

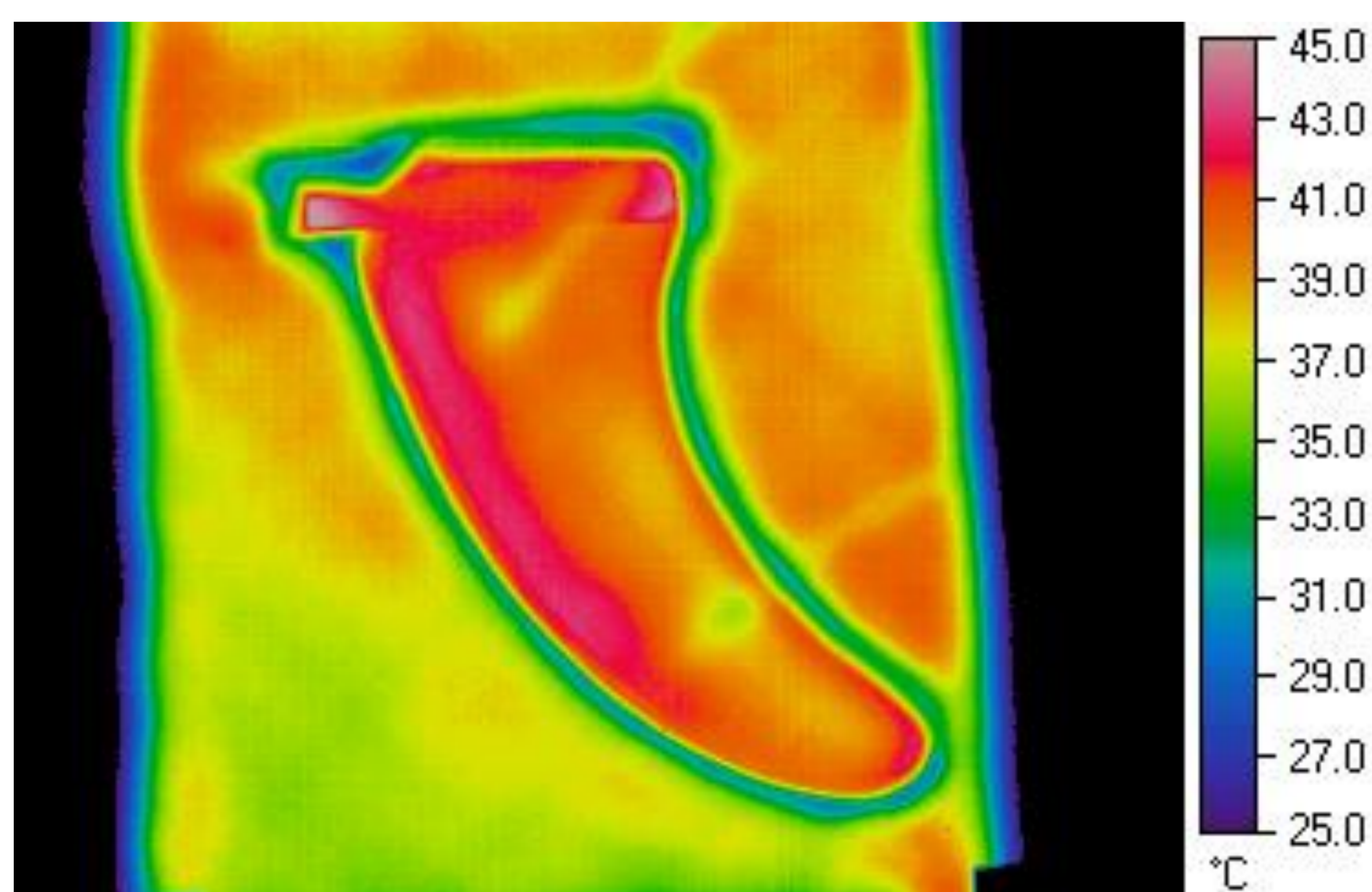
Mould tool technologies for composite manufacturing processes

