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Replacing GB/T 2102-1988

Acceptance, Packing, Marking and Quality Certification of Steel Pipe

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Foreword

This standard is not equivalent to ASTM A 700:1999 "Standard Practices for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment".

This standard replaces GB/T 2102-1988 "Acceptance, Packing, Marking and Certification of Pipe".

There have been some significant changes in this standard over GB/T 2102-1988 in the following aspects:

- The acceptance rules were modified;
- The normative references and terms were added;
- Provisions on the strapping and packing materials of steel pipes were added;
- Provisions on number of strands of each pass of iron wire used for strapping and packing the steel pipes were added;
- Provisions on the protection of grooved end of steel pipes were added.

This standard was proposed by China Iron & Steel Association.

This standard shall be under the jurisdiction of the National Technical Committee on Iron and Steel of Standardization Administration of China.

Drafting organizations of this standard: Metallurgical Information and Standardization Institute, Tianjin Pipe (Group) Corporation, Zhejiang Jiuli Stainless Steel Pipe Co., Ltd. and Panggang Group Chengdu Steel & Iron Co., Ltd.

Chief drafting staffs of this standard: Huang Ying, Zheng Shuyi, Shao Yu, Li Qi, Cai Xingqiang and An Jianbo.

This standard was first-time issued in 1980 and firstly revised in February, 1988.

Acceptance, Packing, Marking and Quality Certification of Steel Pipe

1 Scope

This standard specifies the general technical requirements for the acceptance, packing, marking and quality certification of steel pipe.

This standard is applicable to the acceptance, packing, marking and quality certification of steel pipe. Provided that special requirement is specified in the product standard, the acceptance, packing, marking and quality certification of steel pipe shall be carried out according to those specified in the product standard.

2 Normative References

The following standards contain the provisions which, through reference in this text, constitute the provisions of this standard. For dated reference, the subsequent modification or revisions of these publications do not apply. However, all parties who reach an agreement according to this standard are encouraged to study whether the latest edition of these documents is applicable. For undated references, the latest edition of the normative document is applicable to this standard.

GB/T 8170 Rules for Rounding off of Numerical Values

GB/T 15574 Steel Products Classification and Definitions (GB/T 15574-1995, eqv ISO 6929:1987)

3 Terms

The following terms and definitions apply in this standard.

3.1

Package

One or more articles or pieces warped, bundled or contained into a single unit.

3.2

Mark

Term applied to any of several methods of identifying steel products such as stenciling, stamping, free handwriting, printing, bar coding or label and tag sticking (hanging).

3.3

Label

Paper or other material affixed to the package containing product name, specification, producer, etc.

3.4

Tag

A kind of mobile label fastened to a package or a container, which generally is made of rigid plastic or metal.

3.5

Strapping

Flexible material used as a medium to bundle up steel pipes or packages; the commonly adopted flexible materials are steel bands and steel wires, etc.

3.6

Hand protector

The material placed between steel pipes or between steel pipe and strapping so as to prevent the steel pipes from being damaged and prevent package strapping from being cut off.

4 Acceptance Rules

4.1 Inspection and Acceptance

The quality of steel pipe shall be inspected and accepted by the technical quality supervision department of producer. The supplier shall guarantee the delivered steel pipe meeting the requirements of corresponding product standards. The demander is entitled to conduct inspection and acceptance according to the corresponding product standards.

4.2 Batching Rules

The steel pipes shall be submitted for acceptance in batches, and the batching rules shall meet those specified in the corresponding product standards.

- a) White spots included in the macrostructure defects.
- b) Microscopic structure, grain size and decarburized layer in metallographic inspection.

4.5.3 If the re-inspection result is unqualified or the primary metallographic inspection result is unqualified, the producer may inspect the rest steel pipes in this batch stick by stick or heat treat this batch of steel pipes again. The reheat-treated steel pipes shall be inspected and accepted again as a new batch. The repeated heat treatment times of steel pipe shall not exceed two times.

