

## Announcement Regarding Adoption of Cellulose Nano-Fiber "AUROVISCO" for Concrete Pump Primer "RUBURI" of TAKEcite Co., Ltd.

Oji Holdings Corporation ("Oji", Director of the Board/President: Susumu Yajima, Head Office: Tokyo) announces adoption of Cellulose Nano-fiber (CNF) "AUROVISCO" for concrete pump primer "RUBURI" of TAKEcite Co., Ltd. (President: Masanari Takeda, Head Office: Shizuoka) in January.

At construction sites, 1 ton of conventional mortar is typically used to prevent concrete blockage in pumping pipes. Concrete pump primer "RUBURI" is expected to use for the prevention of concrete blockage as the replacement of the mortar. Only small amount of the pump primer is needed for smooth pumping of concrete, compared with that of mortar. Therefore, the pump primer can largely contribute to decrease material cost, disposal cost, and working hours at construction sites.

This pump primer is required to form thin and uniform lubricating layer on the inner surface of pumping pipes with a small amount, and to adapt for pumping speed, while components in the pump primer remain uniformly dispersed. Due to high thixotropy (\*1) and viscosity of CNF, lubricating layer can be stably formed, and components in pump primer can be stably dispersed by adding OJI's CNF. This prevents concrete blockage in any pumping situations: longer-distance pumping, incline pumping, and pumping using pipes with complicated form. Therefore, the pump primer can be used at various construction sites.

In addition, the pump primer is made from recycled concrete sludge, which used to be industrial waste. Being evaluated the innovative technology, the pump primer was selected as a standardization project for "the Standardization System for Cultivating New Markets" of Ministry of Economy, Trade and Industry (METI), Japan. Once the standardization is approved, the pump primer is expected to be used at much more construction sites.

From now, we are trying to accelerate commercialization of CNF by proceeding to further expand our CNF sample usage in a wider field.

- (\*1) Thixotropy: Property of becoming less viscous by applying stress, but regaining its viscosity when left to rest.
- (\*2) We will utilize natural resources effectively by our own technology and contribute to SDGs (Sustainable Development Goals).



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