Integrally-heated tooling for the manufacture of fibre-reinforced composites

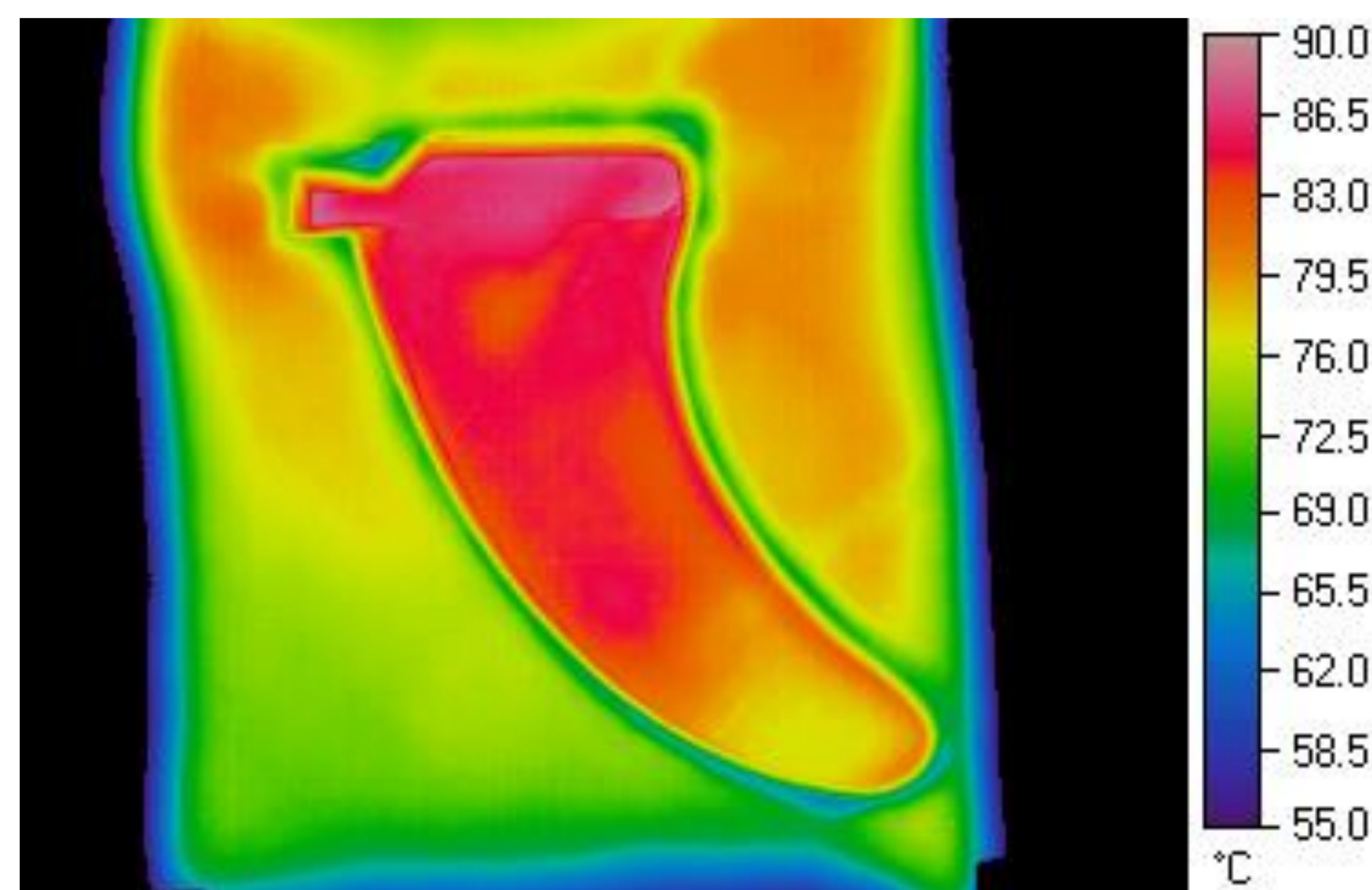
**MW Arney, SM Grove, I Progoulakis, T Searle,
D Short, J Spooner and J Summerscales**

