

The Regulation of Noise

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Ladies and Gentlemen, welcome to the forum on industrial noise. This being the last day of the symposium I promise you some very informative data on the recent regulation revisions, regarding industrial noise, proposed by the Workers' Compensation Board of British Columbia. It goes without saying that without the support of management and labour, it would be difficult to effectively enforce such regulations on all industries.

Let me explain a little about what is presently in force and then what is envisaged for the future.

Our present regulations, effective May 1, 1972 require that:

- a. the employer shall first take appropriate measures to reduce the noise intensity to approved levels, or
- b. if it is not practical to reduce the noise to approved levels or isolate the workmen from the noise, the workmen shall wear personal protective equipment which will effectively protect their hearing.

We then apply the criteria for permissible noise exposure. This is the familiar time weighted scale of 90 dBA for 8 hours with the provision for halving the allowable exposure for every 5 dB increment of noise intensity.

At the start of this program the obvious step was to protect the work force. To this end, the provision of personal hearing protection became widespread. Industry was made aware of the first requirement and I am happy to say that extensive noise control programs were initiated. It took some convincing nevertheless, but I am pleased to relate, that sanctions were not too numerous.

The Board published its policy statement regarding industrial noise in February 1975 wherein the concern about industrial deafness was expressed and preventive measures were outlined. Included was a statement that "as a temporary measure when exposure of workers to noise above the permissible level cannot be avoided, hearing protection must be worn." This then intimated that personal hearing protection would not be accepted as the panacea for all noise exposures.

Personal hearing protection was acceptable as an interim measure while other steps were taken to reduce the noise at the source or isolate the workers permanently from the source of noise. This then is our present policy but, as I intimated earlier, there are other improvements envisaged.

The proposed revision to the regulations have taken a new title, that of Industrial Health and Safety Regulations. These proposals have gone through the process of first and second draft and public hearings, and the cut-off date for additional written submissions to the drafts was July 30, 1976. All submissions are now being studied in preparation for final regulations. As stated in the published Second Draft Amendments, the proposed regulations require:

1. Noise levels to which workers are exposed shall not exceed:

- a. 90 dBA of steady state noise, or
- b. daily exposure to impulsive noise in excess of 100 impulses at 140 dB.

in circumstances in which the noise could have been reduced by methods that are known to the employer, or which he could have discovered upon reasonable inquiry, except;

- a. where the excessive noise level occurs solely in a location to which human access is either impossible or not necessary and not permitted; or,
- b. where the excessive noise level occurs solely at a time at which access is not necessary and not permitted; or
- c. in emergency or other transitory exposure situations where anyone presently is wearing hearing protection.

Where an employer could not and cannot reduce the noise to 90 dBA or below, or cannot isolate the worker from the noise, then all workers who are so exposed shall be provided with and shall wear adequate hearing protection devices. Where hearing protection is required by this regulation, but for medical reasons hearing protection devices should not or cannot be worn by any individual, the employer shall notify the Board and shall follow the directions of the Board concerning the permissible noise exposure.

In a nut-shell then, the Board is proposing a MAC of 90 dBA steady state noise, and 140 dB peak. The permissible excursions from these values will be, "not normally manned positions," emergency conditions, and medical considerations. It has been proposed that where medical considerations are involved we could then relate back to the familiar time weighted scale.

Where impact noise is concerned, it is intended to limit this to 100 impulses at 140 dB, 1000 impulses at 130 dB, and 10,000 impulses at 120 dB. With a little bit of research it will become obvious that we are not too different from the OSHA proposed new noise standard. Included also is a requirement for audiometric testing of the work force. The requirement here will be for base line and periodic audiograms for workers who are exposed to noise in excess of 85 dBA of steady state noise, or in excess of impulse noise of 120 dB.

The proposed requirement for this audiometric testing program is that the conditions be met not later than January 1, 1978. It is envisaged then that every worker exposed to noise shall receive an initial hearing test and shall then receive an annual hearing test thereafter.

It is obvious that the testing of workers' hearing is an integral part of any overall program for the prevention of industrial deafness.

Measuring the hearing of workers at the time they begin their employment and at periodic intervals thereafter assists a program of noise measurement and noise control enforcement.

To enforce such a program it is prudent to assist the industrial community in its implementation. To that end, then, the Workers' Compensation Board of B.C. has established a Hearing Branch in Richmond for the purpose of hearing loss claim adjudication, provision of clinical facilities for the determination of hearing loss, the training and subsequent follow-up of the industrial audiometric program. In addition, it is the function of the Board's industrial hygienists to monitor noise through the Province and assist industry in their noise abatement programs.

I realize this just a key-hole sketch of the regulations pertaining to noise in B.C. However, my two speakers will elaborate on the problems confronting industry and illustrate some of the work that has been done for compliance with present regulations and with ears to the ground, the proposed regulations.

My first speaker then will be Mr. Don Blake, and I must admit that there is no one in B.C. so well equipped as Mr. Blake to "lay on you" the trials and tribulations that the hearing conservation and noise control program inflicts on industry, especially a large industry which Don represents. As he goes through his presentation it will become obvious that considerable effort and analysis has been attributed to the requirements for noise control. It gives me pleasure therefore to introduce the manager of Acoustical Engineering Control for MacMillan Bloedel Ltd., Mr. Don Blake

(Editors Note: Mr. Blake's paper appeared in the last Newsletter, Vol. 5, No. 1).