



ELECTRO PROTECTION SERVICE INDIA PRIVATE LIMITED

Corrosion Specialist



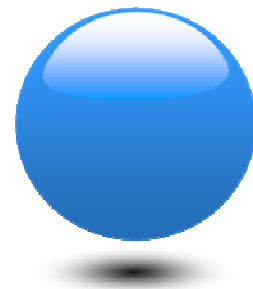
Electro Protection Services India Private Limited offers Design, Engineering, Manufacture and Supply of Cathodic Protection Materials for the past two decades.

Corrosion Specialist



-  **The Company**
-  **Our Products**
-  **Our Services**
-  **Inspection Agencies & Standards**





The Company



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PREQUALIFICATION STATEMENT

- EPSIPL commenced their activities in a humble way during 1983.
- We have the complete know-how and infrastructure for manufacture of these anodes at our works at Karaikudi.
- EPSIPL's decades 26 years of experience in manufacture of Cathodic Protection materials needs in the market.
- EPSIPL provides design, manufacturing, consulting, delivery, and installation supervision to any of the world's main market areas.
- We are committed to partnering with our customers to help them to increase their competitiveness.





THE SERVICES INCLUDES

- Pre and post construction services.
- Design studies on the technical and commercial viability of Cathodic Protection.
- Supply of all Materials associated with Cathodic Protection.
- Installation of cathodic protection systems / supervision of clients installation team.
- Commissioning of the Cathodic Protection Systems.
- Maintenance of the Cathodic Protection System.
- Specialized surveys.





PROMOTER

- The company was founded in the year 1981 by our Founder, Promoter and Chairman, **Dr.R. Thangappan, B.Sc (Tech) Chem. Engg., Ph.D., MIE., MIChE.**
- He is a well acclaimed and eminent scientist turned entrepreneur, who during his scientific career at CECRI – Karaikudi invented Dimensionally Stable Anodes.
- His invention was further commercialized in his then founded company Titanium Tantalum Products Limited under the name of ATMA (Activated Titanium Metal Anodes).





COMPANY DETAILS


- Name : Electro Protection Services India (P) Ltd
- Office : Plot No:6, Cauvery Street,
Guruswamy Nagar Extn.,
Sempakkam, Chennai-600 0073
Tamilnadu, India.
Phone : 0091 - 44 - 22780677
Fax : 0091 - 44 - 22780688
- E-mail (office) : sales@epsipl.com, md@epsipl.com
- Factory : Plot No. 59 & 60, Kottaiyur Main Road,
Karaikudi - 630 002.
Phone : 04565 - 224884
- E-mail (Factory) : works@epsipl.com



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CERTIFICATE

इंजीनियर्स इंडिया लिमिटेड  **ENGINEERS INDIA LIMITED**
(भारत सरकार का उपक्रम) (A Govt. of India Undertaking)

पंजीकृत कार्यालय : इंजीनियर्स इंडिया भवन, 1, भीकाजी कामा प्लेस, नई दिल्ली-110066
Regd. Office : Engineers India Bhavan, 1, Bhikaji Cama Place, New Delhi-110066

Procurement Development Department

Ref: 4994/PDD/RE/E-100 Date: 27th October, 2006

M/s Electro Protection Services India Pvt., Ltd.
86/1, Vengalvasal Main Road
Gowrivakkam
Chennai – 601 302

Subject : Revalidation of Enlistment with EIL

Dear Sirs,

We refer to your application on subject matter and are pleased to inform that your enlistment with EIL has been revalidated for the items as described below :

Item Description	Type
Anodes for CP System	Magnesium, Zinc, Aluminium

(This enlistment is valid for your works located at 59, Kottaiyur Main Road, Karaikudi- 630 002, Tamilnadu).

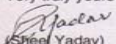
Please note that this revalidation is subject to satisfactory execution of orders in delivery and quality of above mentioned items when ordered for our various projects.

Further, it may be noted that any change in the product range, location of Works/Sales Office, Management/ Organisation structure etc. shall be intimated to us immediately along with relevant document for our necessary action. In case, information to any of the above referred changes is not intimated timely, our enquiries may not reach you and your enlistment with us is liable to be cancelled. Enlistment with EIL shall not guarantee any regular flow of enquiries.

