

INDUSTRIAL NOISE

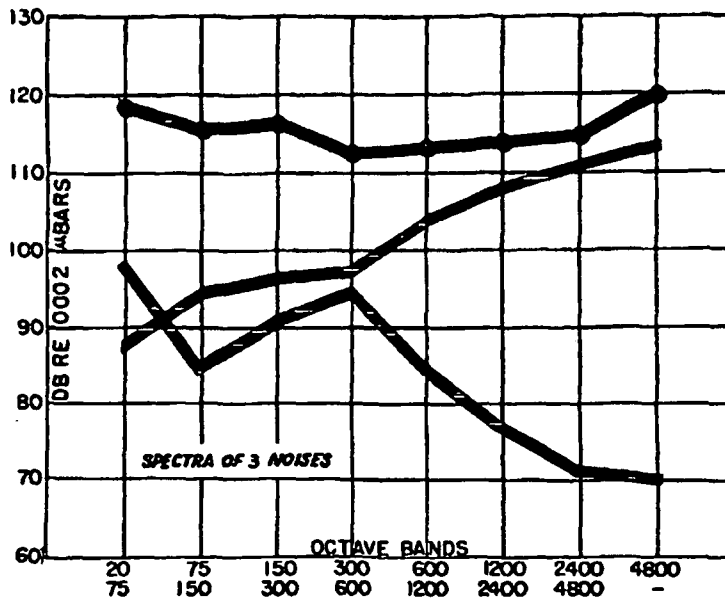


Fig. 43-4 Three representative octave band analyses

Standards Association and the International Organization for Standardization

TABLE 43-A

PREFERRED FREQUENCIES FOR ACOUSTICAL MEASUREMENTS (American Standard S1 6-1960)

Center Frequency (c)	Bands (c)
31.5	22.3 to 44.8
63.0	44.8 to 89.2
125	89.2 to 177.0
250	177.0 to 354.0
500	354.0 to 707.0
1,000	707.0 to 1,414.0
2,000	1,414.0 to 2,828.0
4,000	2,828.0 to 5,656.0
8,000	5,656.0 to 11,310.0
16,000	11,310.0 to 22,620.0
Overall	All pass

Some analyzers are designed to measure sound pressure level in one-third octave bands or in narrow bands of constant width, for example, 5 cycles or 20 cycles. Such

measurements are entirely acceptable, but are not necessary for hearing conservation purposes.

The sound level meter and octave-band analyzer do not measure impulsive noise levels accurately. If a noise-exposure includes impulsive noises, qualified acoustical engineers should make the noise measurements with special equipment.

Noise level measurements for hearing conservation purposes should always be made at the approximate position of the employee's most exposed ear. To take account of the variations in noise levels produced by changes in operational schedules or procedures, repeated measurements should be made during a single day as well as on different days of the week.

Noise-exposure measurement should be undertaken only by personnel with training and experience in making physical measurements with electronic equipment. Readers wishing further information on the techniques of noise measurement should