

ABSTRACT OF THE DISCLOSURE
IMPROVED FUEL STAGING PROCESS FOR LOW NO_x OPERATIONS

A method for diluting a fuel to reduce NO_x uses a fuel dilution device, which includes: a first conduit having an inlet and an outlet, the first conduit adapted to transmit a stream of a fuel entering the inlet and exiting the outlet at a first thermodynamic state and a first fuel index; and a second conduit having an intake and an outtake, the second conduit adapted to transmit a stream of a fluid entering the intake and exiting the outtake at a second/different thermodynamic state and a second fuel index different from the first fuel index by at least about 0.1, whereby a potential for mixing exists between the two streams exiting the outlet and the outtake, and at least some of the fuel mixes with at least some of the fluid near the outlet and the outtake, thereby generating a diluted fuel stream having an intermediate fuel index.

Figure 3