TRANSFER OF TECHNOLOGY
(On Non-Exclusive Basis)

CALL FOR

EXPRESSION OF INTEREST (EOI)

Expression of Interest is invited for transfer of technology of “Plasma Nitriding” used for surface hardening of all ferrous materials for improved wear and corrosion resistance.

[2015/PN/SHM/TT/02]

Introduction

Plasma Nitriding is a surface hardening process, in which nitrogen is diffused into the components surface. Plasma nitriding produces high surface hardness, good wear resistance, increased fatigue strength and toughness.

Advantages of Plasma Nitriding

- Reduced (by 20-50%) treatment cycle compared to gas nitriding process.
- Better process control and automation.
- Higher surface hardness can be achieved (up to 1200 HV, 70 HRC).
- Better dimensional stability (lower distortions) due to lower process temperature and uniform heating.
- Cases with uniform depth are formed even over parts with complex shapes.
- Easier masking for selective nitriding.
- Lower energy consumption
- Reduced gas consumption.
- Safer operation.
- Environment Friendly Process (Green Technology)

**Material for Plasma Nitriding**

- En-8, En-19, En-24, En-47, En 41B
- All types of stainless steels
- Hot working steel
- High speed steel
- Cold work steel
- Valve steel
- Oil hardening steel
- Cast iron

**Applications**

- Cutting tools
- Forging dies
- Drawing dies
- Molds for Transfer molding and Compression molding of polymers
- Machine and automotive parts like gear wheels, valves, lifters, cams, rocker arms, crankshafts

**Specifications** *

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<tr>
<td>1.</td>
<td>Dimensions of Vacuum Chamber</td>
<td>800mm diameter and 800mm height</td>
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<tr>
<td>2.</td>
<td>Multiple size components</td>
<td>Stacking is possible</td>
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<td>2.</td>
<td>Weight of material that can be nitride in a single batch</td>
<td>Maximum up to 500 Kg</td>
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<td>3.</td>
<td>Input Power requirement</td>
<td>3 phase, 40KW</td>
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<td>4.</td>
<td>Database of 20 different types of steel.</td>
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*Details of specification will be provided to selected parties during the process of transfer of technology.*

Interested parties are requested to submit the Expression of Interest (EOI) in the prescribed format (ANNEXURE-1) along with supporting documents/credentials and application processing fee of Rs. 500 for seeking technology transfer of Plasma Nitriding Technology. Soft copy of the documents may be emailed to iprtt@ipr.res.in
Terms and Conditions

1. An expert committee will scrutinize the applications for follow-up action. Shortlisted agencies will be called for a presentation regarding their strengths and business proposals.

2. Technical Commercial Committee (TCC) formed for the purpose, reserves the right of rejecting any offer without assigning reasons.

3. Last date of receiving the applications is 3rd Dec 2015. Any offer received after due date will be rejected.

4. Intellectual Property Right (IPR) will remain with Institute for Plasma Research, Bhat, Gandhinagar.

5. The industry willing to take the technology shall be required to enter into a Technology Transfer Agreement with Institute for Plasma Research as per the terms and conditions approved by the competent authority.

Who should apply?

Interested parties with Engineering & Scientific knowledge, good financial background and adequate experience in vacuum furnaces and heat treatment & fabrication can apply.

Duly filled application form should be sent to:

Dr. Nirav Jamnapara,
Technology Commercialization Cell,
FCIPT, Institute for Plasma Research,
A-10/B, GIDC, Sector-25
Gandhinagar-382016 (Gujarat)
Phone 079-23269017, 23269026 Email: iprtt@ipr.res.in

Note:

1. Application processing fee of Rs. 500/-
2. Duly filled EOI application along with relevant documents must be enclosed with the Demand draft/bankers cheque for application processing fee drawn in favour of Institute for Plasma Research, A/c FCIPT and must be sent to the above mentioned address.
3. Alternatively, in case of electronic fund transfer, the same may be done as per following data with “TECH TRANSFER FEE” in the subject (message) line:

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<th>Details</th>
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<tr>
<td>a.</td>
<td>Bank Account No.</td>
<td>30767137485</td>
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<tr>
<td>b.</td>
<td>Account Name</td>
<td>Institute for Plasma Research - A/c FCIPT</td>
</tr>
<tr>
<td>c.</td>
<td>Bank Name</td>
<td>State Bank of India, IPR Bhat Branch</td>
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<td>d.</td>
<td>MICR Code</td>
<td>380002096</td>
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<td>e.</td>
<td>IFSC Code</td>
<td>SBIN0010864</td>
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Kindly furnish the payment receipt or transaction details along with the ANNEXURE – I submitted with the EoI.