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## PSM 6B And 7B-EA Series Compatible Turbine Airfoils

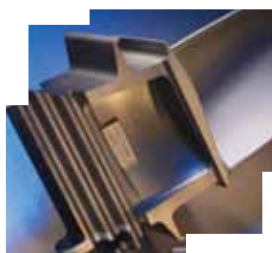
### Scope of Supply for 6B and 7B-EA Series Turbine Section

PSM's complete line of airfoils, compatible with the General Electric 6B and 7B-EA series gas turbines, has been redesigned where necessary to address the life limiting elements of existing designs. Extended durability, in conjunction with lower prices of capital spares, can significantly improve a plant operator's bottom-line profitability.

PSM supplies all buckets, nozzles, and shroud blocks for the 6B gas turbine. These are compatible for the latest 2085°F/1141°C firing temperature machines (engine model 6581) and are backwards compatible with earlier designs. PSM also supplies the buckets and shroud blocks for the 7EA. All stages are suitable for machine vintages up to 2055°F/1124°C firing temperature (engine model 7121) and are backwards compatible to the 7B engines.

2nd and 3rd stage buckets feature an advanced airfoil design for 6B and improved shroud geometry for increased resistance to shingling for both the 6B and 7EA. In addition, blade shrouds have welded STELYTE 694 hard face for improved durability. Frame 6B compatible 2nd and 3rd nozzles incorporate higher strength alloy for reduced hook and airfoil creep and increased part life.

All engine sets include required installation and locking hardware to simplify inventory and installation.



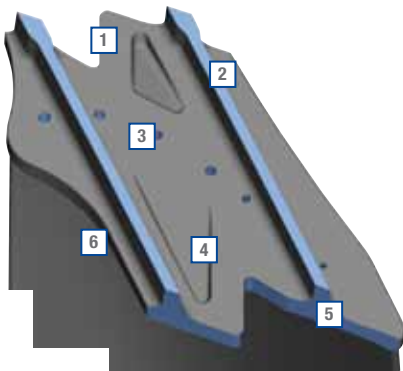
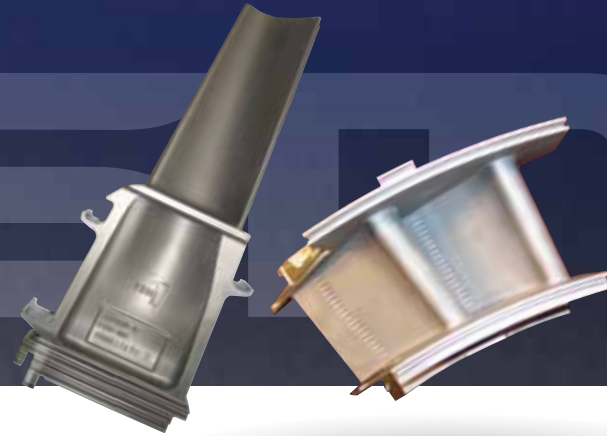
6B and 7B-EA Series	Buckets	Nozzles	Shroud Blocks
Turbine Stage 1	6B, 7B-EA	6B	6B, 7B-EA
Turbine Stage 2	6B, 7B-EA	6B	6B, 7B-EA
Turbine Stage 3	6B, 7B-EA	6B	6B, 7B-EA

Fleet leader E-class parts have been running in engines since January 2004 and have accumulated over 24k Factored Fired Hours. As of today, PSM has provided far more than 100 sets of E-class turbine airfoils to a variety of customers around the globe.

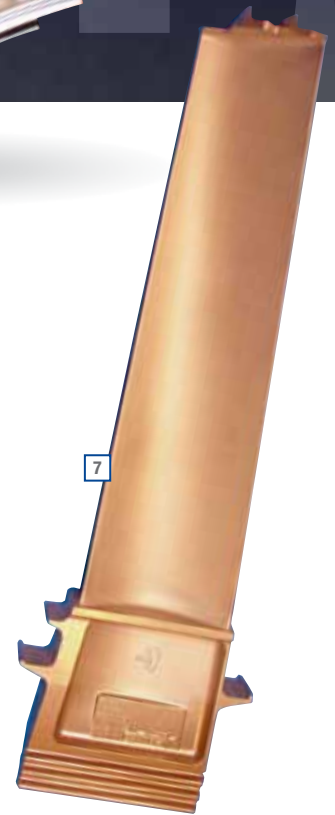
## Improved Durability at Lower Cost

PSM's turbine airfoils are made using advanced materials, coatings, cooling schemes, and design features to maximize durability and reliability of our components in your engines. **To accomplish this we:**

- + Identify the issues and failure mode in current OEM replacement products
- + Use state-of-the-art analytical tools to model the issues
- + Use the same analytical tools to design and fabricate new hardware with longer life
- + Validate the product in real-world testing



- |   |
|---|
| 1. Standard Z-Notch                             |
| 2. Improved Cutter Tooth Design                 |
| 3. 6-Hole Cooling Design                        |
| 4. Shroud Weight-Reducing and Balancing Pockets |
| 5. Welded Cobalt Shroud Hard Face               |
| 6. Shroud Lightening                            |
| 7. Slimmer Mid-Span Airfoil Design              |



### Example of Design Improvements — 6B compatible 2nd stage bucket

The 2nd stage buckets were redesigned to improve both performance and creep capabilities. Reduction of shroud mass through introduction of lightening pockets in the shroud and elimination of unnecessary shroud metal results in better shroud balancing and reduced creep. This allows a slimmer mid-span airfoil profile which improves the flow profile and reduces aerodynamic losses.

- + Standard Z-Notch
- + Improved Cutter Tooth Design
- + 6-Hole Cooling Design
- + Shroud Weight-Reducing and Balancing Pockets
- + Welded Cobalt Shroud Hard Face
- + Shroud Lightening
- + Slimmer Mid-Span Airfoil Design

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