

4.2.2 - Acceleration ranges associated with comfort levels

The level of comfort achieved is assessed through reference to the acceleration undergone by the structure, determined through calculation, using different dynamic load cases. Thus, it is not directly a question of the acceleration perceived by the users of the structure.

Given the subjective nature of the comfort concept, it has been judged preferable to reason in terms of ranges rather than thresholds. Tables 2.1 and 2.2 define 4 value ranges, noted 1, 2, 3 and 4, for vertical and horizontal accelerations respectively. In ascending order, the first 3 correspond to the maximum, mean and minimum comfort levels described in the previous paragraph. The 4th range corresponds to uncomfortable acceleration levels that are not acceptable.

Acceleration ranges	0	0.5	1	2.5
Range 1	Max			
Range 2		Mean		
Range 3			Min	
Range 4				

Table 2.1: Acceleration ranges (in m/s^2) for vertical vibrations

Acceleration ranges	0	0.1	0.15	0.3	0.8
Range 1	Max				
Range 2		Mean			
Range 3			Min		
Range 4					

Table 2.2: Acceleration ranges (in m/s^2) for horizontal vibrations

The acceleration is limited in any case to 0.10 m/s^2 to avoid "lock-in" effect