Production Technology Research Group

YOKOI LAB.

[Ultimate Injection Molding Technology and Pulp Injection Molding]

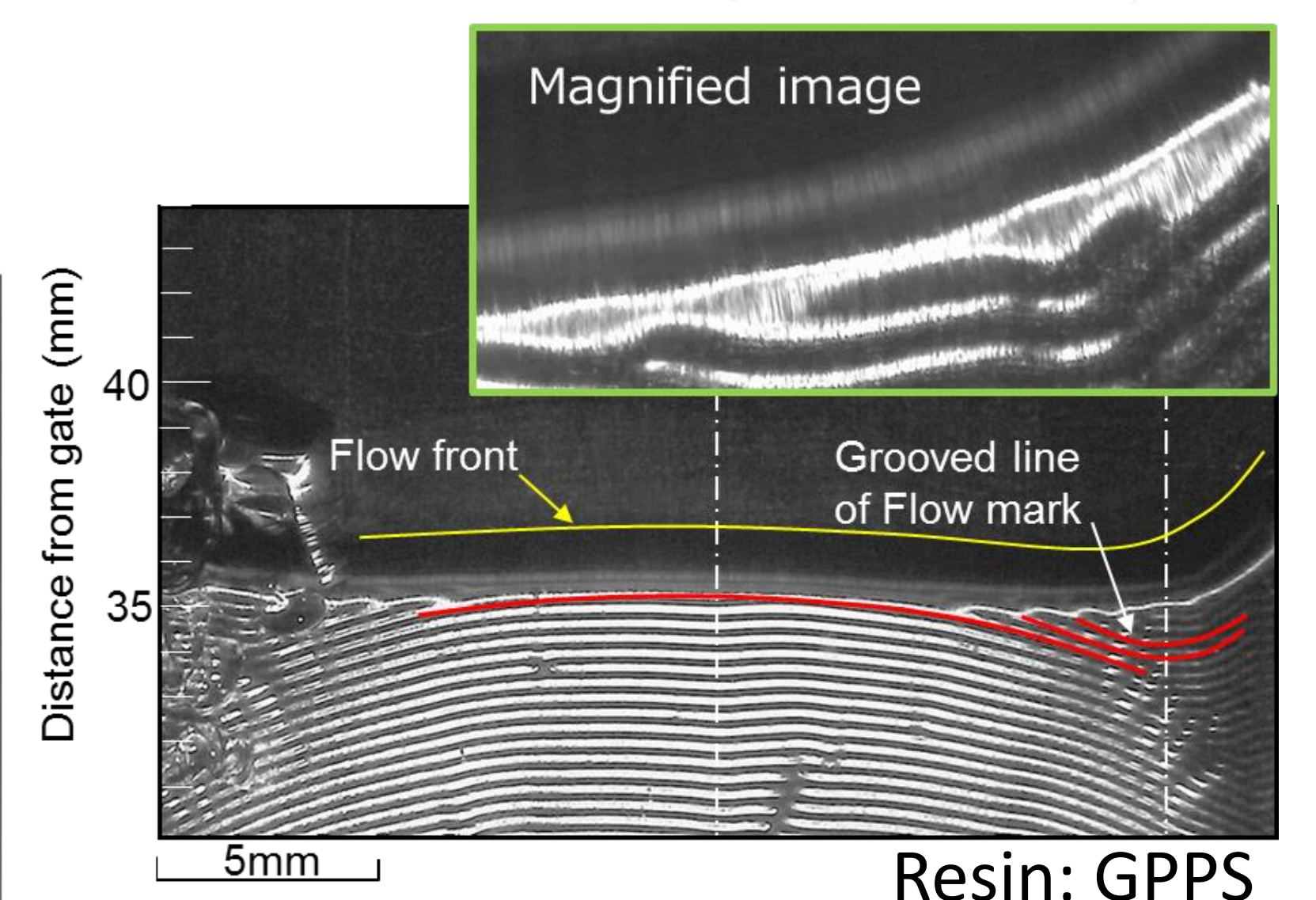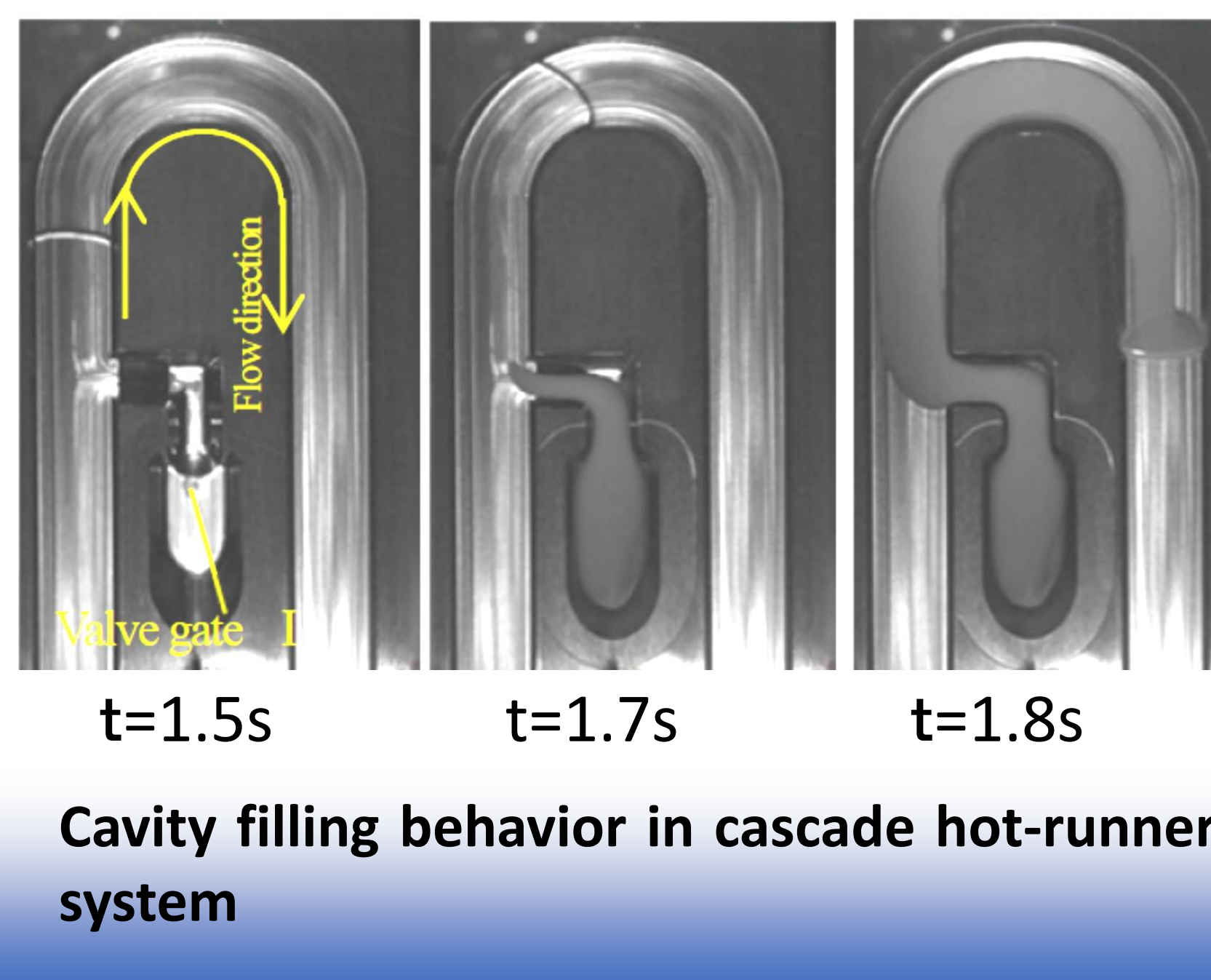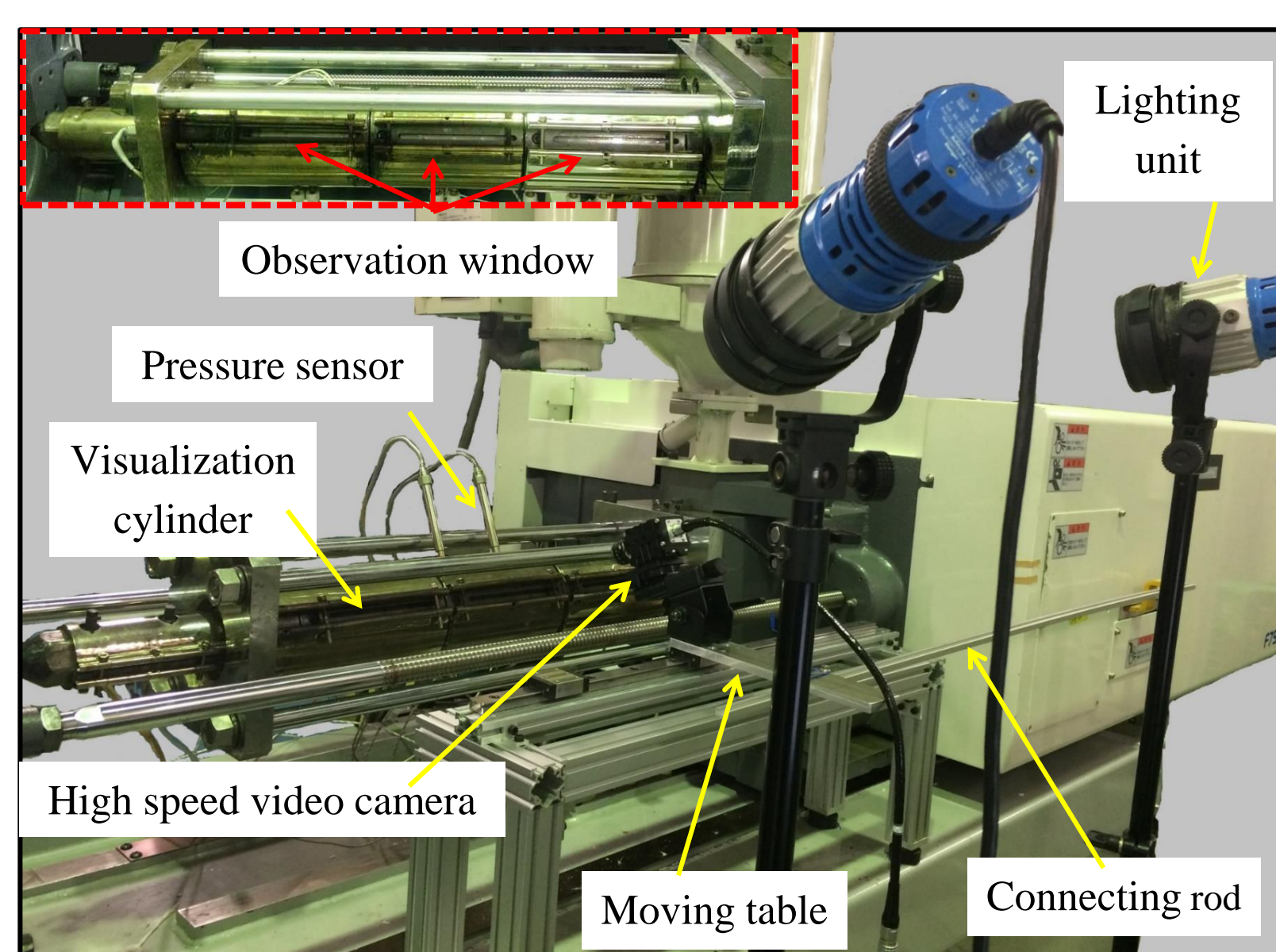### Department