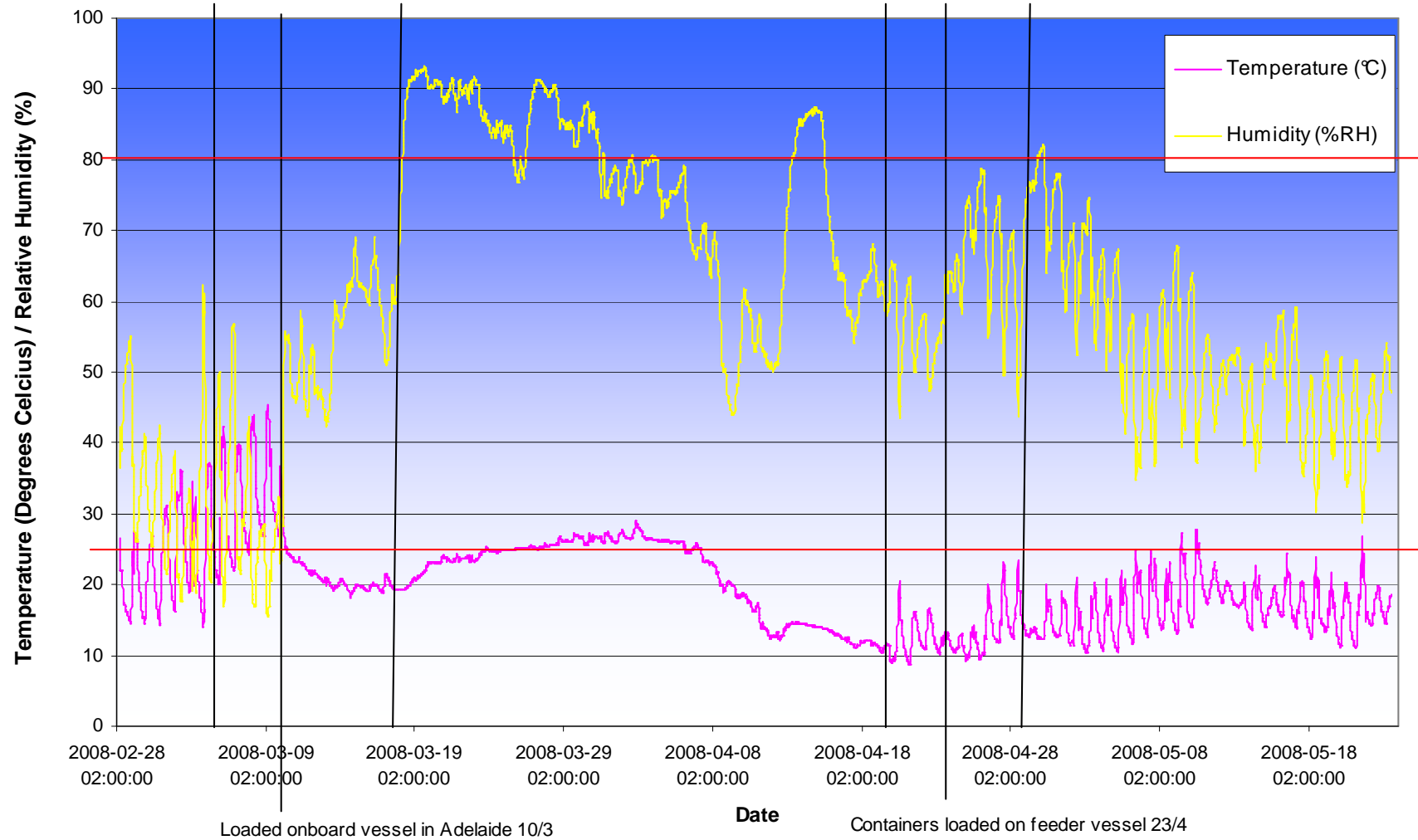


### Non-insulated container - logger placed on top of Flexitank

Containers arrived on terminal in Adelaide 5/3

Passing Equator 18/3

Containers arrived in Bremerhaven 19/4 