

# DIN EN 13674-4:2020-02 (E)

## Railway applications - Track - Rail - Part 4: Vignole railway rails from 27 kg /m to, but excluding 46 kg/m

---

| <b>Contents</b>   |   | <b>Page</b> |
|---|---|-------------|
| European foreword .....   |   | 4           |
| Introduction .....  |   | 6           |
| 1   | Scope .....   | 8           |
| 2   | Normative references .....                                      | 8           |
| 3   | Terms and definitions .....                                     | 8           |
| 4   | Information to be supplied by the purchaser .....               | 9           |
| 5   | Steel grades .....  | 10          |
| 6   | Dimensions, static properties, linear mass and tolerances ..... | 11          |
| 7   | Manufacture .....   | 11          |
| 7.1   | Product integrity .....   | 11          |
| 7.1.1   | Factory production control .....                                | 11          |
| 7.1.2   | Best practice manufacture .....                                 | 11          |
| 7.2   | Blooms .....  | 11          |
| 7.3   | Rails .....   | 11          |
| 7.4   | Identification .....  | 11          |
| 7.4.1   | Branding .....  | 11          |
| 7.4.2   | Hot stamping .....  | 12          |
| 7.4.3   | Cold stamping .....   | 12          |
| 7.4.4   | Other identification .....                                      | 12          |
| 8   | Qualification of the manufacturer .....                         | 12          |
| 9   | Acceptance tests .....  | 13          |
| 9.1   | Laboratory tests .....  | 13          |
| 9.1.1   | General .....   | 13          |
| 9.1.2   | Chemical composition .....                                      | 13          |
| 9.1.3   | Microstructure .....  | 17          |
| 9.1.4   | Decarburization .....   | 17          |
| 9.1.5   | Hardness .....  | 17          |
| 9.1.6   | Tensile tests .....   | 18          |
| 9.1.7   | Retest procedures .....   | 19          |
| 9.2   | Dimension tolerances .....                                      | 19          |
| 9.2.1   | Profile .....   | 19          |
| 9.2.2   | Straightness and twist .....                                    | 20          |
| 9.2.3   | Cutting and drilling .....                                      | 20          |
| 9.3   | Gauges .....  | 20          |
| 9.4   | Inspection for internal quality and surface quality .....       | 21          |
| 9.4.1   | Internal quality .....  | 21          |
| 9.4.2   | Surface quality .....   | 23          |
| 9.4.3   | Checking of automated testing equipment .....                   | 24          |
| Annex A (normative) Rail profiles .....   |   | 34          |
| DIN EN 13674-4:2020-02 EN 13674-4:2019 (E) Annex B (informative) Comparison of steel designations referred to in this European Standard compared to those in EN 10027-2 ..... |   | 66          |
| Bibliography .....  |   | 67          |