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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 14370-2015

Replacing GB/T 14370-2007

Anchorage, grip and coupler for prestressing tendons

预应力筋用锚具、夹具和连接器

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Standardization Administration of China

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1 Scope

GB/T 14370-2015 is the Chinese national standard on anchorage, grip and coupler for prestressing tendons, in the field of construction materials and building. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 11 September 2015 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 August 2016. Classification: ICS 91.080.40, CCS Q73. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies terms and definitions, symbols, product classification, code and marking, general requirements, requirements, test methods, inspection rules and marking, packaging, transport and storage of anchorage, grip and coupler for prestressing tendons. This standard applies to anchorages and couplers used for the anchorage, grip, coupler and cable used in the prestressed structure of internal and external reinforcement with bonding, without bonding, or with slow bonding AND in the special construction process.

2 Normative references

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this Standard.

GB/T 197 Common thread - Tolerances

GB/T 230.1 Metallic materials - Rockwell hardness test - Part

3 Terms and definitions, symbols

The following terms and definitions apply to this document.

3.1 Terms and definitions

3.2 Symbols The following symbols apply to this document. Apk - The nominal cross-sectional area of the prestressing tendons, in square millimeters (mm2);

4 Product classification, code and marking

4.1 Product classification In accordance with the anchoring method of the prestressing tendons, the anchorage, grip and coupler can be divided into four basic types. clip type, support type, grip type and combination type.

4.2 Code The codes of anchorage, grip and coupler are as shown in Table 1.

4.3 Markings The marking of the anchor, grip and coupler consists of the product code, the prestressing tendon type, the prestressing tendon diameter, and the number of prestressing tendons (the manufacturer's system code is only marked if necessary).

4.4 Anchorage and coupler for cable The classification, code and marking of the anchorage and coupler for cable shall follow the provisions of JG/T 330.

5.1 Material

5.1.1 The materials used in the product shall comply with the design requirements, AND have mechanical properties and chemical composition certificate, as well as quality assurance. Materials shall be subjected to acceptance test after entering into factory, AND only those passing the test can be used.

5.2 Manufacturing

5.2.1 The product shall be processed in accordance with the requirements of the technical documentation. The cutting parts shall comply with the provisions of JB/T 5000.9.

5.3 Appearance, dimension and hardness

5.3.1 The appearance of the product shall be in accordance with the technical documentation AND shall comply with the following.

5.3.2 The dimension and deviation of the product shall comply with the requirements of the technical documentation.

5.3.3 The hardness of the product shall comply with the requirements of the technical documentation.

5.4 Quality documents Anchorages, grips and couplers shall have complete design documents, quality documentation of raw materials, manufacturing batch records, and performance inspection records, all of which shall be traceable.

5.5.2 Grip

5.5.2.1 Grip shall be reusable.

5.6 Anchorage and coupler for cable The general requirements for anchorage and coupler for cables may make reference to the relevant provisions of this standard OR otherwise comply with the provisions of relevant national current standards.

6.1.1 Static load anchoring performance

6.1.1.1 The anchorage efficiency coefficient etaa AND the total elongation epsilonTu of the assembly prestressing tendon tension length shall comply with the requirements of Table 2.

6.1.2 Fatigue load performance

6.1.2.1 Prestressing tendon - anchorage assembly shall be able to pass the 2 million times fatigue load performance tests AND comply with the following provisions.

6.1.2.2 Prestressing tendon - anchorage assemblies shall not be subjected to anchorage fatigue damage after 2 million times of cycling load. The fatigue damage cross-sectional area of the prestressing tendons due to holding effect of the anchorages shall not be greater than 5% of the total cross-sectional area of the prestressing tendons in the assembly.

6.1.3 Anchorage zone force transmission performance The bearing plate and the spiral reinforcement fitted with the anchorage shall be capable of transmitting the preload applied by the anchorages to the anchorage zone of the concrete structure.

6.1.4 Low temperature anchoring performance The anchorage with low temperature anchoring performance requirements under non-natural conditions shall be subjected to the low temperature anchorage performance test AND shall comply with the following requirements.

6.1.6 Draw-in When using the process of tensioning without top pressure, the draw-in of the prestressing tendon of the clip type anchorage used by the Phi

15.2 steel strand shall be not more than 6 mm.

6.1.7 Prestress loss due to friction at anchorage device The prestress loss due to friction at anchorage device shall not be more than 6%.

6.1.8 Tensioning anchorage process The anchorage shall comply with the requirements of graded tensioning, additional tensioning, and release tensioning, etc. Tensioning anchorage process shall be easy to operate, AND the loading force is uniform and stable.

6.2 Grip

6.3 Coupler The performance of the coupler which is permanently left in the concrete structure or component after tensioning shall be in accordance with the provisions of 6.1; AND the coupler which needs to be released and disassembled after tensioning shall comply with the requirements of 6.2.

7.1.2 Prestressing tendon - anchorage, grip or coupler assembly for test

7.1.2.1 The prestressing tendon - anchorage, grip or coupler assembly for test shall be