

## **TRAINING IN LIVE LINE MAINTENANCE TECHNIQUES USING HOT STICK METHOD UP TO 220 KV LINES**

### **COURSE OUTLINE AND OTHER INFORMATION**

The fast developing Power System Network calls for least interruption in Power Supply and increased system security. Efficient operation and maintenance of existing and expanding Power System networks, which play a vital role in shaping the economy any country, necessitated adoption of specialized techniques for the maintenance of power transmission and distribution lines.

The Hot Line Training Centre was established at Bangalore to impart specialized training in Live Line Maintenance Techniques (LLMT) using Hot Stick Method (HSM) up to 220 KV to the personnel of the State Electricity Boards / Supply Undertakings all over India and Abroad. The course on Hot Stick Method up to 220 KV lines so designed and planned as to meet the needs of the power systems owned and operated by various power utilities in the country. This 12 weeks training course is conducted about three times in a year.

#### **OBJECTIVE**

The Training Programme has been organized with the following objectives:

- ❖ To Provide in-depth approach and technical know-how for live line maintenance
- ❖ To highlight the importance of maintenance of HV and EHV Power Transmission lines using Hot Stick Method.
- ❖ To give an introduction to Bare Hand Method of Live Line Maintenance

#### **COURSE OUTLINE**

- ❖ General Principles of LLMT.
- ❖ Introduction to maintenance on EHV lines using Hot Stick Method.
- ❖ Safety aspects and Regulatory requirements.
- ❖ Practical oriented Operation covering various tower configurations and on uncharged and charged conditions.
- ❖ Hands on training on commercial lines of various configurations on 66Kv & 220Kv lines.
- ❖ Introduction to testing of insulators and live line insulator washing techniques.
- ❖ Study Tours to Certain Important substations and transmission line locations.
- ❖ Introduction to Bare Hand Method of Live Line Maintenance and Switchyard Maintenance.

**PERIOD: From 10.10.2016 to 30.12.2016 (12 weeks)**

#### **ATTENDANCE**

As the Live Line Maintenance training is intensive, it is expected that the participants who join the training will not avail any kind of leave during the training period except in emergency situations. The sponsoring authorities are requested to advise them accordingly so that they may not apply for any kind of leave during training. If desired, a monthly attendance report of the trainees will be sent to their controlling officers for preparation of salary bills. Trainees found irregular/ uninterested in training by HLTC will not be issued with training certificates.

#### **ASSESSMENT**

At the end of the training course there will be an objective assessment test / viva voce for the participants. Course certificate shall be awarded only to those participants found successful in the test.

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**NATIONAL POWER TRAINING INSTITUTE  
HOT LINE TRAINING CENTRE  
BANGALORE – 560 082.**

**12 weeks Training in Live Line Maintenance Techniques (LLMT) using Hot Stick Method (HSM) up to 220 KV lines from 10.10.2016 to 30.12.2016 (102 Batch).**

**NOMINATION FORM**

*(TO BE FURNISHED BY THE SPONSORING DEPARTMENT)*

01. Name of the candidate (in block letters) :
02. Father's name :
03. Date of birth :
04. Designation & official address :
  
05. Residential address for future Communication :
  
06. Details of Educational/Technical Qualification:
07. Whether the candidate has working knowledge of English/Hindi/ local language to understand the lectures and instructions. :
08. To complete the arduous training Programme whether the candidate has: -
  - a) Physical fitness to climb and work on towers :
  - b) Good eye sight & hearing :
  - c) Free from Height phobia & colour blindness :
  - d) Free from Heart ailments, Arthritis, Epilepsy, etc.:
9. Number of years the Candidate had Worked in overhead T & D lines
  - a) Construction, erection, stringing, testing, etc.:
  - b) Maintenance and repairs :
10. Whether the candidate has high degree of manual skill and even temperament which are which are the essential requirements for Hot Line Trainees. :
11. Whether the Indemnity Bond is executed :

**The information furnished above is true to the best of my knowledge and belief.**

SIGNATURE OF THE SPONSORING AUTHORITY  
WITH NAME, DESIGNATION and ADDRESS :

Date : (OFFICE SEAL)

**INDEMNITY BOND**

THIS DEED MADE ON THIS \_\_\_\_\_ day of \_\_\_\_\_, 2016 by \_\_\_\_\_ (Name of the Trainee with address) do hereby hold and firmly bound to National Power Training Institute (NPTI) and its officials or any person employed by NPTI who have agreed to give me training in the fundamental of routine line maintenance, and thereafter in repairs, maintenance and operation of the overhead transmission and distribution lines and equipment when they are energized, here-in-after referred to as “ **The Live Line Maintenance Techniques Training** ” at the Hot Line Training Centre at Bangalore. Now, the above written bond/obligation’s condition is that I hereby undertake to receive such training at my own risk and responsibility and agree and declare that the NPTI and its officials or any person employed by NPTI shall not be liable for damage sustained in the event of my death or in the event of my being wounded or for any other bodily injury suffered by me or for damage to my property and during my training period and whether arising by accident or by reasons of any acts of NPTI or persons employed by NPTI and I hereby further undertake to indemnify and keep the NPTI indemnified against all liability in respect thereof.

IN WITNESS WHEREOF both the Parties viz. National Power Training Institute (HLTC), Bangalore represented by its Director and the Trainee, (Shri \_\_\_\_\_) have signed on this the \_\_\_\_\_ day of \_\_\_\_\_ 2016.