of Mechanical and Biofunctional Systems

Polymer Processing

Precision engineering department

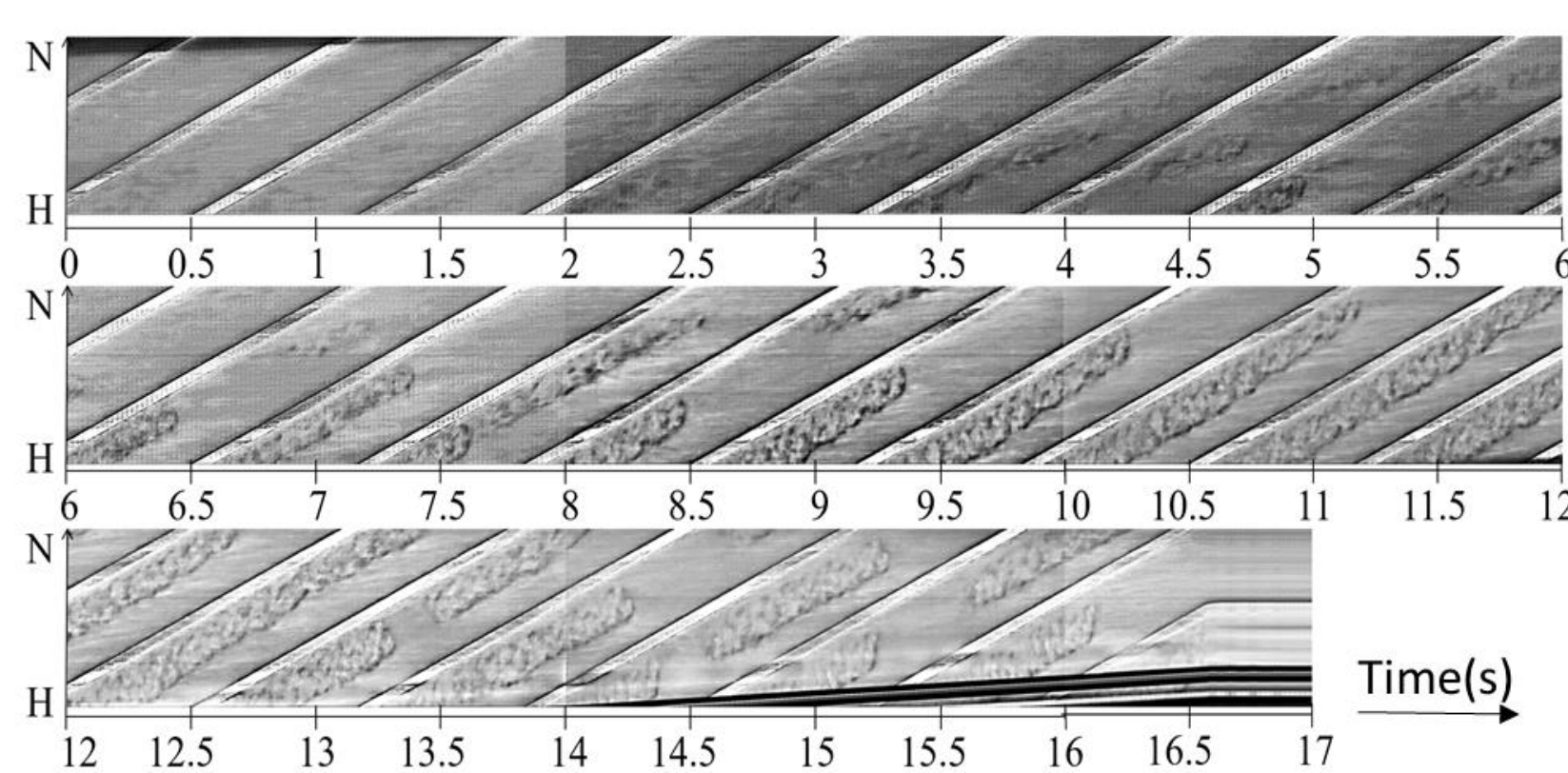http://www.iis.u-tokyo.ac.jp/~hiyokoi/

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.
