

EN13445-3 Annex J

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Alternative methods for the design of heat exchanger tubesheets

This method may give significant reduction in tubesheet thickness compared to the standard method given in section 13, especially for fixed tubesheet heat exchangers. The calculation of heat exchanger tubesheets in the last sixty years in Germany mainly was based on semi-empirical formulae. Some trials to use modern theory of elasticity gave results contradicting to long experiences. Therefore limit load calculations was tested and gave excellent results corresponding to the experiences. These methods are used in the Standard of COMECON and in TGL 32903-23. An improved form is given in EN 13445-3, Annex J.

Even if the method is complex and require a number of iterations, it can easily be run using the VVD software, and it only requires a few more input variables compared to method in section 13. The method given in Annex J was first included in version 9.91 of the VVD software.