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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Emission standard for industrial enterprises noise at boundary
(English Translation)**

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1 Scope

This standard specifies the emission limit and measurement methods of the environmental noise of the industrial enterprises and fixed equipment at boundary.

This standard applies to the management, evaluation and control of noise emission from industrial enterprises. Organs, institutions, organizations and other units emitting noise externally may also make reference to this standard.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For undated references, the latest edition of the referenced document applies.

GB 3096 Environmental quality standard for noise

GB 3785 Electric, sonic properties and measuring methods for sound level meters

GB/T 3241 Electroacoustics - Octave-band and fractional-octave-band filters

GB/T 15173 Sound calibrators

3 Terms and definitions

The following terms and definitions apply to this standard.

3.1

Industrial enterprise noise

It refers to the noise emitted by the use of fixed equipment in the industrial production

activities which interferes the surrounding environment, as measured and controlled at the enterprise boundary.

3.2

A-weighted sound pressure level

It refers to the sound pressure level as measured by the A weighting network, expressed by LA, in dB (A).

3.3

Equivalent continuous A-weighted sound pressure level

It is shortly referred to as the equivalent sound level. It is the average energy value of the A sound level within the specified measurement time T, which is expressed in LAeq,T (abbreviated as Leq), in dB (A). Unless otherwise specified, the noise values in this standard are all equivalent sound levels.

By definition, the equivalent sound level is expressed as.

3.4

Boundary

It refers to the boundary of the place or building the right of use (or ownership) of which belongs to the owner as determined in the legal instruments (such as a land use certificate, a real estate license, a lease contract, etc.). The boundaries of the various noise-generating fixed equipment are the boundaries of their actual occupancy.

3.5

Noise-sensitive buildings

It refers to the building which shall be kept quiet such as hospitals, schools, institutions, scientific research units, residences and so on.

4.1 Environmental noise emission limits at boundary

4.1.1

The environmental noise of industrial enterprises at boundary shall not exceed the emission limits as specified in Table 1.

4.1.2

The maximum sound level of the night-time frequent noise shall not exceed the limit value by more than 10 dB (A).

4.1.3

The maximum sound level of the night-time accidental noise shall not exceed the limit value by more than 15 dB (A).

4.2 Structure transmission fixed equipment indoor noise emission limits

When the noise emitted by the fixed equipment is transmitted through the building structure to the noise-sensitive building indoor, the indoor equivalent sound level of the noise-sensitive building shall not exceed the limits as specified in Table 2 and Table 3.

5.1 Measurement instruments

5.1.1

The measurement instrument is the integral average sound level meter or environmental noise automatic monitor, the performance of which shall not be less than the requirements for the type 2 instruments as specified in GB

3785 and GB/T 17181. The noise below 35 dB shall be measured using the type 1 sound level meter, the measurement range of which shall comply with the requirements the measured noise.

5.1.2

The measurement instruments and calibration instruments shall be regularly calibrated and qualified, AND be used within the valid period; before and after each measurement, it must conduct acoustic calibration at the measurement field, with the indication difference before and after the calibration not more than 0.5 dB; otherwise the measurement results are invalid.

5.2 Measurement conditions

5.2.1

Meteorological conditions. The measurement shall be made in the weather free from rain, snow, or lightning, at the wind speed less than 5 m/s. If it is necessary to make measurement under special weather conditions, it shall take necessary measures to ensure the measurement accuracy.

5.2.2

Measurement conditions. The measurement shall be made at the normal working time of the measured noise source, AND meanwhile it shall indicate the working conditions at that time.

5.3.1 Measurement point layout

Based on the layout of industrial enterprise noise sources, the layout of the surrounding noise-sensitive buildings and the adjacent regional categories,

ARRANGE several measurement points at the boundary of the industrial enterprise, including the positions relatively close to the noise-sensitive buildings AND the positions seriously affected by the measured sound source.

5.3.2 General provisions for measurement point positions

Under normal circumstances, the measurement points are selected at positions 1 m beyond the enterprise enterprises, 1.2 m height above, AND not less than 1 m away from any reflection surface.

5.4 Measurement period

5.4.1

CONDUCT measurement respectively at day-time and night-time.

MEASURE the maximum sound level when there is frequent and accidental noise effects in night-time.

5.5 Background noise measurement

5.5.1

Measurement environment. It is not affected by the other measured sound sources AND the other acoustic environment is kept consistent with the measured sound source during measurement.

5.5.2

Measurement period. It is same as the measurement time length of the measured sound source.

5.7.1 When the difference between the noise measurement value and the

background noise value is more than 10 dB (A), the noise measurement value will not be corrected.

5.7.2 When the difference between the noise measurement value and the

background noise value is between 3 ~ 10 dB (A), the difference between the noise measurement value and the background noise value is taken as integer, which is corrected in accordance with Table 4.