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Content

Title：	Directions Governing the Inspection Procedure for Cement Ch
Date：	2022.05.26
Legislative：	1.Adopted and promulgated by Ministerial Order No. 09920016200, BSMI, MOEA on 11 October 2010. 2.Articles 4 and 7 amended and promulgated by Ministerial Order No. 10020009030, BSMI, MOEA on 25 July 2011. 3.Amended and promulgated by Ministerial Order No. 10420001040, BSMI, MOEA on 1 April 2015. 4.Articles 4 and 5 amended and promulgated by Ministerial Order No. 11120003800, BSMI, MOEA on 1 June 2022.
Content：	1.These Directions are stipulated for the inspection of cement. 2.Cement includes Portland cement and blended hydraulic cement imported to Taiwan or manufactured and sold in Taiwan. 3.The inspection methods for cement are monitoring inspection and management-system-based monitoring inspection. 4.Inspection standards and inspection items: (1)Portland cement: CNS 61, the inspection items are as follows: a.All chemical compositions and physical properties, among which the compressive strength inspection is conducted after three days of aging. b.Contents of additives: Contents of limestone added to Portland cement and processing additions. (2)Blended hydraulic cement: CNS 15286, the inspection items are as follows: a.All chemical compositions must be in accordance with the prescribed standards. b.Physical properties: (a) Autoclave expansion and contraction. (b) Time of setting. (c) Air content of mortar. (d) Three-day age compressive strength [excluding IS (≥ 70) and IP (LH)]. (3)The BSMI may stipulate other monitoring plans to monitor compressive strength for other ages or any other inspection item of the inspection standard. 5.The relevant requirements of monitoring inspection (including management-system-based monitoring inspection): (1)Application: a.Monitoring inspection: The obligatory inspection applicant shall apply to the BSMI or its branch (hereinafter referred to as the Inspection Authority) for inspection by submitting an inspection application form before either the cement are imported or the domestically manufactured cement are transported out of the production premises. b.Management-system-based monitoring inspection: (a) An applicant must register in the monitoring system and submit the application form, together with quality management system certificates issued by the BSMI or by certification bodies recognized by the BSMI, and a list of basic inspection equipment, to the Inspection Authority to apply for management-system-based monitoring inspection. (b) An applicant must also prepare basic inspection equipment, such as autoclave, Le Chatelier pycnometer, constant temperature and humidity incubator, air permeability apparatus, Vicat apparatus, compression machine (25 tons), flow table and muffle furnace (high temperature furnace that can be used constantly up to 1200 degrees). (2)Commodity Inspection Mark: a.Cement must have the Commodity Inspection Mark on the smallest packaging unit. But those in bulk can be exempted from labelling the Commodity Inspection Mark. b.The Inspection method is monitoring inspection. Where the product lot number or manufacture date is identified in the application form, and the smallest packaging unit is labelled with the

product lot number or manufacture date, the obligatory inspection applicants may print the Commodity Inspection Mark by themselves. The identification number is composed of the letter "M" and the designated code.
c.For the production premises registered under the management-system-based monitoring inspection, the obligatory inspection applicants may print the Commodity Inspection Mark by themselves. The identification number is composed of the letter "Q" and the monitoring inspection registration number.
(3)Inspection Requirements:
a.Monitoring inspection:
(a)Batch-by-batch examination is adopted. For obligatory inspection applicants of which the cement of the same origin, the same manufacturing site or brand, and the same types have passed batch-by-batch examination for three consecutive batches, their cement will be subject to random-selected batch inspection that is conducted one out of every two batches. The obligatory inspection applicant who fails to pass the random-selected batch inspection will be subject to batch-by-batch examination.
(b)When the bulk cement which has passed the inspection is repackaged into small units, the obligatory inspection applicants shall apply for re-inspection. For re-inspection applications that are accompanied by the factory or import monitoring inspection certificate and proof of delivery for the bulk cement, release after document examination is adopted. When necessary, on-site examination of packaging, appearance and labels or sampling inspection may be conducted. For those not inspected or sampled for ten consecutive batches, the next batch shall be inspected or sampled.
b.Management-system-based monitoring inspection:
(a)For cement manufactured and sold in Taiwan: A production premise shall perform inspection to its cement and issue, by countersigning, the monitoring inspection certificate if compliance is demonstrated after the inspection.
(b)For cement imported to Taiwan: A production premise shall perform inspection to its cement, and
the obligatory inspection applicant shall submit a copy of the registration certificate of the production premise under management-system-based monitoring inspection and the original inspection records to the BSMI for approval before issuing the monitoring inspection certificate.
(c)Production premises registered under management-system-based monitoring inspection must ensure that the inspection records include the data for slag, fly ash, silicon material and limestone content. The BSMI may examine or conduct sampling inspection when it is deemed necessary.
(4)Principles for the delivery of samples and confirming the content of the additives:
a.Imported cement (including those subject to monitoring inspection and those subject to follow-up batch-by-batch examination after having failed monitoring inspection): Upon receipt of the samples, the Inspection Authority will mix them and divide into three portions: one being subject to testing of chemical composition and content of additives (for slag, only the quantity of sulfur in sulfide in the original cement sample to be tested) by the Inspection Authority; another being subject to physical characteristics testing by specialised cement laboratory of the BSMI (Taichung or Hualian Branch); and the other being subject to testing by the BSMI's specialized slag laboratory (Hualian Branch).
b.Domestic cement (including those from production premises registered under management-system-based monitoring inspection, domestic production premises and those subject to follow-up batch-by-batch examination after having failed monitoring inspection): Upon receipt of the samples, the Inspection Authority will mix them and divide them into three portions: one being kept by the Inspection Authority for future inspection; another being subject to physical characteristics, chemical composition and additive content testing (for slag, only the quantity of sulfur in sulfide in the original cement sample to be tested) by a specialised cement laboratory; and the other being subject to inspection by a specialized slag laboratory.
c.Fly ash, silicon material and limestone content will be tested in accordance with CNS 12459. The quantity of sulfur in sulfide in the original cement sample will be tested in accordance with Clause 7.3 of CNS 12459, and a ratio of 1:100 shall be used as the estimated content for slag. The mass of
limestone added to cement shall not be more than 5% of the total cement mass. The sum of the estimated slag quantity, fly ash, and silicon material content shall not be more than 5% of the total cement mass. Cement will be deemed as a product containing questionable additive contents when its sum of estimated slag quantity, fly ash, and silicon material content is more than 5% of the total cement mass.
d.When cement is deemed as a product containing questionable additive contents after the above testing, the Inspection Authority or specialised cement laboratory shall seek confirmation from the specialised slag laboratory, and inform the obligatory inspection applicant that a six-working day extension is needed for testing. The extension shall be noted accordingly in the "Specialized

	Laboratory Management System" at the same time. e.The specialised slag laboratory must provide the testing results to the Inspection Authority within six working days after receiving the calls. (5)Period of inspection: six working days after the receipt of samples. When the sample is deemed as a product containing questionable additive contents and requires confirmation on the slag content, the inspection period will be extended for another six working days.