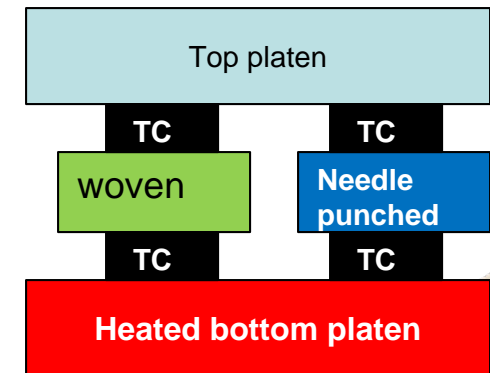


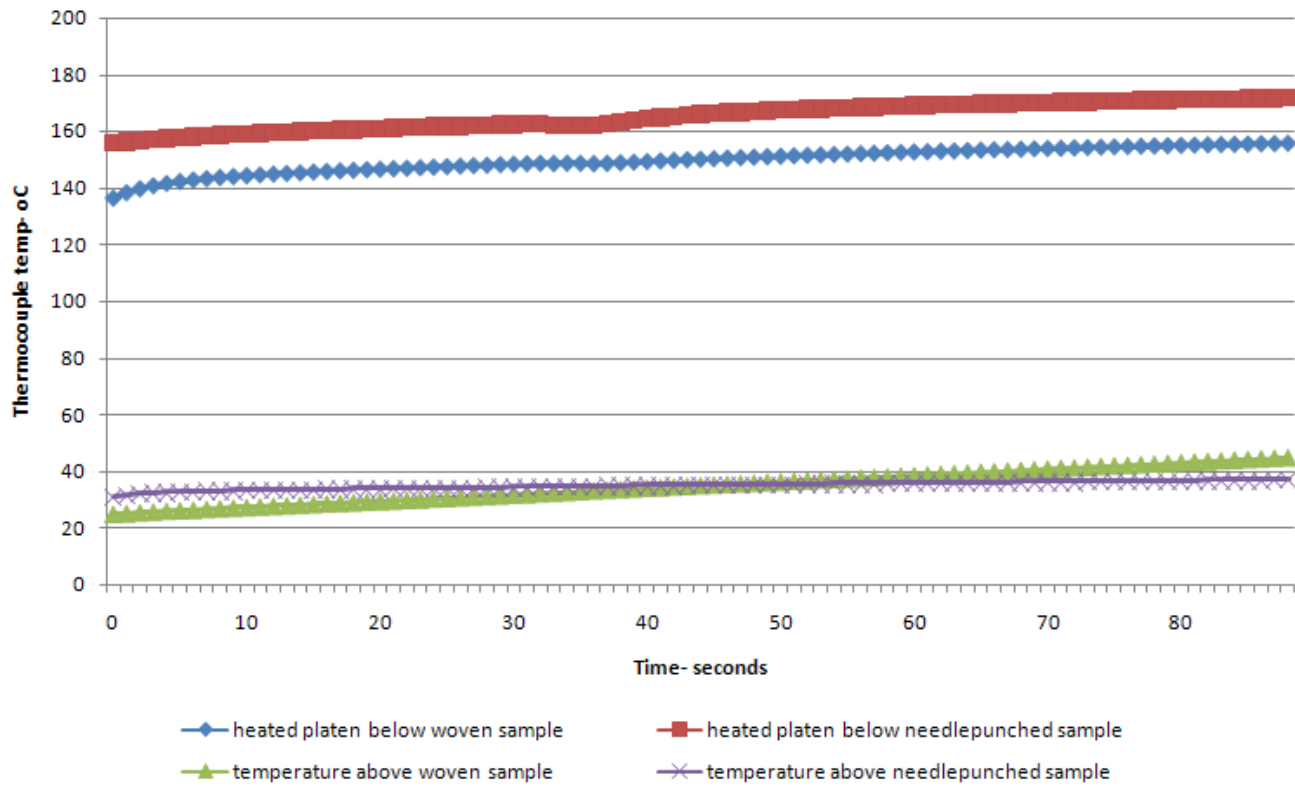
Thermal insulative capacity

- Equipment: Carver press with bottom platen heated to 370F (188C) to simulate hot-plate section of doublebacker. One set of thermocouples placed between platen and corrugator fabrics, another set above the fabrics.
- Data obtained: temperature of top surface of fabrics having the same bottom side temperature: an indication of the insulative capability of the two belts.
- A cooler top surface indicates a better insulator, allowing for more heat to be directed to the board in operation, or the possibility for lower energy consumption.



