

YOKOI LAB.

[Ultimate Injection Molding Technology and Pulp Injection Molding]

Department of Mechanical and Biofunctional Systems

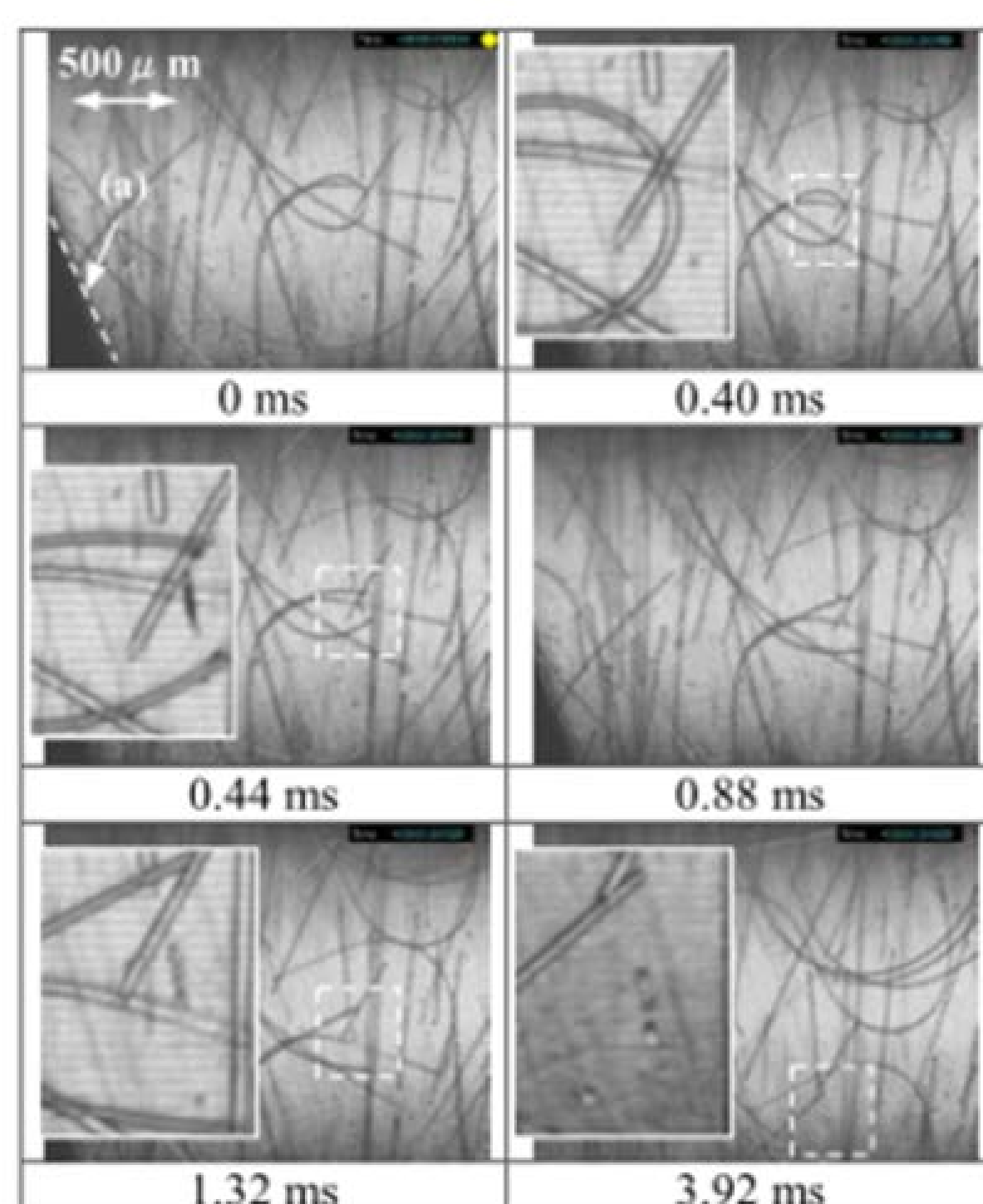
<http://www.iis.u-tokyo.ac.jp/~hiyokoi/>Precision
engineering
department

