

Internal Bond Strength Measurement

A Reliable and Comparable Technique
to Determine Bond Quality?

- An Initial Approach -



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kept constant...

- MDF industrial samples
- Dimensions: 50*50*16 mm³
- Aluminum Blocks
- Cooling Plate (14°C)
- Testing 2h after sample is glued to aluminum blocks (storage @20°C/65%RH)

variation...

- I. Glue (Sample – Block)
 - a. Hotmelt
 - b. Epoxy
- II. Procedure of Block Positioning
 - a. 1-Step
 - b. 2-Step

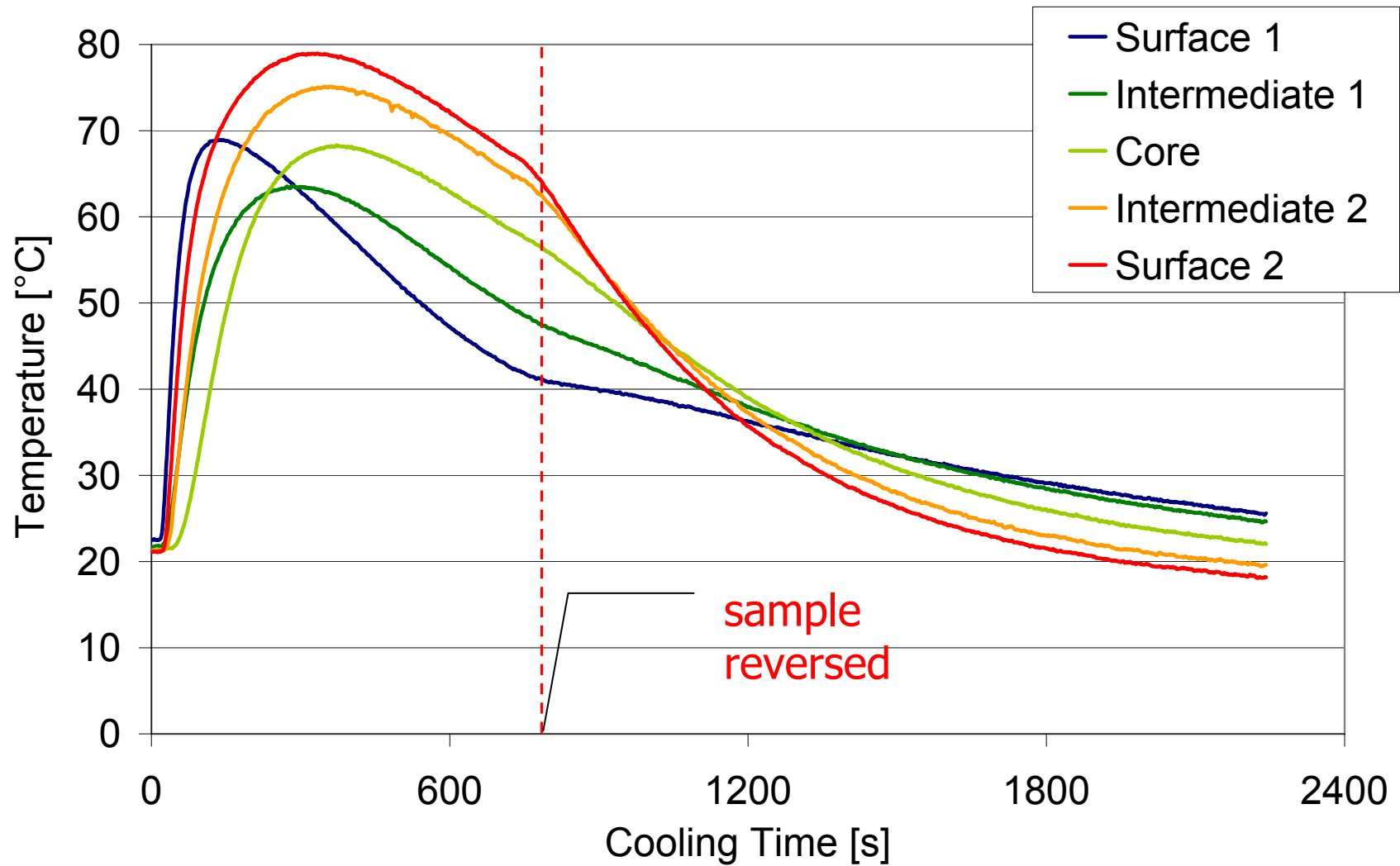
1-Step Procedure

- I. Both pre-heated aluminum blocks (100°C) are glued to the sample simultaneously
- II. Sample is placed on a cooling plate (14°C)
- III. Sample is placed upside down on cooling plate after 12,5min