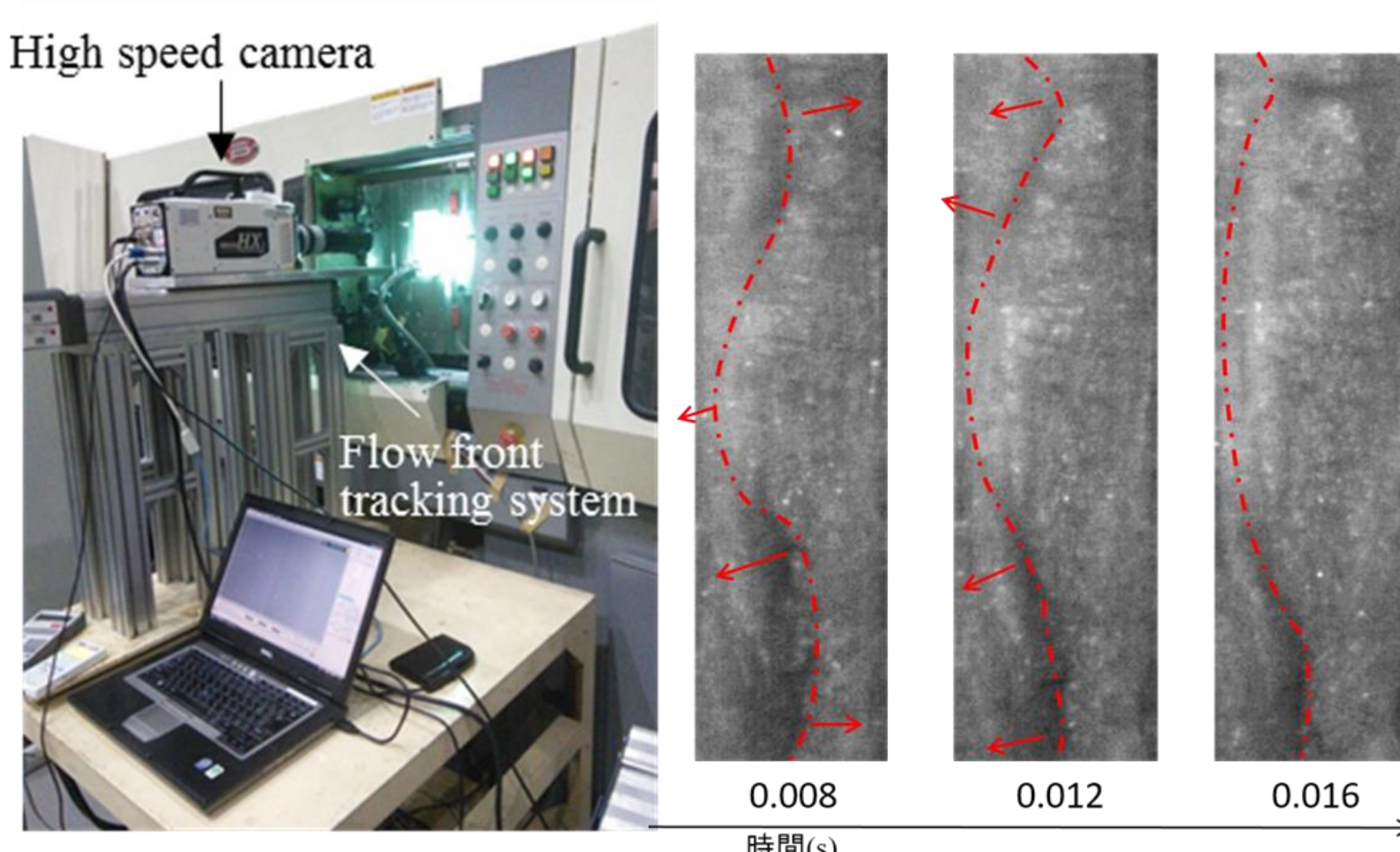
◆ Visualization Analysis on Reciprocating Plastication Process of Fiber-reinforced Resins by Glass-inserted Heating Cylinder
◆ Visualization Analysis of Asymmetric Fountain Flow Phenomena for Fiber-reinforced Resins Based on Dynamic Observation of Melt Front Behaviors
◆ Experimental Analysis on Molding Process of Cascade Hot-runner System by Visualization Mold