Polymer Processing

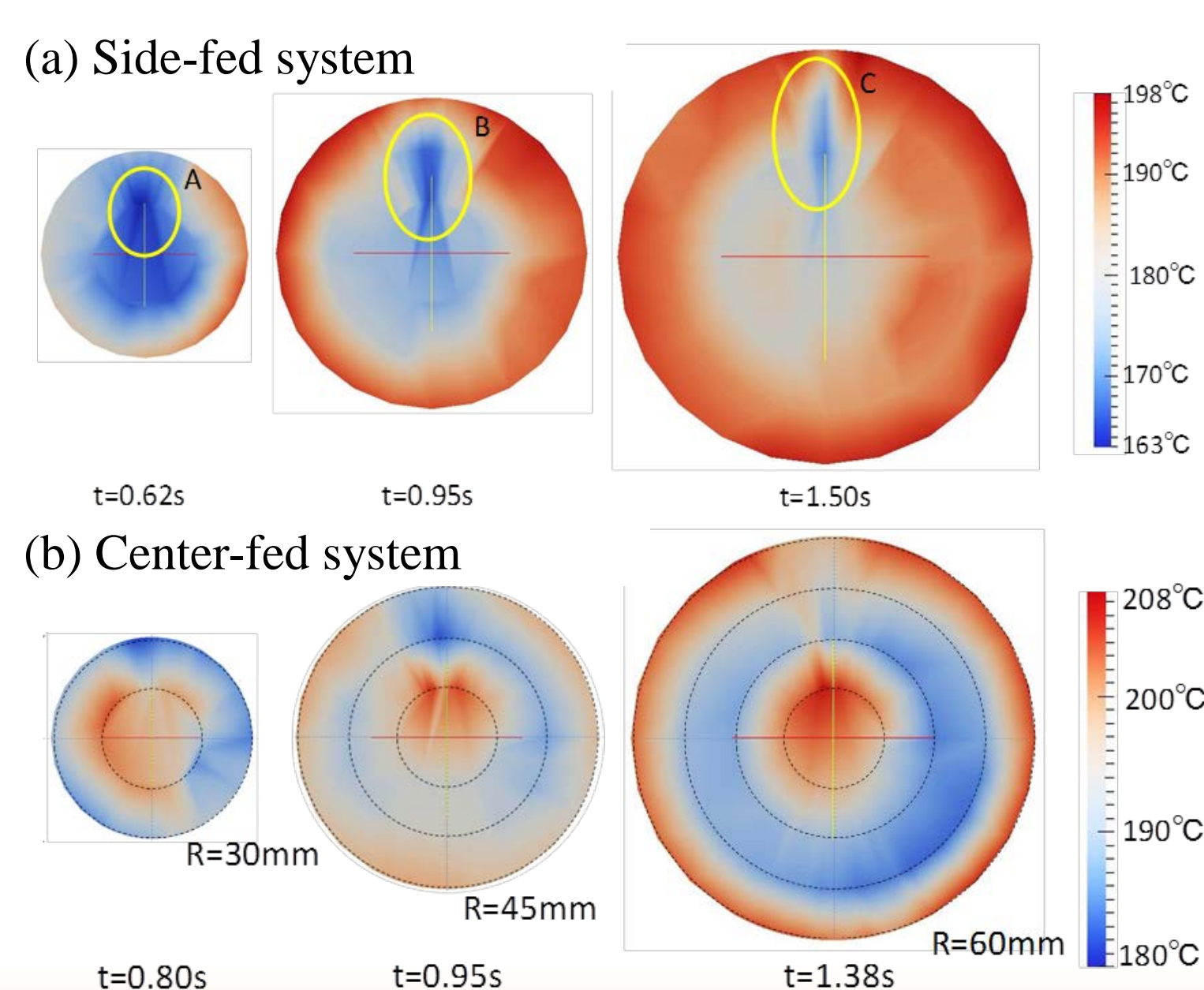
Recent Topics on Visualization and In-process Measurement Technologies for Injection Molding

The Yokoi Laboratory is conducting the following projects; “Ultimate Injection Molding Technology” and “Pulp Injection Molding (PIM)”. Visualization themes and in-process measurement technologies are introduced through the demonstration of recent analytical results and video visualization images. Development of PIM samples is also reported using typical molded samples on display.

