

# CSA S304 TECHNICAL COMMITTEE ON OCCUPATIONAL HEARING CONSERVATION

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The Canadian Standards Association S304 Technical Committee on Occupational Hearing Conservation consists of one subcommittee writing a standard on Hearing Conservation Management, five subcommittees covering such aspects as Hearing Protection, Noise Exposure Assessment and Control, Hearing Surveillance, and Vibration Exposure. This paper will give the history of its formation, its current activities and discuss how people can get involved in our work.

## 1. INTRODUCTION

For over 30 years, the Canadian Standards Association (CSA) Technical Committee Z107 was the main body involved with acoustical standards in Canada, (with TC Z94.2 handling a single standard on hearing protection). In 2009, CSA decided to focus their standards efforts on occupational noise and handed over other aspects of acoustics to the Canadian Acoustical Association.

A new CSA Technical Committee, TC S304 on occupational noise, was formed which combined the former Z107 standards related to occupational noise with the Z 94.2 standard on hearing protectors.

The work is done by a series of subcommittees discussed below. Those interested in working on these issues are invited to contact the author (who chairs S304) or the subcommittee chairs.

## 2. SC1 - HEARING PROTECTION DEVICES – ALBERTO BEHAR

S304 is still responsible for the Z94.2 standard on Hearing Protection. For many years this standard has advocated the use of type A, B, and C hearing protectors. These ratings are not widely used, because most protectors are also sold in the US, where by law they must be labelled with the protector's NRR rating, which is thus much more widely known.

The NRR system, put in place in 1974, meanwhile, is now recognised by most experts as quite flawed because the number shown grossly overstates the actual protection received. The new draft Z94.2 is advocating the NIOSH approach to derating the NRR ratings which derates the NRR by 25-70% depending on the type of protector (minus 7 dB to account for the difference between dBA and dBC).

At this point a new draft of the standard has been written, but there is a concern that if CSA comes out with it before the US decides how they are going to address these ratings, we could again be out of step with that large market for hearing protection.

## 3. SC2 NOISE EXPOSURE ASSESSMENT AND CONTROL – STEPHEN BLY

This subcommittee is responsible for several standards inherited from the former TC Z107:

### 3.1 CSA Z107.56

The most widely used of the Z107 series, Z107.56 covers the measurement of occupational noise exposure. A new version is now being proposed which will extend its scope to cover noise exposure under headsets. The new approach encompasses measurements with probe microphones in real ears, measurements using mannequins and artificial ears and a new calculation method using the NR of the headset and the measured sound level outside the headset.

The use of probe microphones and mannequins is covered by Australian and international standards, to which the new version refers. However the calculation method is new. It is intended to be a low cost initial assessment compared to the other systems. It is based on research indicating that most people adjust the volume on a headset to be about 15 dB above the existing background sound inside the protector.

### 3.2 CSA Z107.58

This standard describes in one location all that Canadians need to know to navigate the variety of standards, codes and regulations which make up the system whereby the sound produced by machinery is documented and available to prospective buyers and users. Health Canada has recently recommended its use by Canadian industry and a new version is expected which will update the constantly

changing standards on which the system is based. This system helps industry buy quiet equipment and helps manufacturers provide purchasers with information about sound levels produced by their equipment

#### 4. SC 3 HEARING SURVEILLANCE – CHRISTIAN GIGUERE

SC3 looks after the former Z107.6 standard on Pure Tone Air Conduction Threshold Audiometry. Theyu also will be providing guidance on hearing testing for the Hearing Conservation Management standard.

#### 5. SC 4 VIBRATION EXPOSURE ASSESSMENT & CONTROL – TONY BRAMMER

This subcommittee provides a liaison with the committee responsible for ISO 2631, which Tony Brammer also chairs and will be responsible for writing the vibration section of the Hearing Conservation Management standard.

#### 6. SC5 HEARING CONSERVATION MANAGEMENT – JEFF GOLDBERG

CAALL-OSH, the Occupational Safety and Health Committee of the Canadian Association of Administrators of Labour Legislation, agreed to fund the development of a new Canadian standard on Hearing Conservation Management, which gave a large impetus to the new Technical Committee. This new standard would be part of CSA's OHS Management systems standards series. It would encompass prevention of occupational hearing loss, control of noise in the working environment and be applicable to all occupational sectors and to all workers and occupations. This work was undertaken by SCI chaired by Jeff Goldberg, who have just completed the first draft of the standard.

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