INFRASTRUCTURE

TECHNICAL SCOPE

• Concerns the infrastructure structural subsystem and part of the maintenance functional subsystem relating to the infrastructure subsystem of the Union rail system.
• Apply to all new, upgraded or renewed 'infrastructure' of the rail system in the EU.
• Apply to networks with the following nominal track gauges: 1435 mm, 1 520 mm, 1524 mm, 1600 mm and 1668 mm
• Metric gauge is excluded from the technical scope of this TSI.

ASPECTS INCLUDED IN THE INF SUBSYSTEM

1. Line layout
   • Structure gauge
   • Distance between track centres
   • Maximum gradients
   • Minimum radius of horizontal curve
   • Minimum radius of vertical curve

2. Track parameters
   • Nominal track gauge
   • Cant
   • Cant deficiency
   • Abrupt change of cant deficiency
   • Equivalent conformity
   • Railhead profile for plain line
   • Rail inclination

3. Switches and crossings
   • Design geometry of switches and crossings
   • Use of swing nose crossings
   • Maximum unguided length of fixed obtuse crossings

4. Track resistance to applied loads
   • Track resistance to vertical loads
   • Longitudinal track resistance
   • Lateral track resistance

5. Structures resistance to traffic loads
   • Resistance of new bridges to traffic loads
   • Equivalent vertical loading for new earthworks and earth pressure effects imposed on new structures
   • Resistance of new structures over or adjacent to tracks
   • Resistance of existing bridges and earthworks to traffic loads

6. Platforms
   • Usable length of platforms
   • Platform height
   • Platform offset
   • Track layout alongside platforms

7. Immediate action limits on track geometry defects
   • The immediate action limit for alignment
   • The immediate action limit for longitudinal level
   • The immediate action limit for track twist
   • The immediate action limit of track gauge as isolated defect
   • The immediate action limit for cant
   • The immediate action limits for switches and crossings

8. Health, safety and environment
   • Maximum pressure variation in tunnels
   • Effect of crosswinds
   • Aerodynamic effect on ballasted track

9. Provision for operation
   • Location markers
   • Equivalent conicity in service

10. Fixed installations for servicing trains
    • Toilet discharge
    • Train external cleaning facilities
    • Water restocking
    • Refuelling
    • Electric shore supply

GEOGRAPHICAL SCOPE

It applies to high-speed lines, conventional lines (both passenger and freight) and all vehicles likely to travel all or part of the Union’s network (locomotives and passenger rolling stock, freight wagons and special vehicles, such as on-track machines).

It does not apply to metros, trams and light rail vehicles, privately owned railway infrastructure, infrastructure and vehicles reserved for a strictly local, historical or touristic use.

WHAT DOES IT CONTAIN?

• Introduction with the technical, risk, and geographical scopes
• Definitions of the subsystem and of the scope
• Essential requirements
• Characteristics of the subsystem, particularly the functional and technical specifications of the subsystem and of the interfaces
• Interoperability constituents
• Assessment of conformity and/or suitability for use of the constituents and verification of the subsystem
• Implementation

ASPECTS INCLUDED IN THE MAINTENANCE SUBSYSTEM

Maintenance rules
• Maintenance file
• Maintenance plan

PARTICULAR CASES DEPENDING ON THE COUNTRY

They are divided in ‘Permanent’ and ‘Temporary’ cases.
Austria, Belgium, Bulgaria, Denmark, Estonia, Finland, France, Germany, Greece, Italy, Latvia, Poland, Portugal, Ireland, Spain, Sweden, UK, Slovakia