ABSTRACT

In 1999 a new I-INCE Technical Study Group TSG 2 was formed on “Noise labels for consumer and industrial products”. This was intended to survey current methods for labelling and otherwise characterizing the noise emissions of consumer and industrial products. Note that labelling can mean more than just a physical label – it might be details in a Technical Manual. The measurement methods used by testing authorities were to be included in the survey. The methodologies were to be compared, and an assessment made of their relative effectiveness. The study of noise labelling is part of an educational program to advise on how, and in what form such labelling should be implemented.

There has been active participation in the TSG from UK, USA, Japan, Norway, Turkey, Belgium and Brazil, with email exchange of information and 2 meetings, at Internoise 2000 in Nice and 2001 in Den Haag. More recently the survey questionnaire has been sent to all the 46 Member Societies of I-INCE. This paper will explain the survey and summarize current results.

1. Introduction

Technical Study Groups have been a vital part of the activities of I-INCE for many years. There are currently 5 in operation, see http://users.aol.com/iince1/iince.html, and this paper concerns the work of TSG 2 on Noise labels for consumer and industrial products. Consumer goods are sold at retail to ultimate customers for personal or household use, indoors or outdoors. Industrial products are sold to commercial firms for a wide variety of purposes. In many parts of the world, consumer and industrial goods are sold without any noise limitations, and frequently no indication to the purchaser how noisy the products will be.
when installed, either to those who operate the products or to those in the vicinity. There is much work in progress to develop international and national standards for measuring the noise characteristics of consumer and industrial products, and there are testing organizations in many countries which carry out appropriate evaluations. However, the noise data available to the typical customer is frequently limited, even in those countries where there is great concern for noise at the workplace, in the home, and in the neighborhood.

The TSG has attempted to assemble information from the countries whose representatives are participating in the study on noise labelling methodologies. Such methodologies are intended to provide effective means for specifying the noise properties of consumer and industrial products to make it possible for the purchasers to select low-noise products. The intent is to provide information that will benefit the users of these products, and their neighbours. The ultimate goal is to make the low noise of products an important competitive factor in the sale of such products. An important aspect of this study is to develop recommendations on how and in what form labelling can be implemented to bring about people’s awareness of the effects of excessive noise, and the need to reduce noise immission levels to preserve health and provide an acceptable environment.

2. Membership

Following the formal agreement to initiate the work in 1999, a request for participation was sent from I-INCE to all Member Societies. Members were offered from the following:

- Australia (Australian Acoustical Society) - Warwick Williams;
- Belgium (Belgian Acoustical Association) - Dominique Pleeck;
- Brazil (Brazilian Acoustical Society) - Samir Gerges;
- Czech Republic (Czech Acoustical Society);
- Japan (INCE/Japan) and (Acoustical Society of Japan) - Iko Kimizuka;
- Korea (Korean Society for Noise and Vibration Engineering) - Doo-Hoon Kim;
- Norway (Acoustical Society of Norway) - K. Selvaag;
- Slovenia (Slovenian Acoustical Society) - N. Holecak and J Rejec;
- Turkey (Turkish Acoustical Society) - Hakan Serafetinoglu;
- United Kingdom (Institute of Acoustics) - Bernard Berry;
- U.S.A. (Acoustical Society of America) - Robert Hellweg and Joe Pope;
- U.S.A. (INCE/USA) - Robert Hellweg.

3. First Meeting

The TSG held its 1st meeting on 29 August 2000 at Internoise 2000 in Nice. The TSG discussed and agreed its Scope, based on that initially posted on the I-INCE website, but with modifications. It agreed a Workplan including, as a first priority, a survey of current methods.
of labelling, and related measurement methods, across I-INCE Member societies represented on the TSG.

4. Survey of Current methods

A Five-item Questionnaire was produced by the Convenor in September 2000 and, after consultation with members of the TSG, was accepted as the basis of the Survey. It was distributed to members by email and the initial target date for completion of the survey was December 31 2000. The 5 items were;

A. What international, national, and local regulations and standards are in use in your country which involve the noise labelling of products of any kind. Please summarise the key parts of any official documents, including details of the test methods used to determine noise output for any labelling, and the details of the actual labelling.

-----------------------------------------

B. Do you think the information given on noise labels could be improved?
For example should Sound Quality indicators such as Loudness be considered?

------------------------------------------

C. If applicable, how effective do you think noise labelling has been in your country.
Not effective/Effective/Very effective

------------------------------------------

D. Do you know of any technical/consultancy reports, conference papers on this topic?

------------------------------------------

E. Do you have any other general comments or observations of relevance to this survey?

------------------------------------------

5. Second meeting

A second meeting of the TSG was held prior to Internoise 2001 in Den Haag. A key part of this meeting was a detailed account of the very interesting approach taken in Brazil to labelling, through the “Programa silêncio”. Information was provided on the basic regulations and standards, testing infrastructure and labelling procedure. An example of one of the labels is shown in Fig 1.
At the second meeting, it was agreed that, to supplement input from active participants in the TSG, an email enquiry should be made of all 46 I-INCE Member Societies.


To date, responses to the survey questionnaire have been received from; China, Japan, Norway, Turkey, Russia, South Africa, UK, USA

Even though numbers of responses are small, a large amount of information has been obtained on relevant standards in response to the first survey question. Of particular interest is the Ecomark system used in Japan. In the USA, ANSI are making progress with an American version of ISO 4871, ANSI S12.61-200X.

On question B, a significant majority of responses favoured additional information such as sound quality on noise labels, to supplement sound power/sound level information. It was noted that in the USA some industrial organizations have developed product specific measurement standards, including for example, the Air Movement and Control Association (AMCA). The AMCA Home Ventilation Division (HVI) has administered its sound certification program for 30 years, providing a simple, single number, linear rating that consumers can use to compare the noise emissions from products. This noise number is on
the carton of all home ventilator fans – it is determined according to a unique test related to sound power and reported in units of sones.

On question C, only in Russia was labelling seen as effective. In Norway it was noted that labelling was effective for industrial equipment but not for consumer products. From Question D a number of interesting reports were identified [1, 2, 3].

Question E elicited this interesting comment from South Africa. “The other main application, which is of greater importance, is labelling of equipment for Industrial purposes. If Industrial equipment is supplied with all the sound power characteristics in Octave bands, these values could be used in Environmental Planning. At the moment Noise Impact investigations are very expensive, because the noise radiation characteristics of equipment is not available, and must be measured at great cost.”

A 3rd meeting will be held prior to Internoise 2002 in Dearborn to discuss a draft I-INCE report. An update on this will be given at the Conference.

6. Acknowledgements

As Convenor I would like to thank all the members of the TSG for their enthusiastic participation and their vital contributions. Thanks are due to Dr Gilles Daigle, I-INCE Vice President for Technical Initiatives.

8. References

