

- 775 Retaining High Sound-Transmission Loss in Industrial Plants. G. L. Bonvallet.
Noise Control 3, 61-64, 92 (Mar. 1957).

It is one thing to enclose an intense sound source such as a modern jet engine behind 12-inch poured concrete walls, and it is another to take full advantage of the sound attenuation provided by such walls, because sound leaks creep into the picture. This presentation describes means of providing high attenuation and points out the importance of leaks. The advantages of double walls are demonstrated. A number of examples are given in which closing of cracks, using fewer windows, and similar means produced better sound attenuation. Methods of measuring sound attenuation are described. The average transmission loss is a convenient figure, but for some work further attention should be paid to sound reduction at high or low frequencies, depending on the requirements of the job at hand.

- 776 Use of Partial Enclosures to Reduce Noise in Factories. D. E. Bishop.
Noise Control 3, 65-69, 82 (Mar. 1957).

Complete enclosure of a noise source is often impracticable, but noise reduction can be accomplished by partial enclosure if properly designed. The following general principles should govern the choice and design of partial enclosures: (1) Where large reductions of noise are required the percentage of open area of the enclosures must be kept very small; (2) Partial enclosures having considerable open area can provide moderate reduction over restricted horizontal angles; (3) Enclosures with a top are preferable, but open-top enclosures can be effective if the gap between the top of the enclosure and the ceiling is kept small and the ceiling is lined with sound-absorbing material; and (4) Partial enclosures are most effective outdoors or in factory-type rooms and least effective in regular rooms which have little sound absorption. -- Cond. from author's summary

- 777 Aircraft Noise and Building Design. A. C. Pietrasanta.
Noise Control 3, 11-18, 88 (Mar. 1957).

Engineering procedures have been presented that can be used with relative ease in analyzing and solving noise problems caused by the interference of jet aircraft noise with speech communication and performance of tasks in nearby office buildings. These procedures utilize the latest information on estimating noise levels from jet aircraft operations and also the most recent thinking on the application of office noise criteria in intermittent-noise situations. They can be used in many ways: for example, to determine the requirements for an adequate wall structure, to aid in the selection of a building site or a site for run-up operations, and to evaluate the effect of re-orienting ground run-ups and using shielding structures and run-up noise suppressors. -- Author's summary

- 778 Materials and Techniques for Damping Vibrating Panels. R. N. Hamme.
Noise Control 3, 23-26, 86 (Mar. 1957).

Vibration damping techniques correctly applied to panel systems can yield large-magnitude noise reductions. The range of application of these techniques and appropriate methods and materials are discussed. -- Editor's summary

- 779 Noise Reduction in Pumps and Pump Systems. N. L. Meyerson.
Noise Control 3, 27-32, 91 (Mar. 1957).

Objectionable noise and vibration from a pump system is not necessarily due to the pump. The chief causes of noise investigated were, in order of decreasing importance: (1) improper mounting, line-up, and isolation of the system; (2) excessive use of pipe fittings, poor piping, sharp bends, and noisy valves; (3) poor maintenance of equipment, which resulted in several noisy conditions; (4) misapplication and off-design operation of pumps; (5) noisy transmissions; and (6) unbalance in pump or motor. Application of reasonable care to the details of pump selection and operation, pipe and fitting selection, isolation and absorption techniques, and proper maintenance will insure quiet and vibration-free service from any pump system. -- Cond. from author's summary