



HSE PROCEDURE

FOR

**(HSE)
TRAINING &
AWARENESS**

**INDUSTRIAL
SYSTEMS GROUP**

**HSE PROCEDURE
FOR
(HSE) TRAINING AND AWARENESS
(HSEP: 04)**



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BHARAT HEAVY ELECTRICALS LIMITED

INDUSTRIAL SYSTEMS GROUP

1.0 Purpose

This procedure establishes the process of ensuring that all personnel performing tasks from or on behalf of BHEL are trained and aware of the Health, Safety and Environmental aspects of their activities, and are equipped for the implementation of provisions of BHEL HSE Management System at their places of work.

2.0 Scope

Applicable to all activities, products and services of BHEL INDUSTRIAL SYSTEMS GROUP

3.0 Responsibility & Authority:

It is the responsibility of all employees to ensure that the persons working in their area follow HSE norms and are regularly trained in HSE procedures and practices with assistance from Site HSE Coordinator.

All site employees, package in-charges and site in-charge shall coordinate with the Site HSE coordinator to ensure that all the site personnel, including BHEL and subcontractor officials, workers, visitors are equipped and trained to handle HSE related issues in their respective areas of operation. Site HR shall assist HSE in carrying out the training programmes.

Any changes required in the procedure shall be brought to the notice of Head, HSE, ISGHQ through Head, HSE, INDUSTRIAL SYSTEMS GROUP by site HSE Coordinator.

4.0 References:

OHSAS 18001:2007, Clause 4.4.2
ISO 14001:2015, Clause 7.2, 7.3

5.0 Training Infrastructure:

Site In-charge shall ensure the availability of suitable infrastructure required for conducting regular training sessions for officials and workers at all times / as per requirement.

The infrastructure shall include:

- Sufficient area, preferably covered, with adequate lighting and seating arrangement for training workers and officials in large groups
- Projector / Screen suitable for large gathering
- Computer or Laptop for displaying Audio-Visual content
- Public Address System consisting of Speaker and Microphone
- Provision of refreshments for the participants



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6.0 Details of Training Programmes

Table 6.1 Different Training Programmes to be Undertaken, their Duration and Periodicity:

S. No.	Programme Title	Duration (minimum)	Periodicity (minimum)	Audience	Content (Suggested)	Other
FOR WORKERS Responsibility: Head (SOX)						
1	INDUCTION TRAINING	1 Hour (minimum)	On joining of new worker of a subcontractor	Newly joined worker of subcontractors, preferably a group	Safety belief, Cardinal Rules, General Safety Rules & importance of safety, Usage of PPEs, Permit to Work System, Job specific training as required, importance of mutual co-operation, role of Safety Officer, Emergency response actions and facilities, Learning from past accidents etc.	Procedure for Induction Training and material for the same shall be available on ISGQ HSE Web-Portal, or developed by site as required. Training shall be imparted in a language understood by workers
2	HEIGHT RESCUE/ FIRST AID/ FIRE TRAINING BY BHEL / EXTERNAL AGENCIES	As per duration of programme	Minimum 1 year or as per site specific calendar	Selected workers to be covered in batches in consecutive days	Height rescue	To be imparted by BHEL/external agencies
3	TOOLBOX TALKS	30 minutes	Daily	To be conducted by each supervisor for all workers in his/her area	The details of the job at hand, the safety precautions required as per Job Safety Analysis, safe access / ingress, safety of platform, safety harness & lifeline, cylinder safety etc.	Workers to check their PPEs for any signs of wear / tear / damage; Warming up for work by light exercise; Check for any signs of intoxication
4	JOB SPECIFIC TRAINING –	1 Hour	Monthly	To be conducted for each group of work-force eg. Crane, winch & Hydra operators, welders, gas cutters;	• Hot Job Safety • Electrical Safety • Scaffolding Safety • Safe Lifting • Cranes • Winches	Training needs to be identified from Register of Environmental Aspects & Impacts and Register of OHS Hazards & Trainees to be assessed for



