PC Upgrade

Product Description
By upgrading a PC turbine to a PG turbine that operates at 3,600 RPM instead of the normal 3,930 RPM of the PG, customers can benefit from some PG improvements.

Product Details
• Upgrade a PC turbine to a PG turbine:
  — Replace the PC turbine with a new PG turbine.
  — Convert an existing PC turbine into a PG turbine.
• Higher temperature and torque capabilities of the PG technology.
• Rad-Rad swirler technology:
  — Reduces the possibility of cracking occasionally found in the jet-rad primary swirler and the secondary swirler.
  — Eliminates the anti-rotation tabs.
  — Reduces thermal stresses and eliminates flash boiling inside of the venturi by changing to a dual skin design.
  — Reduces the thermal gradient across the Thermal Barrier Coating (TBC) and base metal, significantly improving coating life.
  — Significantly reduces wear between the nozzle tip bore and fuel nozzle tip by coating both with a T800 coating (cobalt- and chromium-molybdenum coating).
• Flexible range of operating modes:
  — Life Extension – modified PC control limits.
  — Max power – modified PG control limits.

Customer Benefits
• Higher power output
• Same NOx and CO emissions
• Extended life
• Capability to reach full PG performance with gearbox upgrade

Applicable Units

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<tr>
<th>LM6000</th>
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<th>LM2500</th>
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<tr>
<td>LMS100</td>
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<td>LM5000</td>
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<td>LM1600</td>
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Improvements of the LM6000 PG over the LM6000 PC

- New Rad-Rad combustor and CRF
- Higher temperature LPT casing
- Enhanced LPT airfoils for greater efficiency
- LP shaft material and spline enhancements for higher torque capability
- New 7R damper bearing for better rotor dynamics
- Higher temperature materials on HPT Rotor
- Higher temperature materials on HPC Spool
- Higher temperature seals and HPC Spool
- Enhanced airfoil geometry

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