ALSTOM 11N1 / 11NM / 11N2

Advanced Repairs Available only from Liburdi Turbine Services

The Liburdi Advanced Repair Program offers:

- Extended Reliable Service Life
- Reduced Maintenance Expenses
- Component Upgrades to Address Design Deficiencies

These Advanced Repairs developed by Liburdi are being used by electrical utilities worldwide to reliably operate critical turbine components at a fraction of the cost of new replacement parts; maintaining or improving component integrity while creating significant savings for the operator.

Liburdi Advanced Airfoil Repairs for 11N1 / 11NM / 11N2

Turbine Blade Repairs and Upgrades

- Full coating upgrade with modern oxidation & corrosion resistant coatings
- Optional thermal barrier coating (TBC) for rows 1 and 2 blades increases service interval
- Internal cleaning and coating for hollow blades extends total service life
- Blade tips weld-repaired with advanced technology process and superior filler alloys
- FSR® Full Solution Rejuvenation HIP & heat treatment process to fully restore alloy strength

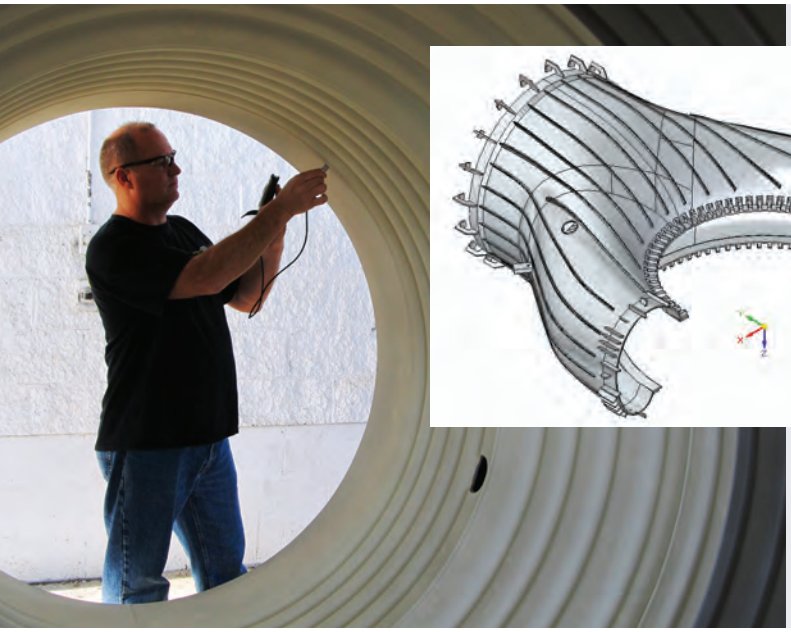
Turbine Vane Repairs and Upgrades

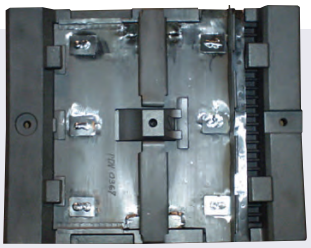
- Full coating upgrade with modern oxidation & corrosion resistant coatings
- High strength, low distortion LPM® crack repair and missing metal replacement technique
- Lean-correction and seal slot repair for aged vane-carrier induced damage
- Anti oxidation tip-seal upgrades for out-of-round vane carriers and casings

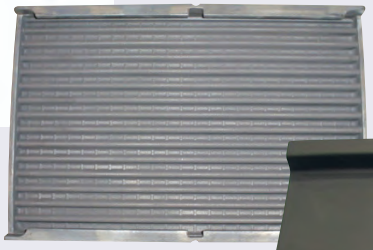
Advanced Combustor and Segment Repairs for 11N1 / 11NM / 11N2

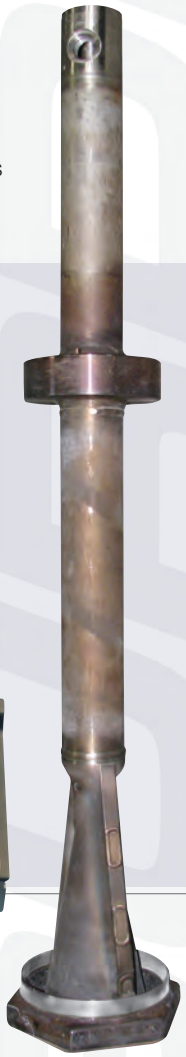
Segment and Heat Shield Repairs and Upgrades

- Full coating removal & replacement with upgrade oxidation / corrosion resistant coating options
- Proprietary LPM® high strength crack repair process out-performs conventional weld repairs
- Segment anti-wear upgrades to attachment areas improve segment durability and extend service lives
- Heat shield abradable coating upgrades eliminate tip-strike cracking while improving sealing characteristics









Burner, Liner and Combustor Casing Repairs and Upgrades

- Full removal and replacement of all coatings
- Combustor Liners and Casings receive matching strength weld repair for crack damage
- Hot Gas Case panel replacement with reinforced wall
- Full thermal barrier coating (TBC) replaces the original partial coating. Optional diffusion aluminide coating
- EV Burner seal ring repairs with anti-wear upgrades to improve in-service durability and life

Liburdi's engineering team leads the industry in the development and application of component upgrades that address original design deficiencies and yield improved durability and increased power and efficiency.

LPM® is a patented process of Liburdi Engineering Limited. LPM® has achieved a proven track record over the past decade and is approved by OEMs for both repair and the manufacturing of new parts.

Liburdi's extensive experience with heat treatment processes, combined with its unique stripping and coating capabilities, ensures that every repaired component meets or exceeds the original equipment performance and durability requirements in future service.

Liburdi Turbine Services

International
Canada
tel: 1-905-689-0734
fax: 1-905-689-0739
email: liburdi@liburdi.com

USA
tel: 1-704-230-2510
fax: 1-704-230-2555
email: liburdi@liburdi.com

Liburdi Asia
Shanghai, China

OLTS Liburdi
St. Petersburg, Russia

www.liburdi.com