December 2, 2019

Notice regarding the commencement of the operation of a municipal waste incineration bottom ash washing system

Taiheiyo Cement Corporation (hereinafter "the Company"; Headquarters: Minato-ku, Tokyo; President: Masafumi Fushihara) is pleased to announce that it has commenced the operation of a municipal waste incineration bottom ash washing system, newly constructed on the premises of the Kumagaya Plant (Kumagaya, Saitama Prefecture) to promote the further recycling of waste into cement.

As one of its initiatives to realize a sustainable society, the Company is promoting the recycling of various waste materials and by-products as source materials for cement. Among them, approximately 60,000 tons of incineration ash (bottom ash: 48,000 tons; fly ash: 12,000 tons) generated by municipal waste incineration plants has been recycled annually at the Kumagaya Plant since 2001, when it started recycling these ashes into cement material. The Company's other plants have also been working on ash recycling.

Many waste materials contain chlorides, which are not suitable for use as a cement raw material. Particularly, because the recycling of incineration fly ash, which has a high chloride concentration, requires desalination, the technologies for it have been established and are being operated. In addition, since incineration bottom ash is difficult to desalinate efficiently and has a low chloride concentration, it is pre-processed (e.g. foreign substances are removed) before being recycled.

These days, demand for the expansion of waste recycling in the production of cement is increasing. To realize this, the Company developed a technology to desalinate incineration bottom ash, which has a low chloride concentration but large amounts of it are disposed. This has enabled the recycling of more other wastes containing chlorides to be used as a raw materials in the production of cement.

The washing and desalination technology of municipal waste incineration bottom ash* enables more efficient chloride removal and drastically reduces the water necessary for washing when compared to the conventional process, which mixes ash with water before washing and desalination. We have constructed and commenced the operation of a incineration bottom ash washing system that utilizes that technology at Kumagaya Plant. This system is capable of washing and desalinating all of the incineration bottom ash the plant accepts.

Through this initiative, Taiheiyo Cement hopes to further contribute to the realization of a zero-waste society.

<Overview of the incineration bottom ash washing system>

Name	Incineration bottom ash washing system, Kumagaya Plant
Location	5310 Mikajiri Kumagaya-shi, Saitama (on the premises of Kumagaya Plant)
Business	Washing and desalination of bottom ash for use in the production of cement
Outline	
Processing	190 t/day
Capacity	
Total Project	0.78 billion yen
Cost	

^{* &}quot;Method and system to recycle waste incineration bottom ash to be used as a raw material in the production of cement" (Patent Number: 6274875)