Assemblies in the database Rail_Veh_Viscous_vs_Friction.cdb

- dwuosiowy_sensor_wisko – two-axle model with viscous suspension damper
- dwuosiowy_sensor_tarcie – two-axle model with Coulomb friction suspension damper

Both models represent laden state. In order to proceed simulation for empty state, mass and moments of inertia has to be changed according to Table 1 in manuscript and for wagon model with viscous damper, preload in suspension spring have to recalculated.
Both models have acceleration markers

Tracks in the database

- Lomza r150_L80_Scurve_PSD1.trk – S-curve R = 150 m
- Lomza 2x320_h110_PSD1.trk – S-curve R = 320 m

See manuscript for more details – Section 4.1.

Solver setting for simulation scenarios:

- **S-curve R=150 m, v= 50 km/h**
  end time : 17.0000
  number of steps : 2000
  initial velocity : 13.0000 meter/sec
  Track File : *databasepath*/ tracks.tbl/Lomza r150_L80_Scurve_PSD1.trk
  Track Type : rigid
  Flex Ref Cfg File : none
  Backflange Contact Activity : off
  Backflange Cfg File : none
  Wheel Irregularities Activity : off
  Contact Configuration File :
  mdids://arail_shared/contact_configurations.tbl/mdi_contact_gen.ccf
  Cruise Control : off

- **S-curve R=320 m, v= 80 km/h**
  end time : 43.0000
  number of steps : 4300
  initial velocity : 22.0000 meter/sec
  Track File : *databasepath* /tracks.tbl/Lomza 2x320_h110_PSD1.trk
  Track Type : rigid
  Flex Ref Cfg File : none
  Backflange Contact Activity : off
  Backflange Cfg File : none
  Wheel Irregularities Activity : off
  Contact Configuration File :
  mdids://arail_shared/contact_configurations.tbl/mdi_contact_gen.ccf
  Cruise Control : off