

PROJECT SOLUTIONS

Retrofit heavy duty fan silencer reduces noise from boiler forced draft fan.

PROBLEM: Potential hearing damage

Noise radiating from the unducted inlet box of a heavy duty forced draft fan was well in excess of the hearing conservation criteria of 85 dBA.

SOLUTION: Heavy duty inlet silencer

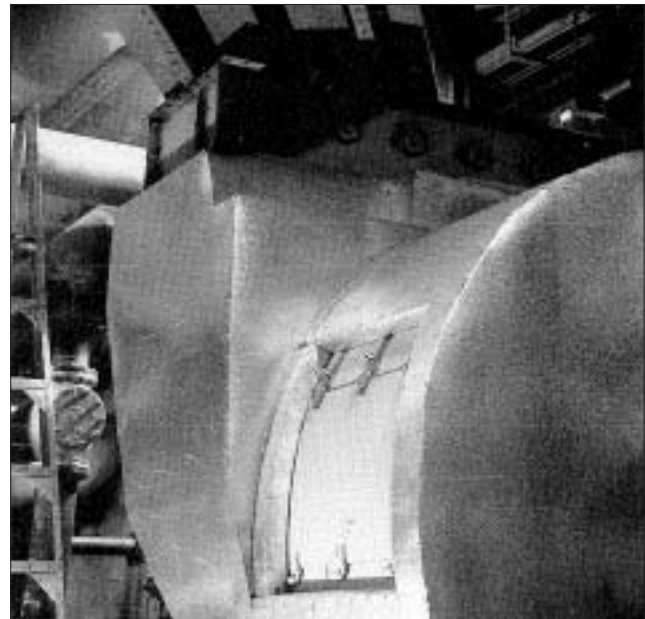
A heavy duty silencer was installed on the inlet box of the forced draft fan which reduced the noise to less than 80 dBA within five feet of the fan. The silencer outlet flange matched the inlet damper flange to which it was connected.

PROBLEM: High inlet velocity

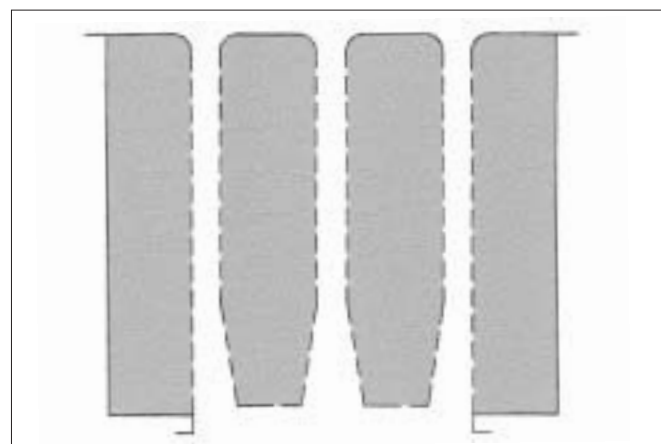
Applying an inlet silencer having an outside body dimension equal to the inlet flange would result in too high a silencer internal velocity. This in turn would result in an unacceptably high pressure drop and excessive energy consumption.

SOLUTION: EX model silencer

The silencer was designed to have substantial thickness of acoustic media totally external to the connection size. This effectively reduced the fan silencer internal velocity for the same acoustic insertion loss in the same length of five feet.



Retrofit heavy duty fan silencer is squeezed into position. This difficult retrofit proves once again that it is less costly and troublesome to provide the necessary silencing for the original installation.



Schematic of splitter design shows external half splitters (EX model).