

# (12) United States Patent

# Gaude et al.

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(54)	INTEGRATED ACOUSTIC DAMPER WITH THIN SHEET INSERT				
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- (58) Field of Classification Search ...... 181/212, 181/214, 225, 227, 229, 246, 250, 264, 266, 181/273, 276; 210/130; 415/55.6, 119, 143, 415/189, 204; 417/312

See application file for complete search history.

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#### (57)ABSTRACT

An exemplary noise damper for a compressor of a turbocharger includes a compressor housing comprising a cavity substantially adjacent a gas flow surface of a conduit to a compressed gas outlet of the compressor housing and an insert that spans the cavity and forms a wall of the cavity where the wall includes one or more openings to the cavity to thereby allow acoustic energy to be damped by the cavity. Various other exemplary technologies are also disclosed.

# 13 Claims, 6 Drawing Sheets

