



## Control test according § 49 b)

### Mechanically refrigerated equipment

It shall be verified that, when the outside temperature is not lower than + 15 °C, the inside temperature of the empty equipment, which has been previously brought to the outside temperature, can be brought within a maximum period of 6 hours:

In the case of equipment in classes A, B or C, to the minimum temperature, as prescribed in this annex





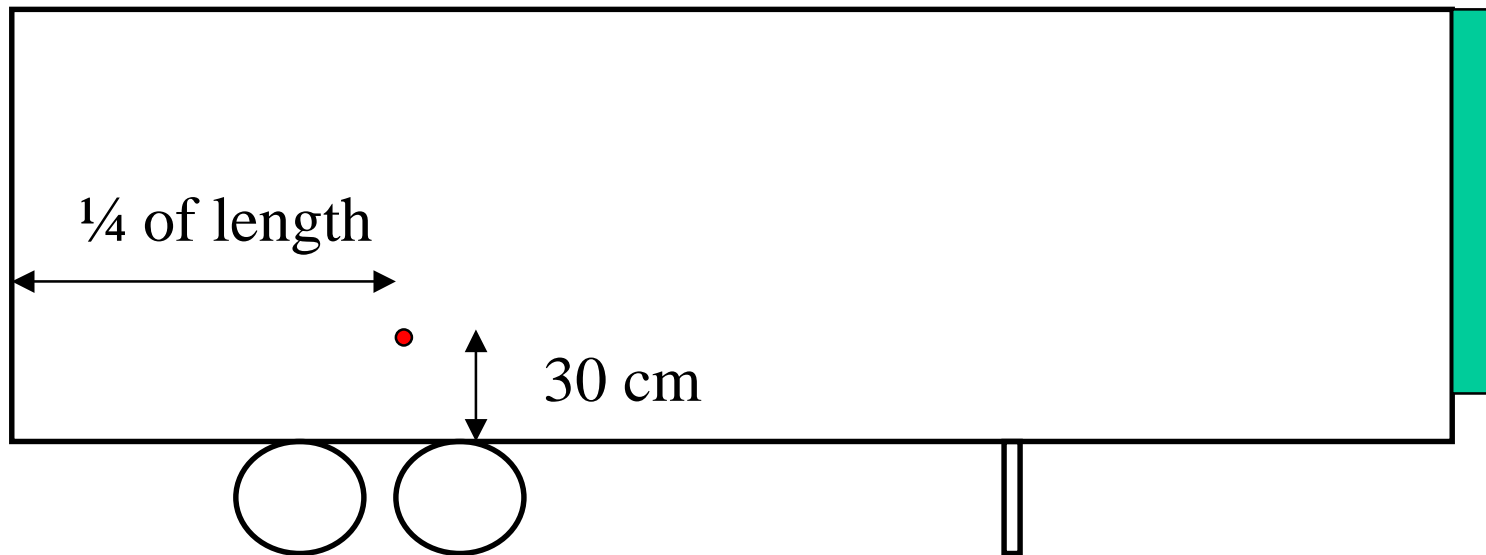
## Control test according § 49 b)

- Number of temperature sensors
- Schedule of the test
- Definition of START / END
- Time of the “cool down” test



