KCS 11 80 20 : 2019

Leaning Type Retaining Wall

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국토교통부

Foreword

- To address needs that were caused by changes in the construction standard code system, the overlaps and conflicts between existing construction standards (design standards, standard specification) were compared and reviewed and then integrated into a new document that can be maintained as a standard code.

- These standards were revised and enacted as standards by integrating the Construction Work Slope Surface Standard Specification and the corresponding parts of the Road Construction Work Specification. Major matters related to the enactment and revision of these standards are as follows.

Construction Standards	Major Contents	Enactment · Revision (Month, Year)
Construction Work Slope Design Standards	• Construction Work Slope Surface Design Standards enacted.	Enactment (May 2006)
Construction Work Slope Design Standards	• Construction Work Slope Surface Design Standards revised.	Revision (Dec 2011)
KCS 11 80 20 : 2016	• Integrated and maintained as a code according to changes in the construction standard code system.	Enactment (June 2016)
KCS 11 80 20 : 2016	• Revised to harmonize Korean Standards with Construction Standards.	Revision (July 2018)

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1. General Matters

1.1 Scope of Application

(1) These standards are applied to the Leaning type retaining wall constructed as slope surface protection work.

1.2 Reference Standards

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- KCS
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(1) Struc at has a compressive strength higher than that specified in the design drawings. The structural concrete shoul have air volume shallas 4.5 % ± 1.5 %, slump as 15 ± 2.5 cm, and maximum coarse aggregate size to be less than 25 mm.

2.1.3 Design Form

(1) The design form shall be fabricated with disposable foamed polystyrene or PE design form. The material shall be in accordance with the specifications provided by the manufacturer.

2.1.4 Connecting Material, Joint Filler, Joint Sealing, and Accessory Material of Expansion Joint

(1) The connecting material, joint filler, joint sealing, and accessory material of expansion joints shall satisfy the standards in KCS 11 80 05.

2.1.5 Steel Reinforcements

(1) Steel reinforcements shall be appropriate for the specifications of the deformed bars SD300 of KS D 3504.

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(1) Inclination batter boards shall be installed at the right positions by verifying the position, inclination, and height specified in the construction work drawings.
(2) The standard spacing of batter board installation is 10 m. The batter boards shall be installed at the starting points, end points, and at the positions where the planes and cross-sections change.

3.2.3 Design Form

(1) Installation work drawings for a design form shall be prepared in accordance with the

shape of the retaining wall and approved by the construction supervisor. The design form shall not decrease the thickness of the retaining wall specified in the design drawings.

3.2.4 Expansion Joint and Contraction Joint

(1) Expansion joints shall be installed with a spacing less than 20 m to 30 m. The steel reinforcement shall be cut off to the foundation bottom, and an expansion joint shall not be placed at bending parts.

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(3) The adequate wate r pushed off d

(4) The /-shaped groov ut 0.3 m. The

3.2.5 An

(1) Anch shall be prepa of the defor

(2) In th the step heigh tachment betw

(3) If th step-type retair nods for incre retaining wall

(4) Anch ne slope surface.

(5) Anchoring pins shall not cause any cracking, deformation, or failure of the retaining wall itself.

(6) A drainage facility to drain the water in the back face of the retaining wall shall be installed where groundwater flows in from the back face of the retaining wall or where the groundwater level is formed at the front face of the retaining wall.

3.2.6 Concrete Placement and Surface Finishing

(1) In order to ensure uniform appearance of the wall, the exposed surfaces shall be carefully treated, avoiding any confusions in term of the concrete materials, mixing, and placement methods. The concrete shall be continuously placed in the predetermined sections, and shall be sufficiently compacted to avoid material separation.

(2) After the absorbed water on the top surface of the compacted concrete disappears, the concrete work shall be finished using a wood float to meet the specified height and shape. Cracks occurred after the finishing work and during concrete curing shall be repai

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