The validity of this ENLISTMENT is upto 30th June, 2009.

You are advised to contact us 6 months before expiry of the enlistment, so that revalidation of your enlistment is taken up.


Thanking you,

Very truly yours

(Shree Yadav)
Additional General Manager
Procurement Development Department

परामर्शदाता का उत्तर - हमारे कर्मियों
DELIVERING EXCELLENCE THROUGH PEOPLE

फोन/Phone : +91-11-26102121 (EPABX)
+91-11-26101419 (DISA)
कैसा /Fax : +91-11-26192520
+91-11-26187822
E-mail : pdd@eil.co.in
Visit us at <http://www.engineersindia.com>
हिन्दी देश की एकता की कड़ी है।

ISO 9001 : 2000
IRQS
BRIEF TO
BRIEF TO

इंजीनियर्स इंडिया लिमिटेड  **ENGINEERS INDIA LIMITED**
(भारत सरकार का उपक्रम) (A Govt. of India Undertaking)

पंजीकृत कार्यालय : इंजीनियर्स इंडिया भवन, 1, भीकाजी कामा प्लेस, नई दिल्ली-110066
Regd. Office : Engineers India Bhavan, 1, Bhikaji Cama Place, New Delhi-110066

REF: 8518/PDD/I/E/E-100 DATE : 22.12.92

M/s Electro Protection Services
161, Velacherry Road,
Ranchi, Jharkhand,
JHARKHAND-834 009

Sub: Vendor Enlistment for ALUMINIUM ALLOY ANODE

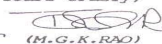
Dear Sirs,

We refer to your letter No.EPS/92-93/276 dtd 20.8.92 seeking enlistment for manufacture and supply of subject item. We have examined your application and are pleased to intimate to you that you have been enlisted with EIL for manufacture and supply of the item as described below:

S.NO	EQUIPMENT DESCRIPTION	RANGE
1.	ALUMINIUM ALLOY ANODE (SACRIFICIAL TYPE)	- ELEC. POTENTIAL: 1.08V - CAPACITY : 2500AH/KG - WEIGHT : 500 KG MAX

Please note that the above enlistment is subject to satisfactory performance in delivery and quality of above mentioned items for our various projects.

Thanking you,

Yours truly,

(M.G.K. RAO)
DY. GENERAL MANAGER

602121, 601419
Box 730, 722

टेलीफोन 031-72401 72443
Telex: 031-82036 82040 82097



Fax : 6874005, 6873403
6872693, 6874760
6874715, 6874663






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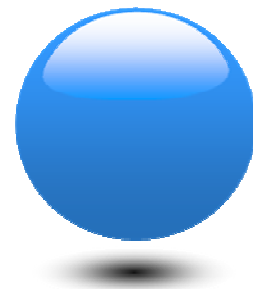


