

## Directions Governing the Inspection of Polyvinyl Chloride Pipes

Adopted and promulgated by Ministerial Order No. 11020006150, BSMI, MOEA on 1 December 2021.

1. These Directions are stipulated by the Bureau of Standards, Metrology and Inspection (BSMI) for implementing the inspection of polyvinyl chloride pipes.
2. Scope of Inspection: products specified in CNS 1298 “Unplasticized polyvinyl chloride pipes,” CNS 4053-1 “Unplasticized polyvinyl chloride (PVC-U) pipes for water supply” and CNS 1302 “Unplasticized polyvinyl chloride (UPVC) for electric conduit use.” Pipes which are not placed on the market for sale or used with machinery for industry or agriculture or any other special purposes are exempted.
3. Inspection Schemes: Type Approved Batch Inspection or Registration of Product Certification (Module II-Type Test + Module IV/V/VII-Quality Management System/Factory Inspection).
4. Definitions of terms used in these Directions shall be as follows:
  - (1) Classification: as defined in CNS 1298, CNS 4053-1 and CNS 1302.
  - (2) Same Type: pipes with the same category, manufacturing factory and country of origin.
  - (3) Same specification: pipes of the same type with the same nominal pipe diameter.
  - (4) Main Type: among products of the same type, the one with the largest nominal pipe diameter shall be regarded as the main type.
  - (5) Series of Type: among products of the same type, those other than the main type shall be regarded as series of type.
5. Inspection Standards: CNS 1298, CNS 4053-1 or CNS 1302.
6. Chinese labeling: the product shall be labeled in accordance with the inspection standards mentioned above as well as Article 11 of the Commodity Inspection Act.
7. Commodity Inspection Mark: The mark shall be printed on the obligatory inspection applicant’s own responsibility. The identification code for Type Approved Batch Inspection is the letter “T” and a designated code; the identification code for Registration of Product Certification is the letter “R” and a designated code.
8. Relevant Requirements for Type Test:
  - (1) Application Procedures:
    - a. The applicant shall apply to the Tainan Branch of BSMI or BSMI designated testing laboratory by submitting 3 copies each of the following technical documents and samples for different types as listed in the Type Classification Table for PVC Pipes (Form FRP-01):
      - (a) List of composition and materials of the product.
      - (b) A 3x5 color photo for the product of each nominal pipe diameter.
      - (c) The summary of the manufacturing process.
      - (d) Samples of the Chinese label.
      - (e) Materials: Validation documents of the quality of materials in compliant with Section 8 of CNS 1298, Section 7 of CNS 4053-1 or Section 6 of CNS 1302.
    - b. Please submit the following samples for the main type and series of types, respectively:
      - (a) Unplasticized polyvinyl chloride pipes: Three pieces, 100 cm each with socket.
      - (b) Unplasticized polyvinyl chloride (PVC-U) pipes for water supply: Seven pieces, 100

cm each with socket, nine pieces for pipes with a specification less than 20 mm.

(c) Uplasticized polyvinyl chloride (UPVC) for electric conduit use: Nine pieces, 100 cm each.

(d) For samples with large pipe diameters, the applicant shall cut the pipes with the length as required by the testing laboratory.

c. The unit accepting the application shall examine whether the submitted samples are consistent with the types or specifications listed in the Type Classification Table.

(2) Principle for sampling: the largest nominal pipe diameter for the main type, and any nominal pipe diameter for series of types.

(3) Inspected items: The main type and series of types are subject to all items specified in the inspection standards mentioned in Clause 5 of these Directions.

(4) Where the CNS Mark test reports are issued within one year prior to the application for Type Approval or Registration of Product Certification, they can be used in place of type test reports of PVC pipes that are of the same classification and specification. However, one such report can only be used in place of the type test report of one main type or one series of type.

#### 9. Relevant Requirements for Type Approved Batch Inspection:

##### (1) Application Procedures:

a. After having obtained the type test report mentioned in the preceding Clause, the applicant shall apply for type approval to BSMI or its Branches (hereinafter referred to as the inspection agency) by submitting the application form, type test report and technical documents. A Type Approval Certificate will be issued upon approval of the application.

b. Review Period of Type Approval: 14 working days from the receipt of the application by the inspection authority (not including the time for delivery of additional information or samples). Where additional samples are drawn, such period shall be extended to another 7 working days after the receipt of the samples.

(2) The validity period of Type Approval Certificate is three years. If changes are intended to be made to the registered scope of the certificate, the requirements below shall be followed.

a. For extending the scope to pipes with the nominal pipe diameter larger than the main type, a type test report shall be obtained from the body that issued the original type test report. An application shall be made to the inspection authority for reissuing the Type Approval Certificate, on which the main type shall be changed to the newly-added pipe and the pipe previously registered as the main type shall become series of type.

b. For extending the scope to a series of type (without changing the main type), an application shall be made to the inspection authority for issuing a replaced certificate.

