

ICS 29.280

CCS S 82



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

**GB/T 43511-2023**

---

**Railway application-Electric traction overhead conductor rail**

轨道交通 电力牵引架空刚性接触网

**Issued on: December 28, 2023**

**Implemented on: April 1, 2024**

---

**Issued by: State Administration for Market Regulation;  
Standardization Administration of the PRC**

## Table of Contents

|                                                                                                                 |    |
|-----------------------------------------------------------------------------------------------------------------|----|
| Preface                                                                                                         | 1  |
| 1 Scope                                                                                                         | 1  |
| 2 Normative references                                                                                          | 1  |
| 3 Terms and Definitions                                                                                         | 2  |
| 4 symbols                                                                                                       | 3  |
| 5 Application conditions                                                                                        | 3  |
| 6 System composition and technical requirements                                                                 | 5  |
| 7 Equipment and Parts Requirements                                                                              | 7  |
| 8 Test methods                                                                                                  | 8  |
| 9 Inspection Rules                                                                                              | 11 |
| Appendix A (informative) Environmental temperature value of rigid contact network in electrified railway tunnel | 14 |
| Appendix B (informative) Supporting device load calculation example                                             | 15 |
| Reference                                                                                                       | 18 |

## Foreword

This document complies with the provisions of GB/T 1:1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

This document is proposed by the National Railway Administration:

This document is under the jurisdiction of the National Rail Transit Electrical Equipment and Systems Standardization Technical Committee (SAC/TC278):

This document was drafted by: China Railway First Survey and Design Institute Group Co., Ltd., Guangzhou Metro Group Co., Ltd., China Railway Electrification Bureau Group Co., Ltd., China Academy of Railway Sciences Group Co., Ltd:

The main drafters of this document: Zhao Wei, Gong Yansheng, Jin Shoujie, Huang Deliang, Luo Bing, Guo Fengping, Han Tongxin:

Rail transit electric traction overhead rigid catenary

## 1 Scope

This document specifies the application conditions, system composition and technical requirements, equipment and components of rail transit electric traction overhead rigid contact network Requirements, inspection rules, and test methods for rail transit electric traction overhead rigid catenaries are described:

This document is applicable to rail transit electric traction overhead rigid contact network with operating speed of 160km/h and below (hereinafter referred to as "rigid contact network"):

The design, construction, testing, acceptance and operation of "Touching the Internet"):

## 2 Normative reference documents

GB/T 19443-2017

GB/T 22707

GB/T 26869-2011

GB/T 28026

GB/T 32347

GB/T 32350

GB/T 32578-2016

GB/T 32586-2016

GB 50009

GB 50010

GB 50017

GB 50157-2013