Arrival final destination port 29/4



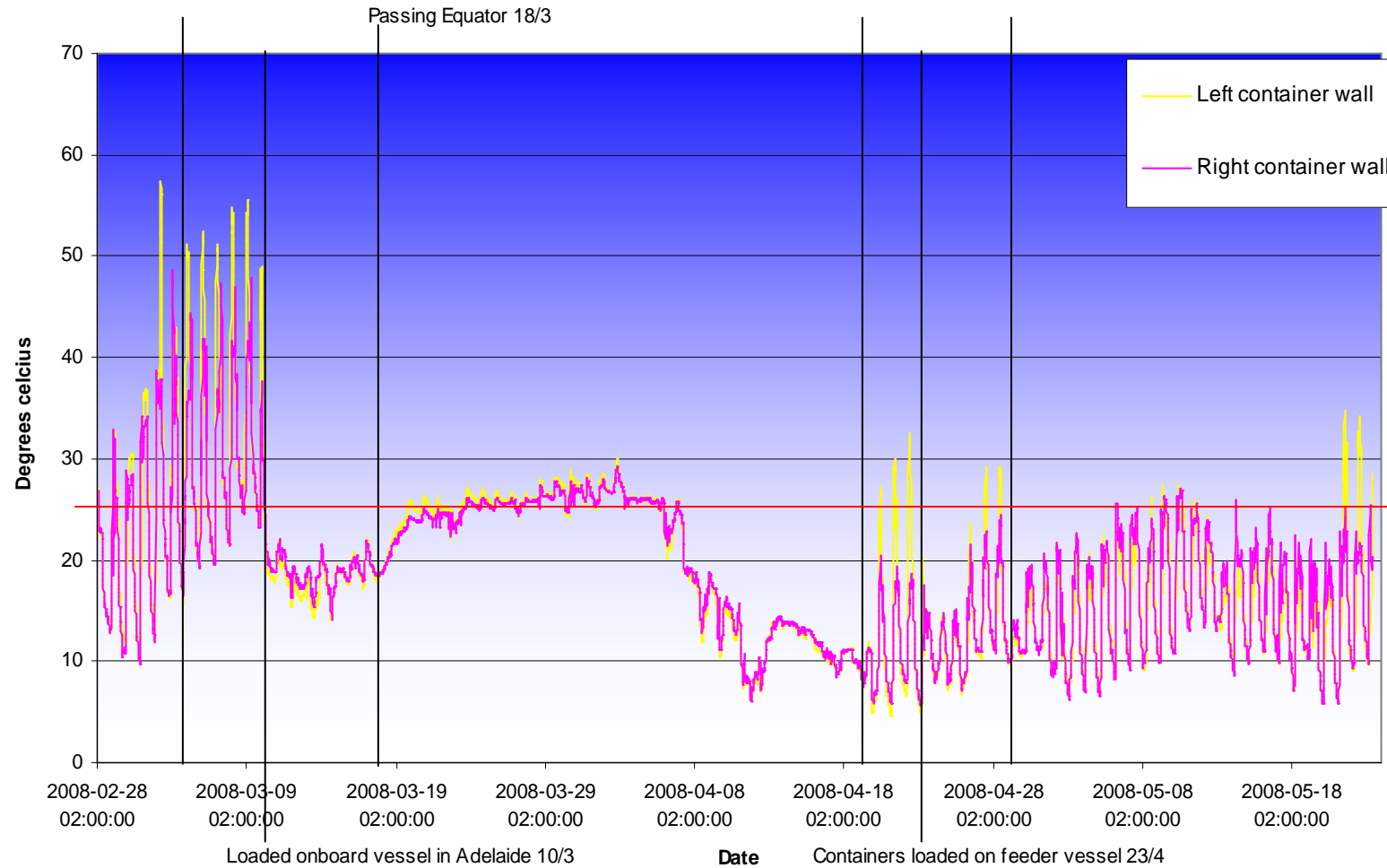


### Non-insulated container - Left wall vs right wall - Temperature

Containers arrived on terminal in Adelaide 5/3

Containers arrived in Bremerhaven 19/4

