

ISO 10326-2:2022-03 (E)

Mechanical vibration - Laboratory method for evaluating vehicle seat vibration - Part 2: Application to railway vehicles

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms, definitions, symbols and abbreviated terms	1
3.1	Terms and definitions	1
3.2	Symbols and abbreviated terms	2
4	Direction of vibration	3
5	Characterization of vibration and of its transmission	4
5.1	Characterization of vibration	4
5.1.1	General	4
5.1.2	Root-mean-square acceleration, arms	4
5.1.3	Acceleration power auto spectral density, $G_{aa}(f)$	5
5.1.4	Acceleration cross spectral density, $G_{ab}(f)$	5
5.2	Characterization of vibration transmission	5
5.2.1	General	5
5.2.2	Frequency response function, $H(f)$	5
5.2.3	Coherence function, $ab(\) f$	5
5.2.4	Transmissibility, TR	6
5.2.5	Weighted transmissibility, TR_w and SEAT factor	6
6	General observations	7
7	Measurement positions	7
8	Instrumentation	7
9	Safety requirements	8
10	Test seats and test persons	8
10.1	Test seats	8
10.2	Test persons	8
11	Input test vibration	9
11.1	General	9
11.2	Pseudo-random excitation	9
11.2.1	Generation of the excitation signal	9
11.2.2	Power auto spectral density	10
11.2.3	Root-mean-square acceleration	10
11.2.4	Tolerances	10
11.2.5	Multi-axis excitation	10
11.3	Sinusoidal excitation	10
11.4	Realistic excitation representing the dynamic environment of the tested seat	11
12	Parameters adopted for characterizing the vibration transmission	11

12.1	Pseudo-random and realistic excitations	11
12.2	Sinusoidal excitation	11
13	Test procedure	12
13.1	Initial procedure	12
13.2	Tests under pseudo-random and realistic excitations	12
13.3	Tests under sinusoidal excitation	12
14	Test report	12
14.1	Seat	12
14.2	Test persons	12
14.3	Measuring chain	13
14.4	Results	13
Annex A (informative) Example of excitation generating process		16
Annex B (informative) Realistic vibration excitation for seat testing		19
Bibliography		27