

Design and production of a silencer for a compressor on articulated railcars



The noise type test is performed after successful testing of the silencer.

Factsheet 2.00019

Details

Project details

- Customer: Stadler Bussnang AG
- Time frame: 1/2003 to 4/2003

Technical specifications for the silencer

- Noise insulation*: 9 dB(A)
- Volumetric current: up to 1 100 m³/h
- Size: 410x436x262 mm
- Delivered units:
 - for SBB (Seetal-line) 17
 - for Regionalverkehr Mittelland 13

Further details

- simple and robust welded sheet metal construction
- weatherproof
- No special tools required to change foam elements

* in this case

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Customer Requirement

Due to the strict noise guidelines for the articulated railcars operating in Seetal, Switzerland, the noise radiating from the compressor must be optimised.

The sound absorbing provisions should be proposed and implemented with minimum complexity and cost.



Test of the noise dispersion in original circumstances to be used as a basis for the design of the silencer

Realisation

Tests of the noise generated by the compressor and analyse of possible noise dispersion patterns were used in order to develop a base for the design of the silencer. The silencer was drafted with respect to the guidelines and the very small space available and then constructed and tested. The tests showed, that the silencer lowered considerably the outside noise of the compressor.

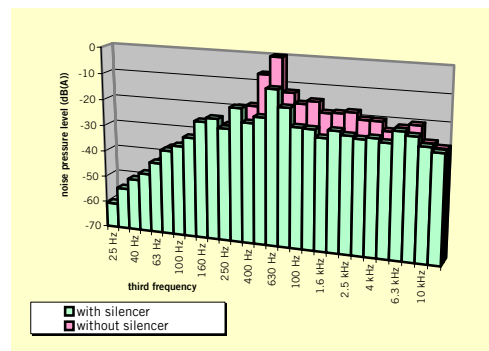
Finally PROSE supplied the silencers for the articulated railcars for SBB, and for those for Regionalverkehr Mittelland.

Customer Advantage

The integrated nature of the contract allowed for the measuring, construction and implementation of the silencer to be performed with absolute minimum inconvenience and risk. Consequently the goal, to greatly reduce the noise pollution, was achieved with minimal time and expense.



Silencer prototype after the installation



Through the implementation of the silencer the compressor noise could be greatly reduced.

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