

# REPORT

Secrecy code 3\*

## Thermal expansion

**Customer:** HBE, Rainer Ålgars  
FIN-216 00 PARGAS, Finland

**Date of assignment:** 2003-06-18

**Object:** Measuring thermal expansion in ABS 430.

Slite 2003-08-01  
CEMENTA RESEARCH AB

Martin Eriksson  
*Author*

Stefan Sandelin  
*Prod. Manager*

**Key words**  
Thermal expansion

**Distribution**  
Customer

\*) **Distribution**  
0 No restriction.  
1 a Not outside HeidelbergCement.  
1 b Not outside customer company and CR.  
2 a Not outside CR.  
2 b To people concerned within CR.  
3 No distribution.

## **Purpose**

The purpose with the assignment was to measure thermal expansion in ABS 430.

## **Procedure**

- ABS 410 produced in Vingåker 2003-05-09 was used.
- Fore mixing Optiroc method 99/02 was used.
- The prisms are shaped like a triangle and are approximately 250 mm long and 42 mm high.
- After 28 days in a climatic chamber, where the temperature (+23°C) and the humidity (50%) is invariable, we covered the prisms first with Serpo 550 and after a few days with Serpo 554 to avoid dehydration.
- Then the prisms were put in -20°C for 24 hours and then we measured them directly after coming out from the chamber.
- Then the same procedure for +10°C and +40°C was carried out.

## **Results**

-20°C Thermal coefficient \* (10<sup>-6</sup>) **11.9**

10°C Thermal coefficient \* (10<sup>-6</sup>) **11.5**

40°C Thermal coefficient \* (10<sup>-6</sup>) **11.2**