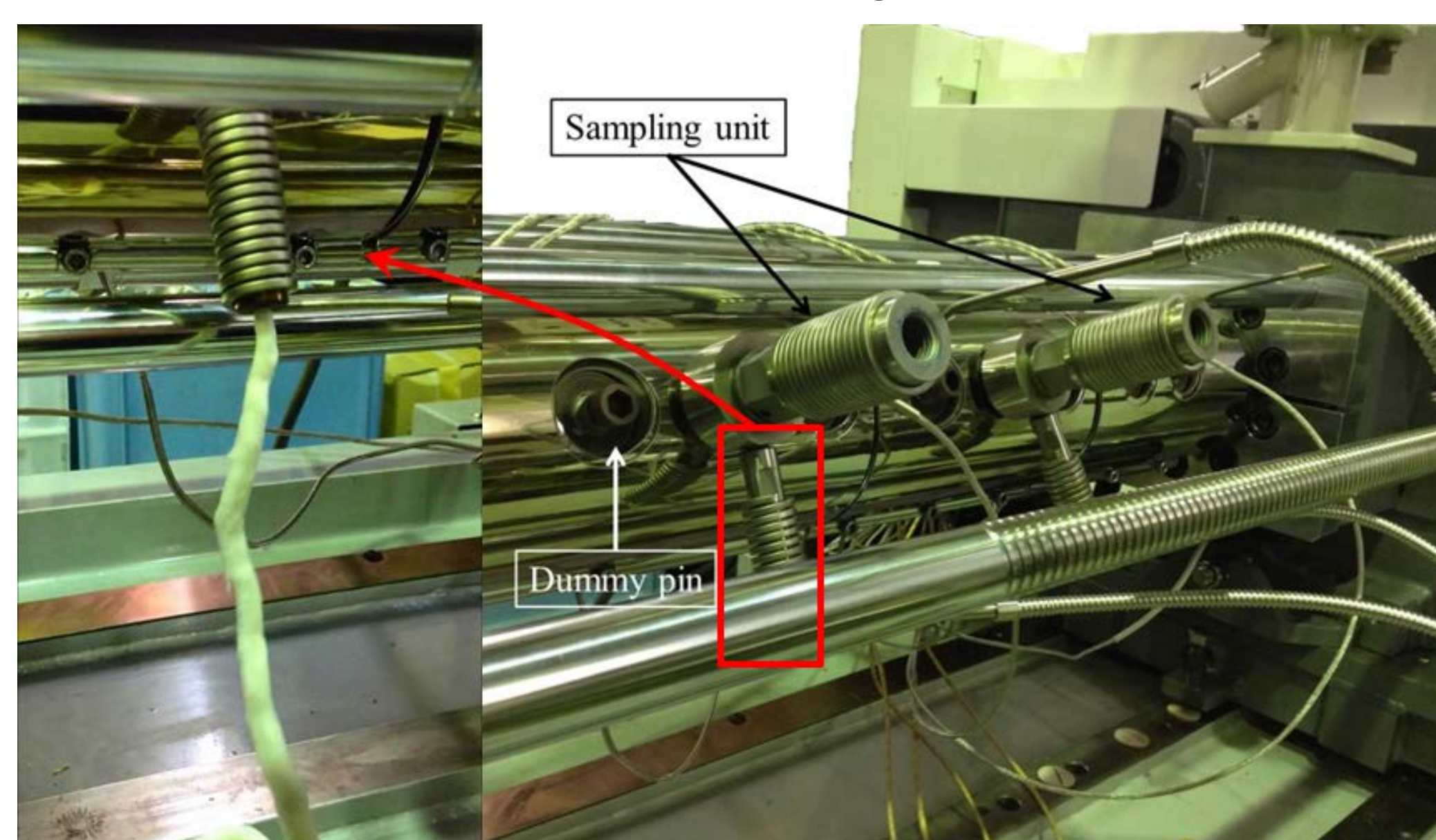
- ◆ Visualization Analysis on Breakage Behavior of Reinforced Fibers by Glass-inserted Heating Cylinder
- ◆ Fiber-breakage Evaluation of Plasticated Resin Based on the Newly-developed Heating Cylinder with Multi-ports for In-process Sampling
- ◆ Analysis of Cavity Filling Phenomena inside Mold with Hot-runner System
- ◆ Visualization Analysis of Melt Flow Behavior inside Hot-runner Manifold
- ◆ Experimental Analysis on Generation Process of Residual Pillar Portion Drawn through Pin-point Gate
- ◆ Development of New Products on Pulp Injection Molding



