

**CENTRAL LABORATORY REPORT**

Order: LP-027711                      Research: Warming of ship decks  
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**Result**

Teak wood shows a faster increase of temperature in function of the time compared to Esthec®. After reaching the equilibrium no difference of increase in temperature between Teak wood and Esthec® has been found.

**Location**

BOLIDT CENTRAL LABORATORY

**Procedure**

Two panels are made of the materials to test, dimensions approximately 40 x 60 cm, and placed alongside with the long sides touching. The lamp is positioned over the surface. The centre of the lamp is above the parting line between the samples. From the beginning the temperature is measured with an infra red thermometer, capable of measuring the surface temperature without contact. The surface temperature of each sample is measured in 2 spots.

**Materials**

Wood: Teak  
Esthec®: Esthec®, Colour: Honey

**Equipment**

Lamp: 300 Watt Halogen Lamp.  
Thermometer: Raytech Infra red Thermometer.

**Conditions**

Temperature: 20°C  
Relative humidity of the air: 50 %

## ATTACHMENT

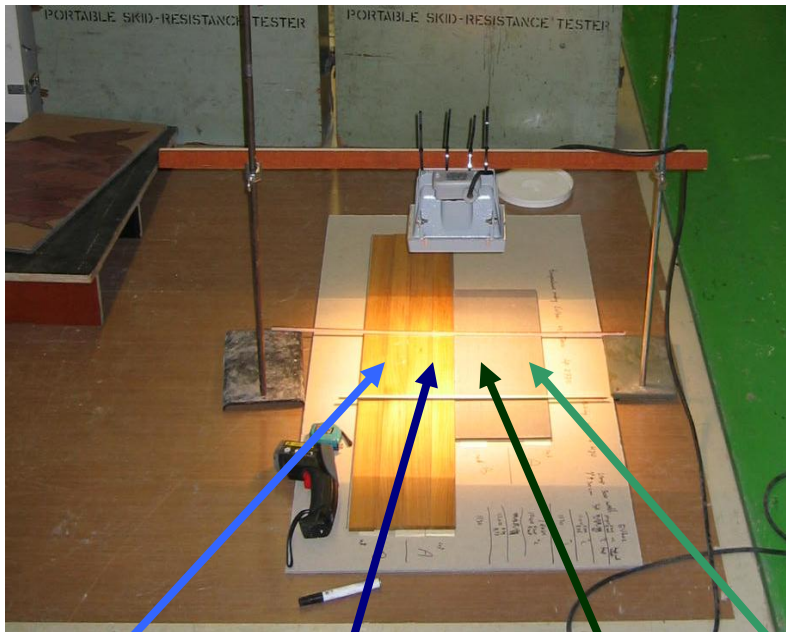
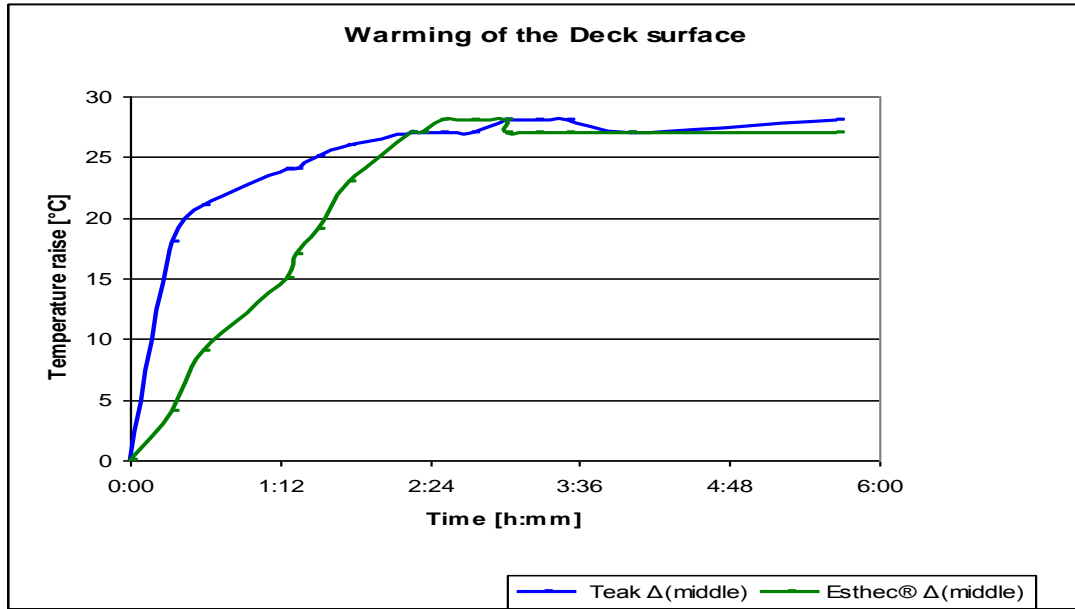
### Observations and Calculations

The table below shows the results of the measurements. The first column shows the time passed by during the test. The four columns with temperatures show the raise of temperature of the deck surface.

| Time<br>[h:mm] | Teak                        |                           | Esthec® Honey               |                           |
|----------------|-----------------------------|---------------------------|-----------------------------|---------------------------|
|                | $\Delta_{(middle)}$<br>[°C] | $\Delta_{(side)}$<br>[°C] | $\Delta_{(middle)}$<br>[°C] | $\Delta_{(side)}$<br>[°C] |
| 0:00           | 0                           | 0                         | 0                           | 0                         |
| 0:20           | 18                          | 12                        | 4                           | 4                         |
| 0:35           | 21                          | 13                        | 9                           | 7                         |
| 1:15           | 24                          | 19                        | 15                          | 10                        |
| 1:20           | 24                          | 20                        | 17                          | 11                        |
| 1:30           | 25                          | 20                        | 19                          | 12                        |
| 1:45           | 26                          | 20                        | 23                          | 15                        |
| 2:15           | 27                          | 20                        | 27                          | 18                        |
| 2:20           | 27                          | 20                        | 27                          | 18                        |
| 2:30           | 27                          | 20                        | 28                          | 18                        |
| 2:45           | 27                          | 19                        | 28                          | 18                        |
| 3:00           | 28                          | 19                        | 28                          | 19                        |
| 3:00           | 28                          | 19                        | 27                          | 19                        |
| 3:15           | 28                          | 19                        | 27                          | 18                        |
| 3:30           | 28                          | 20                        | 27                          | 18                        |
| 4:00           | 27                          | 20                        | 27                          | 18                        |
| 5:40           | 28                          | 19                        | 27                          | 19                        |
|                |                             |                           |                             |                           |

The graph below shows the results of  $\Delta T_{(middle)}$ .

composite decking



Teak wood  
Side

Teak wood  
Middle

Esthec®  
Honey  
Middle

Esthec®  
Honey  
Side