

Research on the new piping system ()

Period

1993.10 ~ 1994.3

33P ~ 36P

(Purpose)

The standards on the piping system which are various in municipalities and associations, with the start of "sewerage plant design guideline and explanation", are utilized for plan and design.

However, it is the fact that hardly base on these standards or need much time for design due to various conditions such as the constraints of natural condition, social condition and construction period in the field in design and construction of the pipe line.

To deal with these, the practical standard by complementing systematically and simply arranged past standards is made and spread. And with it, there are also more cases can be efficiently to deal with.

In addition, on the system of the sewerage pipe, the various new technologies development are carrying out at present, and the approach are examined by positioning as plan theory.

In order to smoothly and effectively develop future sewage works such as promotion of the sewerage popularization and renewal of obsolescent sewers, the adoption of these new methods and materials and approaches is indispensable, but because the effects is sporadic due to individually conducting technology development examination, and it is impossible to effectively commit at all ways.

Moreover, there are also many cases that excellent technology can not be spread for preventing of the patent, though developed.

Based on such situation, this study was carried out as the purpose of "new pipe line technology and equipment, put together the information, standardize by the uniform approach, and in addition, clarify application range, and produce the environment for order to design easily".

(Result)

"Assuming the piping system of natural downward flow system for sanitary sewage, existing material and material of piping system of which the speedup of the construction is possible from the method are studied" was done, and the manual was arranged in this fiscal year.

Proposed materials are as follows.

Sewer relation: chloroethylene pipe, reinforced plastic compound pipe, high voltage resistance polyethylene pipe, plastic rib pipe, resin concrete pipe.

Manhole: assembly manhole.

connection house inlet, residential land inlet: plastic inlet

1. Composition and content of the manual

Considering the convenience of the utilization, the manual was made to be 2 volumes of "main edition" and "material edition". In the main edition, the following were explained: foundation and strength calculation, arrangements of the manhole and bases, types and structure of connecting inlet, positions, types and structures of inlet in residential land, etc.. In the material edition, the following were comprehensibly explained: Specification, features, standard figures, joining method manholes and sewer, etc..

2. Application range of the manual

This manual should be applied in the cases which it is necessary to attempt the speedup of construction in the piping system and it is hard to refer the conventional design guidelines and standard of "sewerage plant design guideline and explanation" (the corporation aggregate Japan sewerage association), etc. as complement.

Collaborators : Japan institute of Wastewater Engineering Technology,

Chloroethylene tube and joint Association, Reinforced plastic multiunit tube Association,
High voltage resistance polyethylene pipe Association, Plastic rib pipe Association,
Resin concrete pipe Association, National S hole industry Association,
National EVA hole industry Association, National Conect hole industry Association,
National Uni-hole industry Association, Trout inlet for drainage utilities Association

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Key Words

Speedup, sanitary sewage, natural flow down, pipe line material of construction