

THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

**NOISE**

**A Guide to Information Required**

**from Equipment Vendors**

PUBLICATION No. 104 — 1985



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## THE ENGINEERING EQUIPMENT AND MATERIALS USERS ASSOCIATION

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## INTRODUCTION

This booklet is intended to give a *brief introduction* to the subject of noise and a guide to the information which users may require on noise from your equipment.

Employers are required by law to give attention to the noise levels in their work places in order to ensure that their employees are not exposed to excessive noise. They are also under a legal obligation to ensure that their plants do not cause a nuisance in the neighbourhood. This means that purchasers of industrial equipment will be increasingly concerned with the noise the equipment emits and will require information on this in addition to its mechanical characteristics.

The information they ask for will depend on the type of equipment and the place in which it is used; they may require a simple statement of the noise level at some defined position, or they may require a detailed report giving information on the noise emitted by the equipment at various frequencies and the noise levels under various modes of operation. If you are a manufacturer who has not been accustomed in the past to provide such information with your products you may find difficulty in answering the enquiries and you could, possibly, lose a customer. To provide a satisfactory answer you will have to make noise measurements and this will involve you either in training a member of your staff to make the measurements — and obtaining a sound-level meter — or contracting an outside consultant to make them. Either way you will need to understand what the measurements mean to ensure you get value for money and also to ensure that you are providing the information your customer needs.

The provision of reliable information on equipment noise may place a new burden upon you if you do not have an established procedure for noise tests. Although the user is ultimately responsible for the noise levels in his plant, legislation under consideration in the UK and EEC may also place an obligation on the supplier to give satisfactory noise data with his product. But, even without this, there will be a growing trend for purchasers to insist on this information, so you will have to give consideration to setting up procedures for carrying out the necessary noise tests.

Appendix 3 gives a glossary of the more commonly used acoustic terms. For further reading, References 2 and 3 are recommended as useful guides to basic acoustic principles and methods of noise control.

## NOISE SPECIFICATIONS

Many purchasers will now specify limits for noise emission in a purchase order for equipment or in an enquiry. The Complexity of the specification will depend on how they intend to use the equipment.

The first stage in the procedure could be a preliminary enquiry from a purchaser in the form of Appendix 1. This will enable him to make a general decision as to whether the equipment will represent a noise problem or not. If the information he receives indicates that the noise will be well below the noise levels he requires in his plant, he may proceed with the purchase without further enquiry. On the other hand, if the information indicates that the equipment noise is approaching or exceeds his noise limits, he will require more detailed information. He may present a specification defining a noise limit in dB(A) at a certain distance from the equipment or at a particular place where an operator works. Alternatively, he may present a more detailed specification for noise limits such as that of Appendix 2 if the equipment is to be part of a complex plant containing other noisy equipment.

In the example of Appendix 2 (based upon Reference 1) the purchaser will have started from the basis of the noise levels he wishes to meet in his plant, and possibly in the neighbourhood as well. He will consider the total noise from all the equipment he is installing and will then allocate separate noise limits to each item. These will be quoted as sound-pressure levels and, possibly, as sound-power levels. The equipment would have to meet both sets of limits.

As the limits will have been derived for the particular situation in which the equipment is to operate, it is possible that different limits might be specified for the same equipment ordered for another purpose. It