

ES1003 501 Dry Low Emissions (DLE) conversion

Employ lean-burn combustion technology to reduce NOx and CO emissions



Engineered solution purpose

To meet emission standards without the need for water injection

Applicability

501-KB5S, KC5, KB7, KB7S, KC7

Technical description

This engineered solution reduces emissions through advanced lean-burn combustion technology. Ignition and part power operation is performed by use of the pilot fuel circuit. Full power operation is achieved solely on the main fuel circuit. DLE is only available for gas fueled applications.

Benefits

Expected emission levels of 25 vppm NOx and 50 vppm CO are achievable at 15% O2, dry from 75% to 100% power with 14th stage bleed upgrade.

Experience

75 DLE units have entered service since 1998. Customers include:

Trigen Cinergy - 5 units

Florida Gas - 5 units

PG&E - 4 units

Northwest Natural Gas - 2 units

Transredes - 1 unit



Scope of work

Replace combustion liners

Replace outer combustion casing

Modify compressor diffuser assembly

Replace fuel manifolds

Install 14th stage bleed system

Modify control system (digital controls required)

Install additional fuel metering valve

Bill of materials

Combustion liners

Outer combustion casing

Compressor diffuser assembly

Fuel manifolds

14th stage bleed system

Control modification

Electronically actuated fuel metering valve(s)

Undertaken

At overhaul

Bundling opportunities

Controls upgrade [ES6006]

