

Grinder Isolation

Background:

A Blanchard Grinder was installed on a manufacturing floor using generic machine leveling mounts. During the grinding process, the grinder was transmitting vibration into the floor which affected the quality of the other grinders in the facility.

Solution:

Based on the machine data (weight, operating frequency) provided by the customer, Fabreeka recommended using Fabcel Lev-L mounts with 9 layers of Fabcel 100 isolation material. This design would provide a lower natural frequency mount and reduce the grinder vibration on the manufacturing floor.

Fabreeka made vibration measurements prior to installation of the new isolators. The floor response during the grinding process using the existing machine mounts was 157.8 mm/s^2 at a frequency of 30 Hz.



Result:

The new Fabcel isolation mounts were installed on the grinder and vibration measurements were again made. The floor response during the grinding process was now 18 mm/s² at 30 Hz – a 92% reduction of the transmitted vibration. The quality of this grinder and the other grinders that were affected by its vibration was greatly improved.

