Korean Construction Standard

KCS 11 30 25 : 2019

Dewatering Works of Underground Water Level

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http://www.kcsc.re.kr

국토교통부

Foreword

• This standard was organized and integrated as the code by comparing and reviewing duplicate or contradictory content within the existing construction standards (design standards, standard specifications) due to the transition of the construction standards code system.

• This standard is established by integrating and organizing the parts that are related to dewatering work of underground water level in existing Building Construction Standard Specifications, Road Construction Standard Specifications and Harbor and Fishing Ports Construction Standard Specifications. The history of the standards are as follows:

Construction Standard	Main Content	Enacted or Revised (Year.Month)
Road Construction Standard Specification	· Established by the Korean Society of Civil Engineers commissioned by the Ministry of Construction	Establishment (Dec. 1967)
Road Construction Standard Specifications	· The specifications were improved and revised to become general specifications of overall road work by reviewing the related existing specifications and guidelines that were used and being developed.	Revision (Dec. 1985)
Road Construction Standard Specifications	· The specifications were improved and revised to be better specifications by advancing and complying with the currently used specifications and guidelines, along with the introduction of new theories.	Revision (May 1990)
Road Construction Standard Specifications	· The specifications were revised to enhance the international competitiveness and to promote quality improvements of road works by reorganizing the system to cope with the openness of the construction market as a result of the launch of the World Trade Organization (WTO).	Revision (July 1996)
Road Construction Standard Specifications	· The specifications were re-organized to establish a system of national standards and to reflect the revision of contents and other standards, such as the Korean Industrial Standard (KS) and the Standard Specification of Concrete according to the Construction Standard Organization Guideline, and to improved and revise standards to address the problems.	Revision (Nov. 2003)

Construction Standard	Main Content	Enacted or Revised (Year.Month)
Road Construction Standard Specifications	· The specifications were revised to improve the problems produced during the road construction and to induce reliable constructions through consistency with other standards such as the KS, Standard Specification of Concretes , and Standard Specifications of Tunnels, ensuring the prevention of shoddy and faulty construction thorough quality control.	Revision (Mar. 2009)
Road Construction Standard Specifications	· The specifications were revised to reflect the recommendations from the Central Construction Technology Deliberation Committee and changed the standard specifications, specialized specifications, and design drawings.	Revision (Sep. 2015)
Road Construction Standard Specifications	· Partial revision, including overview, forest and tree protection materials, and general construction works.	Revision (May 2016)
Standards Specifications of Harbor Construction	· Establishment of the Standards Specifications for Harbor Construction	Establishment (Dec. 1976)
Standards Specifications of Harbor Construction	· Revision of the Standards Specifications for Harbor Construction	Revision (Dec. 1977)
Standards Specifications of Harbor Construction	· The specifications added various design conditions for harbor construction, and included general policies and standards of designs in relation to harbor facilities, counter facilities, and other facilities for harbor construction.	Revision (Dec. 1986)
Standards Specifications of Harbor Construction	· The standards were significantly revised to provide a basis to apply the re-estimation of deep-sea waves, the estimation of wind speeds, and load coefficient to improve the safety of harbor facility and equipment, including coastal maintenance facilities.	Revision (Dec. 1996)
Standard Specifications of Harbor and Fishing Port Construction	· The standards were completely revised to include preemptive countermeasure against climate changes and to reflect the changing port construction conditions.	Revision (Nov. 2005)
Standard Specifications of Harbor and Fishing Port Construction	· The specifications were significantly revised to reflect the modified contents in the upper technical standards and other fields standards, improving related specifications, such as mass concrete and cap concrete and other related specifications such as filter mats, ships, quay walls, and other attached facilities, and added specifications concerning marina facilities.	Revision (Dec. 2012)

Construction Standard	Main Content	Enacted or Revised (Year.Month)
KCS 11 30 05 : 2016	· Integrated and organized the code system due to the transition to the code system of construction standards.	Establishment (Jun. 2016)
KCS 11 30 05 : 2016	· Modified to satisfy the Korean Industrial Standards and Construction Standards.	Modification (Jul. 2018)

Table of Contents

1. Overview

1.1 Application scope

(1) This standard is applied to construction to reduce the underground water level in soft ground.

1.2 Documents to be submitted

(1) The contractor shall create the construction plan documents according to the construction plan and submit them.

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3.1 Deep

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⑤ Pump type and capacity

⑥ Drainage measurements

⑦ Environmental impacts

(3) The location and depth of wells shall follow the specifications set in the design drawings.

(4) Construction management items

① Depth of the inner and outer steel pipes

② Input amount of filter sand

③ Pump's performance

④ Pumping amount or water level in the well
⑤ Underground water level or pore water pressure
⑥ Other instructions from the construction supervisor

3.2 Well-point method

(1) The well-point method is a construction method that increases a catchment effect of water by making a tube inside a vacuum after the well is attached to the tip of the steel pipe, which is penetrated underground.

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① Length and spacing of well-point
② Input amount of filter sand
③ Performances of various work devices
④ Pump amount, underground water level, and pore water pressure
⑤ Pressure inside the drainage pipe
⑥ Other instructions from construction supervisor