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**NATIONAL STANDARD OF THE
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**Technical code for waterproofing of underground works
(English Translation)**

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Table of Contents

1	General provisions
2	Terms
3	Waterproofing design of underground works
3.1	General requirement
3.2	Waterproof grade
3.3	Design requirement for waterproofing
4	Concrete main structure waterproofing of underground works
4.1	Waterproof concrete
4.2	The waterproof layer of cement mortar
4.3	Sheet waterproof layer
4.4	Coating waterproof layer
4.5	Waterproof layer of waterproof plastic sheet
4.6	Waterproof metallic layer
4.7	Waterproof layer of waterproof bentonite material
4.8	Planting topplate waterproofing of underground works
5	Concrete detail constitution waterproofing of underground works
5.1	Movement joint
5.2	Later-cast band
5.3	Wall-through pipe (box)
5.4	Embedded parts
5.5	Reserved passage joint
5.6	Pile head
5.7	Aperture
5.8	Pit and pool
8	Special Construction Structure Waterproof
8.1	Shield Tunnel
8.2	Caisson
8.3	Continuous concrete wall
8.4	Reverse structure
8.5	Shot concrete and rock bolt support
9	Underground works leakage water treatment
9.1	General policy conditions

9.2 Project design

9.3 Treatment materials

9.4 Construction

10 Other provisions

Annex A Safety and environment protection

Explanation of Wording in this Specification

Annex: Article Instruction

1 General provisions

1.0.1 This code is formulated with a view to meet the requirement of high quality, advanced

1.0.1 This code is formulated with a view to meet the requirement of high quality, advanced

technology, economy and rationality as well as safety and usability in the waterproofing design and construction of underground works.

1.0.2 This code is applicable to the waterproofing design and construction of underground

works, such as underground works of industrial and civil buildings, protection projects, municipal tunnel, mountain and underwater tunnel, underground railway, highway tunnel and so on.

1.0.3 The waterproofing design and construction of underground works shall follow the principle of "Combining waterproofing, drainage and blocking together, being flexible and rigid, adjusting measures to local conditions and administering comprehensively".

1.0.4 The waterproofing design and construction of underground works shall meet the requirement of environmental protection and take corresponding measures.

1.0.5 The waterproofing of underground works shall adopt new material, technology and technique with reliable quality, which have been tested, detected, identified and verified in practice.

1.0.6 The waterproofing design and construction of underground works shall comply with not only the requirements stipulated in this code, but also those in the current relevant ones of the nation.

2.0.1 Binder

It is the general name for such mineral admixtures as portland cement, fly ash, fine slag and silicon powder, which are used to prepare concrete.

2.0.2 Water to binder ratio

It refers to the ratio between water consumption and total binder content in preparing concrete.

2.0.3 Operational time

The period from the opening of mono-component material in vessel or the mixing of multi-component material to the time not suitable for construction.

2.0.4 Impermeability of film coating

The ability of the cured coating membrane to resist groundwater seepage.

2.0.5 Water resistance of film coating

The ability of the cured coating membrane to maintain different kinds of performance indexes under long-term immersion in water.

2.0.6 Polymer cement water proof coating

A kind of bi-component water proof coating with polymer emulsion and cement as raw material, which is mixed with other additives.

2.0.7 Self-adhesive waterproofing membrane with macromolecular carrier

A kind of waterproof sheet coated of macromolecular self-adhesive membrane layer sheet with synthetic macromolecular sheet as its bottom film. It used for construction by pre-applied full bonding installation.

2.0.8 Pre-applied full bonding installation

A kind of construction method to lay waterproof sheet coated of macromolecular self-adhesive membrane on the base plane and then to cast the structural concrete so as to tightly bind concrete grout and sheet self-adhesive membrane together.

2.0.9 Self-adhering polymer modified bituminous waterproof sheet

A kind of waterproof sheet with high polymer modified asphalt as the main material and with self adhesive on the whole.

2.0.10 Concealed nail washer

Installed on the surface of base layer, it is composed of material hot-welding with waterproof plastic sheet and designed to fix the washer of waterproof plastic sheet.

2.0.11 Non-nails layouts

A kind of laid method to fix waterproof plastic sheet on the concealed nail washer or hang it on the base layer through hot welding.

2.0.12 Backing material

A kind of deformable material for controlling the caulking depth of sealing material and preventing the sealing material from bonding the base joint.

2.0.13 Pre-grouting

A kind of grouting to pre-fill surrounding ground crack with grout before excavation so as to block water flow and strengthen surrounding ground.

2.0.14 Surrounding ground grouting before lining

A kind of post-excavation grouting to strengthen the surrounding ground of pore and block water flow before lining.

2.0.15 Back-fill grouting

A kind of post-lining grouting to fill the space between lining and surrounding ground.

2.0.16 Surrounding ground grouting after lining

A kind of grouting for surrounding ground when it need improve the waterproof capacity of lining after the back-fill grouting.

2.0.17 Gel time

The period from the preparation or mix of grout to its stagnation.

2.0.18 Composite segment

A kind of segment is made by compounding steel plate and concrete.

2.0.19 Gasket

A kind of sealing material for the waterproofing of segment joint. It is prefabricated by the plant and fixed inside the groove of segment gasket on site.