

Application of Strength Criteria for Cellular Pressure Vessels

Authors : Antanas Žiliukas, Mindaugas Kukis

Abstract : The work deals with cellular pressure vessels subjected to internal pressure. Their cellular insert can be used for placing liquids or gases, which is necessary to carry out technological processes, and the vessel itself has a good bearing capacity. Numerical calculations of the three core structures, which measure the influence of the inner cylinder thickness on maximum bearing capacity are presented. The calculations are compared using strength criteria and they show the different strength safety level.

Keywords : pressure, strength criterion, sandwich plate, cellular vessel

Conference Title : ICME 2014 : International Conference on Mechanical Engineering

Conference Location : London, United Kingdom

Conference Dates : May 26-27, 2014