

Bridge Expansion Joint Rehabilitation

Reid Harmon

Abstract

Bridge expansion joints present an extremely demanding environment for any repair material. Urban applications can sustain hundreds of thousands of impact loading each day. Temperature extremes can run from -30 F to over 120 F. Oil, gasoline, and chemical spills are add to the abuse to which bridge expansion joints are subjected.

Systems used to repair bridge expansion joints can be divided into two basic categories: Permanent, for use on bridges with concrete wearing surfaces; and Temporary, for use when the joints need to last only as long as the asphalt overlays

Permanent applications demand the use of a steel nosing, such as a strip seal expansion joint, and the use of a neoprene sealing element. This type of system is most commonly anchored in place with the use of an elastomeric concrete header.

Temporary applications typically with a maximum expected life of seven years or less, are usually repaired with one of two systems: An elastomeric concrete nosing sealed with a neoprene compression seal or a pourable sealant; or an asphaltic pig expansion joint.

Whatever type of system is used, it is important to have the manufacturer involved in the project in order to provide the owner/specifier with prebid specification assistance, and installation supervision/quality control during the construction phase.

If you have any questions, please contact [Dr. C.Vipulanandan](#)
Copyright © 1998 University of Houston