



System: CEKN

Kinetics Noise Control Solutions

NOISEBLOCK™ Composite Curtain Manufacturing Process Enclosures

Client

A large manufacturer of residential and commercial wood products and materials

Issues

- Due to a new industrial hygiene policy that eliminated the use of earplugs noise levels within the facility must be reduced resulting in a company-wide noise abatement initiative.

Solutions

- The client's safety engineering group initially contacted the local Kinetics Noise Control, Inc. (KNC) representative.
- The representative, KNC's engineering team and client's safety group developed an action plan.
- The client supplied the KNC representative with the independent sound study report prepared by a local acoustical consulting firm.

- The KNC representative and KNC engineering team visited the client's facility to review the loudest noise sources and determine the best and most economical solution. The main noise sources occurred in the sanding machine and the tongue and groove machine process areas. The key areas of concern were not at the machines themselves but at the marked personnel walkways and forklift pathways. For the tongue and groove machine area, that meant reducing the existing 105 dBA to 85 dBA at 19'-0" and the sander machine area from 101 dBA to 85 dBA at 5'-0".
- KNC analyzed the consultant sound study and proposed an enclosure system consisting of **NOISEBLOCK™**, model STL-2 panel roof and model KNC-200BQQ sound curtain, wall panels. The customer not only wanted product supply but also wanted KNC's representative to supply installation and post installation sound readings and report.



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Advantages of Proposed Solution:

- The **NOISEBLOCK™** model KNC-200BQQ sound curtain panels and model STL-2 rigid roof panels are all backed by independent sound tests per applicable ASTM standards.
- The necessary products needed to supply one complete system were brought together by utilizing Kinetics Noise Control, Inc. (KNC) multiple manufacturing facilities and diverse group of noise control products.

Considerations:

- “In-plant” noise initiative
- Customer requested the KNC representative to provide product and installation
- There was a set budget
- Time Constraints

Project Goals:

- Facility-wide target sound level of 85 dBA.
- Current noise level 105 dBA.
- The solution must take into account the normal traffic of process and workers and not interfere.

NOISEBLOCK™ Applied Products:

It was determined that complete curtain enclosures, 4-sides and roof were needed to meet the target sound levels. This posed a few challenges. The sound curtain enclosures needed to be 16'-0" H with large roof spans and two long walls being able to slide out of the way on a moment's notice for emergency service and routine maintenance. This required KNC's structural steel design expertise and product diversity. In addition, the enclosures required lighting and ventilation for proper equipment operation and personnel safety. Due to the manufacturing diversity of KNC, the right products were available to achieve the specified requirements. KNC incorporated products from their two manufacturing facilities in the supply of one complete system.

To increase the stability of the enclosure a **NOISEBLOCK™**, model STL rigid panel roof was used. These panels were constructed 18 gage solid outer skins and 22 gage perforated inner skin, all material was galvanized steel, Type G90. These panels yielded a solid support for lighting and ventilation equipment as well as block and absorbed noise. A structural steel support system was used in conjunction with a double-track curtain suspension system allowing for complete opening of the large 16'-0" H x 18'-5" L bi-parting walls required by the tongue and groove process. The wall panels were manufactured of model KNC-200BQQ, sound curtain panels. The curtain panels are constructed of a layer of 2.0 psf, mass-loaded vinyl sandwiched between two layers of 1-inch thick fiberglass quilt faced with aluminized vinyl cloth. The sander process required a window located on the roof for viewing of the sanding process by personnel during operation.

Installation was completed by a local mechanical contractor who had an established, working relationship with KNC's representative.

Fact:

The noise levels were reduced. The client continues to contact the local KNC representative when they encounter a noise control need within any of their nationally located facilities. This type of **NOISEBLOCK™** system is standard within their organization.