

# Blades and vanes equivalent to V84.2 / SGT6-2000E version 7

Sulzer provides design and manufacturing of new gas turbine components in both hot and cold sections. We focus on lifetime extension and performance improvement of your equipment. We have unique insight into designing a high quality product that is compatible and interchangeable with the original equipment. All blade and vane kits include installation hardware suitable for installation in Siemens V84.2 / SGT6-2000E gas turbines.

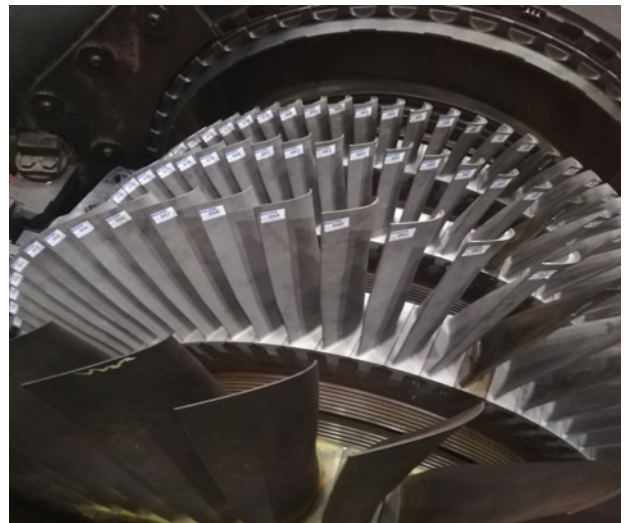
Sulzer 3D upgrade of stage 1 and 2 blades and vanes is designed for turbine inlet temperatures up to 1'080°C (1'976°F) with an increased power output and increased efficiency comparable to previous designs. As a result, components are compatible with 41 MAC.

## 1st stage blade

The first stage blade is manufactured through an investment casting process using the nickel-based super alloy Rene 80 that has superior mechanical properties. Depending on the operation conditions, different coatings and coating systems are applied. Sulzer applies a MCrAlY coating only to the airfoil especially designed for liquid fuel conditions. The coating has superior oxidation and corrosion resistance for base load as well as peak load applications due to its composition. The internal surface has an aluminum diffusion coating to improve resistance against intergranular attack. Optionally a Thermal Barrier Coating (TBC) is applied to reduce metal temperatures and thermal gradients for improved protection against creep and fatigue mechanisms.

## 2nd stage blade

The second stage blade is also manufactured through investment casting. The base material for the second stage blade is identical to the first stage blade, Rene 80. A MCrAlY coating is applied to the external surface to optimize corrosion and oxidation resistance. At the internal surface an aluminum diffusion coating is applied. Optionally a TBC is applied on the external surface.



## 1st stage vane

The first stage vane is manufactured through investment casting using the base material Inconel Rene 80. Similar to the first stage blade, the airfoil surface is coated with a MCrAlY coating especially designed for liquid fuel conditions to optimize corrosion and oxidation resistance. An aluminum diffusion coating is applied to the internal surface. Optionally a TBC is applied for protection against fatigue mechanisms.

## 2nd stage vane

The second stage vane is manufactured through investment casting using the base material Rene 80. A MCrAlY is applied to the external surface, while the internal surface is protected by an aluminum diffusion coating. Optionally a TBC is applied.

## 3rd stage blade

The third stage blade is manufactured through investment casting using the base material Inconel Inconel 738. At the external surface a MCrAlY coating is applied.

### Blade stage 1 and 2

<b>Material</b>	Rene 80
<b>Coating</b>	External MCrAlY coating for liquid fuels External TBC system optional Internal aluminum diffusion coating
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included



### Blade stage 3

<b>Material</b>	Inconel 738
<b>Coating</b>	External MCrAlY
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included



### Vane stage 1 and 2

<b>Material</b>	Rene 80
<b>Coating</b>	External MCrAlY coating for liquid fuels External TBC system optional Internal aluminum diffusion coating
<b>Sealing</b>	Seal wires and strips
<b>Auxiliaries</b>	Locking hardware included



### Services

- Component refurbishment
- Lifetime extension
- Field service
- New parts manufacturing
- Training programs
- Rotor overhaul and refurbishment
- Long-term service agreements
- Condition monitoring
- Turbine controls
- Engineering support



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