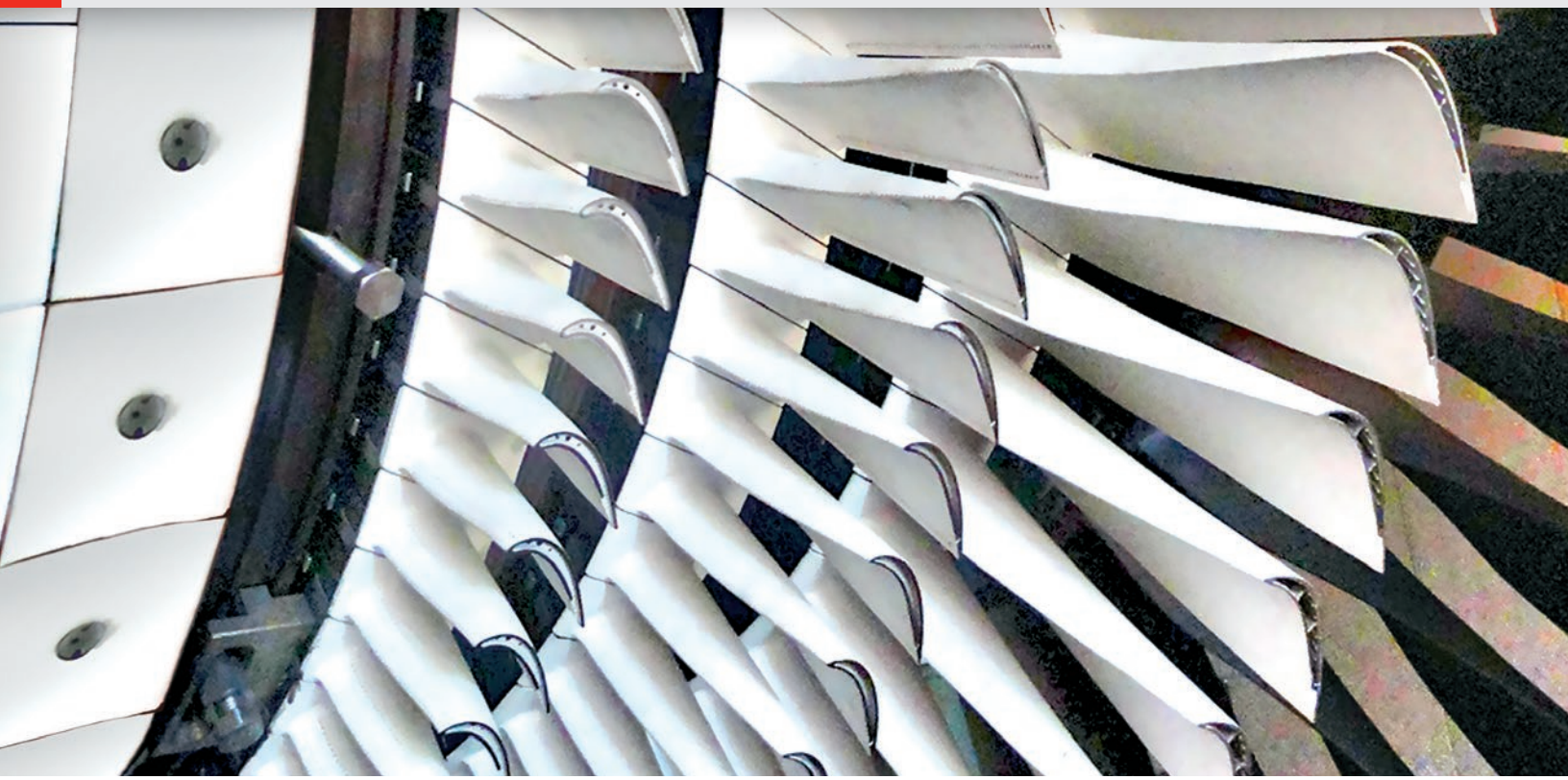
PARTS

V CLASS PARTS & REPAIRS

V94.3Ax Blades, Vanes and Turbine Guide Ring Segments

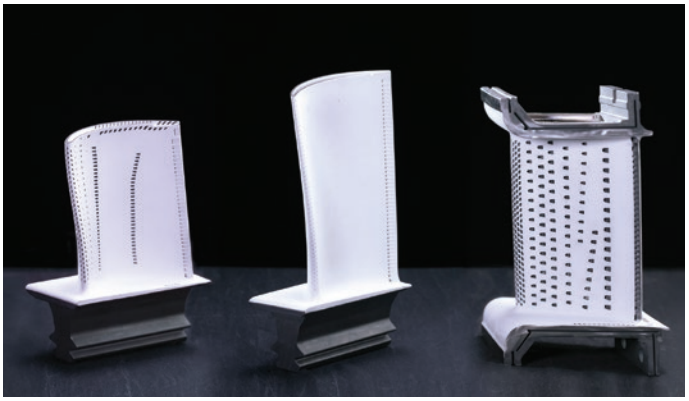


BRINGING ADVANCED ENGINEERING AND TECHNOLOGY TO THE GAS TURBINE PARTS MARKET.

