



April 22, 2021

**JPS Request for Proposal # 876505 - Frame6B Hot Gas Path Components Repair**

Dear Vendors

Only Electronic submissions will be accepted, using ShareFile by Citrix. All uploads will be confidential. Additional information on this software can be accessed by clicking the links below:

- Basic Client Guide <https://citrix.sharefile.com/share/view/s1bff52f8d434781a>
- Training (video) <https://www.sharefile.com/support/training>

**DIRECTORS:**

**BOK HOA JEONG (CHAIRMAN)**

**NADANI CHUNG**

**MINNA ISRAEL**

**HON. CHARLES JOHNSTON**

**SEIJI KAWAMURA**

**DONG UK KIM**

**MOHAMED MAJEED**

**DENNIS MORGAN**

**HON. DANVILLE WALKER, O.J., J.P.**

RFP 876505 Activities are guided by the dates stated in the Calendar detailed in Section 4 of this RFP. Observing these dates,

- 1) Section 2 provides points of contact for the submission of questions via email only
- 2) A combined response to questions will be posted on the Internet only
- 3) Respondents must confirm their intention to bid in order to be setup in JPS ShareFile folder (via email only)
- 4) Access to individual vendor folders will be given at least 1 week before the bid closes to eliminate any issues for bid upload by RFP deadline.
- 5) Files must be accurately labelled/named. Commercial Proposal must be a separate file from your Technical Information.

ShareFile Access will be removed when the bid closes.

Regards,

JPS Purchasing Department

JAMAICA PUBLIC SERVICE  
COMPANY LIMITED

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**Jamaica Public Service Company Limited**

**Frame 6B Hot Gas Path Components Repair**

**Request for Proposals**

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**RFP# 876505**

## 1.0 INTRODUCTION

Jamaica Public Service Company Limited (JPS) invites suitably qualified companies to submit bids to repair a set of Hot Gas Path (HGP) spares required to conduct maintenance intervention on the GT10, A Frame 6B industrial gas turbine located at the Hunts Bay Power Station on Marcus Garvey Drive in Kingston, Jamaica. Repair work is required to be carried out on the HGP spares, which are to be used in the upcoming Hot Gas Path Inspection on the GT10 unit in September 2021.

The intent of this tender document is for the repair of all the Hot Gas Path components for this Frame 6B Gas Turbine, serial number 296416 hereafter referred to as GT10. The current projection is for these components to be delivered to the Power Station by August 9, 2021 (subject to change with prior notification). Additional details on this unit can be seen in Appendix III.

All processes, procedures should be done in accordance with OEM Standards. Bidders must adhere to all applicable TIL relevant to the repair process for Turbine 296416.

## 1.1 BACKGROUND

Jamaica Public Service Company Limited (JPS) is an integrated electric utility company engaged in the generation, transmission and distribution of electricity throughout the island of Jamaica. JPS owns and operates 28 generating units and also purchases power from seven independent power producers (IPP). JPS assets include conventional thermal plants (611.5 MW), hydro and wind (32.5 MW), 50 substations, approximately 1200 km of transmission lines and 20,534 km of distribution lines.

The common shares of JPS are held 40% by Marubeni Corporation through its subsidiary Marubeni Caribbean Power Holdings (“MCPH”); 40% by Korea East West Power Company (“KEWP”); 19.9% by the Government of Jamaica (“GOJ”) and the remaining 0.1% by a group of minority shareholders.

Along with the provision of electricity, the JPS is a key partner in national development. The Company has a vibrant corporate social responsibility portfolio and makes significant contributions in the areas of education, sports, and community development. The Company also has a strong environmental focus and carries out its operations in an environmentally friendly manner.

JPS has the following status with Jamaica Customs – **Authorized Economic Operator (AEO)**. It is an internationally recognized quality mark which indicates that the JPS supply chain is secure, and that the JPS customs’ procedures and policies are compliant. With this designation, JPS Warehouse and Procurement Teams are subject to audit and monitoring by Jamaica Customs.

The Office of Utilities Regulation (OUR) has regulatory authority over JPS’ operations.

## **Geography of Jamaica**

Jamaica lies 145 kilometers south of Cuba and 160 kilometers west of Haiti. Its capital city, Kingston, is about 920 kilometers southeast of Miami. At its greatest extent, Jamaica is 235 kilometers long, and it varies between 35 and 82 kilometers wide, with an area of 10,911 square kilometers.

The highest area is that of the Blue Mountains. The crest of the ridge exceeds 1,800 meters. The highest point is Blue Mountain Peak at 2,256 meters.

Two types of climate are found on Jamaica. An upland tropical climate prevails on the windward side of the mountains, whereas a semiarid climate predominates on the leeward side. Warm trade winds from the east and northeast bring rainfall throughout the year. The rainfall is heaviest from May to October, with peaks in those two months. The average rainfall is 196 centimeters per year.

Temperatures are fairly constant throughout the year, averaging 25 °C to 32 °C in the lowlands and 15 °C to 22 °C at higher elevations. Temperatures may dip to below 10 °C at the peaks of the Blue Mountains.

Jamaica lies at the edge of the hurricane track; as a result, the island usually experiences indirect storm damage. Hurricanes occasionally strike the island with full force, including winds speeds up to 240 km/hr.

### **1.2 PROJECT SCOPE / OBJECTIVES**

The scope of service includes inspection and potential repairs for the outlined parts along with specified protective coatings. The following categories of spares are to be repaired:

- A. Buckets - three stages (one set each stage)
- B. Nozzles – three stages (one set each stage)
- C. Shroud Block – three stages (one set each stage)

Details of repairs includes but not limited to the following activities:

**A. Buckets** Parts Numbers: 112E6033P001, 115E6647P001, 201E1815P001

#### **Inspection:**

- Perform incoming inspection
- Record part numbers and serial numbers
- Conduct cleaning of buckets to remove organic dirt, corrosion and/or oxidation.
- Perform metallurgical review of bucket microstructure and as received coating condition
- Conduct coating removal
- Perform NDE to include the following:
  - ✓ Fluorescent penetrant inspection
  - ✓ Visual inspection
  - ✓ Dimensional inspection

- ✓ Eddy current wall thickness inspection
- Prepare and submit report with inspection findings and repair recommendations

