

# Review of Activity in CSA Standards Activity in Industrial Noise

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## ABSTRACT

This paper reviews recent activities in the Canadian Standards Association Industrial Noise Subcommittee, the most active acoustics standards group in Canada. Recent activities have included a new voluntary standard on Noise Emission Declarations, an acoustics section in the recent Office Ergonomics standard and ongoing work in adapting ISO standards on community noise measurement to Canada. In addition, there is a joint working group with ANSI looking at a North American approach to the ISO industrial noise propagation standard. Future opportunities, such as in-plant noise predictions, will be discussed. Recent publications and ongoing activity will be summarised and opportunities for wider involvement of the acoustics community across Canada encouraged.

## 1. INTRODUCTION

The Industrial Noise Subcommittee is the most varied and active subcommittee reporting to the CSA Acoustics and Noise Control Committee.

Ongoing activities include:

## 2. GUIDELINES FOR THE DECLARATION OF MACHINERY NOISE EMISSION LEVELS

Guidelines For The Declaration Of Machinery Noise Emission Levels will be a voluntary guide<sup>1</sup> for noise labelling of machinery for use in Canada and compatible with European regulations to allow machinery to be sold into that market.

Labels in this context refer to a statement of sound levels produced by the equipment which would be included with the instruction or maintenance manual. Measurements are made according to ISO standards and include estimates of the likely variability of the measurements.

At the time of writing this standard is out for ballot as CSA Z107.58.

## 3. ADOPTION OF ISO1996

A working group chaired by Chris Krajewski<sup>2</sup> and including several Ontario consultants is examining using ISO 1996 as a way of updating the way tonal and impulse sounds are handled in community noise. They are currently

running round robin tests of the procedures with various sample sounds. Stephen Keith of Health Canada is acting as liaison with the ISO committee.

The first round of tests was reported at the last Canadian Acoustics conference<sup>3</sup> and a third round is ongoing. The standard is written to be compatible with a number of different regulations in Europe. A first draft of an informative annex relating the standard to the Canadian context has been prepared.

## 4. ISO9613 / CSA Z107.55 NOISE PROPAGATION

This is a joint study group with ANSI looking at adopting or endorsing ISO 9613-2, the ISO standard on prediction of industrial noise in the community. The ISO standard was written by an international group chaired by Joe Piercy of NRC. It would either replace or update CSA Z107.55.

The US group have decided to adopt the standard with minimal changes. Once their version is ready, we will meet separately and come up with a Canadian position. To some extent, this is more important in Canada than in the US because several provinces such as Ontario routinely predict the impact of new and changing industries on the community as part of their approval process.

## 5. BLASTING NOISE AND VIBRATION

There is an existing standard on Blasting Noise and Vibration measurement in the community which is referred to in Ontario MOE guidelines. It needs updating and we are looking for a working group chair to take this on.

## 6. OFFICE ACOUSTICS

The Office Ergonomics Standard was recently republished with a completely rewritten acoustics section by a working group from the Industrial Noise Subcommittee. It includes design goals, recommended treatments and was written to be accessible to a lay audience.

## 7. NOISE EXPOSURE STANDARDS Z107.56

This standard, first published in 1986 has proven to be the most popular acoustics standard in Canada and is

referred to in legislation and accepted across the country. Stuart Eaton and Alberto Behar are updating the standard presently.

It will specifically address concerns about spurious impulses due to the microphone cable rubbing on clothing and other concerns recently raised in BC.

## 8. INDUSTRIAL HALL PREDICTION

This group agreed that a new revision was long overdue but are looking for funds to allow it to proceed.

## 9. PARTICIPATION

The Industrial Noise Subcommittee and its working groups is an active part of the Canadian Acoustics Standards scene. Those interested in joining are invited to participate by contacting the author.

## 10. STANDARDS

- Z107.51-M1980 (R1994) Procedure for In-Situ Measurement of Noise from Industrial Equipment
- Z107.52-M1983 (R1994) Recommended Practice for the Prediction of Sound Pressure Levels in Large Rooms Containing Sound Sources
- Z107.53-M1982 (R1994) Procedure for Performing a Survey of Sound Due to Industrial, Institutional, or Commercial Activities
- CAN3-Z107.54-M85 (R1993) Procedure for Measurement of Sound and Vibration Due to Blasting Operations  
Méthode de mesure du niveau sonore et des vibrations émanant des opérations de dynamitage
- CAN/CSA-Z107.55-M86 Recommended Practice for the Prediction of Sound Levels Received at a Distance from an Industrial Plant  
Pratique recommandée pour la prévision des niveaux sonores reçus à une distance donnée d'une usine
- Z107.56-94 Procedures for the Measurement of Occupational Noise Exposure  
Méthode de mesure de l'exposition au bruit en milieu de travail
- Z107.58 Noise Emission Declarations for Machinery – in Ballot

## REFERENCES

1. Stephen Keith, Stephen Bly, Tim Kelsall, A preview of the Draft CSA Guideline Noise Emission

Declarations for Machinery, Canadian Acoustics, Volume 29, No. 3, September, 2001

2. C. Krajewski, Rating Sound Level- A New Method for Description and Measurement of Environmental Noise- An Overview of Amendment 1 to ISO 1996-2, Canadian Acoustics, Volume 29, No. 3, September, 2001
3. William J. Gastmeier and James L. Peilders, ISO 1996 Acoustics – Description and Measurement of Environmental Noise Round Robin Testing, Canadian Acoustics, Volume 29, No. 3, September, 2001