Arrival final destination port 29/4





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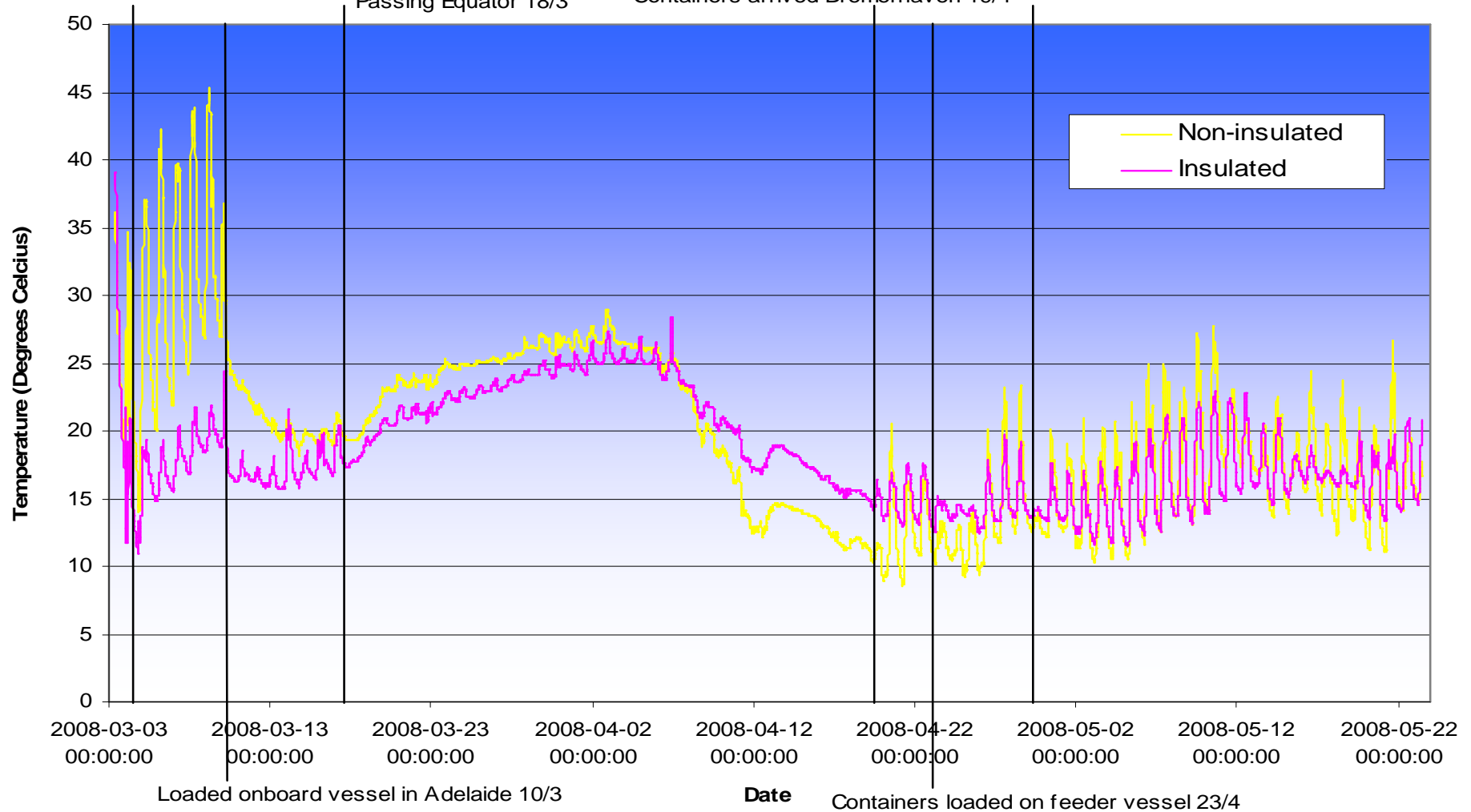
### Non-Insulated vs Insulated, Top of Flexitank - Temperature

