

to their source or sources. It is not improbable that in the near future the maximum sound level produced in a room by ventilating equipment will be specified, just as the quantity of air is now specified. The proper standard for office buildings is about 25 decibels⁵, while in a space where quiet is of the greatest importance, as in residences, sound studios, etc., the level should be as low as 5 decibels. If these conditions are specified it will then be possible to make the contractor responsible for the quietness of operation, either through the use of low air velocities and low fan speeds, or by the use of special duct construction, or by sound deadeners, depending on what is shown by an evaluation of all factors, including construction cost, space assigned to ventilating equipment and ducts, horsepower consumed, etc. Further information on this subject will be found in Chapter 32.

AIR CONDITIONING OF LIBRARIES⁶

Temperature, per se, can be disregarded generally as having little effect upon the keeping qualities of books. There is an optimum temperature for the growth of each variety of mildew, but this growth can best be inhibited by depriving the mildew of water or by the use of chemical treatments. Too high a temperature (over 100 F), combined with low relative humidity, may cause the book materials to become brittle. A temperature much below freezing may cause permanent deterioration of the glue.

The relative humidity should be maintained between 40 per cent and 70 per cent, although these limits may be exceeded in either direction for short periods of time. If the relative humidity gets much below 40 per cent, first the glue and then the paper will tend to become brittle. This will not cause any permanent damage unless the book is used, or rather abused, while in this condition. Subsequent increase in humidity will bring the materials back to their normal condition. If the relative humidity gets much above 80 per cent, the growth of mildew may be expected.

⁵The decibel is the unit of sound level.

⁶Based on a paper by the Bureau of Standards.

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