**Repair:**

**1<sup>st</sup> Stage Bucket Repairs (Dependent on inspection results):**

- Remove aluminum seal strips.
- Perform post-strip inspection.
- Blend defects/indications at the tip.
- Blend defects/indications at the airfoil.
- Perform post-weld heat-treatment of buckets.
- Perform diffusion and age heat treatment.
- Weld-repair to restore height for tips and/or angel wings (As required)
- Weld-repair tip cracks and damages. (As required).
- Perform grit blast
- Apply GT33 IN\_ PLUS or equivalent coatings.
- Shot peen dovetails and apply aluminum seal strip.
- Prepare moment-weigh and chart for buckets.
- Prepare final report.
- Prepare components for shipment

**2<sup>nd</sup> Stage bucket Repairs (Dependent on inspection results):**

- Remove aluminum seal strips.
- Perform post-strip inspection.
- Blend defects/indications on airfoils
- Heat treat buckets and weld repair pin slots, tips, and angel wings
- Weld repair shroud defects, cracks, and seal rails.
- Perform Z-notch hard face repair (as required)
- Perform grit blast
- Apply Protective Chromide coatings or recommended type GT29 CoCrAl<sub>y</sub> for corrosion protection
- Shot-peen bucket dovetails
- Re-apply aluminum seal strip
- Prepare moment-weigh and chart for buckets.
- Prepare final report.
- Prepare for shipment

**3<sup>rd</sup> Stage Buckets Repairs (Dependent on inspection results):**

- Blend defects/indications on airfoils
- Heat treat buckets and weld repair pin slots, tips, and angel wings
- Weld repair shroud defects, cracks, and seal rails.
- Perform Z-notch hardface repair (As required).
- Perform grit blast
- Apply Protective Chromide coatings or recommended type of corrosion protection
- Shot-peen bucket dovetails

- Moment-weigh and chart buckets.
- Final cleaning, quality control inspection, and issue report.

**Addition:**

- Provide addition to quotation for the associated locking hardware for each bucket stage.
- Provide quotation for one(1) missing bucket

**B. Nozzles:** Part numbers: 201E1815P001, 119E20940,112E1624G01

**1<sup>st</sup> Stage Nozzle Inspection:**

- Perform receipt inspection
- Record parts and serial numbers
- Perform Elliptical inspection
- Perform Dimension inspection.
- Disassemble nozzle segment from support ring (save all reusable hardware).
- Remove all core plugs and impingement plates from nozzle segment
- Remove base metal sample for metallurgical evaluation
- Conduct blast cleaning of nozzle segment.
- Conduct NDT Inspection such as:
  - ✓ Fluorescent penetrant inspection
  - ✓ Ultra-Sonic Inspection airfoil leading edge wall thickness (as required)
  - ✓ Visual inspection and mapping of defect
- Prepare and submit report with inspection findings and repair recommendations

**1<sup>st</sup> Stage Nozzle Repairs (Dependent on inspection results)::**

- Remove existing coating from external surface.
- Conduct pre weld heat treatment.
- Conduct cold-straightening of sidewalls.
- Perform cleaning, blending, and repair of nozzle segments (As required)
- Inspect, weld and braze nozzle body
- Perform assessment to nozzle segments to verify that they are within OEM requirements.
- Conduct deflection repair and Reestablish sealing surface (As needed)
- Blend repair nozzle segments and seal slots
- Conduct retaining ring inspection and correction
- Re-assemble nozzle segments to retaining ring.
- Conduct dimensional check of assembled nozzle segments.
- Perform post weld heat treatment of nozzle segment.
- Repair core plug and impingement plate (cooling hardware)
- Apply Thermal Barrier coating onto nozzle segments
- Perform final area checks and alignment measurements to nozzle segments
- Perform final assembly.

- Final cleaning, quality control inspection and issue report.

### **2<sup>nd</sup> and 3<sup>rd</sup> Stage Nozzle inspection**

- Perform receipt inspection
- Record parts and serial numbers
- Conduct all relevant dimensional inspections.
- Disassemble nozzle segment from diaphragm segment (Save all reusable hardware)
- Remove all core plugs and impingement plates from nozzle segment
- Remove base metal sample for metallurgical evaluation
- Conduct blast cleaning Nozzle Segment.
- Perform base material verification
- Conduct NDT Inspection such as:
  - ✓ NDT inspection all Nozzle Segment by F.P.I.
  - ✓ Ultra-Sonic Inspection airfoil leading edge wall thickness as required
  - ✓ Visual inspection and mapping of defect
- Prepare and submit report with inspection findings and repair recommendations

### **2<sup>nd</sup> Stage Nozzle Repair (Dependent on inspection results):**

- Repair core plugs from segments, as required.
- Perform solution anneal heat treatment of segments in vacuum furnace, in accordance with OEM specifications
- Perform liquid penetrant inspection of segments, and weld repair cracks (As needed)
- Repair cracks and worn areas by grinding or welding method (As needed)
- Verify that all cooling holes are clear and open.
- Correct bowing on partitions and trailing edges (As needed)
- Perform weld repairs on diaphragm hooks and stake marks.
- Dress and blend or replace damaged radial and discourager seal on diaphragms
- Apply Diffused Chromium coating or recommended type MCrAlY for corrosion protection
- Repair core plugs as required, and install in segments.
- Re-assemble nozzle segments to diaphragm packing.
- Final cleaning and quality control inspection.
- Preserve and pack for shipment.

### **3<sup>rd</sup> Stage Nozzle Repairs (Dependent on inspection results):**

- Perform dimensional check for roundness, gas path diameters and intersegment gaps.
- Apply Diffused Chromium coating or recommended type MCrAlY for corrosion protection
- Re-assemble nozzle segments to diaphragm packing.
- Perform final dimensional check.
- Final cleaning and quality control inspection.
- Preserve and pack for shipment.

**Note. 3<sup>rd</sup> Stage Nozzle components appears unused**

**Addition:** Provide addition to quotation for the associated Nozzle hardware for each nozzle stage.

**C. Shroud Blocks:**

Part Numbers: (RHI32/1) 6001-0705-0019G001, (HCB6374/1)6001-0705-5970G002, (RHI32/1) 6001-0705-5971G002

**1<sup>st</sup> Stage Shroud Inspection:**

- Perform receipt inspection
- Record parts and serial numbers
- Grit blast to remove coating and discoloration or carbon accumulation areas
- Conduct NDT inspection
- Conduct Visual inspection
- Conduct dimension inspection
- Prepare and submit report with inspection findings and repair recommendations

**1<sup>st</sup> Stage Shroud Repairs (Dependent on inspection results):**

- Conduct Pre-weld heat treatment
- Blend repair and weld preparation
- Weld cracks and worn areas
- Blend welded areas to original contour
- Machine shroud / rubbing surface
- Perform post-weld heat treat
- Apply wear resistance coating to shroud rubbing surface
- Perform post repair NDT inspection
- Final quality control inspection.
- Pack Components for shipment.