TYPE APPROVAL CERTIFICATE

Industry & Facilities Division		Page: 1/2																					
 TYPE APPROVAL INSPECTION REPORT Nr TYPE APPROVAL/EP/TRY/TAIR/001		<input type="checkbox"/> Interim <input checked="" type="checkbox"/> Final																					
BV Job nr: IND C 4.08.0166																							
PROJECT: TYPE TEST APPROVAL FOR SACRIFICIAL ANODES BV Client: M/S ELECTRO PROTECTION SERVICES INDIA PVT LTD, CHENNAI Manufacturer: M/S ELECTRO PROTECTION SERVICES INDIA PVT LTD, KARAIKUDI Inspection requested by: M/S ELECTRO PROTECTION SERVICES INDIA PVT LTD, CHENNAI		Ref: IND C 4.08.0166 P/o nr: --- (Client to BV) P/o nr: --- (Client to manufacturer)																					
SUPPLY / SUBJECT OF INSPECTION Type Test Approval for manufacturing of High Purity Zinc, Zinc Alloy & Aluminium Alloy sacrificial Anodes.		ITEM / TAG Nr High purity Zinc Anodes Zinc Alloy Anodes Aluminium Anode																					
		TYPE / NO 1 Type 1 Type 1 Type																					
3 Types																							
DOCUMENTS OF REFERENCE: See continuation sheet for additional documents. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																							
<table border="1"> <thead> <tr> <th>Reference</th> <th>Rev</th> <th>Approved by</th> <th>Date</th> </tr> </thead> <tbody> <tr> <td>ALUMINIUM ANODES</td> <td>GALVALUM III</td> <td>---</td> <td>---</td> </tr> <tr> <td>ZINC ALLOY ANODES</td> <td>ASTM B 418 - 01 TYPE I</td> <td>---</td> <td>---</td> </tr> <tr> <td>HP ZINC ANODES</td> <td>ASTM B 418 - 01 TYPE II</td> <td>---</td> <td>---</td> </tr> <tr> <td>TESTING STANDARD</td> <td>DNV RP B401</td> <td>---</td> <td>---</td> </tr> </tbody> </table>				Reference	Rev	Approved by	Date	ALUMINIUM ANODES	GALVALUM III	---	---	ZINC ALLOY ANODES	ASTM B 418 - 01 TYPE I	---	---	HP ZINC ANODES	ASTM B 418 - 01 TYPE II	---	---	TESTING STANDARD	DNV RP B401	---	---
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INSPECTIONS: Inspection place & Date / Period: M/S Electro Protection Services India Pvt Ltd, Karaikudi, & 04.11.2009. Stage of inspection: <input type="checkbox"/> Before manufacturing <input type="checkbox"/> During manufacturing <input checked="" type="checkbox"/> Final <input type="checkbox"/> Packing Kind of inspection: <input type="checkbox"/> Pre-inspection meeting <input checked="" type="checkbox"/> Witnessing tests <input checked="" type="checkbox"/> Final inspection <input type="checkbox"/> Document review <input type="checkbox"/> Expediting & vendor assessment <input type="checkbox"/> Packing Stamping: <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		Results of inspection: <input checked="" type="checkbox"/> Satisfactory <input type="checkbox"/> Unsatisfactory Non Conformities Reported (NCR): Nil Nil Nil Main Conclusions & Remarks: (for details see continuation sheet) 1) Type Test Approval for HP Zinc Anodes, Zinc Alloy Anodes and Aluminium Alloy Anodes with regards to the above Documents found satisfactory to the relevant standards subject to the design of Anodes. 2) Type Test approval for HP Zinc Anodes, Zinc Alloy Anodes and Aluminium Alloy Anodes are issued for Manufacturing of above Anodes only and not for Design. 3) Renewal Survey to be performed at every three years 4) Surveillance audit to be performed at every year.																					
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Industry & Facilities Division		Page: 2/2	
 TYPE APPROVAL INSPECTION REPORT Nr TYPE APPROVAL/EP/TRY/TAIR/001		<input type="checkbox"/> Interim <input checked="" type="checkbox"/> Final	
BV Job nr: IND C 4.08.0166			
Introduction At the request of M/s. EPS, Chennai, Bureau Veritas Surveyor visited M/s. EPS, Karaikudi for Type approval for the Products - HP Zinc Anodes, Zinc Alloy Anodes & Aluminium Alloy Anodes on 4.11.2009.			
Attendees Mr. Anbu Raj, Engineer-QC EPS & A. Kathirvel, Bureau Veritas.			
Details of inspection activities carried out with respect to scope of work. Surveillance with Reference to Relevant Standards.			
<ul style="list-style-type: none"> Reviewed the relevant catalogues, brochures & specifications. Reviewed the Calibration status of Testing Equipments and found in order. Raw Material Test Certificates are verified for Chemical Analysis and found meeting the relevant standards. Pouring witnessed for HP Zinc Anodes, Zinc Alloy Anodes and Aluminium Alloy Anode Samples identified with hard stamp near the serial numbers (HP Zinc Anodes - TP 01 HPZN S 01-09, Zinc Alloy Anodes- TP 02 ZNA S 01-09 and Aluminium Alloy Anode - TP 03 ALA S 01-09) Chemical Analysis Reports on the above samples received from IIT, MUMBAI were reviewed for the elements Zn, In, Fe, Si, Cu & Al and found in accordance with relevant standards. Electro chemical Analysis Reports on the above samples received from IIT, MUMBAI were reviewed for the Open Circuit Potential Test, Anode Capacity Test & Closed Circuit Test and found in accordance with relevant standards. 			
Conclusion 1) Type Test Approval for HP Zinc Anodes, Zinc Alloy Anodes and Aluminium Alloy Anodes with regards to the above stages of inspection and Documents found satisfactory to the relevant standards subject to the design of Anodes. 2) The above Type Test Approvals are applicable for Manufacturing of HP Zinc Anodes, Zinc Alloy Anodes and Aluminium Alloy Anodes and not for design of the above Anodes.			
ANNEXES <input type="checkbox"/> Yes (Total number of pages: ...) <input checked="" type="checkbox"/> No			
Inspected by: A. Kathirvel  Signature: _____ Date of issue: 15.04.2009.		Checked by: A. Kathirvel  Signature: _____	
Inspection centre: BV-TRICHY.			
Distribution: <input type="checkbox"/> BV CHENNAI <input type="checkbox"/> EPS CHENNAI <input type="checkbox"/> BV TRICHY			
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Our Products



