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Patent Search

Invention Title	AN AUTOMOBILE EXHAUST SYSTEM
Publication Number	48/2021
Publication Date	26/11/2021
Publication Type	INA
Application Number	202031052531
Application Filing Date	02/12/2020
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	MECHANICAL ENGINEERING
Classification (IPC)	F01N0001080000, F01N0003280000, F16K0015020000, F02M0037000000, F01N0001160000

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Abstract:

An exhaust system (100) for an automobile is disclosed. The exhaust system (100) may include an outer casing (102), and a chamber assembly (104) positioned within casing (102). The chamber assembly (104) includes a first chamber (104A), a second chamber fluidically coupled to the first chamber (104A), a third chamber fluidically coupled to the second chamber (104B), a first baffle wall (106A) separating the first chamber (104A) and the second chamber (104B), a second baffle wall (106B) separating the second chamber (104B) and the third chamber (104C), inlet pipe (110), and an internal flow pipe (108) which passes straight through the first chamber (104A) up to the third chamber (104C), and a pressure check valve (114) positioned inside the second chamber (104B). The pressure check valve (114) includes a body (114A) and a helical spring (114) inside the body (114A).

Complete Specification

Description: Technical Field

[001] This disclosure relates generally to an automobile exhaust, and in particular to an exhaust system for a vehicle capable of acting as a muffler and providing additional effects of soot removal and collection.

Background

[002] In automobiles, an exhaust muffler is a device used to attenuate the noise of exhaust gas, coming out from engine to the desired decibel level, as per Auto Norms and regulations, for all type of vehicles. The desired noise attenuation is the primary functional requirement of all categories of exhaust muffler. Further, it is expected from the exhaust that it should not contribute higher backpressure on exhaust system and ultimately on engine. Furthermore, it is expected that its shape be such that it occupies lesser space and does not affect the packaging or fitment of all other aggregates of vehicles. Moreover, it is expected that its size and weight be such that it should be easy to handle and package on vehicles. Yet further, it is expected that the design should be robust and simple so that it can be manufactured and requires very less time for development. Further, it should be cost-effective muffler, and lastly, the design should be environment friendly.

[003] Some mufflers are known in the art. For example, US6935461B2 discloses an exhaust sound and emission control system. It is a system for reducing sound and noxious emissions from an automotive exhaust. The system may have an exhaust resonator having one or more catalytic converter elements in combination thereon in a single device. Alternatively, the system may have multiple angularly disposed chambers therein, with a series of V-shaped baffles or guides in one of the chambers, combining resonator and muffler functions in a single device. In another alternative, the system has a series of longitudinal tubes therein, in combination with a series of

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Page last updated on: 26/06/2019