

## Recent Activities in Noise and Vibration Control Engineering in Japan

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### Introduction

Since the 1950s, noise has been one of the important social problems in Japan, and there have been remarkable developments in the field of noise control engineering. A large number of papers and technical reports have been published. However, most of them are written in Japanese, and therefore practical activities on noise and noise control engineering in Japan are not well understood in other countries. Here, the peculiarities existing in noise problems and the special features in noise control engineering in Japan are reviewed - through an analysis of activities from various viewpoints.

### Activities in Professional Societies and Institutes

Noise and noise control engineering problems have been treated in various professional societies and institutes in parallel with authorities at various levels of government, public corporations, and private industry. In this section, activities in leading societies and institutes are described.

#### The Acoustical Society of Japan (ASJ)

The Acoustical Society of Japan (ASJ) was established in 1936 and now has more than 4500 members. The special interests of its members cover almost all fields of acoustics. ASJ holds spring and fall meetings annually; in each meeting, about 600 papers are presented. About 15% of the papers cover noise and noise control engineering, mainly in noise & vibration and building acoustics sessions. In order to see the general trends,

Table 1. The number of papers on noise/vibration at the 1996 meetings of ASJ classified by subject area.

Subject Classification	Number of papers
EMISSION: NOISE SOURCES	17
PHYSICAL PHENOMENA	5
NOISE CONTROL ELEMENTS	11
VIBRATION & SHOCK	7
IMMISSION	26
ANALYSIS	17
Total:	83

Table 1 shows the number of papers on noise and vibration at the 1996 meetings classified by subject area.

In addition to these papers, there is a fairly large number of papers on noise and vibration in other sessions such as building acoustics, electroacoustics, hearing, etc.

The work of Technical Committees is a special feature of ASJ activities. Existing Technical Committees cover nearly all fields in acoustics - such as noise and vibration, building acoustics, electroacoustics, speech, hearing, ultrasonics, underwater acoustics, musical acoustics, etc. Every year, each technical committee has about 10 meetings somewhere in Japan. These meetings are open to all ASJ members. In each meeting, five to twenty papers are presented and discussed, and proceedings are published. For each paper, 40 to 60 minutes are allocated for presentation and discussion.

In ASJ, *ad hoc* survey/research committees are organized for special subjects to be considered for the development of acoustics. At present, there are the following four committees relevant to noise:

- 1) Prediction method for road traffic noise
- 2) Education in acoustics
- 3) Hearing protection
- 4) National and international standards on acoustics

ASJ publishes two journals. The monthly *Journal of the Acoustical Society of Japan* in which original papers, technical reports, short notes, reviews etc. appear in Japanese. Papers in English appear in the second *Journal of the Acoustical Society of Japan (E)*, which is published bi-monthly.

#### The Institute of Noise Control Engineering of Japan (INCE/Japan)

INCE/Japan was established in 1976, after INTER-NOISE 75 was held in Sendai. INCE/Japan now has about 1300 members. A special feature of the Institute membership is that not only noise control engineers but also governmental and local administrators may join.

INCE/Japan has an annual meeting where rather