

TECHNICAL UPDATE - TU-1003

SUBJECT: ASTM and ASME Standards

3/26/01

There are two groups of documents that play a major role in the selection and application of tubing used in our Preinsulated, and Heat Traced Tubing products.

The first group, ASTM Standards, published by the American Society for Testing and Materials, covers tubing materials and constructions, and the test methods used to insure that the requirements of the individual Standard are met.

These standards are developed by working committees whose members include representatives from manufacturers, end users, specifying agencies, and others involved in the production and application of the particular product or material.

ASTM Standards on tubing cover items like: material chemistry, surface appearance, physical properties, testing methods for material properties, dimensional tolerances, quality assurance procedures, product marking, and labeling.

Tubing Standards generally cover a number of materials, fabrication methods, and sizes commonly used in a specific application.

It should be noted that the Standards do not state or imply that a particular material or product is required or suitable for the intended application.

Specific Standards used by Dekorun Unitherm are discussed in later Technical Updates.

The second group of documents is the American National Standards Committee B31 Code for Pressure Piping, commonly called the ANSI Piping Code (The Code). This Code is administered by the American Society of Mechanical Engineers (ASME).

The Code covers engineering requirements for the safe design and construction of pressure piping systems. It is divided into several sections, based on the application. Dekorun Unitherm is generally concerned with section B31.1 (Power Piping) and section B31.3 (Process Piping). Other sections cover piping in applications like nuclear power plants, and transmission lines.

The Code covers design pressures and temperatures, static and dynamic effects on the piping system, and the design of piping, connections and supports.

The Code does not require specific designs for the application. Instead, it gives the formulae and information required for all designs.

Like the ASTM Standards, the Piping Code does not require the use of a specific material for any given application. The designer selects materials based on their knowledge of the application, using design parameters detailed in the Code.

Many of the design parameters detailed in the Dekorun Unitherm catalog and Product Standards are based on data from the ANSI/ASME Piping Code.