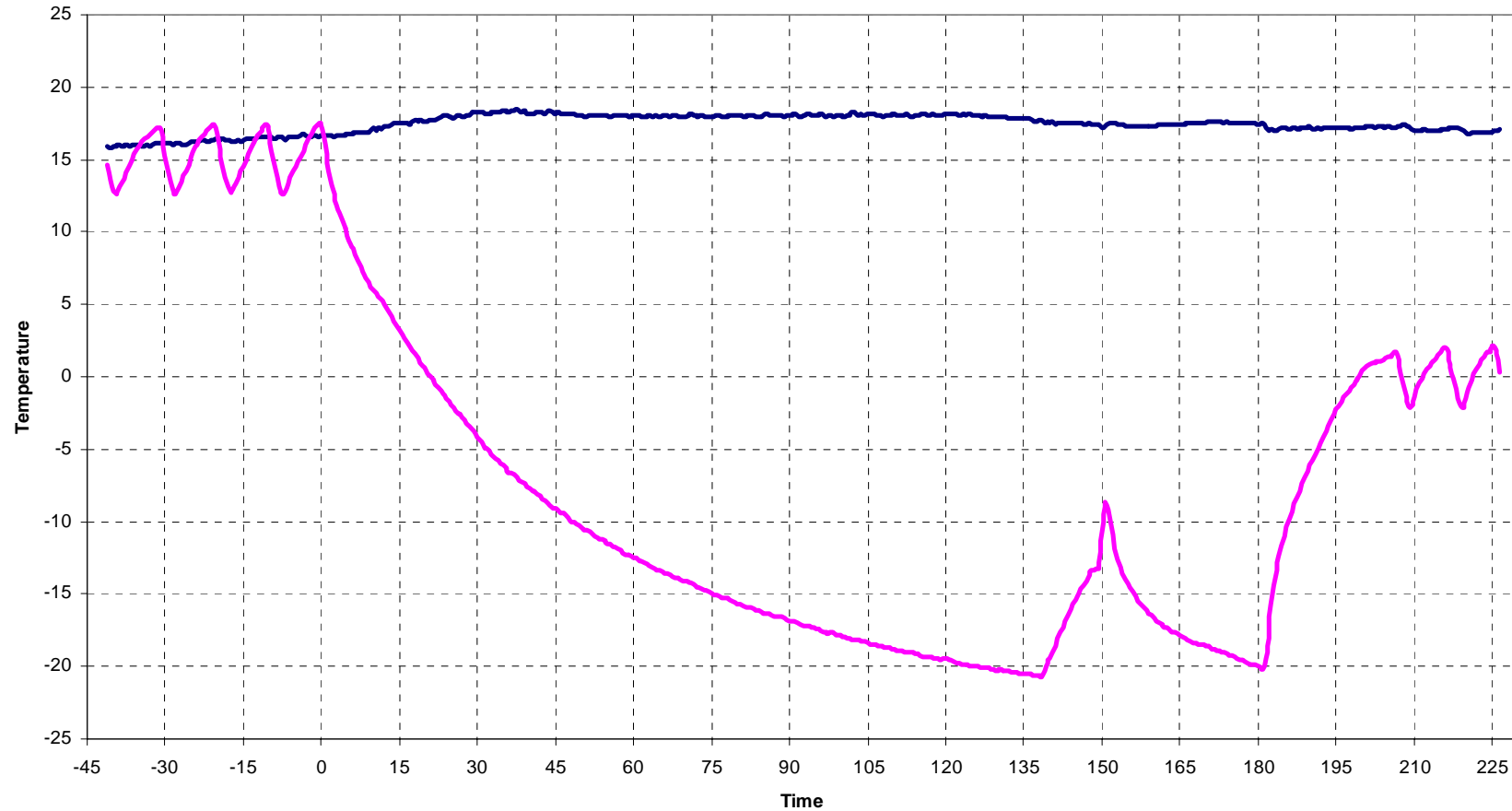


# Number of temperature sensors





# Schedule of the test





## Definition of START / END

- **START**= adjusting thermostat to set point
- **Set point ???** – Example for FRC:  
Adjusting  $-25\text{ }^{\circ}\text{C}$  eliminates low speed mode near by set point and accuracy of the thermostat.