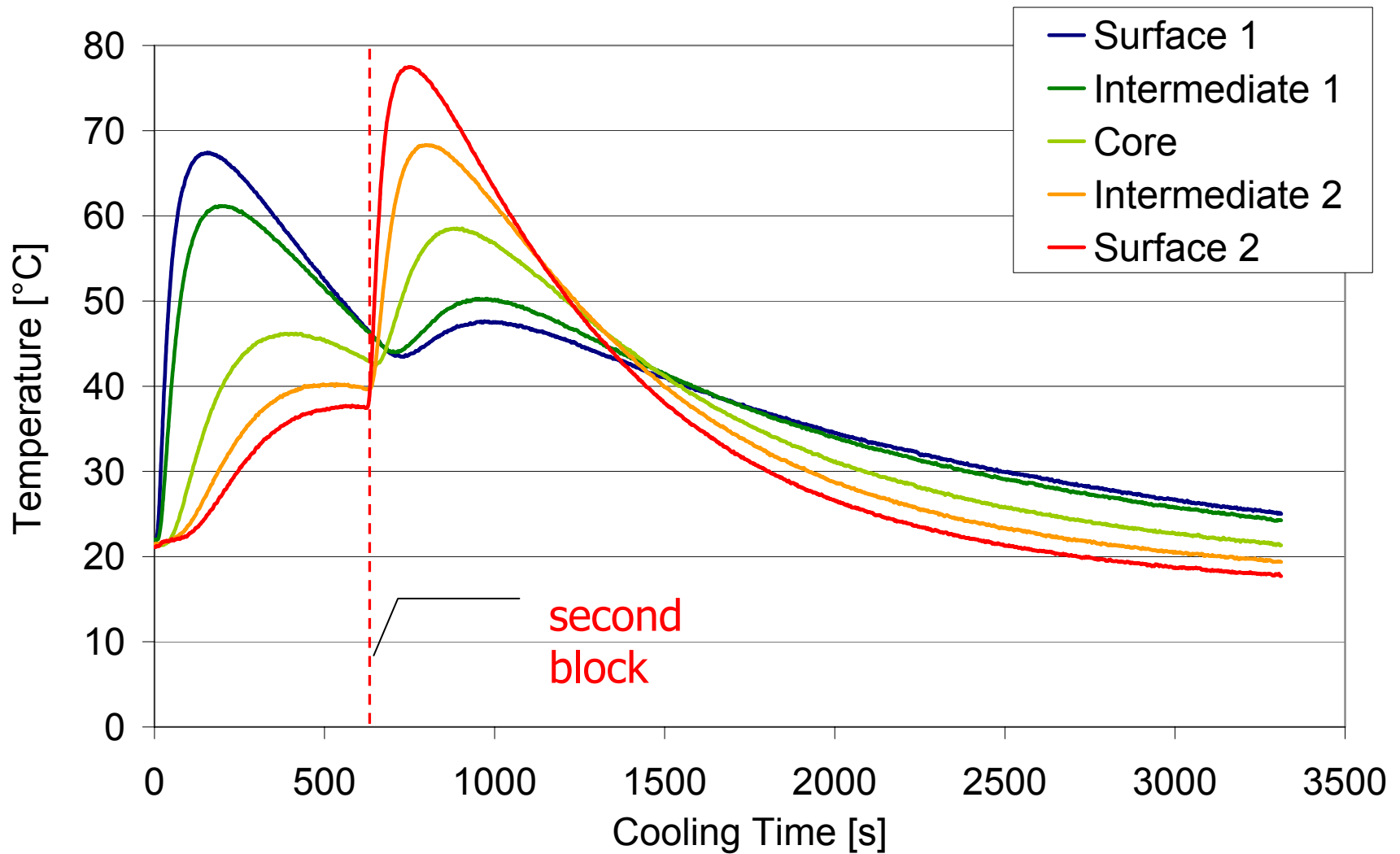
2-Step Procedure

- I. First pre-heated aluminum block (100°C) is glued onto the sample surface
- II. Sample is placed on cooling plate (14°C) for 600s
- III. Second pre-heated aluminum block (100°C) is glued onto the other surface

Temperature Development 1-Step



Temperature Development 2-Step



Internal Bond Strength

