

ICS 93.020
CCS P 25

JG

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JG/T 163-2013

**Couplers for Rebar Mechanical Splicing
(English Translation)**

Issued on: April 27, 2013

Implemented on: October 1, 2013

**Issued by: Ministry of Housing and Urban-Rural Development of the
People's Republic of China**

Table of Contents

Foreword...	3
1 Scope...	6
2 Normative References...	6
3 Terms and Definitions...	7
4 Classification, Type and Marking...	9
5 Requirements...	13
6 Test Methods...	18
7 Inspection Rules...	21
8 Marking, Packaging, Transportation and Storage...	26

1 Scope

This Standard stipulates the terms, definitions, classification, types and marking, requirements, test methods, inspection rules, mark, packaging, transportation and storage of couplers for rebar mechanical splicing.

This Standard is applicable to parallel threaded coupler, taper threaded coupler and coupler for squeezing sleeve splicing of rebars for rebar mechanical splicing in concrete structure. The couplers described in this Standard are applicable to the splicing of all types of rebars with the diameter of 12 mm ~ 50 mm, which comply with the stipulations in GB 1499.2 and GB 13014. Couplers for the splicing of plain round rebars, stainless steel rebars and foreign rebars may take this Standard as a reference.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 197 General Purpose Metric Screw Threads - Tolerances

GB/T 228.1 Metallic Materials - Tensile Testing - Part 1. Method of Test at Room Temperature

GB/T 230.1 Metallic Materials - Rockwell Hardness Test - Part 1. Test Method (scales A, B, C, D, E, F, G, H, K, N, T)

GB/T 699 Quality Carbon Structural Steels

GB/T 700 Carbon Structural Steels

GB/T 702 Hot-rolled Steel Bars - Dimensions, Shape, Weight and Tolerances

GB 1499.2 Steel for the Reinforcement of Concrete - Part 2. Hot Rolled Ribbed Bars

GB/T 2975 Steel and Steel Products - Location and Preparation of Samples and Test Pieces for Mechanical Testing

3 Terms and Definitions

The following term and definition are applicable to this Standard.

3.1 Rebar Mechanical Splicing

Rebar mechanical splicing refers to a splicing method which transmits force in one steel reinforcing bar to another steel rebar through the mechanical occlusion effect between the rebar and the coupler, or the load-bearing effect on the end face of the steel rebar.

3.2 Coupler

Coupler refers to steel sleeve for mechanical splicing of steel rebars; it may transmit axial tensile force or pressure of steel rebars.

3.7 Parallel Threaded Coupler for Splicing Rebars with Threads Roll on to

Rebar End

Parallel threaded coupler for splicing rebars with threads roll on to rebar end refers to parallel threaded coupler which may be spliced with threads roll on to rebar end.

3.8 Taper Threaded Coupler

Taper threaded coupler refers to a threaded coupler which may be spliced with taper threads of steel rebars and has taper threaded inner hole.

3.15 Threaded Coupler with One Slope at Thread End

Threaded coupler with one slope at thread end refers to a parallel threaded coupler which has an internal chamfer for the centering of steel rebars on one end and extended length than the standard coupler.

3.16 Thread Plug Gauge

Thread plug gauge refers to a measuring appliance which has consistent thread profile with the thread being tested and can reflect the boundary conditions of the inner thread being tested.

4.1 Classification

In accordance with the type of rebar mechanical splices, coupler may be classified into parallel threaded coupler, taper threaded coupler and coupler for squeezing sleeve splicing of rebars. Furthermore, parallel threaded coupler may be classified into parallel threaded coupler for splicing rebars with upsetting end, parallel threaded coupler for splicing rebars with rib stripped before rolling of threads, parallel threaded coupler for splicing rebars with threads roll on to rebar end.

4.2.1 Parallel threaded coupler

There are four commonly used types of parallel threaded coupler. standard coupler for parallel threaded splicing of rebars, parallel threaded coupler with different inner diameter, parallel threaded coupler with left and right hand thread, parallel threaded coupler with one slope at thread end, as it is shown in Figure 1.

4.2.3 Coupler for squeezing sleeve splicing of rebars

There are two commonly used types of coupler for squeezing sleeve splicing of rebars. standard coupler for squeezing sleeve splicing of rebars, coupler for squeezing sleeve splicing of rebars with different inner diameter, as it is shown in Figure 3.

4.3.1 Method of marking

The marking of couplers shall be constituted of four parts. name code, type code, main parameter (strength grade of rebar) code and main parameter code (nominal diameter of rebar), etc.

5.1.1 Threaded coupler

The raw materials of threaded coupler shall comply with the following requirements.

5.1.2 Coupler for squeezing

The raw materials of coupler for squeezing shall select appropriate calendaring steel products in accordance with the designation of steel rebars to be spliced. Quality carbon structural steels with the designation of No. 10 and No. 20, or, carbon structural steels with the designation of Q235 and Q275 should be selected. The shapes and mechanical

properties shall comply with the stipulations in GB/T 700, GB/T 702 and GB/T 8162; the actually tested mechanical properties shall comply with the stipulations in Table 1.

5.2.1 Threaded coupler

The shapes of threaded coupler shall comply with the following requirements.

5.2.2 Coupler for squeezing

The shapes of coupler for squeezing shall comply with the following requirements.

5.3.2 Taper threaded coupler

The dimensions and tolerances of taper threaded coupler shall comply with the following requirements.

5.3.3 Coupler for squeezing

The dimensions and tolerances of coupler for squeezing shall comply with the following requirements.

5.5.2 Inspection of products being manufactured

Inspection items of couplers being manufactured shall at least include. external diameter, internal diameter, length and thread dimensions.

5.5.3 Traceability

The traceability of coupler manufacture shall comply with the following requirements.

5.6 Anti-rust

Before exiting factory, couplers shall have anti-rust measures.

6.1.1 Sampling

The sampling of raw materials of coupler shall comply with the stipulations in GB/T 2975.

6.2.1 Shapes, dimensions and threads

The inspection items of the shapes, dimensions and threads of coupler, the measuring tools, gauges and inspection methods shall comply with the stipulations in Table 7.