## Definition of START / END

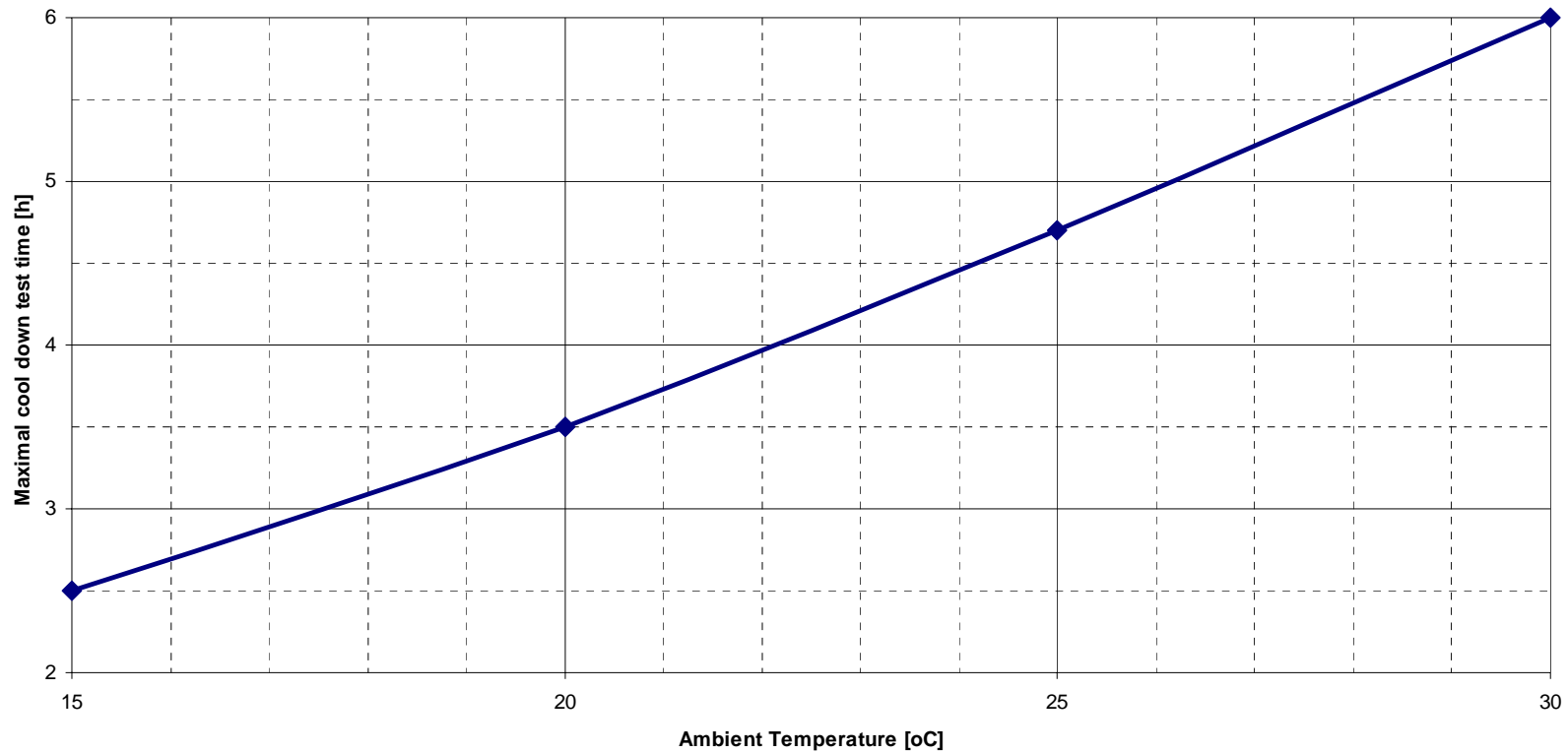
- END=???
- Temperature reaches  $-20.0\text{ }^{\circ}\text{C}$  ?
- Thermostat shows  $-20$  (& real temperature reaches  $-20\text{ }^{\circ}\text{C} \pm 1\text{ K}$ ) ?
- Thermostat starts cycling ?
- Thermostat switch to low speed mode ?





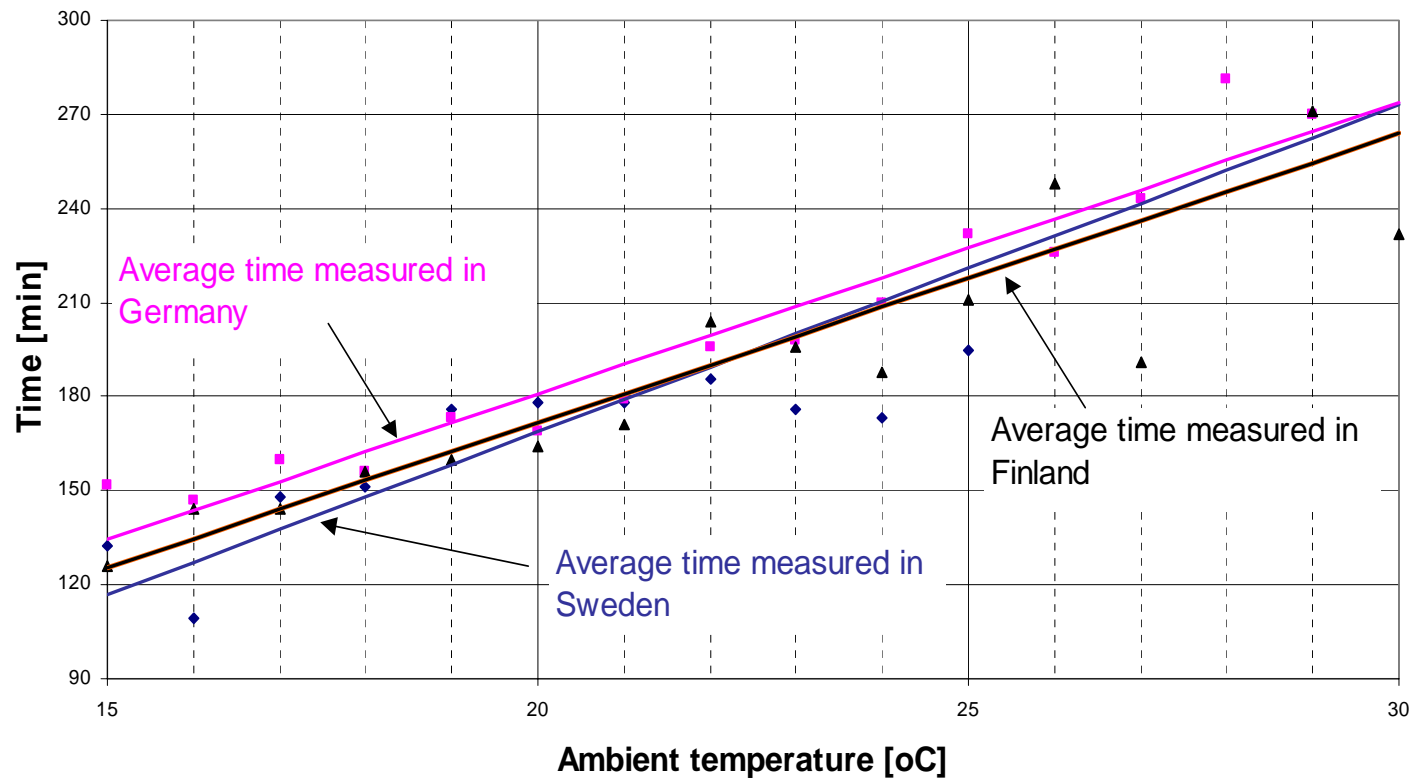
# Time of the “cool down” test (CZ)