Composites Processing Association, Bromsgrove, 23 April 2004

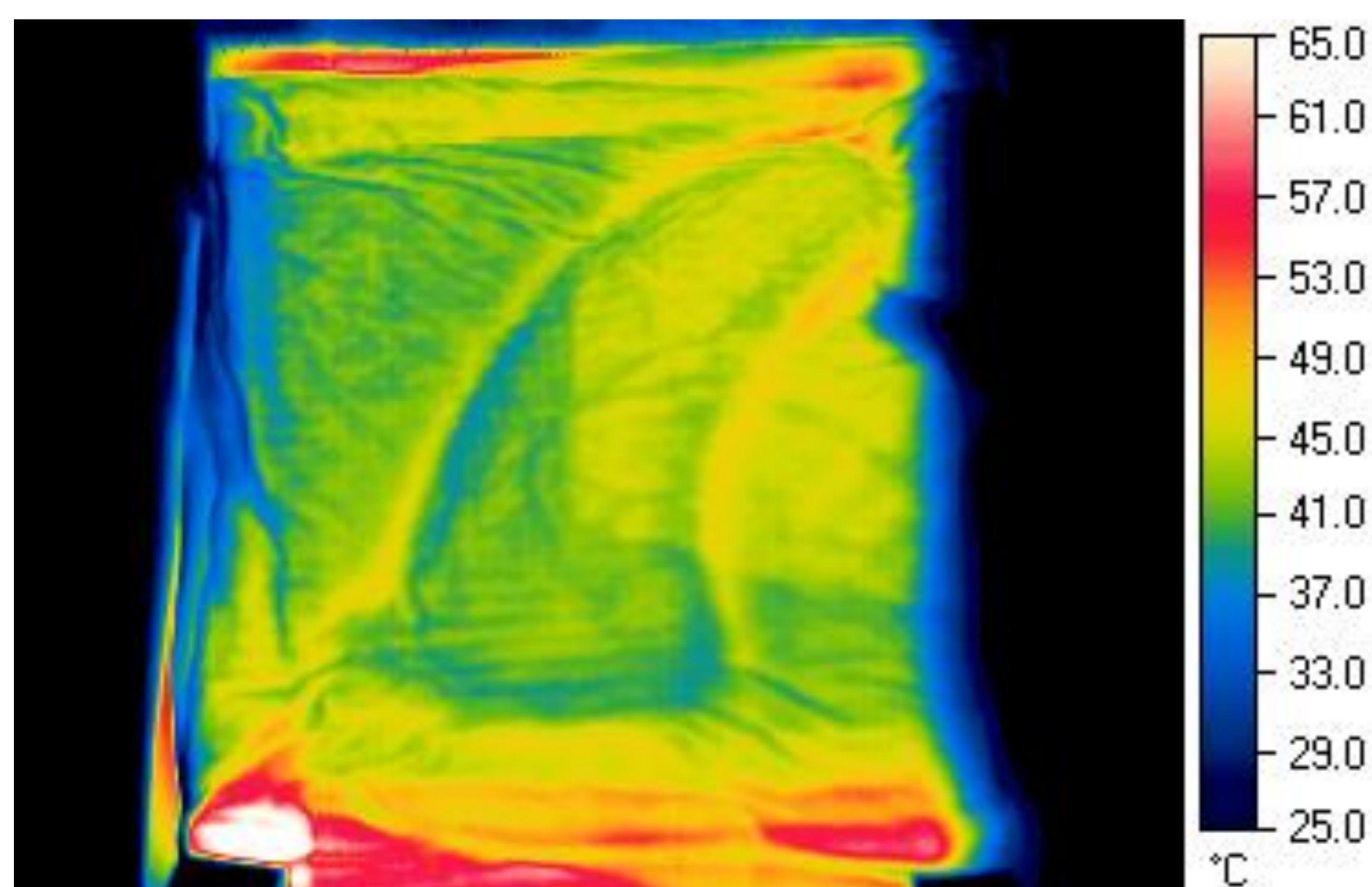
An epoxy matrix composite mould tool has been manufactured using a novel liquid resin infusion tooling system. The integrity of the embedded electrical heater has been confirmed using thermography.



