VEHICLE TITLE FS ETR500 LOCOMOTIVE

## MASSES & INERTIAS

| | |
|---|---|
| Number of bogies | 2 |
| Number of axles (per bogie) | 2 |
| Body mass | 55.98 Mg |
| Body roll inertia | 53.366 $Mgm^2$ |
| Body pitch inertia | 1643.0 $Mgm^2$ |
| Body yaw inertia | 1630.0 $Mgm^2$ |
| Bogie mass | 3.896 Mg |
| Bogie roll inertia | 3.115 $Mgm^2$ |
| Bogie pitch inertia | 5.843 $Mgm^2$ |
| Bogie yaw inertia | 8.107 $Mgm^2$ |
| Wheelset mass | 2.059 Mg |
| Wheelset roll and yaw inertia | 1.164 $Mgm^2$ |

## DIMENSIONS

| | |
|---|---|
| Semi pivot spacing | 6.0 m |
| Semi wheelbase | 1.5 m |
| Wheel radius | 0.55 m |
| Body centre of gravity height above rail level | 1.65 m |
| Bogie centre of gravity height above rail level | 0.64 m |

## PRIMARY SUSPENSION

| | |
|---|---|
| Lateral stiffness (per axle) | 12.0 MN/m |
| Vertical stiffness (per axle) | 3.55 MN/m |
| Yaw stiffness (per axle) | 15.4 MNm/r |
| Lateral damper rate (per axle) | - MNs/m |
| Vertical damper rate (per axle) | 0.3 MNs/m |
| Vertical friction breakout (per axle) | - KN |
| Height above rail level of lateral springs | 0.55 m |
| Lateral semi spacing of vertical springs | 1.03 m |
| Height above rail level of lateral dampers | - m |
| Lateral semi spacing of vertical dampers | 1.2 m |
| Lateral semi spacing of vertical friction | - m |