ATP Control (pull down) Test according §49 b)





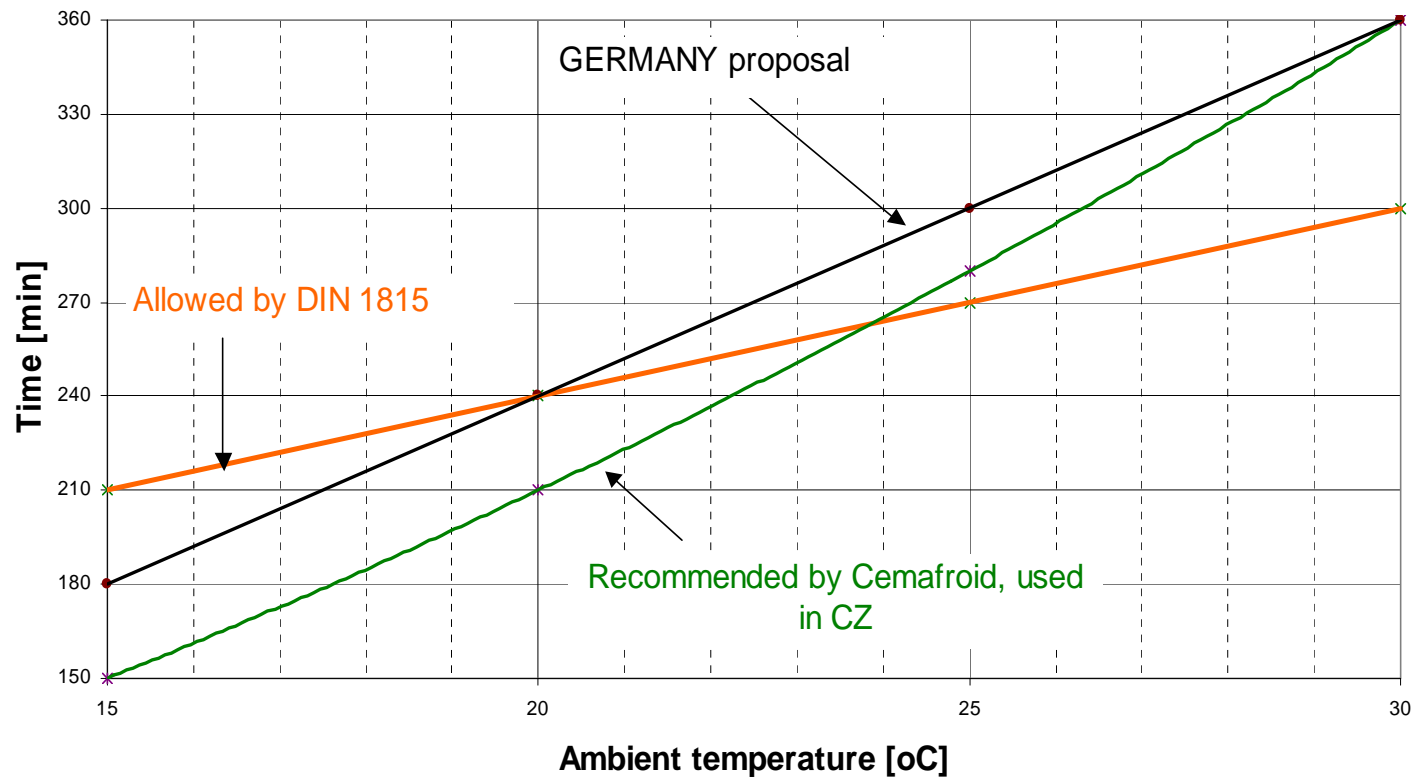
# Time of the “cool down” test (2)