**2<sup>nd</sup> Stage and 3rd Stage Shroud Blocks Inspection:**

- Perform receipt inspection
- Record parts and serial number
- Grit blast to remove coating and discoloration or carbon accumulation areas
- Conduct NDT inspection
- Conduct Visual inspection
- Conduct dimension inspection
- Prepare and submit report with inspection findings and repair recommendations

**2<sup>nd</sup> Stage and 3rd Stage Shroud Blocks Repairs (Dependent on inspection results):**

- Perform Pre-weld heat treatment
- Blend repair and weld preparation
- Weld cracks and worn areas
- Blend welded areas to original contour
- Conduct Honeycomb replacement (as needed)
- Perform Post-weld heat treatment
- Perform post repair NDT inspection

- Final quality control inspection.
- Pack Components for shipment.

**Addition:**

- Provide addition to quotation for the associated Locking hardware for each shroud stage
- Provide quote for additional shrouds to complete set or quote for a full set

**Note to Bidders: Repairs should include, but not limited to, the scope activities listed above.**

**1.4 Definitions**

**“Bidder”, “Bidder”, “Vendor” or “Contractor”** shall mean JPS’ qualified service provider acting in the role of the prime contractor who responds to this RFP.

**“Bid/ Proposal”** shall mean the Bidder’s formal written response indicating committed price.

All references to JPS or Company shall mean the Jamaica Public Service Company Limited.

**“Services”** means services ancillary to the research data gathering and submission

**“Approved”** means approved by the JPS or its delegated representatives.

**“Delivery”** means completion of the research findings and the requisite recommendations submitted

**“Days”** means calendar days according to the Gregorian calendar.

**“The Contract”** means the final agreement entered into between the JPS and the Contractor signed by the parties, including any attachments, addenda, and appendices thereto and all documents incorporated by reference therein.

**“The Contract Price”** means the price payable to the Bidder under the Contract for the full and proper performance of its contractual obligations.

**2.0 GENERAL INSTRUCTIONS TO BIDDERS**

The Bidder is expected to confirm intent to bid by date stated in Calendar (Section 4). Failure to comply will result in Bidder being unable to participate in bid. Bidder must examine all instructions, terms specifications in the Bidding Documents. Failure to furnish all information required, will be at the Bidder's risk and may result in the rejection of its bid.

**2.1 Points of Contact**

All communications and questions with JPS regarding this RFP must be directed to the following Points of Contact (POC) via email:

**Name:           Ann-Marie Woodham  
                      Charmaine Shaw**

cc:               [aaiken@jpsco.com](mailto:aaiken@jpsco.com)  
                      [cshaw@jpsco.com](mailto:cshaw@jpsco.com)

Email Subject: JPS RFP # 876505 – HGP Components Repair

**2.2 Communication Regarding the RFP**

***Unauthorized communications concerning this RFP with other Company employees, executives or Contractors may result in immediate disqualification.***

All communication and questions should be submitted in writing, electronically to the POC. In order to ensure consistency in the information provided to Bidders, responses to questions received will be communicated to all participants, without revealing the source of the inquiries.

Only written responses will be considered official and binding. JPS reserves the right, at its sole discretion, to determine appropriate and adequate responses to questions and requests for clarification.

A Bidder contact should be provided for all questions and clarifications arising from the Proposal Queries should include:

- a) Company's name, company address and phone number, contact person, email address, position.
- b) References to specific points within this RFP using the Section number as reference
- c) Clear and concise questions

**2.3 Period of Validity of Bids**

Bids shall remain valid for *ninety (90) days* after submission. A bid valid for a shorter period may be rejected by the Company as non-responsive. In exceptional circumstances, the Company may solicit the Bidder's consent to an extension of the period of validity. The request and responses thereto shall be made in writing.

**2.4 RFP Amendment and Cancellation**

At any time prior to the deadline for the submission of bids, the Company may for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the Bidding documents by amendment.

The amendment will be done in writing to all prospective Bidders who have received the Bidding Documents.

In order to afford prospective Bidders reasonable time in which to take the amendment into account in preparing their bids, the Company may, at its discretion, extend the deadline for the submission of Bids.

JPS reserves the unilateral right to cancel or reissue the RFP at its sole discretion. Bidders will respond to the final written RFP and any exhibits, attachments and amendments.

**2.5 Bid Withdrawal**

A Bidder may withdraw a submitted bid at any time up to the deadline for submitting bids. To withdraw a bid, the Bidder must submit a written request electronically, or via fax, signed by an authorized representative, to JPS before the deadline for submitting bids. After withdrawing a previously submitted bid, the Bidder may submit another bid at any time up to the deadline for submitting bids.

**2.6 Confidentiality of Data**

The Bidder should recognize that JPS operates in a sensitive business environment and, for that reason the Bidder must treat the materials and data provided by JPS as confidential. The successful Bidder may be required to agree to and execute the Confidentiality agreement.

### 3.0 PREPARATION OF BIDS

The bid shall be prepared in two (2) parts, technical and financial. The technical part should not contain any pricing information. The financial proposal shall be separate and contain price information and business profile. The uploaded proposals must include below:

#### A. Technical Proposal

Business Profile / General Information Sheet

Reference is made to Appendix I – General Information:

- (a) Evidence of establishment, type of organization, size, and professional affiliate
- (b) Executive Summary indicating why your firm should be chosen
- (c) Qualification and experience of your staff who will provide the service
- (d) Provide the names and profiles of the top 3 executives
- (e) Audited Financial Statements for the last 2 years
- (f) Current/valid insurance document
- (g) References – provide 3 references that you have provided similar service in the past. Include contact persons and phone numbers

#### B. Financial Proposal

- a) Quotations must be submitted along with
  - a. The completed form specified in Appendix II, namely Response Template.
  - b. Completed MS Excel worksheet showing cost breakdown for each activity
- b) The financial proposal shall consist of cost estimates along with payment terms.
- c) Draft contract to provide this service to JPS.

### 3.1 Bid Prices

Prices quoted by the Bidder and further negotiated and agreed between the bidder and JPS shall be fixed during the Bidder's performance of the Contract and not subject to variations on any account. Prices should be quoted in **United States Dollars**.

