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United States Patent [19]

Santos

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[54] **APPARATUS FOR REDUCING THE PRODUCTION OF NO_x IN A GAS TURBINE**

[76] Inventor: **Rolando R. Santos**, 15012 SW. 146th St., Miami, Fla. 33196

[21] Appl. No.: **329,193**

[22] Filed: **Oct. 26, 1994**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 12,923, Feb. 3, 1993, abandoned.

[51] **Int. Cl.**[6] **F02C 9/28**

[52] **U.S. Cl.** **60/39.281**; 60/39.59; 60/737

[58] **Field of Search** 60/39.53, 39.55, 60/39.58, 39.59, 737, 738, 39.281

[56] **References Cited**

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Primary Examiner—Louis J. Casaregola

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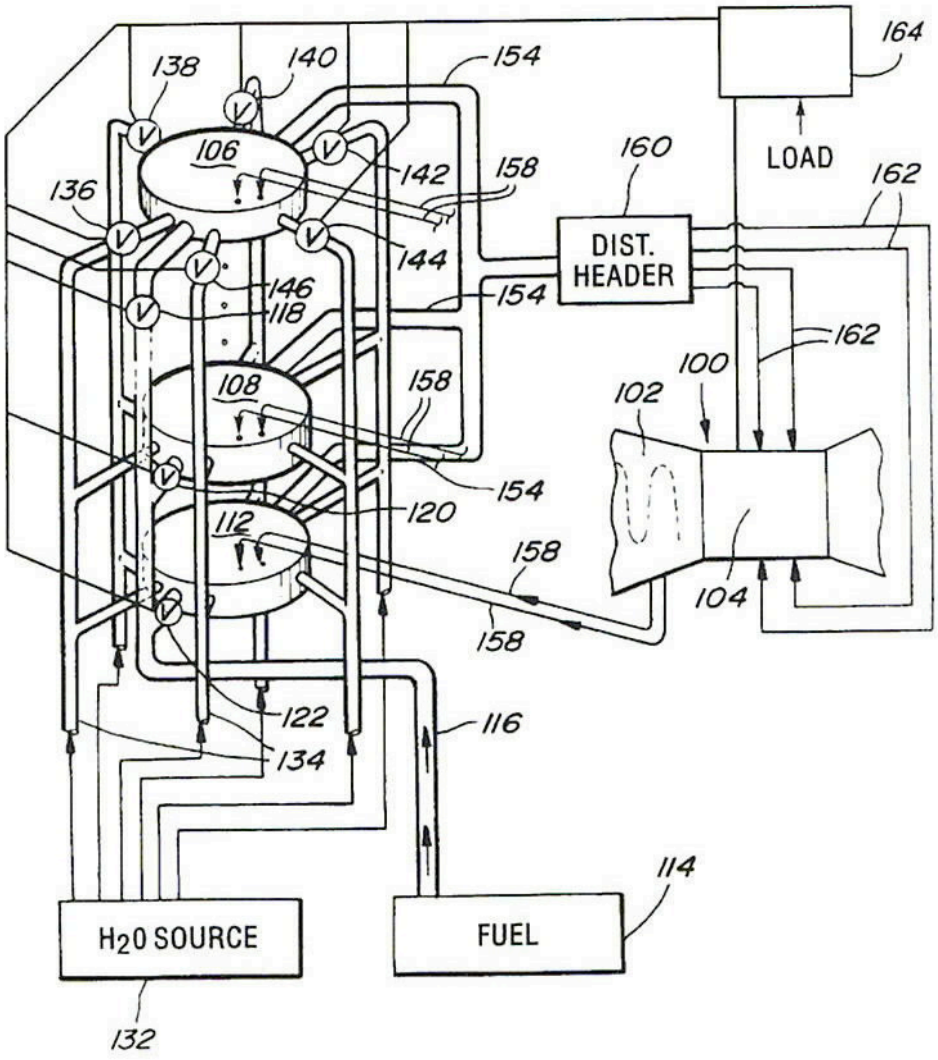
[57] **ABSTRACT**

An apparatus is disclosed for reducing the production of NOx in an engine. One embodiment of the apparatus comprises a plurality of mixing cans in which air is drawn into the flow of gaseous fuel therethrough. The gaseous mixture formed by one of the mixing cans is transmitted to the engine at a rate which increases with the load on the engine, and the other mixing cans are serially brought on line after the preceeding mixing cans reach their predetermined rate.

20 Claims, 5 Drawing Sheets



US005974780A

United States Patent [19]

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[45] Date of Patent: Nov. 2, 1999

[54] **METHOD FOR REDUCING THE PRODUCTION OF NOX IN A GAS TURBINE**

[76] Inventor: **Rolando R. Santos**, 15012 SW. 146th St., Miami, Fla. 33196

[21] Appl. No.: **08/854,999**

[22] Filed: **May 13, 1997**

Related U.S. Application Data

[63] Continuation of application No. 08/329,193, Oct. 26, 1994, Pat. No. 5,628,184, which is a continuation-in-part of application No. 08/012,923, Feb. 3, 1993, abandoned.

[51] **Int. Cl.**[6] **F02C 3/30**

[52] **U.S. Cl.** **60/39.05**; 60/39.59

[58] **Field of Search** 60/39.05, 39.3, 60/39.55, 39.59

[56] **References Cited**

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Primary Examiner—Louis J. Casaregola
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[57] **ABSTRACT**

An apparatus is disclosed for reducing the production of NOx in an engine. One embodiment of the apparatus comprises a plurality of mixing cans in which air is drawn into the flow of gaseous fuel therethrough. The gaseous mixture formed by one of the mixing cans is transmitted to the engine at a rate which increases with the load on the engine, and the other mixing cans are serially brought on line after the preceeding mixing cans reach their predetermined rate.

3 Claims, 5 Drawing Sheets