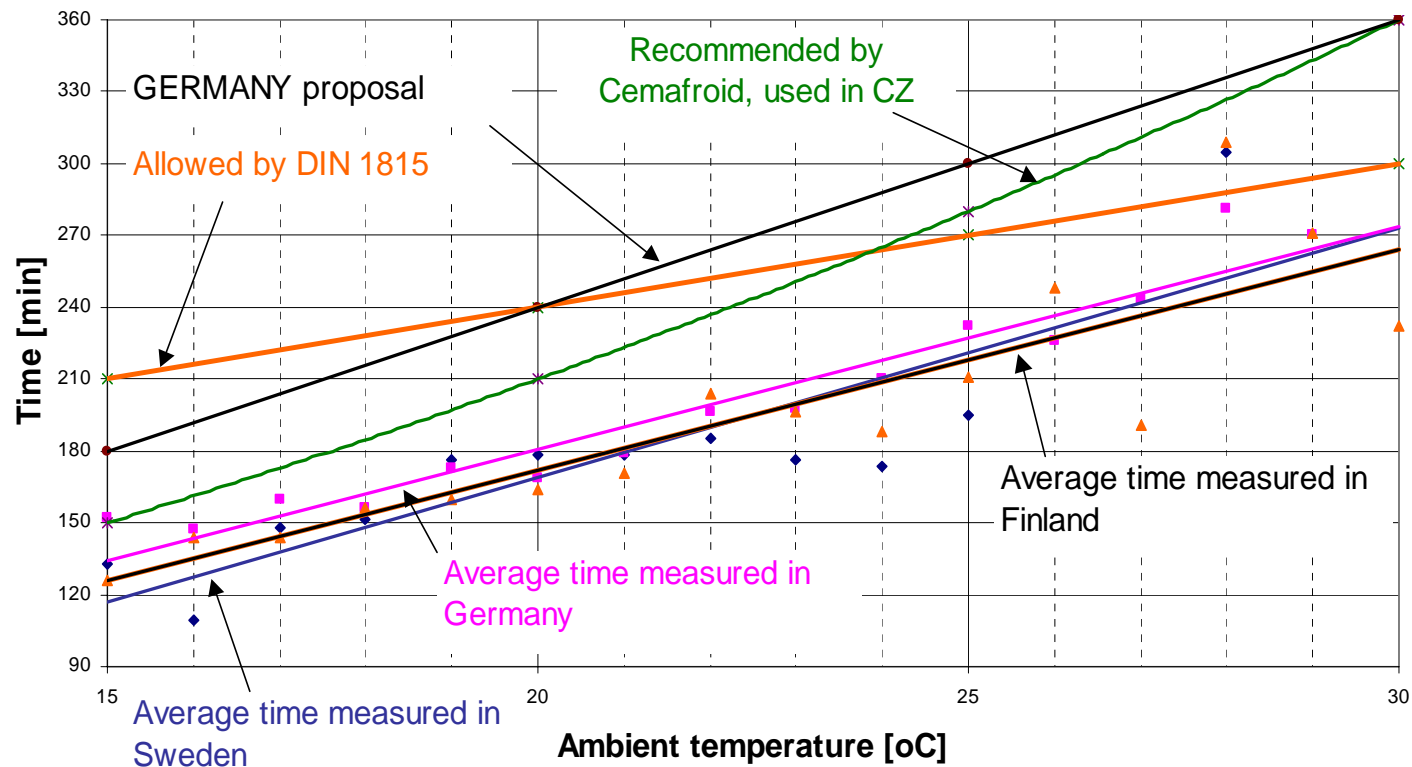


# Time of the “cool down” test (3)





# Time of the “cool down” test (4)





# Discussion

- Number of temperature sensors
- Schedule of the test
- Definition of START / END
- Time of the “cool down” test

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