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				Electrical Safety for Electricians & helpers etc., specialized training for riggers etc. and Supervisors	• Hydra • Height Work • etc.	proficiency and issued Training Cards by respective agencies
5	FIRE / MOCK DRILLS	As per requirement	As per authorized Mock drill calendar	All workers & employees to be covered in a phase-wise manner	Simulation of actual Fire / Emergency incident and ensuring correct response of the system including interface with external agencies and authorities	
FOR ALL SITE OFFICIALS of BHEL and Contractors Responsibility : Site HR						
6	HSE Orientation for supervisory staff (including BHEL & Subcontractor management, package in-charges, engineers, supervisors etc.)	2 Hours	Monthly	All BHEL and Subcontractor Officials to be covered in a phase wise manner	Safety Belief, HSE Policy, Role & Responsibility, Targets & Goals. Requirements of BHEL HSE Management System including HIRA, Permit-to-Work System etc. Contractual HSE requirements, general Safety awareness & importance of Safety	To be also attended by top Site management

General Guidelines for Training of different sections of Work Force

Training Programme for BHEL and Subcontractor Officials (General HSE Awareness and Orientation Training)

The Site HSE Department and ISG shall ensure that all employees/contractors officials (executives, supervisors) undertake a general HSE awareness and orientation training course. Such persons shall be required to complete the training before they start any work activities (Incase already deployed, training shall be conducted without further delay).

HSE Training Calendar / Plan of Site HSE

HSE Training Calendar / Plan to cover employees (BHEL and Subcontractor) at site shall be developed annually by BHEL Site HSE in consultation with Site HR and ISG as per Format No. **HSEP04:F01. The calendar shall cover the relevant programmes of Table 6.1.** Same shall be monitored and reviewed periodically. The Training calendar /Plan for each year will consist of the following types of training. All training records shall be maintained by BHEL Site HSE.

A complete list of all supervisors at site to be maintained by each subcontractor and submitted to BHEL HSE Coordinator (Format No. HSEP04:F03). BHEL shall maintain up to date list of all supervisors at site. The list to be updated with each joining / leaving supervisor.

a) HSE Induction / General Orientation Training

(Mandatory for existing employees, new recruits including contractors)

- Roles & Responsibilities in achieving conformance with the HSE policy, HSE Management System (**HSEMS**), rules, procedures. HSE Management Programmes, Emergency preparedness and response requirements.
- Brief Introduction of Plant premises with layout plan
- Weather condition of Site Emergency Assembly Point
- Emergency Contact Numbers
- Frequently occurred natural problems if exist at site like, rock fall at hydro project, poisonous snakes, poisonous insects and wild animals
- HSE Policy & Objectives.
- Applicable regulatory/Legislative requirements.
- HSE requirements that are conditions of employment
- Significant environmental aspects/impacts and occupational hazards/risks of their work activities and the HSE benefits of improved personal performance.
- The potential consequences of deviation from specified operating procedures.
- Accident case studies
- Non-conformance observed during management audits and details of past accident/incident.
- HSE benefits to individuals and the society of Improved personal performance.
- Consequence of not following documented HSE procedures.

General orientation shall include the following:

- Description of the operations
- General rules
- General Responsibilities of Employees and Supervisors
- Safety System
- Permit to Work System
- Hazards Identification & Risk Analysis
- High-risk Work (Work at Heights; Confined Space, Hot Work; Cranes & Lifting, Excavation, Blasting etc.)
- Housekeeping
- Hand and Power Tools
- Machine Guarding
- Material Handling
- Health Hazards
- Transportation
- Communication
- Fire Prevention
- Medical programs
- Training
- First Aid
- General Recommendations
- Security Awareness
- Control of Hazardous Materials and Chemicals
- Spills, Releases, Excess Emissions
- Internal and External Communication Awareness Etc.
- Introduction to local work area Hazard recognition
- Transportation and communications
- Emergency evacuation procedures
- Mandatory health and safety standards
- Area specific hazards
- Accident reporting
- Employee's responsibilities
- P.P.E. requirements
- Work specific procedures

b) Job Specific Training prior to starting work on a new job

- Safety requirements for the job
- Minimum skill requirements for the job
- Relevant rules, procedures & regulatory requirements.
- Significant environmental impacts & occupational hazards/risks of their work activities & the HSE benefits of improved personal performance w.r.t. particular job.
- Preventive & Control Measures/Techniques.

c) Internal HSE Management Systems Auditor Training – as per requirement.

d) Emergency Preparedness and Response.



