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

**GB 24910-2010**

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**Steel plate punched couplers**

钢板冲压扣件

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## Foreword

5.1,5.2,5.3,5.5,5.8,

5.9 technical content of this standard is mandatory, the remaining provisions are recommended. The standard reference to the Japanese standard JISA8951-1995 "steel scaffold." Appendix A of this standard is an informative annex. The standard proposed by the Ministry of Housing and Urban-Rural Development of the People's Republic of China. This standard is under the jurisdiction of the Ministry of Housing and Urban Construction Engineering standard technical focal point. This standard is drafted by: China Academy of Building Research. Participated in the drafting of this standard. Jiangyan blue sky Metal Factory, State Construction Engineering Quality Supervision and Inspection Center, China Construction Metal knot Construction fastener configuration Association Committee, Urumqi City shaped silver Trade Co., Ltd., Langfang Kaibo Construction Machinery Co., Ltd. and the like. The main drafters of this standard. Wang Feng, Wang Yi-Zhang Lian into the lake, Sun Yi Ling, Guo Yu increase, Yuanxin Guo, Wei East. Steel stamping fasteners

## 1 Scope

GB 24910-2010 is the Chinese national standard on steel plate punched couplers, in the field of construction materials and building. It carries no /T suffix, which in the Chinese

system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 9 August 2010 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 June 2011. Classification: ICS 91.220, CCS P97. 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 the pressed steel fasteners (hereinafter referred to as fasteners) terms, definitions and symbols, classification, requirements, test methods, inspection rules, Signs, packaging, transport and storage. This standard applies to the construction of the steel pipe nominal outside diameter of 48.3mm and 42.4mm and other size steel scaffolding, derrick, Template support such as the use of fasteners. Also used in municipal, water, chemicals, metallurgy, coal and shipbuilding and other projects using steel stamping fasteners.

## 2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard. GB/T 109 flat head rivet

GB/T 196 common thread basic size

GB/T 699 high-quality carbon structural steel

GB/T 700 carbon structural steel

GB/T 2828.1 Sampling procedures for inspection - Part 1. by acceptance quality limit (AQL) retrieval batch inspection sampling plan

GB/T 3091 low pressure liquid delivery welded steel pipe

GB 15831 pipe scaffold fastener

## 3 Terms, definitions and symbols

3.1 Terms and Definitions The following terms and definitions apply to this standard.

3.1.1 Use of steel stamping fasteners.

3.1.2 Right angle fastener rightanglecoupler Connect two vertically intersecting steel

fasteners.

3.1.3 Rotating fastener swivelcoupler Two were connected at any angle cross steel fasteners.

3.1.4 Docking fastener sleevecoupler Butt pipe connecting two fasteners.

3.1.5 Pedestal base-plate Scaffolding uprights to withstand loads stampings.

3.2 Symbol P. Test load; Delta. displacement tensile test; Delta1. horizontal displacement of the tube. Category 4

4.1 Main parameters Fastener main parameters of pipe diameter, unit mm.

4.2 type fastener By structure type fastener rectangular fastener, rotating fastener, docking fastener and the base, fastening pattern shown in Figure 1.

a) rectangular fastener

b) Rotate the fastener

c) docking fastener

1 a schematic diagram type fasteners

#### 4.3 Code Fastener Code. CYK

--- steel stamping fasteners. Type code. Z

--- rectangular, U

--- base. Update code variants. either uppercase phonetic alphabet.

4.4 Fastener Model Fastener type fastener by the code, type code, the main parameters, variations update code and the implementation of the standard number. Model as follows:  
Fastener Code. CYK Type code. Z

--- right angle; U

--- base Main parameters. scaffolding pipe diameter, unit. mm Update code variants.  
phonetic alphabet is represented by uppercase

4.5 tag example Example 1. scaffolding pipe diameter of 48.3mm, the first variant of the updated right angle fastener. Example 2. scaffolding pipe diameter of 48.3mm, a second variant of the updated base.

## 5 Requirements

5.1 fasteners should be required procedures approved by the drawings for production.  
Mechanical properties of fasteners

5.2 uses material should not be below the relevant provisions of GB/T 699 in 15Mn or GB/T 700 in the same material; spiro Bolts, nuts, rivets, using the mechanical properties of the material should not be lower than in line with GB/T 700 in Q235 the relevant provisions.

Various parts of the fasteners

5.3 There shall be no cracks.

5.4 bolts should be riveting fasteners, bolts should be sealed after assembly.

5.5 fastener surface should be galvanized.

5.6 zinc coating thickness is preferably 0.05mm ~ 0.08mm.

5.7 bolt and nut threads shall comply with the provisions of GB/T 196's.

5.8 Rivets should comply with GB/T 109, the place should be firmly riveted.

5.9 fasteners anti-slip deformation, resistance to damage, tensile and compressive properties should meet the requirements of Table 1. Table 1 fastener performance indicators

| Properties name       | type              | fastener performance requirements                  |
|-----------------------|-------------------|----------------------------------------------------|
| Anti-slip deformation | Right Angle       |                                                    |
| P = 10.0kN            | time, Delta1      | $\leq 7.00\text{mm}$                               |
| When the rotation     | P = 7.0kN, Delta1 | $\leq 7.00\text{mm}$                               |
| Anti-sabotage         | Right Angle       | P = 15.0kN, the various parts should not undermine |
| P = rotation          |                   | when 10.0kN, all parts should not undermine        |
| Tensile butt          |                   | when P = 3.0kN, Delta                              |
|                       |                   | $\leq 2.00\text{mm}$                               |
| P = 50.0kN            | compression base, | the various parts should not undermine             |

Note. P corresponding test load applied to the fastener.

5.10 appearance quality requirements

5.10.1 open the cover and the seat of the distance should be greater than the pipe diameter 10mm.

5.10.2 moving parts should be flexible rotation, rotating fastener two rotating surface gap should be less than 1mm.

5.10.3 product models, trademarks, production should reign punched out in eye-catching, writing, pattern should be clear and complete.

## 6.1 Test conditions and methods

6.1.1 The test should be used GB/T 3091 in nominal outer diameter of 48.3mm or 42.4mm, 3.5mm wall thickness of the pipe, the outer surface Rust coating should be uniform and should be tested after the paint dried. Each one trial, fasteners should move a fastened position.

6.1.2 Accuracy test used for materials testing machines and dial indicator should not be less than  $\pm 1\%$ , anyone torque wrench accuracy not less than  $\pm 5\%$ . Vernier caliper precision not less than 0.02mm. Test equipment should be used within legal units of measurement certified by the expiration date.