Patent Search

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Abstract:

ABSTRACT A NOISELESS SILENCER ASSEMBLY BY USING ACTIVE METHOD OF CONTROL OF NOISE The present invention describes a noiseless silencer assembly by using active method of control of noise. In the present invention, an exhaust pipe functions as a tube open at both end because RPM of cycles is very high. The oscillation in the tube is enhanced if an heat source is kept at L/4 position from the bottom end of the tube and attenuated if the heat source is kept at 3L/4 position. Heat source acts as an acoustic source or sink corresponding to the position. It is contemplated that in place of heat source at 3L/4, if we have an acoustic source at 3L/4, it will act as an acoustic sink because heat source actually increases the acoustic oscillations but at 3L/4 it absorbs or attenuates oscillations by destructive interference. So, it is planned to have an op-amp controlle mic-loudspeaker coupling in an electronic oscillator circuit. Accompanied Drawing [Fig. 1]

Complete Specification

DESC:FIELD OF INVENTION:
This invention generally relates to the field of the noiseless silencer assembly, method and more particularly relates to a noiseless silencer assembly by using active method of control of noise(acoustic oscillation).
BACKGROUND OF THE INVENTION
Conventional silencers are using techniques such as absorption and reflection of acoustic oscillations. For absorption type a coating of absorbent is to be used on to the inner surface of the silencer pipe, thus changing the dimension actually required for the exhaust. Similarly, reflection of acoustic oscillation technique uses the muffler using obstruction to the flow and thus increasing the back pressure and affecting the performance of engine.
There are few references made to the present invention as given below:
FR3005993A1 discloses an active muffler system for an exhaust line of a diesel engine, in particular a naval platform, of the type comprising means for acquiring a sound signal to be minimized and means for controlling electroacoustic transducer means for generating a signal. against a signal in order to minimize the sound signal, is characterized in that the electroacoustic transducer means comprise at least two axial electro-acoustic actuators (12, 13) placed opposite and at a distance from one another, on either side of a perforated section (11) of the exhaust line (10).
WO1993020551A1 describes an active, noise cancellation apparatus for a conduit comprising: a sensor (62) for generating a sensor signal representative of an input pulse train; a first transducer (66) having a front side and a rear side; a second transducer (68) having a front side and a rear side; means (58) for mounting said transducers (66, 68) adjacent to said conduit; and at least one first side of said front and rear sides of said first transducer (66) facing a complement one of said front and rear sides of said

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