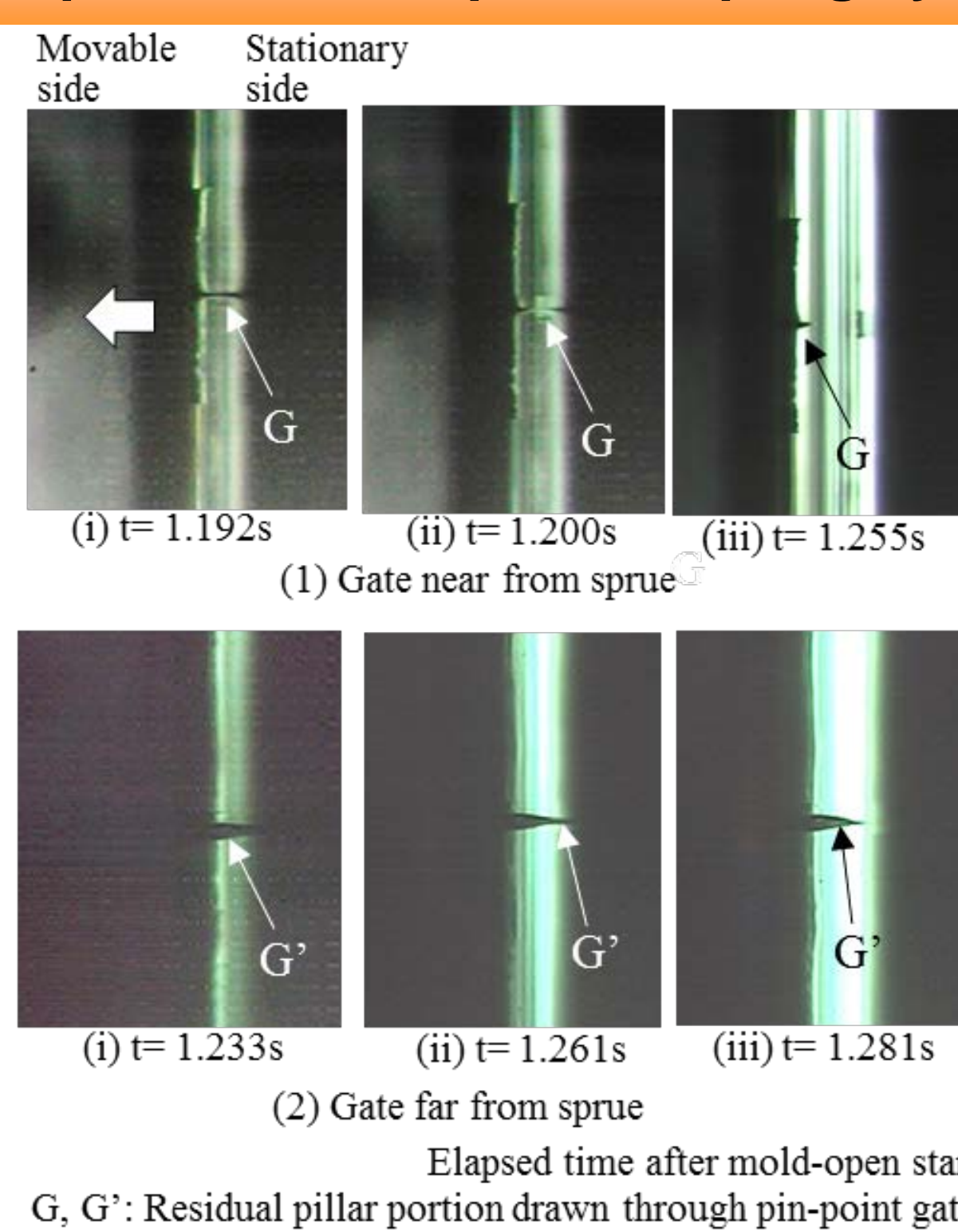
Fiber breakage process inside a screw channel



