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GB/T 5973-2006

Replacing GB/T 5973-1986

Cuneiform Connector for Use with Steel Wire Ropes

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Standardization Administration of the People's Republic of China.

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Foreword

This Standard replaces GB/T 5973-1986, *Cuneiform Connector for Use with Steel Wire Ropes*.

Compared with GB/T 5973-1986, the major changes of this Standard are as follows:

-- the “Foreword” is added;

-- the parameters of permissible stress and breaking load in Table 1 are modified. The column of “cotter pin” is deleted;

-- the dimensions of B_2, C_1, C_2 and H in Table 2 are adjusted;

-- the dimension of R_5 in Table 3 is slightly adjusted, i.e. the wedge angle of wedge is slightly greater than the wedge angle of wedge sleeve;

-- the sampling method is added in the inspection rules;

-- Annex A, *Connection Method of Cuneiform Connector*, is added.

Annex A to this Standard is informative.

This Standard was proposed by China Machinery Industry Federation.

This Standard shall be under the jurisdiction of National Technical Committee on Hoisting Machinery of Standard Administration of China (SAC/TC 227).

The drafting organization of this Standard: Dalian Large Crane Co., Ltd.

The main drafters of this Standard: Ding Zhiqiang, Liu Daqiang.

The previous edition of the standard replaced by this Standard is:

-- GB/T 5973-1986.

Cuneiform Connector for Use with Steel Wire Ropes

1 Application Scope

This Standard specifies the types and dimensions, specifications, test method, inspection rules, and marking, packaging, transportation and storage of cuneiform connector for use with steel wire ropes.

This Standard applies to the cuneiform connector for use with round strand wire ropes fixed or connected at the end as specified in GB 8918-2006 and GB 20118-2006, which are used in all kinds of cranes (hereinafter referred to as cuneiform connector).

2 Normative References

The provisions in following documents become the provisions of this Standard through reference in this Standard. For dated references, the subsequent amendments (excluding corrigendum) or revisions do not apply to this Standard, however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable. For undated references, the latest edition of the referenced document applies.

GB 8918-2006, *Steel Wire Ropes for Important Purposes*

GB/T 9439-1988, *Grey Iron Castings*

GB/T 11352-1989, *Carbon Steel Castings for General Engineering Purpose*

GB/T 13384-1992, *General Specification for Packaging of Mechanical and Electrical Products*

GB/T 20118-2006, *Steel Wire Ropes for General Purpose*

3 Types and Dimensions

3.1 Cuneiform connector

3.1.1 The types and dimensions of cuneiform connectors shall be as specified in Figure 1 and Table 1.

3.1.2 Designation example

A cuneiform connector of specification 20 (the nominal diameter of steel wire ropes d > 18 mm ~ 20 mm) is designated as:

than the grey iron castings HT 200 specified in GB/T 9439-1988. When better materials are used, the permissible load and breaking load in Table 1 may be increased accordingly.

4.2 The surface of wedge sleeve and wedge shall be smooth; sharp edges and dead heads shall be removed; and there shall be not defects which reduces the strength significantly and obviously detrimental to the appearance (such as pores, cracks, porosities, sand inclusions, casting scars and so on).

4.3 Wedge sleeve and wedge shall be annealed to eliminate their internal stress.

4.4 Wedge sleeve and wedge shall be treated for rustproofing.

4.5 Cuneiform connector shall be mounted properly in use. See Annex A for the method for connecting cuneiform connector to steel wire ropes.

5 Test Method

5.1 During the first production, two groups of samples must be taken for the test of the cuneiform connectors of the same specifications, materials and manufacturing methods. During the test, first conduct preloading, and then gradually apply load to the breaking load (see Table 1). During the loading process, the length of the free end of steel wire ropes shall not become shorter. The test result: cracks of wedge sleeve and wedge or any damage which affects their usability are not allowed. Both groups of cuneiform connectors shall be as specified, and then the batch of cuneiform connectors are acceptable. If one group in the two groups of cuneiform connectors is not as specified, then take another two groups of samples from the batch of cuneiform connectors to conduct the test; and if one more group fails to meet the requirements or both groups fail to meet the requirements in the first test, then the batch of cuneiform connectors are unacceptable.

5.2 In case of any change in the structural dimensions, material specifications and manufacturing techniques of cuneiform connectors, the test shall be conducted for the modified cuneiform connectors in accordance with the above-mentioned sample test.

6 Inspection Rules

6.1 Cuneiform connector shall be inspected by the supplier. The supplier shall ensure each batch of cuneiform connectors are as specified in this Standard; and that they shall be accompanied with the certificate of quality.

6.2 The double sampling method by the piece is used for the inspection. From one batch of cuneiform connectors submitted for acceptance, take n_1 groups of samples randomly for each specification to conduct the inspection. If the number of unacceptable groups is not greater than C_1 groups, then the batch of cuneiform

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