

Another Demonstration Facility for B-DASH Project Starts Running: "Demonstration of Sewage Sludge Conversion with Dehydration and Drying System"

"Demonstration of Sewage Sludge Conversion with Dehydration and Drying System" adopted for B-DASH Project*¹ 2017 is a joint research practiced by the consortium of Tsukishima Kikai Co., Ltd.; Sun Eco Thermal Co., Ltd.; Kanuma City Agriculture Public Corporation; JS and Kanuma City.

In this demonstration, drying sludge is produced using the dewatering and drying system. *The system is the combination of "Inside double coagulation centrifugal dehydrator" and "Circulation flash dryer" targeting small to medium scale WWTP. The project aims to demonstrate the adaptability of sewage sludge as a fertilizer or fuel, the performance of the conversion facilities, and cost reduction effect of life cycle costs (LCC).*

The conventional drying technology requires an adhesion control to prevent sludge from adhering to the heating surface of the dryer, which makes system complicated with additional costs. In the demonstration technology, the inside double coagulation centrifugal dehydrator produces low adhesion, fine granulated sludge that makes the dehydration system simple and low-cost. Besides, the drying system has a moisture content adjustable system, which enables wide application of dried sludge. These promising function will achieve the construction of sustainable society.

**1: B-DASH Project (Breakthrough by Dynamic Approach in Sewage High Technology Project) has been conducted by Ministry of Land, Infrastructure, Transport, and Tourism (MLIT) of Japan. The Project aims to accelerate R&D of new technologies and their practical applications, enhance costs reduction in sewage works and the production of renewable energy, and facilitate the global presence of Japanese companies in their water business. In B-DASH Project, all demonstrations are carried out as a contract research of National Institute for Land and Infrastructure Management (NILIM.)*

Demonstration of Sewage Sludge Conversion with Dehydration and Drying System

Joint research group:

- Tsukishima Kikai Co., Ltd.
- Sun Eco Thermal Co., Ltd.
- Kanuma City Agriculture Public Corporation
- JS
- Kanuma City

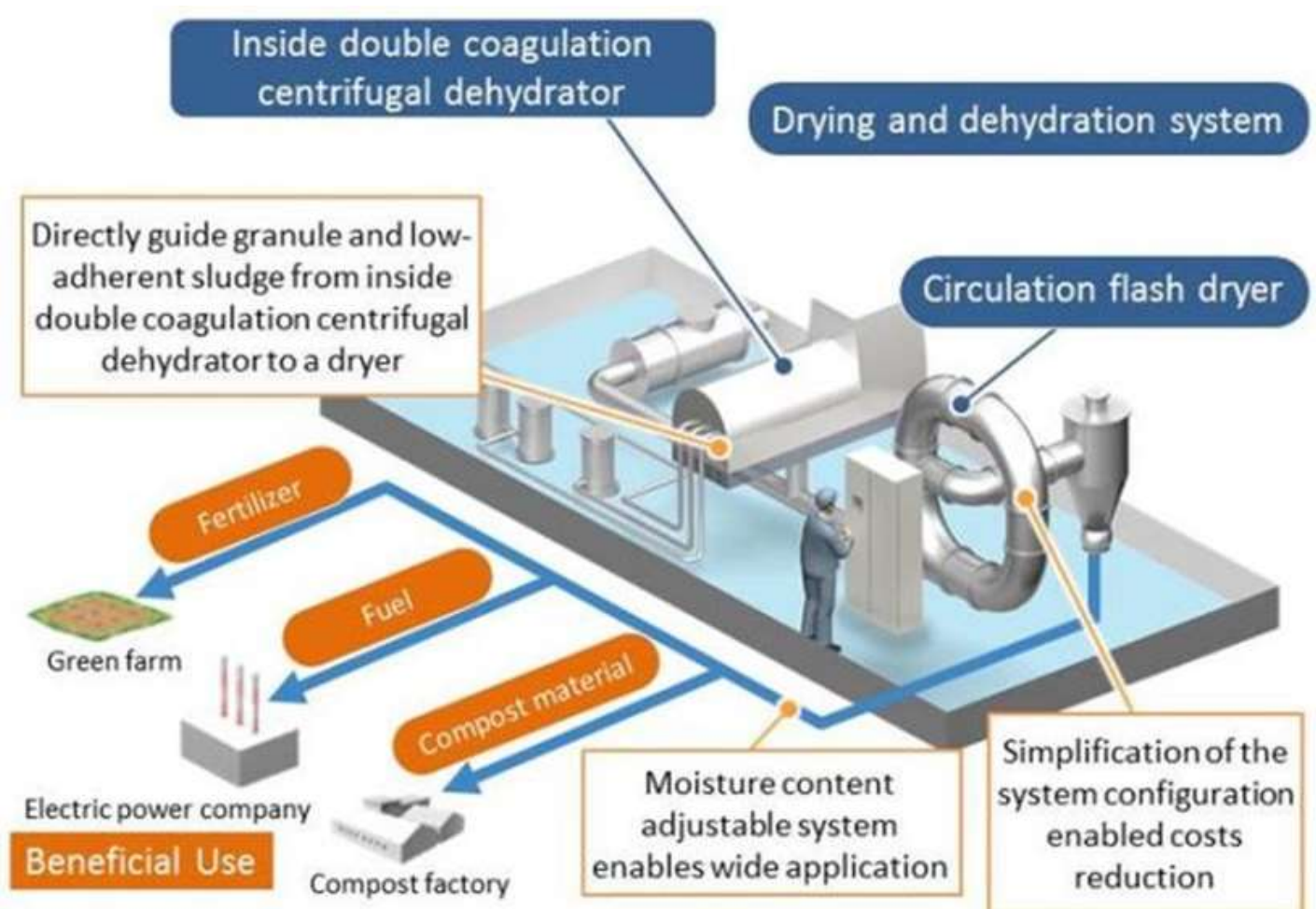
Demonstration field

Kurokawa WWTP in Kanuma City, Tochigi Prefecture

Period of demonstration

2017-

Demonstration summary



Feature of the system

1. Low-cost dehydration and drying technology
 - Simple: Reduction of number of major machines (Conventional system: 10 ⇒ New system: 4)
 - Space-saving (50% of the conventional system)
 - Automatic operation system: a reduction of labor costs and an efficient operation management.
2. Moisture content adjustable dehydration and drying technology: usable for various purposes
 - No risk of adhesion and wearing
 - No device inside dryer
 - Can produce sludge with wide range of moisture contents (10-50%) applicable to various utilization.