If prices are subject to an adjustment clause, kindly state:

- the variables that will affect the price
- the reference index that will govern movement of prices and
- the base price index.

### 3.2 Proposal Withdrawal

The Bidder may modify or withdraw its proposal after the proposal's submission, provided that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of proposals. To withdraw a proposal,

the Bidder must submit a written request electronically or signed document by an authorized representative to JPS before the deadline for submitting proposals. After withdrawing a previously submitted proposal, the Bidder may submit another proposal at any time up to the deadline for submitting proposals.

**3.3 Cost of Proposal Preparation**

The Bidder shall bear all costs associated with the preparation and submission of its bid, and the JPS will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

**3.4 Bidder's Eligibility and Qualifications**

(a) In the case of a Bidder offering to supply goods under the Contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized by the goods' manufacturer or producer to supply the goods in the Purchaser's country.

(b) The Bidder is to confirm the financial, technical and production capability necessary to perform on the Contract.

**3.5 Documents establishing Goods' Eligibility and Conformity to Bidding Documents**

The Bidder shall furnish, as part of its bid, documents establishing conformity to the Bidding Document of all goods and services, which the Bidder proposes to supply under the Contract.

**3.6 Period of Validity of Bids**

Bids shall remain valid for ninety (90) days, after the date of bid opening prescribed by the Purchaser. A bid valid for a shorter period may be rejected by the Purchaser as non-responsive.

**4.0 SUBMISSION OF BIDS AND SELECTION CRITERIA**

**4.1 Bid Response**

All responses must be in English Language. Your bid response must be presented in two (2) separate packages, namely Financial and Technical Proposals. The deadline to upload bids is **11:59 p.m. on Friday May 13, 2021**.

<b>RFP CALENDAR</b>		
<b>ACTIVITY</b>	<b>DUE DATE</b>	<b>RESPONSIBILITY</b>
RFP date	April 22, 2021	JPS
Bidder submits questions on RFP	April 27, 2021	Bidder
Final date to respond to all queries	April 29, 2021	JPS
Bidder confirms intention to bid	April 29, 2021	Bidder
Confirmed Bidder given Shared file access to upload bid	May 3, 2021	Bidder
Completion of RFP and deadline for submission of bids to JPS	11:59pm May 13, 2021	Bidder
Closed Bid Opening	May 14, 2021	JPS

The Company may, at its discretion, extend this deadline for the submission of bids, in which case all rights and obligations of the Company and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

Observing the deadline of the RFP, responses should be uploaded with appropriately file labels/names, and information required in Appendices I and II. Adobe Pdf and Power Point file formats are acceptable. Proposal must be signed by an official authorized personnel who can bind the contractor to the provision of the RFP.

**4.2 Late Bids**

Any bid received by the Company after the deadline to upload bids, pursuant to **Section 4.1**, will be rejected.

**4.3 Proposal Signing**

All proposals must be signed by an official agent or representative of the company submitting the proposal.

**4.4 Proposal Rejection**

Bids received after the deadline for submission of bids will be rejected. Any bid received that does not meet the requirements of this RFP may be considered to be non-responsive, and the bid may be rejected. Bidders must comply with all of the terms of this RFP. JPS

may reject any bid as being non-responsive that does not comply with the terms, conditions, and characteristics of this RFP or the key criteria for selection.

**4.5 Right of Rejection**

JPS reserves the right, at its sole discretion, to reject any and all bids or to cancel this RFP in its entirety.

JPS reserves the right to reject any and all proposal(s) at its sole and absolute discretion. Submission of a proposal constitutes acknowledgement that the Bidder has read and agrees to be bound by such terms and conditions as outlined in the Bid document.

JPS reserves the right to hold discussions/negotiations with OEM directly in arriving at final product specifications, warranty, pricing and delivery. This will not stop finalizing proposal directly with 3<sup>rd</sup> parties or OEM distributors.

**5.0 SELECTION PROCESS AND EVALUATION CRITERIA**

JPS will open bids privately. See calendar for date (Section 4). A selection committee consisting of JPS staff members will evaluate all responses. Based on the preliminary evaluation of the responses, we reserve the right to short list respondents.

Selection will be based on the contractor’s responsiveness to the RFP and total price quoted (including recurring costs).

**5.1 Determination of Responsive Bids**

The company will examine the bids to ensure conformance to all the instructions listed in the Instructions to Bidders.

Omission of any of the requisite documentation may result in the bid being declared non-responsive and therefore rejected.

<b>TECHNICAL CRITERIA</b>	<b>Result</b>
Technical Proposal	Pass or Fail

<b>COMMERCIAL CRITERIA</b>	<b>Score (%)</b>
Cost of Services	90
Payment Terms	10

## **5.2 JPS Bid Evaluation Discretion**

JPS at its discretion may:

- Select a bid other than the lowest priced if JPS determines, at its sole and absolute discretion, that JPS' interests will best be served by doing so;
- Withhold any information used in conducting the evaluation;
- Reject any or all bids and enter into negotiations with other third party non-bidders, or any Bidder or Bidders that JPS may choose;
- Seek clarification from any Bidder regarding bid information and may do so without notification to any other Bidder;
- Continue the review procedure until a Bidder is selected successfully or until JPS chooses to reject all bids;
- Accept any bid or alternate as submitted without negotiations;
- Require revisions to, corrections of, or other changes to any bid submitted as a condition to its being given any further consideration;
- Select for negotiations only the overall best bids or alternate submitted, as determined by JPS;
- Truncate negotiations with a Bidder if JPS determines that progress towards a contract is not proceeding in a reasonable manner or at a reasonable pace;
- Open negotiations with additional Bidders or non-bidders.

## **5.3 Bid Discrepancies**

Arithmetical errors will be rectified on the following basis:

If there is a discrepancy between words and figures, the amount in words shall prevail.

If the contractor does not accept the correction of errors, its bid shall be rejected.

The Company may waive any minor informality or non-conformity or irregularity in a Bid, which does not constitute a material deviation, provided such waiver does not prejudice or affect the relative ranking of any Bidder.

