

Characteristics and Analysis of Ride Comport of Electric-locomotive Cab

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Key words : Ride Comport, Electric-locomotive Cab

1.

#7100 가 가

Table 1

Table 1 Specification of electric-locomotive

Description	Specification
Max. speed of operating	140km/h
Max. speed of design	150km/h
Axle load	22tonnes
Weighting	132tonnes
Cab noise	85dBA at 140km/h
Wheel base	2,600mm
Power	3,000HP
2nd spiring	Coil spring + damper(vertical, lateral yaw, incline).
Ist spring	Coil spring
bogie	bolster type
material of bogie/bolster	Casting iron

(ride comport)

DL #7128	발전차	객차 #1	객차 #2	DL #7163
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- KS R 9216:2000

5

: B & K Type 4447 (Fig. 1)



Fig. 1 Ride comport tester

(whole-body)4

- ISO 8041 - 2005
- ISO 5349 - 1 ISO 5349 - 2
- ISO 2631 - 1
- KS R 9216:2000

#7834

, #7835

3.

9216-2000

KS R 가

Table 2

#7163

. #7163

2.

KS R 9216-2000

ISO 2631

B&K type 4447

90km/h ~ 120km/h
0.2135m/s² ~ 0.4375m/s² KS

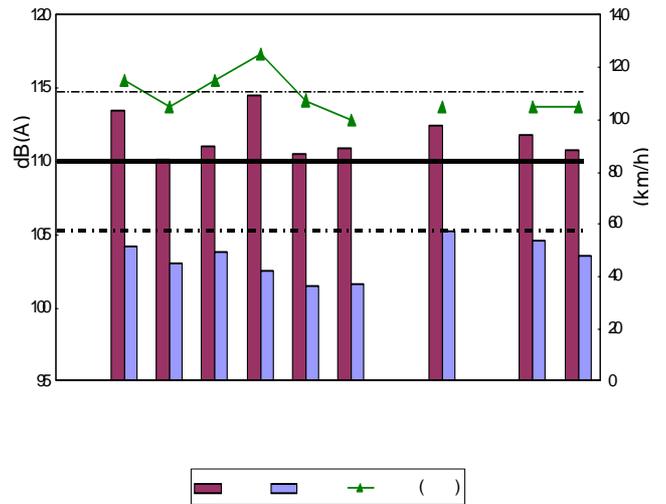
R 9216:2000 가 (Table 2)
 0.1032m/s² ~ 0.2508m/s² 가
 (Fig. 2)

R 9216:2000 가 (Table 2)
 108.2dBA ~ 115.0dBA 가

9216:2000 가 KS R 가
 (Fig. 3)
 90km/h ~ 130km/h 가
 110.1dBA ~ 가
 100km/h ~ 125km/h 가
 0.4027m/s² 가
 0.1718m/s² ~ 0.2409m/s² 가

100.7dBA ~ 105.7dBA 가
 100km/h ~ 125km/h 가
 0.2768m/s² 가

Level(A)	Effectiveness value(%) (B)	Index
100dBA > A	0.1 > B	very good comfortable
100dBA ≤ A < 105dBA	0.1 ≤ B < 0.178	good comfortable
105dBA ≤ A < 110dBA	0.178 ≤ B < 0.315	not comfortable
110dBA ≤ A < 115dBA	0.315 ≤ B < 0.562	a little uncomfortable
115dBA ≤ A < 120dBA	0.562 ≤ B < 1.0	uncomfortable
120dBA ≤ A < 125dBA	1.0 ≤ B < 1.779	very uncomfortable
125dBA ≤ A	1.779 ≤ B	extremely uncomfortable



가 150km/h 가
 가 1 가 2 가
 #7128
 #7128

Fig.3 Experimental value of ride comfort at Electric-locomotive Cab ; Dongdaegu - Daejeon, Car no. # 7163

4.

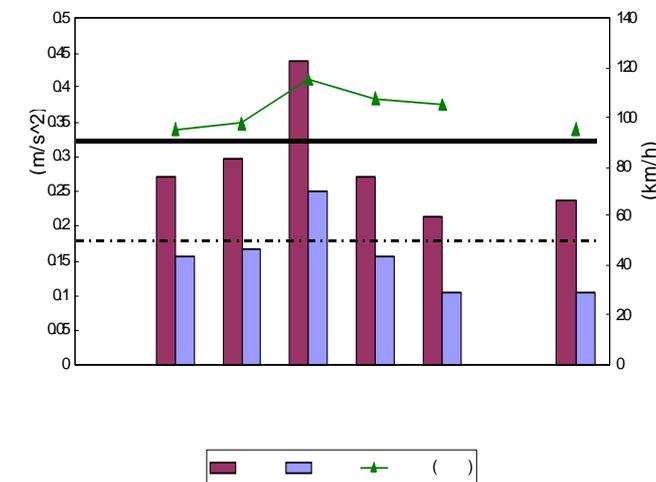


Fig.2 Experimental value of ride comfort at Electric-locomotive Cab ; Sasang - Komo, Car no. # 7163

#7163 #7128
 가

1. KS R 9216-2000 가
2. , , 200 가 , 999-1000, 2008

90km/h ~ 115km/h