

**SINGAPORE STANDARD**

# **Code of practice for industrial noise control**

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**Code of practice for industrial noise control**

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This Singapore Standard was approved by the General Engineering and Safety Standards Committee on behalf of the Standards Council of Singapore on 24 January 2003.

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The General Engineering and Safety Standards Committee, appointed by the Standards Council, consists of the following members:

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	Mr Tan Swee Hong	<i>Singapore Contractors Association Limited</i>
<b>Co-opted Member</b>	: Mr Chan Yew Kwong	<i>TC for Safety Management</i>

The previous Technical Committee on Equipment and Machinery Safety in Workplace was responsible for the initiation of this standard. With the restructuring and formation of the General Engineering and Safety Standards Committee in Oct 2001, the Technical Committee on Safety of Machinery was formed to undertake the responsibility of this standard. This newly formed Technical Committee consists of representatives from the following organisations:

	<b>Name</b>	<b>Organisation</b>
<b>Chairman</b>	: Mr Cheah It Cheng	<i>General Engineering and Safety Standards Committee</i>
<b>Secretary</b>	: Mr Benny Lim	<i>SPRING Singapore</i>
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	<b>Name</b>	<b>Organisation</b>
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	Mr Steven Teo Kim Chen	<i>Singapore Confederation of Industries</i>
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	Mr Edwin Yap	<i>Singapore Institution of Safety Officers</i>
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	Mr Tan Soo Hoon	<i>Working Group Convenor</i>

The Working Group appointed by the Technical Committee to assist in the preparation of this standard comprises the following members:

	<b>Name</b>	<b>Organisation</b>
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<b>Members</b>	: Assoc Prof Chew Chye Heng	<i>National University of Singapore</i>
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## Foreword

Noise is unwanted sound and is common in an industrial environment. Prolonged exposure to excessive noise may cause hearing loss or noise-induced deafness (NID) which cannot be cured. In Singapore, as of 2001, there are more than 1700 workplaces with noise levels above 85 dBA and there are more than 67000 workers exposed to excessive noise. Each year, about 700 cases of NID are reported. However, measures are available to control noise and prevent NID.

Under the Factories Act, there is a provision requiring factory occupiers to take practical measures to control excessive noise and vibration. The Factories (Noise) Regulations, which were enacted in 1997, specify the permissible exposure limits to noise, and the various engineering methods to control noise and vibration. Among other things, the Regulations require factory occupiers or employers to appoint a competent person to advise on all noise control measures if 50 or more persons are exposed to excessive noise.

The purpose of this Code is to provide detailed technical information on noise and vibration control for acoustic specialists, plant engineers, safety and health professionals, technical personnel and people who wish to apply practical measures to control noise and vibration. Specifically, the code provides worked examples on engineering noise control such as the use of acoustic barriers, enclosures, partition walls, silencers, isolators, sound absorbing and damping materials. It also provides guidance on planning for noise control at the plant design stage, as well as the roles and responsibilities of factory occupiers and appointed competent persons with respect to noise monitoring, noise control planning and noise hazard management.

This Code was prepared by the Working Group appointed by the Technical Committee for Equipment and Machinery Safety in Workplaces which has been restructured and known as the Technical Committee for Construction and Safety of Machinery.

In the preparation of this Code, reference was mainly made to the following publications:

1. The Factories(Noise) Regulations
2. Guidelines for Industrial Noise and Vibration Control (published by the Ministry of Manpower)
3. A Code of Practice for Noise Control in the Workplace published by the Occupational Health, Safety & Welfare Commission of Western Australia
4. AS/NZ 1269.2 : 1998 – Noise control management
5. Shock and Vibration Handbook (4<sup>th</sup> edition), Cyril M. Harris, McGraw-Hill

The diagrams from the Shock and Vibration Handbook (4th edition) by Cyril M Harris, copyright 1995, are reproduced with permission from the McGraw-Hill Companies.

Acknowledgement is made for the use of the information from the above publications.

All Annexes are for information only.

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## **Code of practice for industrial noise control**

### **1 Scope**

This Code aims to provide information on industrial noise control measured by engineering means such as barriers, enclosures, absorbers, damping materials, silencers and isolators.

It is applicable to all industrial workplaces except for construction and demolition sites that are covered by SS CP 49. With reference to the proper noise criteria, this Code is applicable to other workplaces.

This Code does not cover community noise, transportation noise, construction noise and noise from public entertainment.