## **5.4 Right to Negotiate**

Upon evaluation of the submitted bids, JPS reserves the right to enter into negotiations with one or more Bidders (not necessarily the Bidder with the lowest deliverable price submission) that appear to have submitted a bid that meets the needs and requirements

of JPS. Negotiations could include, but are not limited to, price and the terms and conditions of this RFP. However, issues may arise that JPS may not negotiate due to policies or strategies, and an impasse could arise. If, for any reason, a Bidder and JPS cannot arrive at a mutual agreement that would result in the issuance of a contract, JPS reserves the right to terminate negotiations, to reject the bid, and to continue negotiations with other responsive Bidders that may lead to the issuance and award of a contract.

**5.5 Written Clarification**

JPS reserves the right, at its sole discretion, to request clarifications of bids or to conduct discussions for the purpose of clarification with any or all Bidders. The purpose of any such discussions will be to ensure full understanding of the bid proposal. Discussions will be limited to specific sections of the bid identified by JPS and, if held, will be after initial evaluation of the bids. If clarifications are made as a result of such discussion, the Bidder will submit such clarifications electronically. Refusal to respond to JPS' request for clarifications may be considered non-responsive and be used as grounds for rejection of the bid.

**5.6 Contract Award**

The award will be based on the Bidder(s) proposal that is/are most responsive to the requirement of JPS and that which will offer the greatest value for JPS.

Issuance of this Bid does not constitute a commitment by JPS to award any contract or to perform the research services as per the Offer made in response to this RFP.

JPS reserves the right to invite any or all Bidders to make an in-person presentation.

The Contract shall be interpreted in accordance with the laws of the Purchaser's country.

**6.0 Bidder Qualifications and Requirements:**

Your quote should include, but not limited to:

**a) Terms of payment.** JPS standard terms of payment is Net 90 days of Invoice date

**b) Warranty Terms**

The Bidder shall warrant that during the term of the Agreement the services provided by it hereunder will be performed in a workmanlike manner and in accordance with the JPS safety regulations and reasonable commercial standards.

The Bidder warrants that the goods supplied under the Contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Bidder further warrants that the Goods supplied under this

Contract shall have no defect arising from design, materials or workmanship (except insofar as the design or material is required by the Purchaser's Specifications) or from any act or omission of the Bidder, that may develop under normal use of the supplied Goods in the conditions obtaining in the country of final destination. This warranty shall remain valid for a minimum of twelve (12) months after the Goods, or any portion thereof as the case may be, have been delivered (and commissioned) to the final destination indicated in the Contract.

The Purchaser shall promptly notify the Bidder in writing of any claims arising under this warranty. Upon receipt of such notice, the Bidder shall, depending on which of the methods can be achieved more expeditiously with reasonable speed, repair or replace the defective Goods or parts thereof, without costs to the Purchaser and under the terms and conditions as if the replacement Goods or parts were being delivered to the Company for the first time.

If the Bidder, having been notified, fails to remedy the defect(s) within a reasonable period, the Purchaser may proceed to take such remedial action as may be necessary, at the Bidder's risk and expense without prejudice to any other rights which the Purchaser may have against the Bidder

## **7.0 GENERAL CONDITIONS OF CONTRACT**

Bidders are required to provide the following in their submissions:

- Qualification to work on the equipment
- One time as well as recurring costs

### **7.1 Proprietary Content**

JPS understands that certain elements of the Bidder's proposal may contain information, including pricing, that is competitively sensitive. JPS acknowledges that all information furnished in the proposals will be for the exclusive use of JPS, in evaluating and selecting a Contractor for the supply of goods and services all parties will respect the sensitive nature of that information in accordance with sound commercial practices.

### **7.2 Prices**

Prices listed by the Bidder of the service to be provided under the Contract shall not, with the exception of any price adjustments authorized, negotiated and agreed on by Contractor and JPS, vary from the prices quoted by the Contractor in its bid.

**7.3 Terms of Payment**

The JPS shall pay the Contractor for the services within ninety (90) days of the Contractor's undisputed invoice date.

**7.4 Contract Amendments**

No variation in or modification of the terms of the Contract shall be made except by written amendment signed by the duly authorized agents of both parties.

**7.5 Subcontract**

The Contractor shall notify the JPS in writing of all subcontracts awarded under the Contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the contractor from any liability or obligation under the Contract with the JPS.

If the bidder submitting a proposal must outsource or contract any work to meet the requirements contained herein, this must be clearly stated in the proposal. Additionally, all costs included in proposals must be all-inclusive to include any outsourced or contracted work. Any proposals which call for outsourcing or contracting work must include a name and description of the organizations or persons being contracted.

**7.6 Delays in the Contractor's Performance**

If at any time during the performance of the Contract, the Contractor or its subcontractor(s) should encounter conditions impeding timely performance of the services, the Contractor shall promptly notify the JPS in writing of the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the Contractor's notice, the JPS shall evaluate the situation and may at its discretion extend the Contractor's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract, or terminate the Contract in accordance with the provision of clause 7.8

**7.7 Penalties**

Failure to submit the Deliverables to the Company within the timelines specified will result in the Contractor being liable to the company payments of sums equivalent to ten percent (10%) of the value of compensation and or liquidated damages payable by the Company in respect of such Deliverable.

**7.8 Termination**

The JPS may, without prejudice to any other remedy for breach of contract, by written notice of default sent to the Contractor, terminate the Contract in whole or in part:

(a) If the Contractor fails to perform any other obligation(s) under the Contract.

(b) The JPS may by written notice sent to the Contractor, terminate the Contract, in whole or in part, at any time for its convenience by giving seven (7) working days'

notice. The notice of termination shall specify that termination is for the JPS's convenience, the extent to which performance of work under the Contract is terminated, and the date upon which such termination becomes effective.

**7.9 Force Majeure**

The Contractor shall not be liable for liquidated damages or termination for default, if and to the extent that, the delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.

For the purposes of this clause, "Force Majeure" means an event beyond the control of the Contractor and not involving the Contractor's fault or negligence and not foreseeable. Such events may include, but are not restricted to, acts of the JPS either in its sovereign or contractual capacity, wars or revolutions, fires, floods, hurricanes, epidemics, quarantine restrictions and freight embargoes.

