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(54) **ZONE COATED CATALYST TO SIMULTANEOUSLY REDUCE NOX AND UNREACTED AMMONIA**

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(57) **ABSTRACT**

Provided is an emissions treatment system and method for reducing NOx emissions in the exhaust stream produced from an internal combustion engine. The system has an injector for periodically metering ammonia or an ammonia precursor into an exhaust stream; and a first substrate with a first SCR catalyst composition, downstream of the injector. The first substrate has an inlet end, an outlet end, a length extending between the inlet end to the outlet end, wall elements and a plurality of passages defined by the wall elements. The first SCR catalyst composition is disposed on the wall elements from the inlet end toward the outlet end to a length that is less than the substrate's axial length to form an inlet zone.

The first substrate also has an NH₃ destruction catalyst composition with a platinum group metal component dispersed on a refractory metal oxide. The NH₃ destruction catalyst is disposed on the wall elements from the outlet end toward the inlet end to a length that is less than the substrate's axial length to form an outlet zone. Generally, there is from 0.1 to 10 g/ft³ of platinum group metal component in the outlet zone.

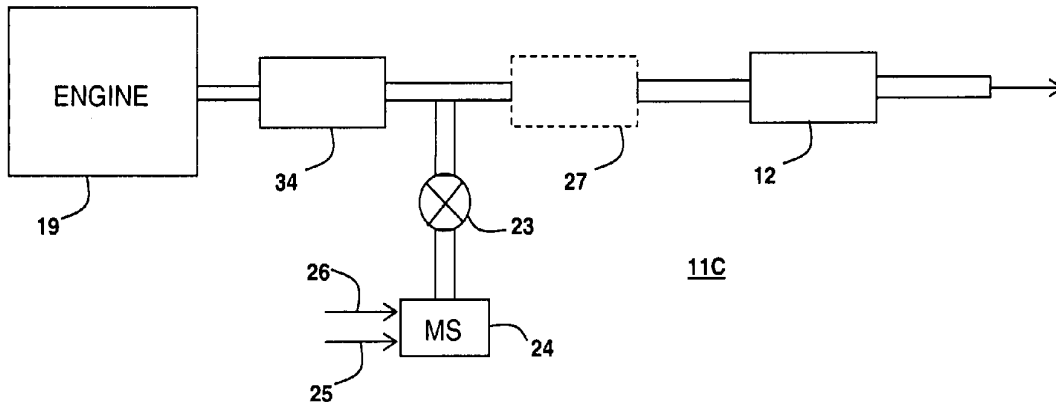


Figure 1

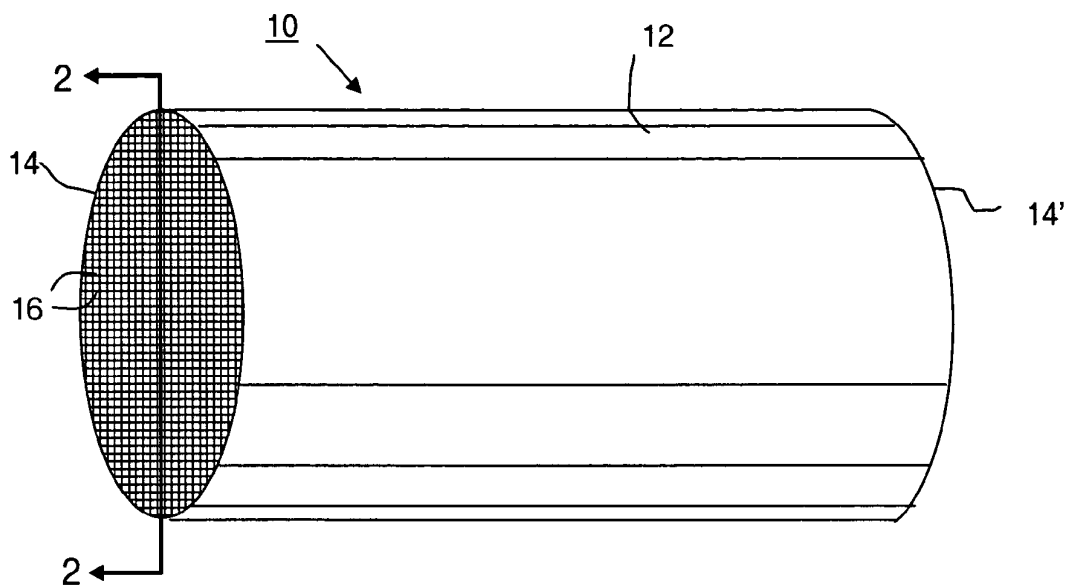


Figure 2

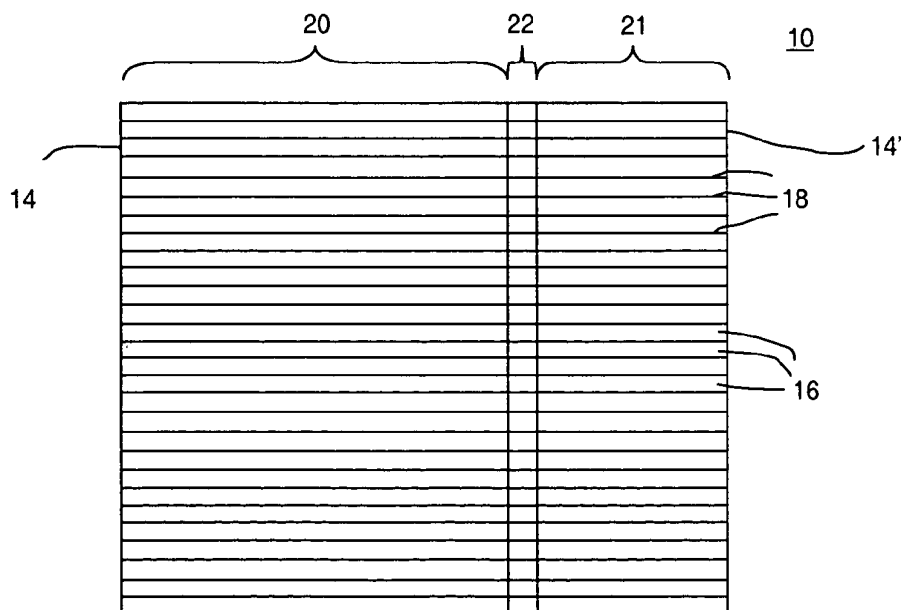


Figure 3A

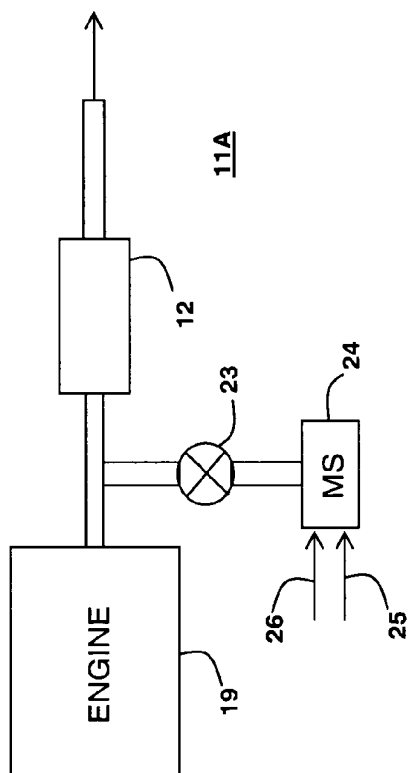


Figure 3B

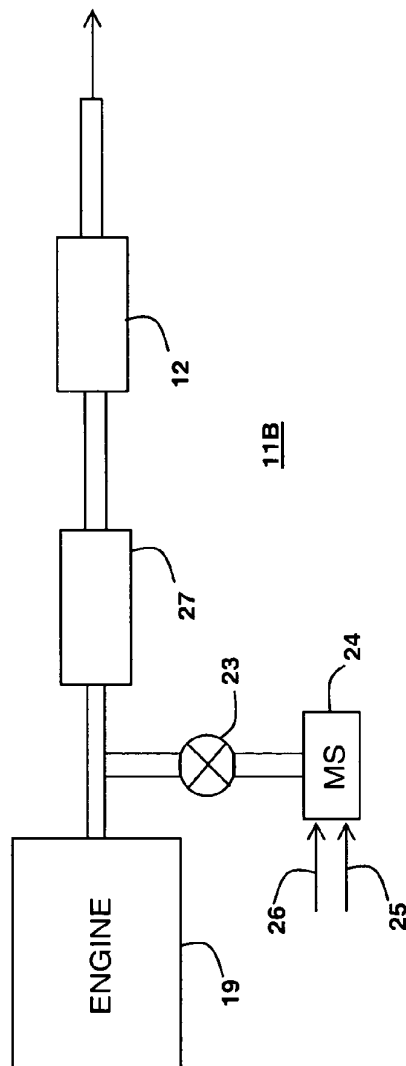
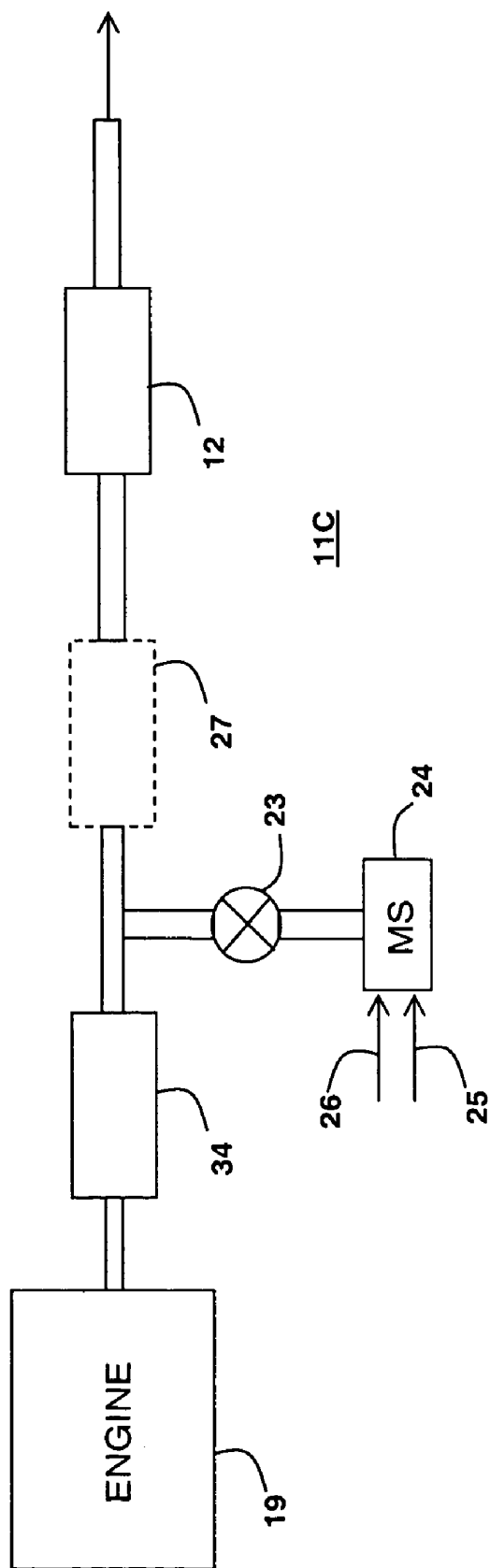
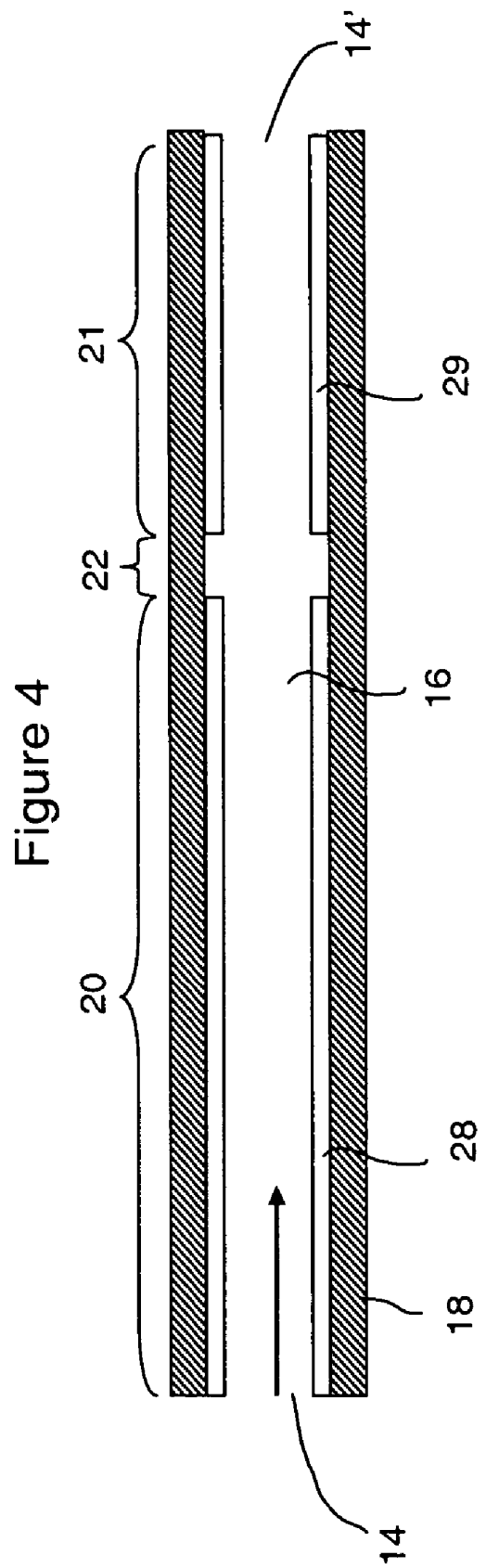


Figure 3C





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