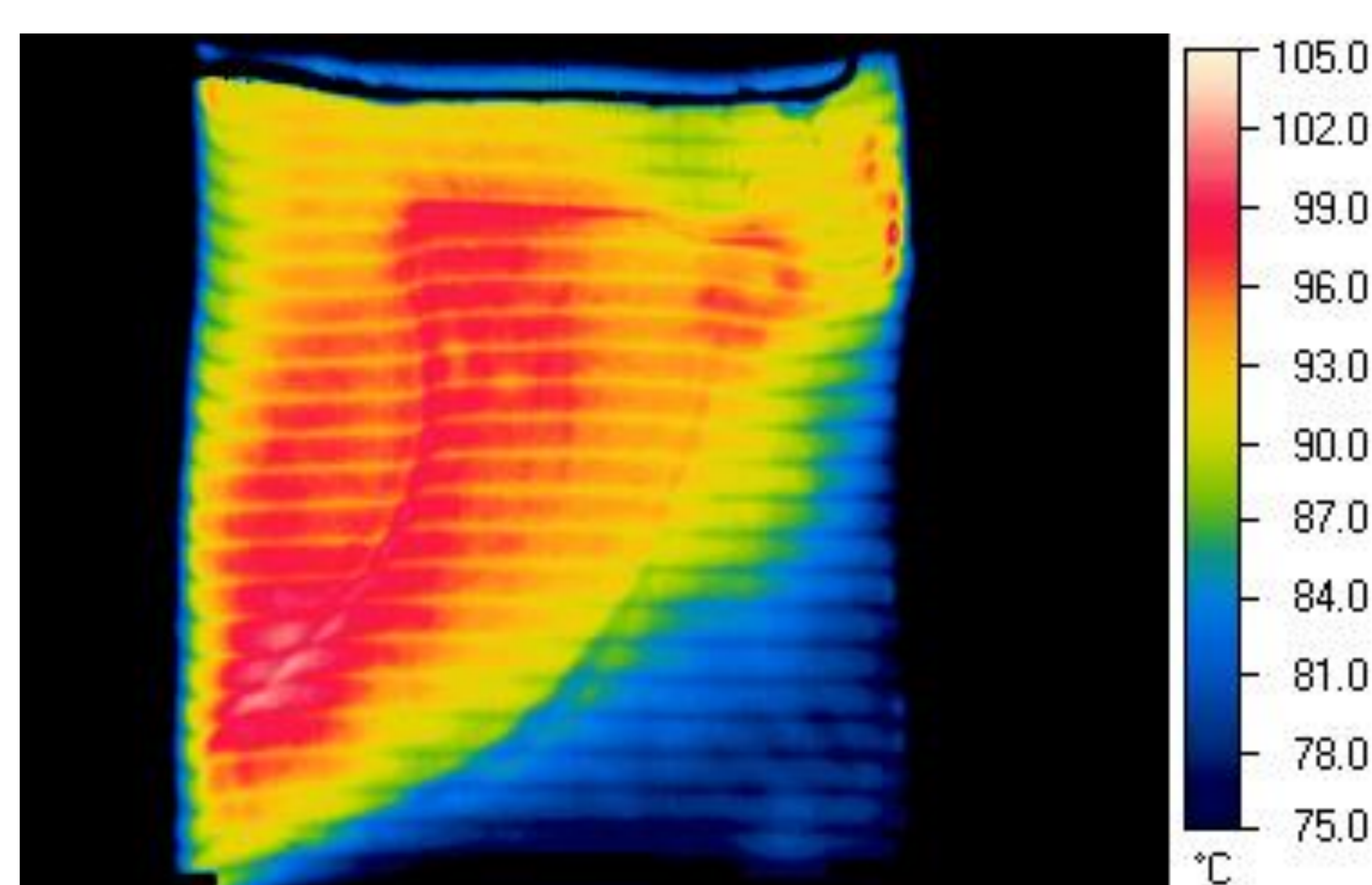
Tool face during heat-up showing cool spots/lines corresponding to the thermocouple positions/wires and cooler outline at the resin-rich mould cavity lip.



Tool face at target temperature of 90°C showing ~10°C variation across the component.



Insulated back surface during dwell at 90°C.



Tool back face (GRP side) without insulation, showing the resistive heater element spacing (horizontal shading).

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