

Criteria of the fastening

01. Static creep resistance
02. Dynamic creep resistance
03. Resistance to rotation
04. Rail-head deflection
05. Gauge in the zero position and in height and laterally adjusted positions
06. Guaranteeing of the gauge under operating conditions
07. Fulfilment of railway-specific requirements on equivalent conicity
08. Damping of and tolerance in respect of vertical and horizontal percussion-type loadings (damping of impact loads)
09. Dynamic long-term loading
10. Transmission of the vertical forces to the substructure
11. Transmission of the horizontal forces laterally and longitudinally to the track
12. Defined elasticity in vertical and horizontal directions
13. Elasticity that is stable in respect of temperature and time within the given limits
14. Defined electrical resistance between rail and substructure
15. Suitability for low and high frequency direct current circuits
16. Suitability for linear train control systems
17. Suitability for ETCS systems
18. Defined reduction of vibrations, oscillations, structure-borne noise and air-borne noise
19. Resistance to lifting forces
20. Ability to be inspected
21. Adjustable in respect of height up to 60 mm (optional > 60 mm)
22. Adjustable in respect of depth up to > 60 mm with ground uplifts (e.g. ettringite) or tunnel uplifts
23. Lateral adjustability up to ± 5 mm (optional up to ± 10 mm)
24. Lateral adjustability on one side up to 20 mm
25. Defined vibration behaviour in both vertical and horizontal directions
26. Oscillation damping in vertical direction
27. Very extensive use of parts, subassemblies and components of DB AG – fastening IOARG 336
28. Fatigue resistance of the wearing parts within cycles, which correspond to those of rail replacements (UIC 60) (15 ... 25 years),
29. Fatigue resistance of the fastening several times higher than the rail replacement cycle (30 ... 50 years),
30. Ability to be used on concrete sleepers, steel sleepers, prefabricated parts and monolithically fabricated rigid rail systems (unrestricted compatibility)