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

TB/T 3396.7-2015

**Test methods for fastening systems of high-speed railway - Part
7: Vertical load test for cast-in fastening components
(English Translation)**

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Table of Contents

Foreword...	3
1 Scope...	4
2 Principle...	4
3 Test Equipment...	4
4 Test Piece...	4
5 Test Procedures...	4
6 Test Report...	5

Foreword

TB/T 3396 Test Methods for Fastening Systems of High-Speed Railway consists of the following 7 parts:

- Part 1: Determination of Longitudinal Rail Restraint;
- Part 2: Determination for Clamping Force;
- Part 3: Determination of Static Stiffness for Fastening Assembly;
- Part 4: Test of Fatigue Performance of Fastening Assembly;
- Part 5: Determination of Electrical Resistance;
- Part 6: Effect of Severe Environmental Conditions;
- Part 7: Vertical Load Test for Cast-in Fastening Components.

This Part is Part 7 of TB/T 3396.

This Part was drafted as per the rules specified in GB/T 1.1-2009.

This Part shall be under the jurisdiction of Institute of Standards and Metrology, China Academy of Railway Sciences.

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Test Methods for Fastening Systems of High-Speed Railway

- Part 7: Vertical Load Test for Cast-In Fastening Components

1 Scope

This Part specifies the indoor test method for the pull-out resistance for pre-embedded parts of

fastener.

This Part applies to fastening systems for high-speed railway.

2 Principle

A vertical load is applied to the pre-embedded parts of the fastener pre-embedded in the concrete; and the pull-out resistance of the pre-embedded part is determined by the load retention capacity during the test and the state of the joint between the pre-embedded part and

the concrete after the test.

3.1 Loading equipment

The equipment with loading rate of 40kN/min~60kN/min, static loading capacity reaching 150kN, which applies the vertical load.

3.2 Load sensor

The instrument that applies load to the pre-embedded part, with accuracy of Class-1.

4 Test Piece

Sleeper with pre-embedded part of fastener, 1/2 sleeper or track slab (all described as sleeper

in this test method).

5 Test Procedures

For the pre-embedded casing where the embedded parts are screwed in by bolts, the load shall

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