IMMI
VDI 3722 Part 2

Effect of traffic noise

Characteristics relating to the exposure to multiple source types

In order to determine the exposure of the population caused by noise types, such as road, railway and aircraft noise, the energetic addition of the various percentages is not an appropriate means. Based on exposure-effect relations, the directive specifies methods for weighting nuisance caused by exposure of persons to multiple source types, i.e. road, railway, aircraft, and to determine corresponding characteristics. The directive is applied in the development of planning variants, such as the planning of noise reduction actions.

Its implementation in IMMI provides the following features:

- Two evaluation functionalities for selectively calculating reception points by means of a calculator and complex function dialog for area calculation in large-size models
- Graphical and tabular evaluation for persons affected (% A), persons heavily affected (% HA), persons suffering from sleeping disorders (% SD), persons suffering from heavy sleeping disorders (% HSD)
- Determination of characteristic rating levels L_r (TAN, TN, N, T), effect related substitute level L_{AES}, impairment function B, impairment characteristic N_B
- Automatic determination of reception points complying with the directive – proportionate distribution of inhabitants across the building
- Tabular output of the total number of persons in the area under investigation, distribution of inhabitants in the individual level ranges, total number of persons affected by L_{AES}
- Area display of the noise indicator (NI) (100 m x 100 m) – hotspot determination

This function is available for the Plus and Premium expansion versions of IMMI 2014 and higher.