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OUR PRODUCTS

■ Sacrificial Anodes

- ✦ Zinc
- ✦ Aluminum
- ✦ Magnesium

■ Impressed Current Anodes

- ✦ Mixed Metal Oxide
- ✦ Platinized Titanium
- ✦ Lead Silver
- ✦ Ferro-silicon (Chromium)
- ✦ Graphite Anode
- ✦ Others (on special request)





SACRIFICIAL ANODES

■ Aluminum Anodes

- ✦ Superind EPS Aluminum Alloy Anodes
- ✦ Superin EPS Aluminum Alloy Anodes
- ✦ Supertin EPS Aluminum Alloy Anodes
- ✦ Hull Anode
- ✦ Tank Anode

■ Magnesium Anodes

- ✦ Standard Mg Anodes
- ✦ High Potential Mg Anodes

■ Zinc Anodes





SACRIFICIAL ANODES

■ Marine Anodes

- ✦ Hull Anode
- ✦ Tank Anode

■ Industrial Anodes

- ✦ Condenser Anode
- ✦ Heater Anode
- ✦ Boiler Anode

■ Offshore Anodes

- ✦ Platform Anode
- ✦ Jetty & Wharf Anode
- ✦ Bracelet Anode





SACRIFICIAL ANODES

- High/Standard Potential
 - ✦ Bare Anode
 - ✦ Pre-packed Anode
 - ✦ D-Shaped Anode
 - ✦ Ribbon Anode
 - ✦ Extruded Anode
 - ✦ water Heater Anode





IMPRESSED CURRENT ANODES

■ MMO Anodes

- ✦ Wire Anode
- ✦ Ribbon Anode
- ✦ Expanded Mesh Anode
- ✦ Probe Anode
- ✦ Tubular Anode
- ✦ Solid Rod Anode

■ Platinized Titanium Anodes

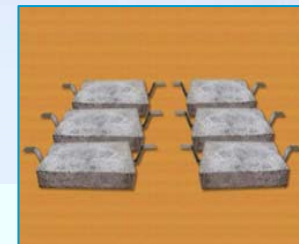
- ✦ Probe Anode
- ✦ Wire Anode





IMPRESSED CURRENT ANODES

- High Silicon Anodes
 - ✦ Double Headed Anode
 - ✦ Single Headed Anode
 - ✦ Tubular Anode
 - ✦ Pre-packed Anode
- Platinized Niobium Anodes
- Lead Alloy Anodes
- High Silicon Chromium Anodes

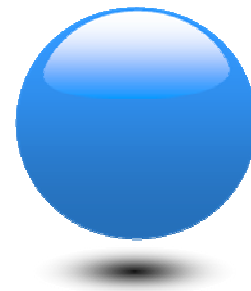




IMPRESSED CURRENT ANODES

- Water Heater Anodes
- Tank Anodes
- Wood Alloy Anodes
- Lead Bismuth Alloy Anodes
- Lead tin Alloy Anodes
- Lead Tin Silver Alloy Anodes
- Lead Tin Antimony Alloy Anodes