◆ Visualization Analysis on Various Types of Flow-mark Occurrence Processes by Visualization Mold
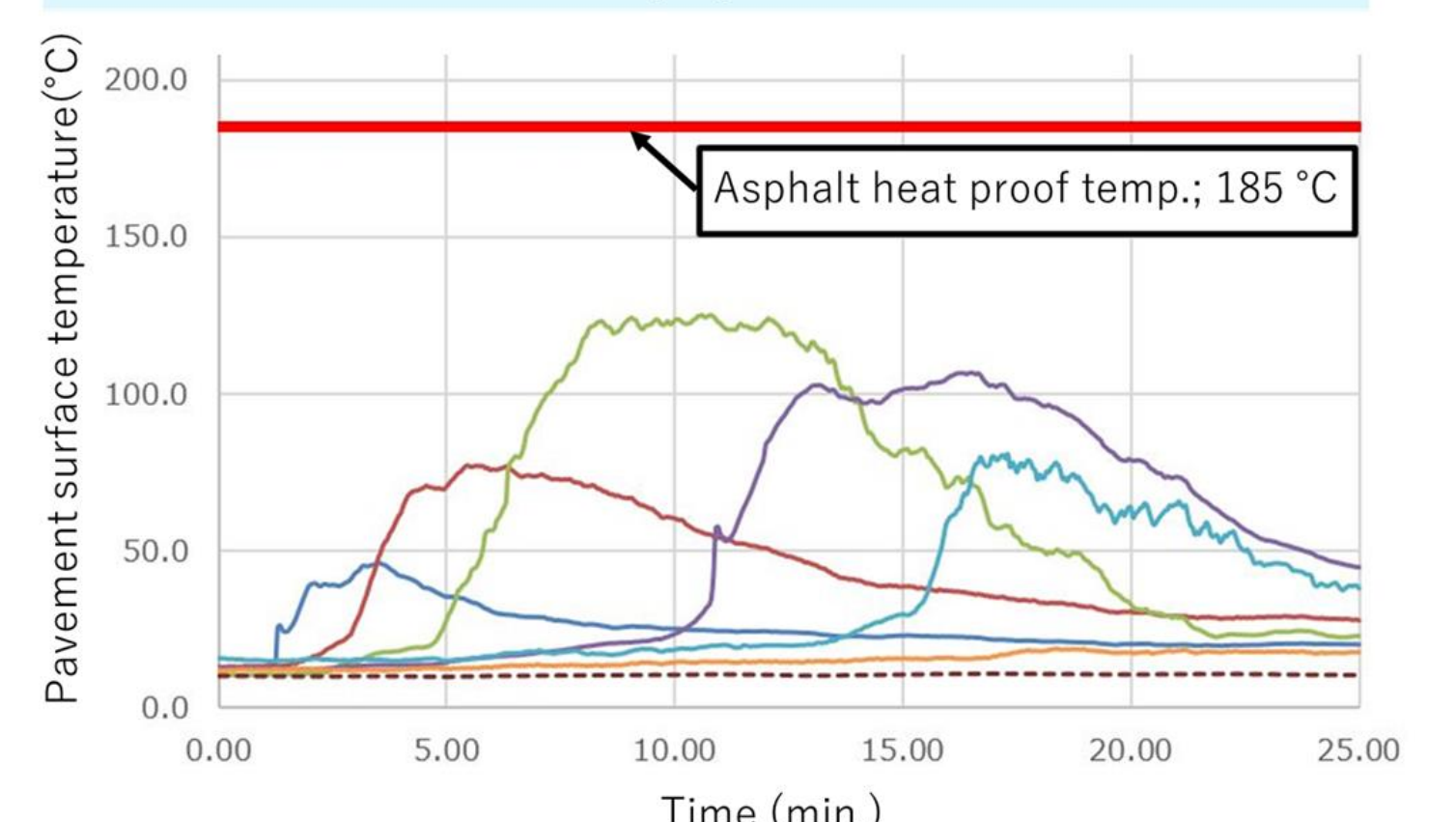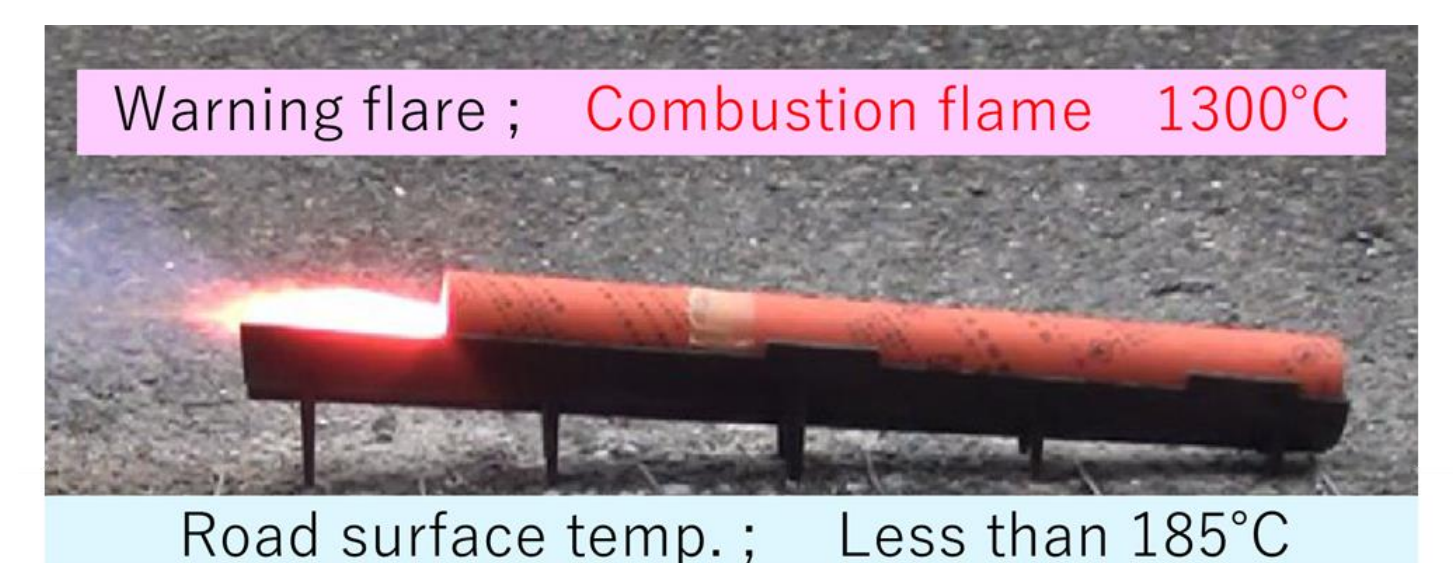◆ New Application Fields of Pulp Injection Molding Technology

Cavity filling behavior in cascade hot-runner system

Observation of micro-groove flow mark generation process in the case of generating inclined grooves to the melt contact line

Experimental setup for visualization of reciprocating plastication process and An example of extended lamination image for glass-fiber reinforced PP(30wt%)

Dynamic observation of melt front behavior of long glass-fiber reinforced PP(50wt%)

Application of pulp injection molding Case for warning flare