This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.

FOREWORD

This is a revision of ANSI/ASHRAE Standard 17-2015. This ISC publication public review draft updates references.

This is a review of Independent Substantive Changes to normative text made since the last public review. Text that was removed from the Public Review Draft is provided for reference but is shown in strikethrough, and text that has been added is shown with underlines.

Only these changes are open to comment at this time. All other material is provided for context only and is not open for Public Review comment except as it relates to the proposed changes.

10. CAPACITY CALCULATION

\[
\text{CAPACITY} = w \left( h_g - h_f \right) \quad (2)
\]

where

- \( w \) = refrigerant mass flow rate, kg/h (lb/h)
- \( h_g \) = enthalpy of saturated refrigerant vapor at the measured equalizer pressure, kJ/kg (Btu/lb)
- \( h_f \) = enthalpy of saturated refrigerant liquid at the measured test valve inlet temperature, kJ/kg (Btu/lb)

The enthalpy values (\( h_g \) and \( h_f \)) of some refrigerants at various temperatures may be found in *ASHRAE Handbook— Fundamentals* in the chapter entitled “Thermophysical Properties of Refrigerants.” More extensive properties are available in the NIST Standard Reference Database 23, entitled *NIST Thermodynamic and Transport Properties of Refrigerants and Refrigerant Mixtures—REFPROP 10*.

SI Example test report:

Refrigerant R-410A (a Zeotropic mixture)
Liquid temperature 40°C
Inlet pressure 2733 kPa absolute
Outlet pressure 1258 kPa absolute
External equalizer pressure 936 kPa absolute
Temperature-sensing element temperature 11°C
Static superheat 3°C
Superheat change 3°C
Refrigerant flow rate 300 kg/h
$h_g = 427.55 \text{ kJ/kg}$

$\eta_f = 266.3 \text{ kJ/kg}$

Capacity = 13.4 kW

*I-P Example test report:*

Refrigerant R-410A (a Zeotropic mixture)

Liquid temperature 100°F

Inlet pressure 396 psia

Outlet pressure 182 psia

External equalizer pressure 136 psia

Temperature-sensing element temperature 52°F

Static superheat 6°F

Superheat change 6°F

Refrigerant flow rate 600 lb/h

$h_g = 183.8 \text{ Btu/lb}$

$\eta_f = 114.5 \text{ Btu/lb}$

Capacity = 41,580 Btu/h

11. REFERENCES


