Supplementary Material

Table 3. Notations and values of freight train locomotive properties in used in the train-track-bridge model

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| --- | --- | --- | --- |
|  |  | 3-axle bogie locomotive | Unit |
|  | car body mass |  | kg |
|  | car body mass inertia |  | kg.m2 |
|  | car body pitch rotation | - |  |
|  | car body displacement | - |  |
|  | secondary suspension damping |  | kN.s/m |
|  | secondary suspension stiffness |  | kN/m |
|  | bogie mass |  | kg |
|  | bogie mass inertia |  | kg.m2 |
|  | bogie pitch rotation | - |  |
|  | bogie displacement | - |  |
|  | primary suspension damping |  | kN.s/m |
|  | primary suspension stiffness |  | kN/m |
|  | wheel mass |  | kg |
|  | wheel displacement | - |  |
|  | wheel-rail interaction force | - |  |
|  | Axle spacing within one bogie |  | m |
|  | Axle spacing within different bogie |  | m |