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**General rules for performance of
electric railcars for commuter service**

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General rules for performance of electric railcars for commuter service

1 Scope This Japanese Industrial Standard specifies common conditions for calculating the performance of powering, braking and so on (hereafter referred to as “performance”) of electric railcars for commuter service (hereafter referred to as “electric railcars”), and is mainly applicable to DC electric railcars.

NOTE 1 Electric railcars mean those capable of not only transporting passengers going to/returning from work or school during rush hour periods but also providing service to daytime passengers. Trams and special kind cars are excluded.

2 The units and values in { } are according to the traditional unit system and shown as a reference.

2 Terms and definitions For the purposes of this Standard, the following definitions apply.

(1) **average acceleration** average value of acceleration from the instance an electric railcar starts moving to the instance the electric railcar reaches a designated speed when the electric railcar is accelerated from standstill

It shall be obtained by dividing the designated speed by the time required for the electric railcar to reach the speed. The unit shall be km/(h·s). The designated speed shall be 30 km/h, 40 km/h, 60 km/h or 80 km/h.

(2) **200 m runtime from standstill** time required for an electric railcar to run a distance of 200 m from the instance an electric railcar starts moving, when the electric railcar is accelerated from standstill

The unit shall be s (second).

(3) **acceleration change rate** rate when acceleration changes

The unit shall be km/(h·s²).

(4) **average deceleration** average value of deceleration from a designated speed to standstill when decelerating an electric railcar by giving a braking command in such a way as operating a brake valve

It shall be obtained by dividing the speed when the braking command is given by the time required for the electric railcar to stop. The unit shall be km/(h·s). The designated speed shall be the maximum running speed, 100 km/h or 75 km/h.

(5) **deceleration change rate** rate when deceleration changes

The unit shall be km/(h·s²).