

D5 Compressor Upgrade

Product Sheet

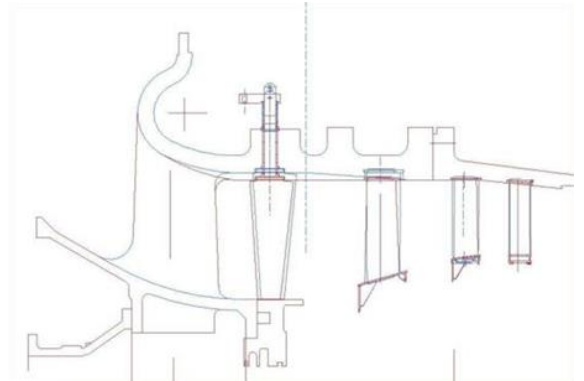
TG50 D5 / M701D – Compressor Retrofit

In late 1990's an upgrade of a TG50 D5 / M701D compressor was commissioned to increase the inlet air flow and to improve the unit performances.

New engines with the upgraded compressor have been installed starting from 1997 and more than 80,000 operating hours have been collected.

The front stages of the compressor are modified to increase the annulus area and new Row # 1, 2 & 3 blades are used.

- The inlet casing needs to be machined to obtain a new internal diameter & different grooves to house new IGV & Row # 1-2 diaphragms
- IGV has a different airfoil shape & height
- The 1st & 2nd compressor discs have to be milled to obtain new grooves for the new rotating blades
- Row # 1, 2 & 3 diaphragms have different dimensions & new airfoils shape
- The new blades for the front stages will have a different profile compared with the existing configuration & a different height according to the modified diameter of the compressor body



Our Customer Benefits

- Power Output: +4%
- Heat Rate: -0.8%
- Increase of exhaust energy for combined cycle
- It can be introduced during a Level III Rotor Inspection

In order to reduce the outage of the units, especially to those power plants having more operating units, it is recommended to use a complete "kit" including all the required components, both, modified and new, ready to be assembled.

The "kit" will include

- A modified compressor inlet casing including new IGV
- A modified rotor (new or modified during a Level III Inspection)
- A set of new Row# 1, 2 & 3 compressor Diaphragms

Typical hardware scope

The engine's modifications are:

- Compressor inlet casing
- Inlet guide vanes
- First & second compressor discs
- 1st, 2nd & 3rd stages diaphragms
- 1st, 2nd & 3rd stages rotating blades



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