##### (3) Inspection Procedures:

a. The obligatory inspection applicant shall apply for inspection by submitting the application form and a photocopy of the Type Approval Certificate when the products arrive at the port or transported out of the manufacturing premises. The application shall be made to the inspection authority of jurisdiction over the port or the manufacturing premises. When applying for inspection, the date of manufacture shall be filled in on the application form.

b. The application for inspection shall be made for each batch of products, which shall be of the same type. The inspection authority may sample products for inspection at the

rate of 20% from the applications. When the sampled batch contains different specifications, the ones with the largest nominal pipe diameter shall be sampled. Batches that are not sampled will be processed by document review. However, batch-by-batch inspection may be adopted, if necessary.

- c. Where non-conformity is found for products of the same type for a consecutive five batches, the rate of sampling shall be reduced to 5%.
- d. Quantities of products to be sampled:
  - (a) Unplasticized polyvinyl chloride pipes: Three pieces, 100 cm each.
  - (b) Unplasticized polyvinyl chloride (PVC-U) pipes for water supply: Three pieces, 100 cm each.
  - (c) Unplasticized polyvinyl chloride (UPVC) for electric conduit use: Two pieces, 100 cm each.
- e. Inspection items:
  - (a) Unplasticized polyvinyl chloride pipes: Tensile strength at yield, flattening resistance and labeling.
  - (b) Unplasticized polyvinyl chloride (PVC-U) pipes for water supply: Tensile strength at yield, flattening resistance, vinyl chloride monomer content in pipe and labeling.
  - (c) Unplasticized polyvinyl chloride (UPVC) for electric conduit use: insulation, insulation resistance and labeling.
- f. Testing body: Tainan Branch of the BSMI.
- g. The inspection period for batch inspection is nine working days upon receipt of samples by the inspection body.
- h. If the testing results do not meet the inspection requirements, each batch of products of the same type shall be sampled and tested for three consecutive batches. The sampling rate may be resumed to 20% if there is no non-compliance record.
- i. The inspection authority may take samples and perform relevant testing when it receives reports of potential non-compliance or has doubts about the compliance of products with inspection standards.

#### 10. Relevant Requirements for Registration of Product Certification (RPC):

- (1) The following documents shall be submitted along with the application:
  - a. Type test report (mentioned in Clause 8).
  - b. A copy of the quality management system certificate or factory inspection report issued by BSMI or bodies recognized by BSMI.
  - c. Declaration of conformity.
  - d. Technical documents.
- (2) The review period: 14 working days from the receipt of the application by the inspection authority (not including the time for delivery of additional information by the applicant). Where additional samples are drawn, such period shall be extended to another 7 working days after the receipt of the samples
- (3) The validity period of RPC certificates is three years. If changes are intended to be made to the registered scope of the certificate, the requirements mentioned in Clause 9(2) shall be mutatis mutandis.

## Type Classification Table of Products

[Applicable to Polyvinyl Chloride Pipes]

Applicant: \_\_\_\_\_ Date of Application: \_\_\_\_\_ (MM/DD/YYYY)

Tel: \_\_\_\_\_ Address: \_\_\_\_\_

Email/Fax: \_\_\_\_\_

1. Type Classification:

(1) CCC Code: \_\_\_\_\_

(2) Chinese Name: \_\_\_\_\_

(3) English Name: \_\_\_\_\_

(4) Product Name: \_\_\_\_\_

(5) Manufacturing Factory and Country: \_\_\_\_\_

(6) Types

a. Classification: \_\_\_\_\_

b. Main type (the largest nominal pipe diameter):

\_\_\_\_\_  
\_\_\_\_\_

c. Series of type (the other nominal pipe diameters):

\_\_\_\_\_  
\_\_\_\_\_

2. Checklist for Technical Documents (three copies of each document)

- List of composition and materials of the product.
- A 3x5 color photo for the product of each nominal pipe diameter.
- The summary of the manufacturing process.
- Samples of the Chinese label.
- Materials: Validation documents of the quality of materials in compliant with Section 8 of CNS 1298, Section 7 of CNS 4053-1 or Section 6 of CNS 1302.
- Samples: (the main type and series of type provided separately)
  - a. Unplasticized polyvinyl chloride pipes: Three pieces, 100 cm each with socket.
  - b. Unplasticized polyvinyl chloride (PVC-U) pipes for water supply: Seven pieces, 100 cm each with socket, nine pieces for pipes with a specification less than 20 mm.
  - c. Uplasticized polyvinyl chloride (UPVC) for electric conduit use: Nine pieces, 100 cm each.