If a Force Majeure situation arises, the Contractor shall promptly notify the JPS in writing of such condition and the cause thereof. Unless otherwise directed by the JPS in writing, the Contractor shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**Appendix I**

**REQUEST FOR PROPOSAL (RFP)  
HGP Components Repair  
RFP # 876505**

**GENERAL INFORMATION**

Name of Organization:

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Address:

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Key Contact:

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Title:

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Telephone Numbers:

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Email Address:

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## Company Profile

Please submit the requested information below:

- Directors names and profiles
- Company references
- Complete set of audited financial statements for the last two (2) years
- Average employee tenure
- Staff turnover ratio
- Names of top 5 executives, their tenure, experience, qualifications etc.
- Three (3) top achievements of the company in the last 5 years
- Companies must state 5 reasons for JPS to consider Partnering/Selecting them (your company) for this RFP
- Organizational structure for the top five levels in your organization.
- Please provide a short profile such as name, title, experience and education level for the personnel at the top five levels within the organization
- How long has your company been in business?
- How many people do you employ?
- Does your company currently have a Risk Management or Business Continuity Programme in place?
  - If yes, please provide details of the programme you have in place
- Three (3) Customer references (for similar purchases)

**Appendix II**

**Response Template**

This form must be completed by each Bidder and it must be included in your financial proposal.

Name of Bidder: \_\_\_\_\_

Signature of Bidder: \_\_\_\_\_

**Payment Terms**

Purchaser's preference: Net 90 days      Bidder's proposal: Net \_\_\_\_ days

**Price Schedule in United States Dollars**

GT10 SUMMARY RATE SHEET (TURBINE S/N. 296416)

ITEM	DESCRIPTION	QUANTITY	ESTIMATED TIME (HOURS)	COST (USD)		
				INSPEC-TION	REPAIRS	COATING
1	1st Stage Bucket	92				
2	2nd Stage Bucket	92				
3	3rd Stage Bucket	91				
4	1st Stage Nozzle Assembly	1				
5	2nd Stage Nozzle	16				
6	3rd Stage Nozzle	16				
7	1 <sup>st</sup> Stage Shroud	36				
8	2 <sup>nd</sup> Stage Shroud	14				
9	3 <sup>rd</sup> Stage Shroud	11				
	<b>TOTAL</b>					

<b>ITEM</b>	<b>DESCRIPTION</b>	<b>QUANTITY</b>	<b>LEAD TIME (DAYS)</b>	<b>UNIT COST</b>	<b>TOTAL COST</b>	<b>INCOTERMS OF SUPPLY</b>
<b>10</b>	New 3rd Stage Bucket	1				
<b>11</b>	New 2 <sup>nd</sup> Stage Shroud	22				
<b>12</b>	New 3 <sup>rd</sup> Stage Shroud	19				
<b>13</b>	Locking Hardware	1				
	<b>TOTAL</b>					

## Note.

1. Above to be completed using total costs and time (hours) taken from Bidder's MS Excel Sheet with detailed activity cost breakdown. This must be included in Financial Proposal.
2. New components will be needed to complete spares sets
3. Quotation should be provided for locking hardware for each component set

**Appendix III**UNIT INFORMATION – HUNTS BAY GT-10

Unit Name	GT10
Maximum Capacity Rating (MCR)	32.5MW
Turbine Serial number	296416
Frame Size	MS6000B
Fuel Type	No. 2 Distillate
Control System	Mark V with <HMI>
Job Type	HGP Spares Refurbishment

**Images of Components**

These can be viewed on the following pages.

1<sup>st</sup> Stage Bucket



2<sup>nd</sup> stage Bucket



3<sup>rd</sup> Stage Bucket



**1<sup>st</sup> Stage Nozzle**



**2<sup>nd</sup> Stage Nozzle**





**3<sup>rd</sup> Stage Nozzle**



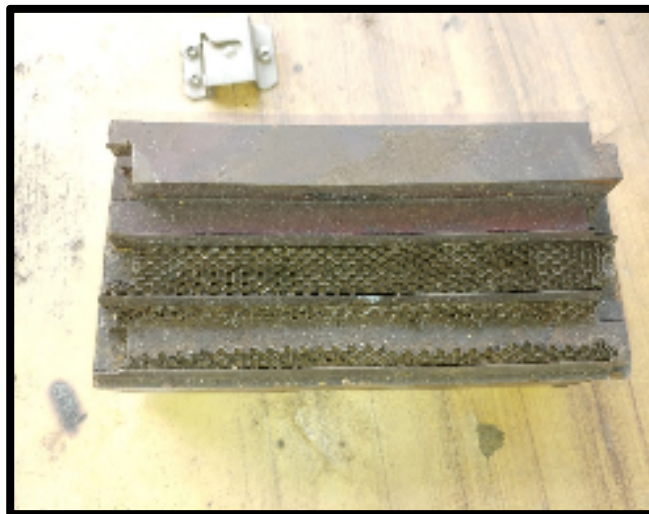
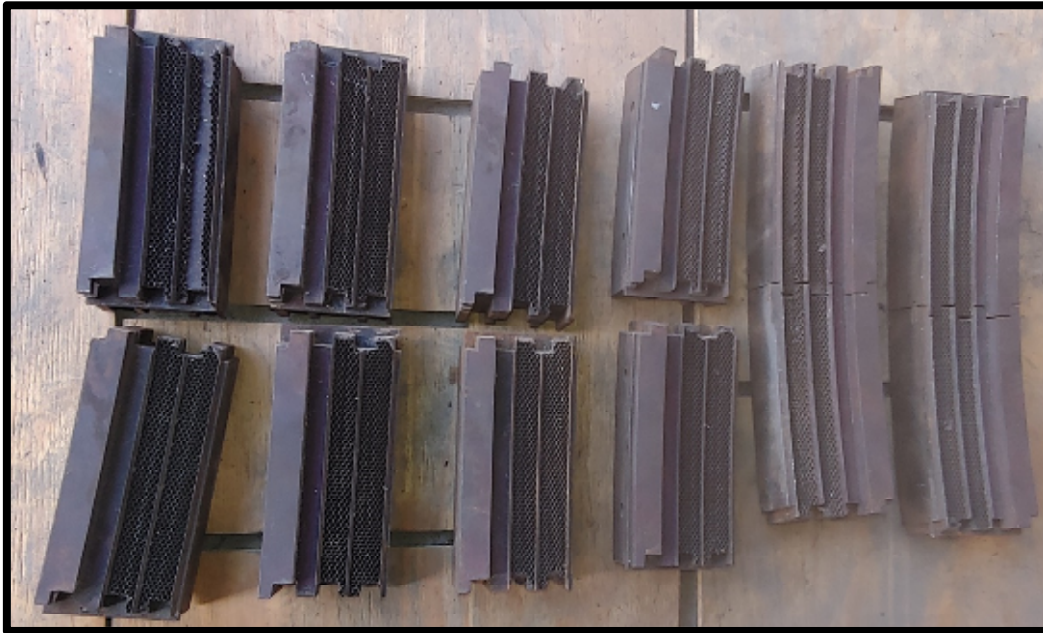
**1<sup>st</sup> Stage Shroud**



