

(PREVIEW)

Indian Standard

SPECIFICATION FOR
SHELL AND TUBE TYPE HEAT EXCHANGERS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 27 September 1967, after the draft finalized by the Chemical Engineering Sectional Committee had been approved by the Mechanical Engineering Division Council.

0.2 Shell and tube type heat exchangers are widely used in many branches of industry for duties such as heating, cooling, evaporating chemical reaction. This specification lays down the essential requirements and gives guidance for the design and construction of such heat exchangers.

0.3 The design requirements given in this specification are based on those given in IS : 2825-1969*.

0.4 A typical heat exchanger data sheet has been given in Appendix A.

0.5 The following data have been tabulated in Appendix B for various materials at different temperatures:

- a) Thermal conductivity of metals,
- b) Mean coefficient of thermal expansion, and
- c) Modulus of elasticity.

1. SCOPE

1.1 This specification covers the design, construction, inspection and testing of cylindrical shell and plain tube heat exchangers for application in the petroleum and general chemical industry. Both the requirements of the industries where the operating conditions are not severe or where costlier materials of construction are used as well as the more severe requirements of the petroleum and chemical processing industries are covered.