

ISO/TR 22131:2018-10 (E)

Railway applications - Railway braking - Country specific applications for ISO 20138-1

| Contents | | Page |
|--------------------|--|-------------|
| Foreword | | iv |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | Slowing or stopping distance calculation using a method implemented in France | 1 |
| 4.1 | General | 1 |
| 4.2 | Terms, symbols and abbreviations | 1 |
| 4.3 | Slowing or stopping distance calculation | 2 |
| 4.3.1 | French model for "G" position | 2 |
| 4.3.2 | Calculation using ISO 20138-1:2018, 5.7.5.1 (step model) | 3 |
| 4.4 | Example of calculation | 4 |
| 4.4.1 | Test results | 4 |
| 4.4.2 | Comparison of calculation models with test results | 4 |
| 5 | Calculation of braking performance implemented in Japan | 5 |
| 5.1 | General | 5 |
| 5.2 | Brake ratio for a single vehicle | 5 |
| 5.3 | Example for brake ratio calculation | 6 |
| 5.4 | Equivalent response time | 8 |
| 6 | Stopping or slowing distance calculation methods for some particular rolling stock in China | 9 |
| 6.1 | General | 9 |
| 6.2 | Definitions, symbols and abbreviations | 9 |
| 6.3 | Train resistance retarding forces | 11 |
| 6.3.1 | Basic running resistance | 11 |
| 6.3.2 | Curve resistance | 12 |
| 6.4 | Train brake block force | 14 |
| 6.4.1 | Total brake block force of train | 14 |
| 6.4.2 | Real friction coefficient | 14 |
| 6.4.3 | Conversion friction coefficient | 15 |
| 6.4.4 | Real brake block force | 16 |
| 6.4.5 | Nominal values of rigging efficiency | 17 |
| 6.4.6 | Emergency brake cylinder pressure | 17 |
| 6.4.7 | Conversion brake block force | 17 |
| 6.4.8 | Conversion braking ratio | 19 |
| 6.4.9 | Train unit brake retarding force | 21 |
| 6.4.10 | Dynamic brake force | 21 |
| 6.4.11 | Coefficient of adhesion | 21 |
| 6.5 | Brake calculation | 22 |
| 6.5.1 | Braking time | 22 |
| 6.5.2 | Free running time | 22 |
| 6.5.3 | Stopping/slowng distance | 23 |
| Bibliography | | 25 |