

AIR AND NOISE POLLUTION, CAUSES, ABATEMENT MEASURES

Some of the ways to control noise pollution are as follows:

- (1) Control at Receiver's End
- (2) Suppression of Noise at Source
- (3) Acoustic Zoning
- (4) Sound Insulation at Construction Stages
- (5) Planting of Trees
- (6) Legislative Measures.

Like all other pollutions, noise pollution needs to be controlled by measures which will maintain the acceptable levels of noise pollution for human beings and buildings as indicated.

Noise pollution can be effectively controlled by taking the following measures:

(1) Control at Receiver's End:

For people working in noisy installations, ear-protection aids like ear-plugs, ear-muffs, noise helmets, headphones etc. must be provided to reduce occupational exposure.

(2) Suppression of Noise at Source:

This is possible if working methods are improved by:

- (a) Designing, fabricating and using quieter machines to replace the noisy ones.
- (b) Proper lubrication and better maintenance of machines.
- (c) Installing noisy machines in sound proof chambers.
- (d) Covering noise-producing machine parts with sound-absorbing materials to check noise production.
- (e) Reducing the noise produced from a vibrating machine by vibration damping i.e. making a layer of damping material (rubber, neoprene, cork or plastic) beneath the machine.
- (f) Using silencers to control noise from automobiles, ducts, exhausts etc. and convey systems with ends opening into the atmosphere.
- (g) Using glass wool or mineral wool covered with a sheet of perforated metal for the purpose of mechanical protection.

(3) Acoustic Zoning:

Increased distance between source and receiver by zoning of noisy industrial areas, bus terminals and railway stations, aerodromes etc. away from the residential areas would go a long way in minimising noise pollution. There should be silence zones near the residential areas, educational institutions and above all, near hospitals.

(4) Sound Insulation at Construction Stages:

(a) Sound travels through the cracks that get left between the door and the wall. For reducing noise, this space (jamb frame gap) should be packed with sound absorbing material.

(b) Sound insulation can be done by constructing windows with double or triple panes of glass and filling the gaps with sound absorbing materials.

(c) Acoustical tiles, hair felt, perforated plywood etc. can be fixed on walls, ceilings, floors etc. to reduce noise (especially for sound proof recording rooms etc.)

(5) Planting of Trees:

Planting green trees and shrubs along roads, hospitals, educational institutions etc. help in noise reduction to a considerable extent.

(6) Legislative Measures:

Strict legislative measures need to be enforced to curb the menace of noise pollution. Some of these measures could be:

(a) Minimum use of loudspeakers and amplifiers especially near silence zones.

(b) Banning pressure horns in automobiles.

(c) Framing a separate Noise Pollution Act.