Our Services



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DESIGN STUDIES

- Based on the technical and commercial viabilities of cathodic protection in-house design facilities are available for all types of cathodic protection systems. The design function includes,
 - ✦ Material Specification
 - ✦ Installation Specification
 - ✦ Equipment and Installation Drawing
 - ✦ Bill of Materials
 - ✦ Operation and Maintenance Manual





SURVEYS

- Soil resistivity survey.
- Soil analysis.
- Potential and line current surveys.
- Holiday inspection of pipe coatings and cable insulation tests.
- Interaction testing on foreign structures.
- Current drainage surveys.
- Ground bed location.





INSTALLATION

- EPSIPL can provide a full system of Design Service, supply equipment, supervise its installation and commissioning.
- As a part, EPSIPL offers installation services depending on the nature of the work to be executed and the resources it has available.
- In some cases, the client may opt to have the materials installed by its own contractor.
- But to engage services of EPSIPL to provide supervision and technical support.
- Our field engineers and technicians install complete system or supervise client's own personnel.





OTHER SERVICES

In addition to the turnkey cathodic protection work, EPSIPL offered specialized surveys such as,

- Corrosion inspection of pipeline
- Close interval potential survey
- Potential and line current survey
- Current attenuation survey
- Stray current analysis .





OTHER SERVICES

- Interaction and interference testing on foreign structure.
 - ✦ Due to cathodically protected foreign pipeline.
 - ✦ Due to EHT crossing.
 - ✦ Due to DC traction
- Coating defect survey (Pearson/DCVG)





CP FOR AUTO LPG DISPENSING STATION

- Soil Resistivity Survey
- Design of CP System
- Manufacturer & Supply of Anodes
- Erection , Installation, Testing & Commissioning
- AMC





CP FOR ABOVE GROUND STORAGE TANK

- Design
- Installation of cathodic protection systems or the supervision of the clients installation team.
- Commissioning of the cathodic protection systems.
- Maintenance of the cathodic protection system.





OUR STRENGTHS

- EPSIPL since 1983, have always been in the fore front of Technological Development
- Cathodic Protection against corrosion has been and continues to be demanded in an ever increasing variety of operating conditions.
- EPSIPL always sets out to meet these new demands with innovative system design, and alloy formulation with a focus on.
- EPSIPL facilitates all types of commissioning tests associated with cathodic protection systems.

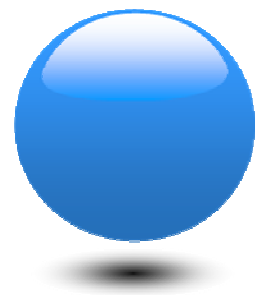




OUR STRENGTHS

- Long Life Span with higher strength.
- Optimum Cell Voltage and savings on Power Cost.
- Eliminating Downtime in addition to low maintenance cost.
- Lower Anode Potential.
- Higher Current Density.
- Utmost Care to have no product contamination
- Resistant to adverse environments.





Inspection Agencies & Standards



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MAJOR INSPECTION AGENCIES

- The works at Karaikudi which has been registered and approved by Engineers India Limited, approved with all major inspection agencies
 - ✦ DNV
 - ✦ Lloyds
 - ✦ BVIS
 - ✦ EIL
 - ✦ CECRI
 - ✦ SGS
 - ✦ IRS
 - ✦ DGQA
 - ✦ ABS





STANDARDS

- Maintains comprehensive in-house quality control following stringent inspection procedures and monitoring in accordance to standards and technical design codes laid down by:
 - ✦ National Association of Corrosion Engineers (NACE)
 - ✦ Recommended Practices (RP)
 - ✦ British Standards
 - ✦ DNV
 - ✦ CP 1021
 - ✦ ASTM





THE WORKS AT KARAIKUDI

- Produce a single anode weighing up to 2 metric tones and has also accreditation from Engineers India Limited.
- Produce magnesium alloy anodes being up to 2 tones each.





Thank You



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