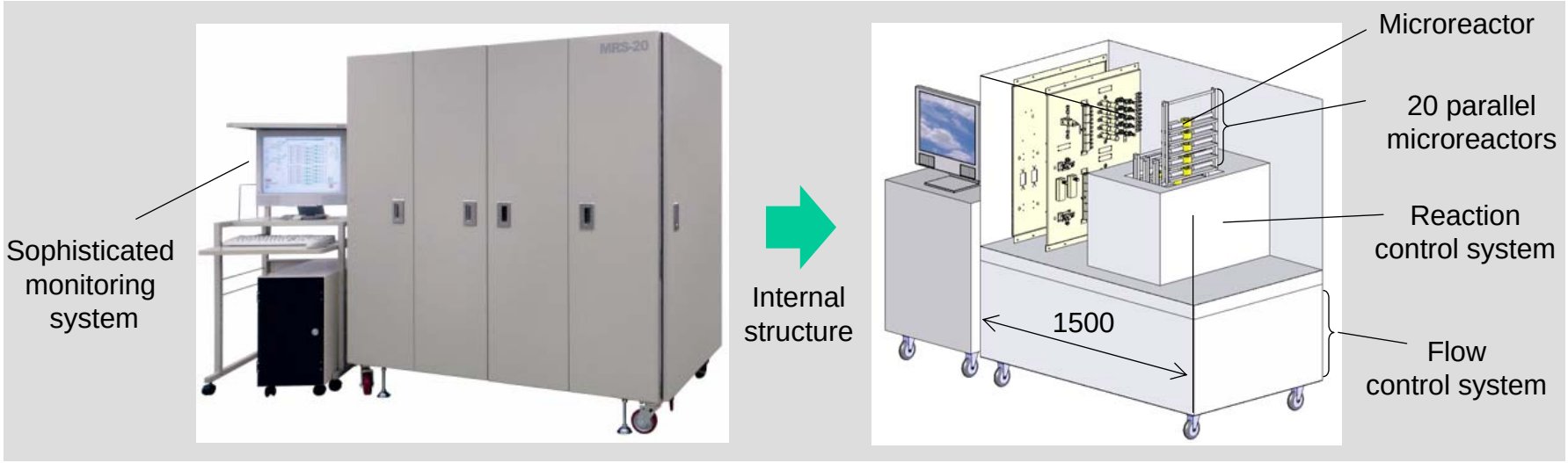
2006/3/27 Release

Development of a pilot plant enabling parallelization of microreactors

- Synthesizing a max. of 72 tons/year of liquid chemicals, and significant increasing potential productivity of pharmaceutical drugs and cosmetics –



The Mechanical Engineering Research Laboratory (GM: Mr. Hideshi FUKUMOTO) has succeeded in the development of a pilot plant mounted with up to 20 parallel microreactors using MEMS (Micro Electro Mechanical Systems) technology*. A microreactor is a device for enabling efficient chemical reactions to take place in small grooves of several tens of micrometers (1 micrometer is 10^{-6} meters). By mounting several microreactors in parallel, the pilot plant developed is able to synthesize up to a maximum of 72 tons of chemicals per year, resulting in a significant increase in productivity potential of pharmaceutical drugs, cosmetics, agricultural chemicals, dyes, etc.

This result will be presented at the 71st Annual Meeting of the Society of Chemical Engineers, Japan (SCEJ), to be held at the Tokyo Institute of Technology from 28th – 29th March 2006.

*A system composed of a minute 3-dimensional structure with integrated advanced functions using micromachining technology. The general term for a minute device integrated with multiple functions, e.g. mechanical, electrical, optical, or chemical.