Thermal insulative capacity

Doublebacker Thermal Insulation Comparison- 90 second

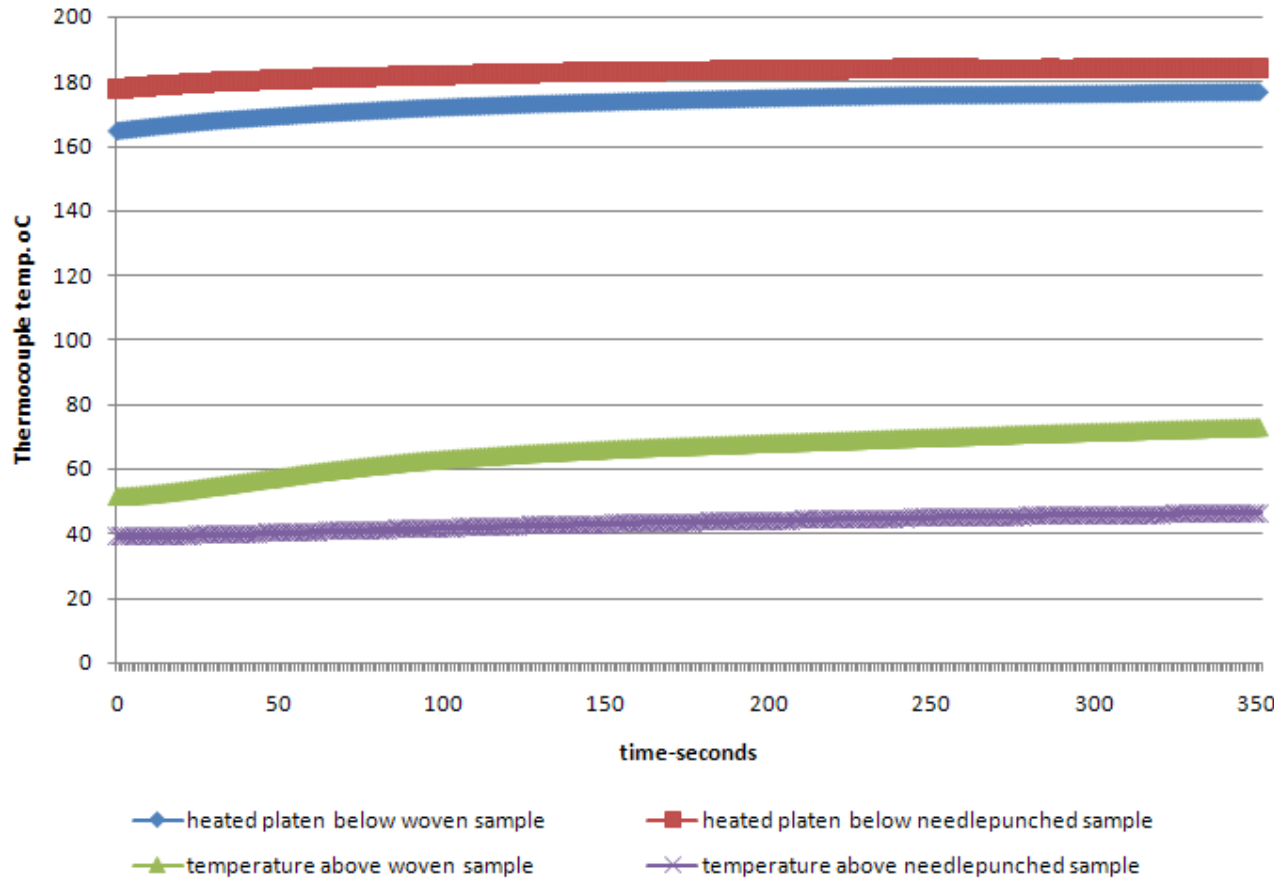


Initial test: 90 second exposure-
Bottom platen temperature remained cooler under woven sample although after 40 seconds top surface of woven sample became hotter

Test was repeated, and duration extended.....

Thermal insulative capacity

Doublebacker Thermal Insulation Comparison -6 minute



Second test: 6 minute exposure:

Bottom platen temperature remained cooler under woven sample. Equilibrium difference between woven and needlepunched top surface was $> 25^{\circ}\text{C}$, indicating superior insulative capacity of needlepunched structure