

# noiseletter

Published by Kinetics Noise Control, Inc.  
Problem-solvers in vibration isolation,  
noise and shock control.

## Kinetics Isolation Pads Solve Shock Transmission Problem in Stamping Plant

When Banner Metal Products Company installed a 450-ton (405 metric ton) Hamilton press at their Windsor Tool & Die facility in Windsor, Ontario, Canada, it was supported on 2" (51 mm) thick neoprene isolators to reduce the transmission of shock into the building structure.

Six years later, a nearby resident complained that the vibration and shock, especially at night, had become very disturbing to him.

The Ministry of the Environment in Windsor allows a maximum peak measured vibration level of 0.3 mm (0.012")/sec for nighttime use.

Windsor Tool contacted Kinetics Noise Control's representative in Detroit, Michigan, for assistance in solving the problem. A vibration survey was conducted to determine the extent of the vibration transmission. It was found that the Hamilton press was transmitting peak vibration of 0.54 mm (0.021")/sec into the structure, exceeding the Canadian code by 80%! It was felt that the excessive transmission was because the 6-year-old neoprene pads had age-hardened and stiffened with time, rendering them useless as vibration and shock isolators.

Kinetics Noise Control designed 2" (51 mm) thick shock isolators using Type Q pre-compressed molded fiberglass pads with a natural frequency of 10.6 Hz. After installation, the measured peak vibration at the neighboring residence was reduced to 0.09 mm (0.004")/sec. The resulting peak vibration was only 30% of that allowed by code, and an 83% reduction from that experienced with the stiff neoprene!

Banner Metal Products' management, sensitive to the needs of the community, was extremely pleased with the performance of the Kinetics fiberglass shock isolators. The residents were appreciative of Banner's efforts and concern and, as a result, a much more amicable relationship evolved.