Formerly PW Power Systems' IGT Division, the MD&A San Antonio Service Center, our gas turbine parts service facility is an industry leader in V class parts supply and repair.

MD&A has added important solutions to an already exemplary offering of services, parts, and repairs. With more than 35 years of unmatched customer service, MD&A has extended its scope of capabilities to become an industry leader in the repair and manufacturing of V class components – an alternative in the power generation space that gives customers more while costing less.

Our improved designs extend the service life of V class components by minimizing oxidation, creep, and metal temperatures through proprietary technology designed to reduce field distress. Thesedesigns incorporate customer feedback and component optimization with the advantage of our technological expertise. All this to offer your equipment longer life and better quality – traits you've come to expect from MD&A.



Model V94.3Ax - 1st, 2nd, 3rd, 4th Stage Blade

V94.3AX 1ST STAGE BLADE ADVANTAGES:

- Manufactured using a proprietary single crystal nickel superalloy tailored for gas turbine parts
- The design uses a metallic bond coat applied by High Velocity Oxy-Fuel (HVOF)
- Utilizes a ceramic thermal barrier coating (TBC) top coat that reduces base metal temperature to provide superior protection against oxidation, coating spallation, and TMF cracking
- A vapor phase aluminide coating provides improved oxidation and corrosion resistance for the internal cooling passages

V94.3AX 2ND STAGE BLADE ADVANTAGES:

- Manufactured using a directionally solidified nickel superalloy tailored for gas turbine parts
- The design uses a metallic bond coat applied by HVOF and a TBC top coat providing superior protection against oxidation and TMF cracking
- For improved internal cooling passage oxidation and corrosion resistance, this part also incorporates an aluminide coating on the internal cooling passages

V94.3AX 3RD STAGE BLADE ADVANTAGES:

- Manufactured using René 80 commercially available equiaxed nickel superalloy
- The design uses a metallic bond coat applied by HVOF and a TBC top coat providing superior protection against oxidation and corrosion
- For improved internal cooling passage oxidation and corrosion resistance, this part also incorporates an aluminide coating on the internal cooling passages
- The design provides optimized internal cooling to reduce metal temperature without increasing cooling air requirements

V94.3AX 4TH STAGE BLADE ADVANTAGES:

- Manufactured using René 80 commercially available equiaxed nickel superalloy
- The design incorporates a chromide coating applied with a pack cementation process providing superior protection against corrosion

Model V94.3Ax - 1st, 2nd, 3rd, 4th Stage Vane

V94.3AX 1ST STAGE VANE ADVANTAGES:

- Manufactured using a Mar-M-509 commercially available equiaxed cobalt superalloy
- Utilizes a proprietary metallic bond coat applied by HVOF and a TBC top coat
- The TBC reduces base metal temperature, provides superior protection against oxidation, coating spallation, and TMF cracking

V94.3AX 2ND STAGE VANE ADVANTAGES:

- Manufactured using René 80 commercially available equiaxed nickel superalloy
- Utilizes a proprietary metallic bond coat applied by HVOF and a TBC top coat
- The TBC reduces base metal temperature, provides superior protection against oxidation, coating spallation, and TMF cracking
- For improved internal cooling passage oxidation and corrosion resistance, this part also incorporates a vapor deposited aluminide coating on the internal cooling passages

V94.3AX 3RD STAGE VANE ADVANTAGES:

- Manufactured using René 80 commercially available equiaxed nickel superalloy
- The design incorporates a metallic bond coat applied by Air Plasma Spray (APS) and a TBC top coat providing superior protection against oxidation and TMF cracking
- For improved internal cooling passage oxidation and corrosion resistance, this part also incorporates a vapor deposited aluminide coating on the internal cooling passages

V94.3AX 4TH STAGE VANE ADVANTAGES:

- Manufactured using René 80 commercially available equiaxed nickel superalloy
- The design incorporates a chromide coating applied with a pack cementation process providing superior protection against oxidation and corrosion

V94.3Ax 1st and 4th Stage Turbine Guide Ring Segments

V94.3AX 1ST AND 4TH STAGE TURBINE GUIDE RING SEGMENTS ADVANTAGES:

- Manufactured using an IN-738 commercially available equiaxed nickel superalloy
- The design incorporates a metallic bond coating applied by APS and a ceramic abradable seal coating providing superior protection against oxidation

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