MXL2 FOR AE94.3A

In order to increase the performance of gas turbines and lengthen maintenance intervals, Ansaldo Energia has developed a number of different upgrades of the main Gas Turbine components throughout the years.

The MXL2 upgrade allows to obtain the maximum performance improvement (M-mode) and/or to extend the maintenance interval (XL-mode).

Fully retrofittable, Ansaldo Energia’s solutions include an upgrades version of combustor, turbine blades and vanes, sealings and cooling systems.

Your Gas Turbine

The new set of Hot Gas Path Parts are applicable to all versions of AE/V 94.3A and SGT5- 4000F.

This upgrade is fully retrofittable during a programme Major Overhaul, according to technological development of newest AE94.3A, which reach 340 MW of power output and 40.3% simple cycle efficiency.

CUSTOMER BENEFIT*
- Increase of net power production up to +25MW
- Up to +0.7% simple cycle efficiency
- Up to 41 kEOH maintenance interval increase
- Reduced maintenance costs
- Reduced CO₂ emissions

TECHNICAL FEATURES
- Latest combustion chamber design
- Aero-mechanical optimized design
- Enhanced cooling system on both stator and rotor components
- Improved metallic bond coating and Thermal Barrier Coating (TBC) thickness, additional high porous TBC
- Reduction of secondary air system flow

* Reference values in new, clean and ISO conditions, specific data to be evaluated case by case.
STANDARD SCOPE

The hot gas path upgrade involves the following components:

- New combustion chamber: the new Secondary Air System UPdate “SAS-UP2”
- Replacement of turbine vane carrier with optimized cooling system
- Replacement of turbine blades and vanes (stages 1 to 4) with new design components that have an improved airfoil, cooling path, and coating
- Improved Seal Rings

GT Performance Gain*

<table>
<thead>
<tr>
<th>Mode</th>
<th>Performance</th>
<th>GT Gain</th>
<th>1+1 CC Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>M Mode</td>
<td>Power [MW]</td>
<td>Up to 25</td>
<td>Up to 45</td>
</tr>
<tr>
<td></td>
<td>Efficiency [%]</td>
<td>Up to 0.7%</td>
<td>Up to 1.5%</td>
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<tr>
<td>XL Mode</td>
<td>Maintenance Step [kEOH]</td>
<td>+16</td>
<td>+16</td>
</tr>
</tbody>
</table>

*Reference values in new, clean and ISO conditions, site specific data to be evaluated case by case