Containers arrived on terminal in Adelaide 5/3

Passing Equator 18/3

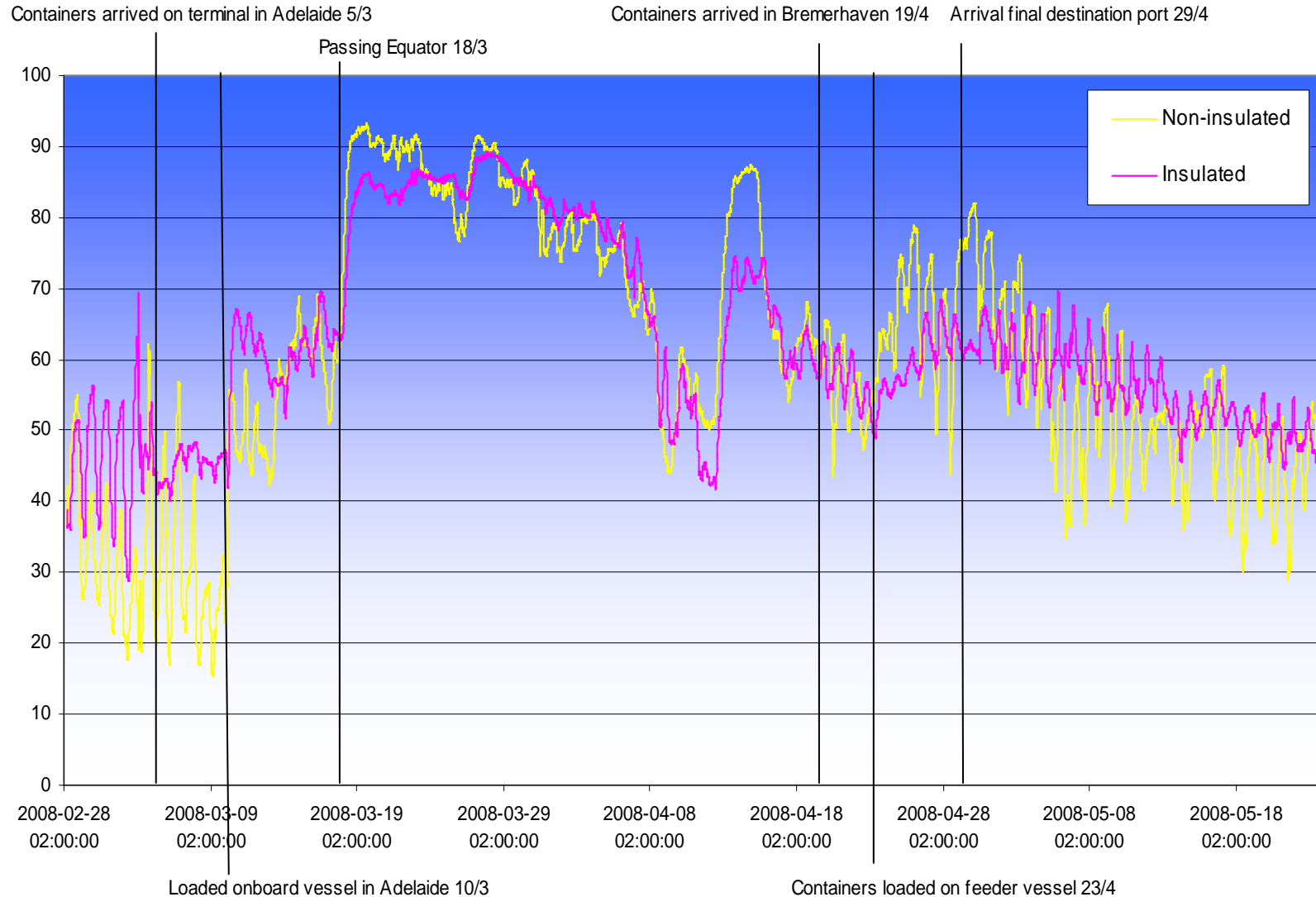
Containers arrived Bremerhaven 19/4

Arrival final destination port 29/4





### Non-insulated vs Insulated, Top of Flexitank - Humidity





## Conclusions / recommendations

- Ensure that flexitanks used are of the best possible quality and properly tested
- Limit the time on the terminal before departure and after arrival as much as possible
- Use direct services in order to avoid transshipments
- Temperature controlled containers (Reefers) for BIBs that are already packed



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**Thank you for your attention!**