4.6 Acceptance of Chemical Composition

Unless otherwise specified in the product standard especially, the chemical composition of steel pipe shall be checked for acceptance according to smelting composition.

4.7 Rounding off of Numerical Values

Where the test results need to be evaluated on whether meeting the specified value or not, the test results shall be rounded off to be consistent with the digit marked for the last figure of the specified value, and the rounding off method shall comply with those specified in GB/T 8170.

5 Packing

5.1 General Requirements

5.1.1 The package shall be able to protect the steel pipes from loosening or being damaged during the normal handling, transportation and storage process.

5.1.2 The special requirements of the demander on the packing materials and packing manner of steel pipes shall be indicated in the contract, if not, the packing materials and packing manner shall be selected by the supplier.

5.1.3 The classification of steel pipe products shall comply with those specified in GB/T 15574.

5.2 Packing Materials

5.2.1 The packing materials shall meet the requirements of the relevant standards. As for the materials not included or not specifically specified in this standard, their quality shall be corresponding to their planned purpose. The packing materials may be changed according to the technical and economic development.

5.2.2 The baled steel pipes shall be bundled up tightly by adopting with strapping.

belt or plastic cloth. Protecting materials shall be set between the stainless steel pipe and steel band or steel wire;

- c) Other stainless steel pipes shall be adopted with appropriate packing manners based on the differences in their variety, final procedure, dimension and means of transportation.

5.3.10 Before bundling the polished steel pipes and precision steel pipes, their external surfaces shall be coated with antirust oil or other rust inhibitor and shall be wrapped with waterproof paper and sackcloth (or woven belt and plastic cloth) in turn.

5.4 Package Container

5.4.1 Upon the negotiation between the supplier and demander and provision in the contract, the cold-drawn or cold-rolled seamless steel pipes with wall thickness no larger than 1.5 mm, the electric welded steel pipes with wall thickness no larger than 1mm, the hot rolled stainless steel pipes through surface polishing and the precision steel pipes with surface roughness R_a no larger than $3.2\mu\text{m}$ may be packed in hard containers (such as metal boxes and wooden cases).

5.4.2 The weight of steel pipes packed in one container shall be in accordance with those specified in Table 3. Upon the negotiation between the supplier and demander, the weight of steel pipes packed in one container may be increased.

Table 3

Steel pipe type	Possible maximum weight of steel pipes packed in each container /kg
Steel pipes with external diameter less than 20mm and special steel pipes with sectional perimeter less than 65mm	2500
Steel pipes with external diameter no less than 20mm and special steel pipes with sectional perimeter no less than 65mm	3000

5.4.3 To pack the steel pipes into container, the inner wall of this container shall be padded with felt paper, plastic cloth or other damp-proof materials. Steel pipes with requirements on external surface are disallowed being loosen in the container but shall be bundled up with strapping for fear that their external surfaces are damaged by impact or friction in container during the process of hoisting and transportation. The container shall be bundled up tightly with steel band, double-strand steel wire or other methods outward.

5.4.4 The separately shipped pipe joints shall be packed into containers. The maximum weight of each container is 250kg.

6 Marking

attached in every container. One label or tag shall be stuck (hung) on the outer end face of container. Contents indicated in label or tag shall comply with those specified in Article 6.2.6.

7 Quality Certification

7.1 Each batch of delivered steel pipes shall be accompanied by the quality certification proving that this batch of steel pipes meets the requirements of purchase contract and product standard.

7.2 The quality certification shall be stamped by the technical quality supervision department of producer or be signed and issued by the designated leader.

7.3 The product quality certification shall include the following contents:

- a) Producer's name;
- b) Demander name;
- c) Contract number;
- d) Product standard number;
- e) Grade of steel;
- f) Furnace number, batch number, delivery state, weight, number of sticks (or packages);
- g) Variety name, specification and quality grade;
- h) Inspection results of different items (including the informative indexes) as specified in product standard;
- i) Mark of technical quality supervision department;
- j) Issuing date or delivery date of quality certification.

_____ **END** _____

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