

ACOUSTICAL CURTAIN ENCLOSURE

INNOVATIVE CURTAIN ENCLOSURE HUSHES GRANULATOR



“O.K., we’ll flip for it. Heads I have to do it, tails you have to do it.” Sounds like a conversation between two kids arguing over who has to take out the trash. But in actuality, it was the type of conversation that took place for years at a large plastics manufacturer in the Northeast until they called Sound Seal.

Like other manufacturers, this plastics producer has a certain amount of waste inherent in the making of a product. Fortunately, they are able to recycle waste. Waste is loaded into a granulator which grinds the plastic into tiny pellets. Eventually these pellets are reused in a finished product. The problem was that no employee wanted to go near the granulator. It was the loudest machine on the shop floor peaking at 110 dB(A).

Finally, the noisy granulator became too much for management to deal with. Complaints from shop

employees became more frequent, waste piled up meaning that potential raw materials were being squandered and the threat of an insurance claim or an OSHA violation grew every day. Something had to be done quickly.

Company management figured that the best way to overcome the problem was with some type of acoustical enclosure, either metal or one constructed from composite materials. A metal enclosure would help reduce noise levels once the proposed design provided no protection for the operator when loading the machine. Another disadvantage of the metal enclosure is that access to the machinery would have been limited.

Sound Seal applications engineers offered an enclosure design featuring their BBC-13-2” composite material, a combination sound absorber and noise barrier. The composite is made up of a 1 lb/sq.ft. reinforced loaded

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Sound Seal applications engineers offered an enclosure design featuring their BBC-13-2” composite material, a combination sound absorber and noise barrier. The composite is made up of a 1 lb/sq.ft. reinforced loaded vinyl noise barrier and 2” thick quilted fiberglass sound absorber. Typically, a 1” thick absorber is put on the interior of a reinforced barrier. Because of the extreme conditions in this case, Sound Seal engineers utilized the 2” thick material.

The BBC-13-2” composite gives overall noise protection comparable to the metal enclosure and because of Sound Seal’s extensive fabricating capabilities, the enclosure

ACOUSTICAL PERFORMANCE

SOUND TRANSMISSION LOSS								
Octave Band Center Frequency (Hz)								
Location	A	125	250	500	1000	2000	4000	8000
BEFORE at operator	110	96	99	102	104	109	96	90
AFTER at operator (feed hatch closed)	88	90	91	89	83	79	73	70

