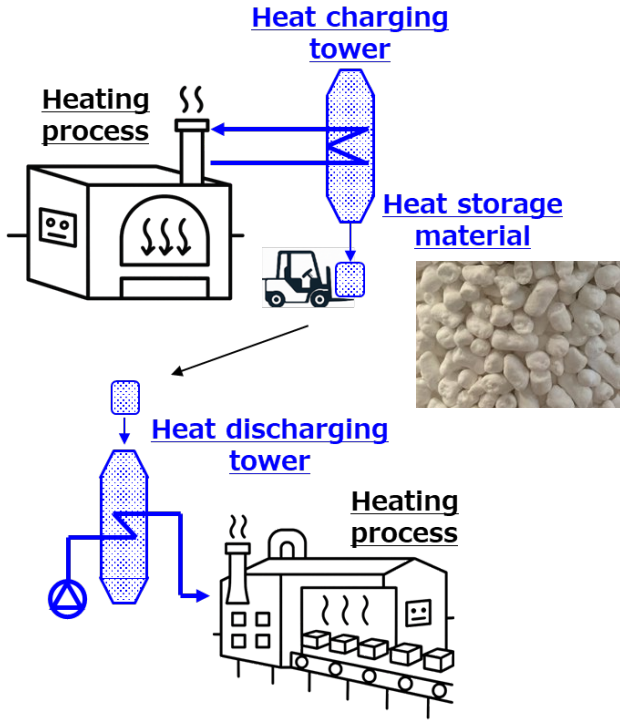
Thermochemical Heat Storage

R&D | **FS/Demo** | Product/ Service

Technology Research Center

- SHI is developing **the thermochemical heat storage system, which has a high energy density and offers advantages in terms of size reduction and cost.** This system can play a critical role in promoting waste heat utilization and enabling the storage and leveling of renewable energy.
- Cost-effective and widely available CaO/Ca(OH)2 is used as the heat storage material, allowing for efficient heat storage at around 500°C. During the heat releasing process, it can produce heat energy at even higher temperature around 600°C by controlling the steam pressure for reaction, providing additional benefits through the effective use as a heat pump.
- **Waste heat from factories or plants can be stored in this system and then released when needed or transported to other locations for alternative heat use**. This technology can also provide low-cost renewable energy storage for flexible heat or energy supplying.



10kW reactor

Carbon Neutral Contribution points

- ✓ **This technology contributes to a reduction in overall energy consumption** by using heat that would otherwise be wasted.
- ✓ **This system can offer a cost-effective solution for renewable energy storage.**

Copyright © Sumitomo Heavy Industries, Ltd. All Rights Reserved.