US009926827B2

(12) **United States Patent**
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(10) **Patent No.: US 9,926,827 B2**
(45) **Date of Patent: Mar. 27, 2018**

(54) **DETECTION OF AN IMPROPER REDUCTANT IN A STORAGE TANK**

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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 129 days.

(21) Appl. No.: **14/702,248**

(22) Filed: **May 1, 2015**

(65) **Prior Publication Data**

US 2016/0319725 A1 Nov. 3, 2016

(51) **Int. Cl.**

F01N 9/00	(2006.01)
F01N 3/20	(2006.01)
F01N 11/00	(2006.01)

(52) **U.S. Cl.**

CPC ***F01N 9/007*** (2013.01); ***F01N 3/2066*** (2013.01); ***F01N 11/00*** (2013.01); ***F01N 11/007*** (2013.01); *F01N 2550/02* (2013.01); *F01N 2560/021* (2013.01); *F01N 2560/025* (2013.01); *F01N 2560/026* (2013.01); *F01N 2610/02* (2013.01); *F01N 2900/1402* (2013.01); *F01N 2900/1616* (2013.01); *F01N 2900/1621* (2013.01); *Y02T 10/24* (2013.01); *Y02T 10/47* (2013.01)

(58) **Field of Classification Search**

CPC Y02T 10/24; Y02T 10/47; F01N 3/208; F01N 2610/02; F01N 9/007; F01N 11/00; F01N 11/007; F01N 3/2066

See application file for complete search history.

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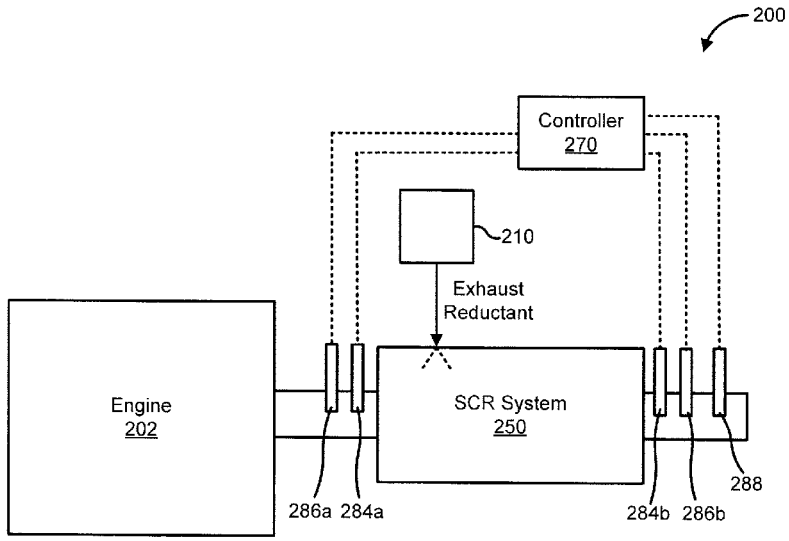
(57) **ABSTRACT**

An aftertreatment system comprises an exhaust reductant storage tank and a SCR system including a catalyst fluidly coupled thereto. The aftertreatment system also includes a controller configured to interpret an output signal indicative of a catalytic efficiency of the catalyst. The output signal is filtered using a fast filter to obtain a fast filter response signal, and also using a slow filter to obtain a slow filter response signal. It is determined if the fast filter response signal exceeds a first threshold and if the slow filter response signal exceeds a second threshold. In response to determining that the fast filter response signal exceeds the first threshold, and the slow filter signal response exceeds the second threshold, an indication is provided that an improper exhaust reductant is present in the storage tank.

29 Claims, 10 Drawing Sheets