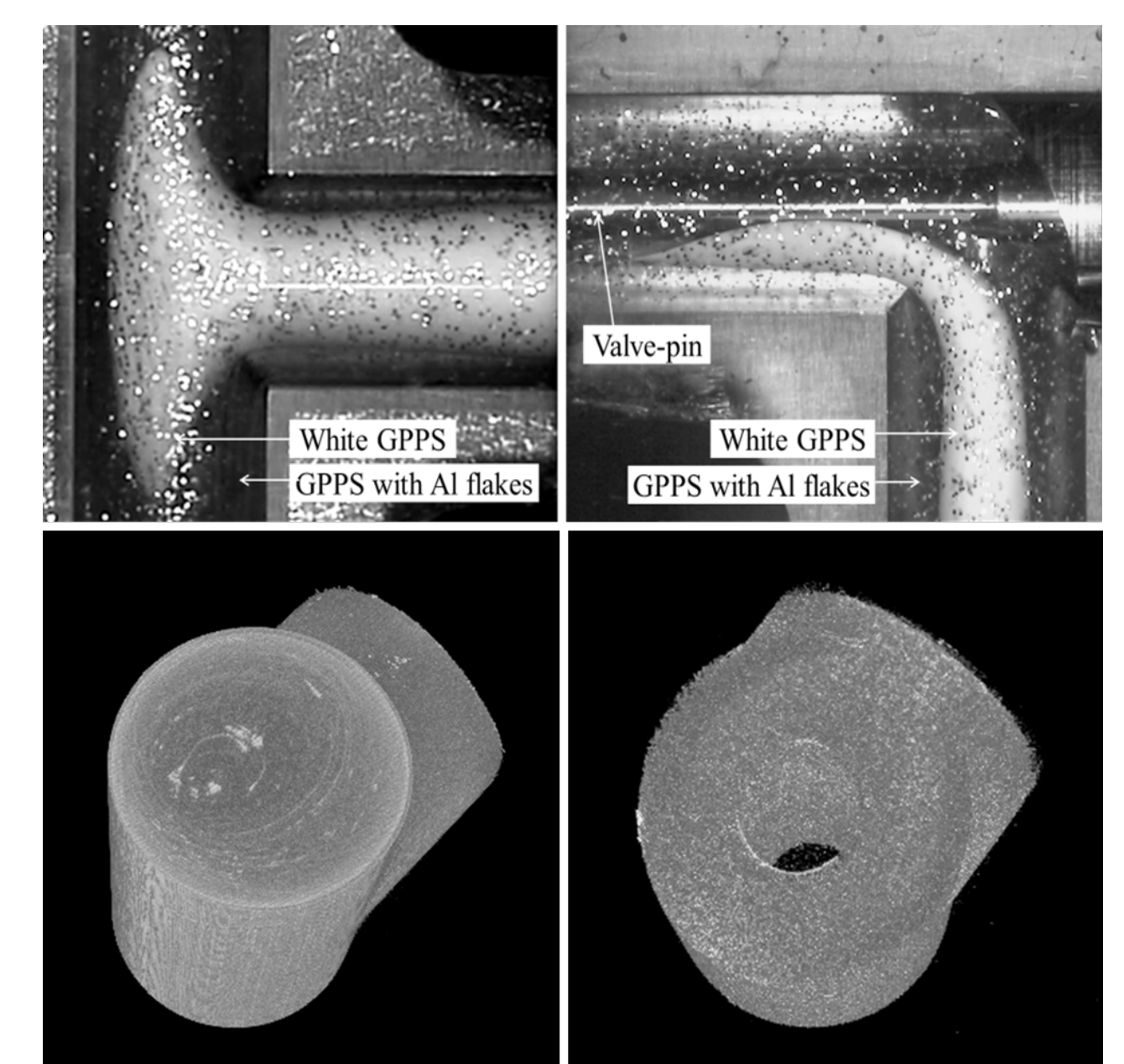
Change of temperature distribution with time after injection starts in hot runner mold



In-process multi-port sampling cylinder



Elapsed time after mold-open start
G, G': Residual pillar portion drawn through pin-point gate
Visualization images of mold opening process



L-shaped channel T-shaped channel
Visualization images of melt flow behavior inside hot-runner manifold



New products on pulp injection molding