Brick Veneer Steel Stud Wall Systems: State-of-the-Art

Joseph O. Arumala [1]

Abstract:

Brick veneer with a steel stud backup wall system is the most common type of cavity wall system in contemporary construction. Introduced in the mid- 1960s, the steel stud backup wall system has undergone some developmental changes and yet today it still poses challenges to designers, builders, and owners. Termed "controversial" by some professionals, the wall system continues to generate interest in the construction industry because it offers a light-weight and cost-efficient option. This paper examines the progress that has been made from when the wall system first came into the market to the present time. The prospects of the wall system in the early part of the 21st Century are also examined. The issues addressed include failures, the provisions of building codes, and standards available to designers and builders for the proper design, detailing and construction of the system. Also included are designing the system for seismic loads and the computer software that are currently in use for the design of the wall system. From the experience in the industry, it appears that if attention is paid to design, detailing, construction, good workmanship and materials selection, water and air tightness and structural performance, the wall system will continue to offer an attractive and viable form of wall construction.

To purchase full article: Please use this direct link to purchase the TMS Journal Volume of this article, Volume 25, Issue 1: https://masonrysociety.org/product/tms-ejournal-vol-25-no-1/

Otherwise, consider becoming a TMS member for full access to all TMS Journal articles: https://masonrysociety.org/membership/#join

DOI: 10.70803/001c.141185

[1] TMS Member, M. ASCE, PE Professor, Construction Management Technology Program, Department of Technology, University of Maryland Eastern Shore