CODE OR STANDARD	WHEN ADOPTED OR APPROVED	SPONSORED BY	REFERENCE
Standard Test Code for Heat Transmission Through Walls.	January, 1925	A.S.H.V.E.	JOURNAL, A.S.H.V.E. Vol. XXXIV, No. 1, January, 1928.
Approval Requirement for Central House Heating Gas Appliances.	1927	*American Gas Association.*	*American Gas Association,* New York City.
Code for Heating and Ventilating Garages.	June, 1929	A.S.H.V.E.	JOURNAL, A.S.H.V.E. May, 1929, p. 63.
Code of Minimum Requirements for the Heating and Ventilation of Buildings.	June, 1925	A.S.H.V.E.	Code of Minimum Requirements for the Heating and Ventilation of Buildings, Edition of 1929.
Pipe Flanges and Fittings.	1927–1929	*American Society Mechanical Engineers.*	*American Standards Association.*
Code for use of Pitot Tube.	January, 1914	A.S.H.V.E.	TRANSACTIONS A.S.H.V.E., Vol. XX, p. 211.
Identification of Piping Systems.	November, 1928	(1) *American Society Mechanical Engineers;* (2) *National Safety Council.*	*American Standards Association,* JOURNAL, A.S.H.V.E., July, 1929.
Pipe Thread	December, 1919	(1) *American Society Mechanical Engineers;* (2) *American Gas Association.*	*American Standards Association.*
Safety Code for Mechanical Refrigeration.	Submitted for formal approval.	*American Society of Refrigeration Engineers.*	*American Standards Association.*
Code for Testing Radiators.	January, 1928	A.S.H.V.E.	TRANSACTIONS, A.S.H.V.E., Vol. XXXIII.

In addition to the foregoing Codes and Standards, others having an important bearing on the heating and ventilation of buildings are under preparation. These include Code for Rating Low-Pressure Heating Boilers; Code for Testing Unit Heaters; Code for Testing Unit Ventilators; Code for Testing Concealed Radiators, and Code for Testing Air Cleaners.

CHAPTER 2

HEAT LOSSES FROM BUILDINGS

Method of Computing Heat Losses; Data on Inside and Outside Temperatures; Heat Losses by Transmission; Conductivities of Building Materials and Insulations; Heat Transmission Coefficients; Heat Losses by Infiltration; Effect of Wind Movement; Examples of Heat Loss Computations; Prevention of Condensation.

INTRODUCTION

MANY important changes and additions have been made to this chapter of THE GUIDE, 1930. Special effort has been made to base the conductivities and conductances of building materials, insulations and air spaces upon the latest and most reliable test data available. The heat transmission tables have been enlarged and rearranged to include many common types of construction, and all the tables have been recomputed, using a new conductance factor for air spaces. A discussion of the economic value of insulation has been added, together with formulae for solving fuel and radiation-saving problems. Data regarding the prevention of condensation on interior building surfaces have been included.

CALCULATING HEAT LOSSES

The procedure to be followed in determining the heat loss from any building can be divided into seven consecutive steps, as follows:

1. Determine on the inside air temperature, at the breathing line, which is to be maintained in the building during the coldest weather. See Table 1, p. 8.

2. Determine on an outside air temperature for design purposes, based on the minimum temperatures recorded in the locality in question, which will provide for all but the most severe conditions. Such conditions as may exist for only a few consecutive hours are readily taken care of by the heat capacity of the building itself. See Table 3, p. 11.

3. Select or compute the heat transmission coefficients for outside walls and glass, also for inside walls, floors, or top-floor ceilings, if these are next to unheated space; include roof if next to heated space. See pages 14 to 30 and Tables 12 to 36.

4. Measure up net outside wall, glass and roof next to heated spaces, as well as any cold walls, floors or ceilings next to unheated space. Such measurements are made from building plans, or from the actual building.

5. Compute the heat transmission losses for each kind of wall, glass, floor, ceiling and roof in the building by multiplying the heat transmission coefficient in each case by the area of the surface in square feet and the temperature difference between the inside and outside air. (See pars. 1 and 2).

6. Select unit values and compute the heat equivalent of the infiltration of cold air taking place around outside doors and windows. These unit values depend on the kind or width of crack and wind velocity and when multiplied by the length of crack and the temperature difference between the inside and outside air, the result expresses the heat required to warm up the cold air leaking into the building per hour. See pages 60 to 73 and Tables 37 to 42.