.....  
Director  
National Power Training Institute  
Hot Line Training Centre  
Bangalore.  
**(For and on behalf of the  
National Power Training Institute)**

.....  
Signature of the trainee  
.....  
**Signature of the Authority/Controlling Officer.  
(For and on behalf of Sponsoring Utility /  
Organisation)**

IN THE PRESENCE OF

1.

2.

IN THE PRESENCE OF

1.

2.

\* **To be furnished in Non-Judicial Stamp Paper of not less than ₹.50/-**

### INSTRUCTIONS FOR TRAINEES

- I. **ATTENDANCE:** As the training in Live Line Maintenance Techniques up to 220 kV using Hot Stick Method is highly comprehensive and intensive, the attendance of the trainees for the complete course is compulsory and no leave of any kind will be sanctioned to the trainees during the course of training. It is advisable to sponsor only such candidates who will be punctual and regular in attendance. Unauthorised absence by candidates will be viewed seriously and HLTC will not be in a position to issue Course Certificates in such cases.
- II. **INDEMNITY BOND:** The trainees shall sign an Indemnity Bond on non-judicial stamp paper of **not less than ₹.50/-** which is duly counter signed by the sponsoring/controlling authority before joining the training course. The participants who have **NOT** executed the bond shall **NOT** be admitted to training course.
- III. **ACCOMMODATION:** A Hostel with well-furnished rooms on twin sharing basis is available in the HLTC campus for the trainees. The course is fully residential and the boarding and lodging are provided by HLTC. As far as possible HLTC will make arrangements for the comfortable stay of the trainees.
- IV. **PHOTOGRAPHS:** Trainees shall submit Three (2) passport-sized and Two (3) Stamp sized colour photographs duly signed on the back of the photograph at the time of reporting to training course.
- V. **SAFETY SHOES:** As the nature of training demands regular climbing and working on the towers, the trainees need to be equipped with good quality **SAFETY SHOES** with thick rubber soles for providing electrical insulation, be sturdy, robust and secure for withstanding mechanical stresses. Non-availability of safety shoes will result in trainees not being able to take up hands-on training on towers. Also it is suggested that the sponsoring authority may provide the trainees with **Safety Glasses** for protecting eyes from ultra violet rays before sending them for the training course.
- VI. **INSURANCE COVERAGE:** The sponsoring authority is advised to provide suitable insurance cover for the trainees, in view of the risk involved while on training. Normally, the insurance coverage to the trainee shall be minimum of 24 months gross emoluments of the individual concerned.
- VII. **HOW TO REACH:** The sponsored candidates may be directed to alight at Bangalore City Railway Station/city Bus Stand and report to this office, which is about 35 km from there. It is situated next to 220 kv Sub Station of Karnataka Power Transmission Corporation Ltd (KPTCL) and 400 kv Sub-station of POWERGRID on Kanakapura Road and is opposite to Acharya Patasala College (APS) of Engineering campus. Buses are available from Krishna Rajendra (K.R.) Market which is about 3 Km from City Railway station/City Bus stand. HLTC can be reached by City Bus Route Nos. 211, 211D, 211G, 211H, 211L, 211N, 213, 213A, 213B, 213K, etc. For any assistance, contact this office (Monday to Friday) between 10.00 hrs to 17.00 hrs on **Phone Numbers: 080-28432212 & 080-28432053, Tele fax: 080-2843596.**

### **CHECK LIST FOR TRAINEES:**

All the trainees nominated for attending the LLMT course Using Hot Stick Method should check the following items before proceeding to HLTC, Bangalore.

1. Relieving order from respective departments for attending training course at HLTC.
2. Nomination form of trainee duly countersigned by controlling officer, in original, if not sent earlier.
3. Indemnity bond duly signed by the trainee and counter signed by his controlling officer.
4. **DEMAND DRAFT for ₹.1,74,782/- (Rupees One Lakh Seventy four Thousand Seven Hundred Eighty Two Only)** per trainee towards training fee plus boarding and lodging charges for 12 weeks, drawn in favour of **“DIRECTOR, HOT LINE TRAINING CENTRE, BANGALORE”**.

**Electronic Payment Mandate Form****(Mandate for receiving payment through RTGS/NEFT from MSTC Limited)**

|    |                        |   |
|----|------------------------|---|
| 01 | Principal Name         | The Director  |
| 02 | Address with Phone No. | National Power Training Institute<br>Hot Line Training Centre<br>26 <sup>th</sup> KM, Kanakapura Road<br>Bangalore-560082 |
| 03 | Permanent Account No.  | AAALN0083C  |
| 04 | Particulars of Account |   |
| a) | Name of the Bank       | State Bank of India   |
| b) | Name of the Branch     | Banashankari II Stage   |
| c) | Branch Code            | 06767   |
| d) | NEFT Code of the Bank  | SBIN0006767   |
| e) | City Name              | Bangalore Urban   |
| f) | Branch Location        | 422, 9 <sup>th</sup> Main, Banashankari II Stage,<br>Bangalore  |
| g) | Branch Telephone No.   | 080 26718342  |
| h) | Bank IFSC Code         | SBIN0006767   |
| i) | 9- Digit MICR          | 56000 2008  |

(Where MICR is starting with “O”, Please take the correct code from your bank for proper identification of city, Bank, Branch)

|    |  |  |
|----|--|--|
| j) | Type of Account (S.B. Current or Cash Credit) with code (010/11/013) | Current Account<br>Code No-930926                        |
| k) | Account Number (as appearing on the Cheque Book)                     | 10031210270  |
| 05 | Email address of Principal   | <a href="mailto:hltc_npti@vsnl.in">hltc_npti@vsnl.in</a> |
| 06 | Date of Effect of RTGS/NEFT in your Bank                             | 01-01-2010   |

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