**2<sup>nd</sup> Stage Shroud**



**3<sup>rd</sup> Stage Shroud**



**\*END OF DOCUMENT\***

COMPANY NAME

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Bucket Inspection

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform incoming inspection	92	each			
2	Record part numbers and serial numbers	92	each			
3	Conduct cleaning of buckets to remove organic dirt, corrosion and/or oxidation.	92	each			
4	Perform metallurgical review of bucket microstructure and as received coating condition	92	each			
5	Conduct coating removal	92	each			
6	Perform NDE to include the following:	92	each			
6.1	Fluorescent penetrant inspection	92	each			
6.2	Visual inspection	92	each			
6.3	Dimensional inspection	92	each			
6.4	Eddy current wall thickness inspection	92	each			
7	Prepare and submit report with inspection findings and repair recommendations	92	each			
	<b>Total</b>					

1st Stage Nozzle Inspection: 18 segments

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform receipt inspection	1	set			
2	Record parts and serial numbers	1	set			
3	Perform Elliptical inspection	1	set			
4	Perform Dimension inspection.	1	set			
5	Disassemble nozzle segment from support ring (save all reusable hardware).	1	set			
6	Remove all core plugs and impingement plates from nozzle segment	1	set			
7	Remove base metal sample for metallurgical evaluation	1	set			
8	Conduct blast cleaning of nozzle segment.	1	set			
9	Conduct NDT Inspection such as:	1	set			
9.1	Fluorescent penetrant inspection	1	set			
9.2	Ultra-Sonic Inspection airfoil leading edge wall thickness (as required)	1	set			
9.3	Visual inspection and mapping of defect	1	set			
10	Prepare and submit report with inspection findings and repair recommendations	1	set			
	<b>Total</b>					

COMPANY NAME

---

2nd Nozzle inspection:

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform receipt inspection	16	each			
2	Record parts and serial numbers	16	each			
3	Conduct all relevant dimensional inspections.	16	each			
4	Disassemble nozzle segment from diaphragm segment (Save all reusable hardware)	16	each			
5	Remove all core plugs and impingement plates from nozzle segment	16	each			
6	Remove base metal sample for metallurgical evaluation	16	each			
7	Conduct blast cleaning Nozzle Segment.	16	each			
8	Perform base material verification	16	each			
9	Conduct NDT Inspection such as:	16	each			
9.1	NDT inspection all Nozzle Segment by F.P.I.	16	each			
9.2	Ultra-Sonic Inspection airfoil leading edge wall thickness as required	16	each			
9.3	Visual inspection and mapping of defect	16	each			
10	Prepare and submit report with inspection findings and repair recommendations	16	each			
	<b>Total</b>					

COMPANY NAME

3rd Stage Nozzle inspection:

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform receipt inspection	16	each			
2	Record parts and serial numbers	16	each			
3	Conduct all relevant dimensional inspections.	16	each			
4	Disassemble nozzle segment from diaphragm segment (Save all reusable hardware)	16	each			
5	Remove all core plugs and impingement plates from nozzle segment	16	each			
6	Remove base metal sample for metallurgical evaluation	16	each			
7	Conduct blast cleaning Nozzle Segment.	16	each			
8	Perform base material verification	16	each			
9	Conduct NDT Inspection such as:	16	each			
9.1	NDT inspection all Nozzle Segment by F.P.I.	16	each			
9.2	Ultra-Sonic Inspection airfoil leading edge wall thickness as required	16	each			
9.3	Visual inspection and mapping of defect	16	each			
10	Prepare and submit report with inspection findings and repair recommendations	16	each			
	<b>Total</b>					

1st Stage Shroud Inspection:

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform receipt inspection	36	each			
2	Record parts and serial numbers	36	each			
3	Grit blast to remove coating and discoloration or carbon accumulation areas	36	each			
4	Conduct NDT inspection	36	each			
5	Conduct Visual inspection	36	each			
6	Conduct dimension inspection	36	each			
7	Prepare and submit report with inspection findings and repair recommendations	36	each			
	<b>Total</b>					

COMPANY NAME

2nd Stage Shroud Blocks Inspection:

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform receipt inspection	36	each			
2	Record parts and serial number	36	each			
3	Grit blast to remove coating and discoloration or carbon accumulation areas	36	each			
4	Conduct NDT inspection	36	each			
5	Conduct Visual inspection	36	each			
6	Conduct dimension inspection	36	each			
7	Prepare and submit report with inspection findings and repair recommendations	36	each			
	<b>Total</b>					

3rd Stage Shroud Blocks Inspection:

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform receipt inspection	30	each			
2	Record parts and serial number	30	each			
3	Grit blast to remove coating and discoloration or carbon accumulation areas	30	each			
4	Conduct NDT inspection	30	each			
5	Conduct Visual inspection	30	each			
6	Conduct dimension inspection	30	each			
7	Prepare and submit report with inspection findings and repair recommendations	30	each			
	<b>Total</b>					

COMPANY NAME

1st Stage Bucket Repairs (Dependent on inspection results): P/N:  
112E6033P001

Item no.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Remove aluminum seal strips.	92	each			
2	Perform post-strip inspection.	92	each			
3	Blend defects/indications at the tip.	92	each			
4	Blend defects/indications at the airfoil.	92	each			
5	Perform post-weld heat-treatment of buckets.	92	each			
6	Perform diffusion and age heat treatment.	92	each			
7	Weld-repair to restore height for tips and/or angel wings (As required)	92	each			
8	Weld-repair tip cracks and damages. (As required).	92	each			
9	Perform grit blast	92	each			
10	Apply GT33 IN_ PLUS or equivalent coatings.	92	each			
11	Shot-peen dovetails and apply aluminum seal strip.	92	each			
12	Prepare moment-weigh and chart for buckets.	92	each			
13	Prepare final report.	92	each			
14	Prepare components for shipment					
	<b>Total</b>					

