

SINGAPORE STANDARD

Code of practice for ~~industrial~~ workplace noise control

(Formerly CP 99)

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Code of practice for ~~industrial~~workplace 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.

First published, 2003

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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:

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| | Mr Tan Soo Hoon | <i>Working Group Convenor</i> |

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QSSC consists of the following members:

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| | Mr Alvin Soong Kheng Boon | <i>Land Transport Authority</i> |
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QSSC set up the Technical Committee on Workplace Safety and Health to oversee the preparation of this standard. The Technical Committee consists of the following members:

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| | Er. Veronica Chow | <i>Occupational and Environmental Health Society</i> |
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The Technical Committee set up the Working Group on Industrial Noise Control to prepare this standard. The Working Group consists of the following experts who contribute in their *individual capacity*:

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| Deputy Convenor | : Mr Tan Kia Tang |
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| | Mr Eric Loo Song Poh |
| | Mr Eric Ng Teck Sing |
| | Mr Ng Zhihan |
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The organisations in which the experts of the Working Group are involved are:

Absolute Instrument Systems Pte Ltd
Association of Singapore Marine Industries
ChemTech Speciality & Engineering Industries
Environmental Engineering Society of Singapore
Ministry of Manpower
The Singapore Contractors Association Ltd
Singapore Institution of Safety Officers
The Institution of Engineers, Singapore
TÜV SÜD PSB Pte Ltd

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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 (4th 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.

This Singapore Standard was prepared by the Working Group on Code of practice for industrial noise control set up by the Technical Committee on Workplace Safety and Health under the purview of QSSC.

It is a revision of Singapore Standard CP 99: 2003 “Code of practice for industrial noise control” and has been re-designated as SS 657 : 2020.

The summary of changes is as follows:

- a) Inclusion of noise risk management;
- b) Inclusion of ultrasound;
- c) Expansion of plant planning to include new plants and noise hazard management at workplaces;
- d) Inclusion of Annex N for sample checklist on noise hazard identification;
- e) Inclusion of Annex O for Noise exposure/Dose calculation chart;
- f) Inclusion of Annex P for list of noise control measures;
- g) Inclusion of Annex Q for noise monitoring and measurements;
- h) Alignment with current industry practices.

For more information on the protection of site personnel against noise-induced hearing loss, refer to SS 602, “Code of practice for noise control on construction and demolition sites”.

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