2nd Stage Bucket Repairs (Dependent on inspection results): P/N:  
115E6647P001

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Remove aluminum seal strips.	92	each			
2	Perform post-strip inspection.	92	each			
3	Blend defects/indications on airfoils	92	each			
4	Heat treat buckets and weld repair pin slots, tips, and angel wings	92	each			
5	Weld repair shroud defects, cracks, and seal rails.	92	each			
6	Perform Z-notch hard face repair (as required)	92	each			
7	Perform grit blast	92	each			
8	Apply Protective Chromide coatings or recommended type GT29 CoCrAlly for corrosion protection	92	each			
9	Shot-peen bucket dovetails	92	each			
10	Re-apply aluminum seal strip	92	each			
11	Prepare moment-weigh and chart for buckets.	92	each			
12	Prepare final report.	92	each			
13	Prepare for shipment	92	each			
	<b>Total</b>					

3rd Stage Bucket Repairs (Dependent on inspection results): P/N 201E1815P001

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Blend defects/indications on airfoils	92	each			
2	Heat treat buckets and weld repair pin slots, tips, and angel wings	92	each			
3	Weld repair shroud defects, cracks, and seal rails.	92	each			
4	Perform Z-notch hardface repair (As required).	92	each			
5	Perform grit blast	92	each			
6	Apply Protective Chromide coatings or recommended type of corrosion protection	92	each			
7	Shot-peen bucket dovetails	92	each			
8	Prepare moment-weigh and chart for buckets.	92	each			
9	Prepare final report.	92	each			
10	Prepare for shipment	92	each			
	<b>Total</b>					

COMPANY NAME

1st Stage Nozzle Repairs (Dependent on inspection results): P/N: 201E1815P001

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Remove existing coating from external surface.					
2	Conduct pre weld heat treatment.					
3	Conduct cold-straightening of sidewalls.					
4	Perform cleaning, blending, and repair of nozzle segments (As required)					
5	Inspect, weld and braze nozzle body					
6	Perform assessment to nozzle segments to verify that they are within OEM requirements.					
7	Conduct deflection repair and Reestablish sealing surface (As needed)					
8	Blend repair nozzle segments and seal slots					
9	Conduct retaining ring inspection and correction					
10	Re-assemble nozzle segments to retaining ring.					
11	Conduct dimensional check of assembled nozzle segments.					
12	Perform post weld heat treatment of nozzle segment.					
13	Repair core plug and impingement plate (cooling hardware)					
14	Apply Thermal Barrier coating onto nozzle segments					
15	Perform final area checks and alignment measurements to nozzle segments					
16	Perform final assembly.					
17	Final cleaning, quality control inspection and issue report.					
	<b>Total</b>					

2nd Stage Nozzle Repair (Dependent on inspection results): 119E20940

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Repair core plugs from segments, as required.					
2	Perform solution anneal heat treatment of segments in vacuum furnace, in accordance with OEM specifications					
3	Perform liquid penetrant inspection of segments, and weld repair cracks (As needed)					
4	Repair cracks and worn areas by grinding or welding method (As needed)					
5	Verify that all cooling holes are clear and open.					
6	Correct bowing on partitions and trailing edges (As needed)					
7	Perform weld repairs on diaphragm hooks and stake marks.					
8	Dress and blend or replace damaged radial and discourager seal on diaphragms					
9	Apply Diffused Chromium coating or recommended type MCrAlY for corrosion protection					
10	Repair core plugs as required, and install in segments.					
11	Re-assemble nozzle segments to diaphragm packing.					
12	Final cleaning and quality control inspection.					
13	Preserve and pack for shipment.					
	<b>Total</b>					

3rd Stage Nozzle Repairs (Dependent on inspection results):112E1624 G01

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform dimensional check for roundness, gas path diameters and intersegment gaps.					
2	Apply Diffused Chromium coating or recommended type MCrAlY for corrosion protection					
3	Re-assemble nozzle segments to diaphragm packing.					
4	Perform final dimensional check.					
5	Final cleaning and quality control inspection.					
6	Preserve and pack for shipment.					
	<b>Total</b>					

1st Stage Shroud Repairs(Dependent on inspection results): P/N: (RHI32/1)  
6001-0705-0019G001

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Conduct Pre-weld heat treatment					
2	Blend repair and weld preparation					
3	Weld cracks and worn areas					
4	Blend welded areas to original contour					
5	Machine shroud / rubbing surface					
6	Perform post-weld heat treat					
7	Apply wear resistance coating to shroud rubbing surface					
8	Perform post repair NDT inspection					
9	Final quality control inspection.					
10	Pack Components for shipment.					
	<b>Total</b>					

COMPANY NAME

2nd Stage and 3rd Stage Shroud Blocks Repairs (Dependent on inspection results): P/N: (HCB6374/1)6001-0705-5970G002, (RHI32/1) 6001-0705-5971G002

Item No.	Description	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	Perform Pre-weld heat treatment					
2	Blend repair and weld preparation					
3	Weld cracks and worn areas					
4	Blend welded areas to original contour					
5	Conduct Honeycomb replacement (as needed)					
6	Perform Post-weld heat treatment					
7	Perform post repair NDT inspection					
8	Final quality control inspection.					
9	Pack Components for shipment.					
	<b>Total</b>					

**COMPANY NAME**

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item no	Description	Coating Type	Quantity	UOM	Unit Cost	Total Cost	Time (hours)
1	1st Stage Bucket	GT33 IN_ PLUS or equivalent coatings.	92	each			
2	2nd Stage Bucket	Protective Chromide coatings or recommended type GT29 CoCrAly for corrosion protection	92	each			
3	3rd Stage Bucket	Protective Chromide coatings or recommended type of corrosion protection	92	each			
4	1st Stage Nozzle	Thermal Barrier coating onto nozzle segments	1	set			
5	2nd Stage Nozzle	Diffused Chromium coating or recommended type MCrAly for corrosion protection	16	each			
6	3rd Stage Nozzle	Diffused Chromium coating or	16	each			
7	1st Stage Shroud	wear resistance coating to shroud rubbing surface	36	each			
8	2nd Stage Shroud	None	36	each			
9	3rd Stage Shroud	None	30	each			
	<b>Total</b>						

COMPANY NAME

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1st Stage Bucket

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

2nd Stage Bucket

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

3rd Stage Bucket

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

1st Stage Nozzle

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

2nd Stage Nozzle

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

3rd Stage Nozzle

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

1st Stage Shrouds

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

2nd Stage Shrouds

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY

3rd Stage Shrouds

ITEM	DESCRIPTION	QUANTITY	LEAD TIME (DAYS)	UNIT COST	TOTAL COST	INCOTERMS OF SUPPLY