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- e) **Penalty Training:** In case a particular package or area is faring poorly in terms of safety as evident from the number of accidents / incidents or a assessed by Safety officer (with evidence), all officials of the package shall undergo 'penalty training'

The trainees shall be suitably evaluated by means of a quiz / test paper and should pass with minimum marks suitably decided by the trainer. In cases where marks obtained are below passing value, training shall be repeated.

7.2 Training Programmes for Workers

7.2.1 Induction Training for New Workers

- a. Importance of Safety and mutual co-operation in site work – verbal interactive communication in workers' native / understandable language by Safety Officer
- b. Audio visual content has more impact and recall value as compared to other methods, more stress on such methods to be ensured for workers' training. Audio Visual, interactive training sessions (including Presentations, Videos etc.) on the following topics:
- Brief Introduction of Plant premises with layout plan
 - Importance of Safety at work place
 - Safe work procedures and Safety precautions to be taken in each area of site work as applicable in sufficient detail
 - Importance of Personal Protective Equipment (PPEs); A demonstration of all kinds of PPEs used at site using real equipment
 - Case studies of accidents / consequences of not working safely
 - Their rights w.r.t. safe work conditions and whom to contact for fulfilment of same
 - Sensitisation regarding role of Safety Officer, who is not a policeman, but a well-wisher, who wants to help them follow safety rules and get home safely. That they need to address all justified concerns raised by the Safety Officer.
 - Weather condition of Site Emergency Assembly Point
 - Emergency Contact Numbers
 - Frequently occurred natural problems if exist at site like, rock fall at hydro project, poisonous snakes, poisonous insects and wild animals

These presentations, videos etc. should be in workers' native language and otherwise should be easily understandable. HSE officer to explain in workers' native language in case of confusion. These presentations and videos can be downloaded from ISGHQ/HSE Web portal. New training material developed by site to be communicated and included in web portal for benefit of all.

7.2.2 Regular Training Programmes for Workers:

- a. Each Subcontractor at site shall prepare a **workers training calendar** for the financial year as per Format No. **HSEP04:F02** and adhere to the same. The calendar shall include relevant programmes as per **Table 6.1**
- b. The attendance during training programmes shall be recorded as per **Format No. HSEP04:F04**



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- c. Each worker shall be given a training card by subcontractors (**Format No. HSEP04:F05**), which shall be updated with details of training programmes attended
- d. Training records of workers and supervisors shall be maintained by each sub-contractor and BHEL HSE

HSE supervisor / Safety Officer / HSE Coordinator Training Contents:

- INDUSTRIAL SYSTEMS GROUP HSE Management System
- HSE Documentation requirements at site
- Accident/Incident Investigation requirements
- Inspections
- Reporting Requirements
- Re-introduction into HSE
- Introduction to Statutory & Regulatory Requirements applicable at site
- Personal Communications and Safety Meetings
- Task and Behaviour Observation
- Emergency Response
- Risk Management
- Industrial Hygiene and Hazardous Materials Management
- Accident case Studies

The sponsor of a visitor or short term contractor shall conduct a visitor orientation, which shall include the following:

- The guest shall be informed they are required to attend the Visitor Orientation program
- The Visitor Orientation program shall be conducted before the visitor is allowed on site, which shall cover all possible risks and control procedures required for the visitor during visit
- Ensure the visitor has appropriate PPE, and shall comply with site rules and regulations while on site
- Be escorted by a competent person the entire time the visitor is on the property

Professional Training Programmes Conducted by Third Party

Liaison with third Party training providers shall be ensured to conduct a minimum of two training programmes per year, covering:

1. Proper usage of Work at height PPEs and height rescue demonstration
 2. Fire Safety demonstration
 3. First Aid
 4. Any other demonstration / programmes deemed suitable / necessary by the site
- Selected site personnel to be covered in these programmes, if required in a batch-wise manner**

7.6 Mock Drills

Mock drills shall be carried a minimum of once every 3 months to check system response in case of emergency.

(For detail, see **HSEP:06 – HSE Procedure for Emergency Response and Planning**)

All site personnel to be covered in these drills, if required in a batch-wise manner

7.7 Training Programmes for all Officials by ISG

ISG shall ensure that all officials at Sites and Regional Headquarters are sensitised towards Health, Safety and Environmental Requirements through regular training & awareness programmes.

8.0 Evaluation

After the training, wherever possible the trainees are to be evaluated using a suitable Quiz / Questionnaire. If marks obtained are below a pre-defined (reasonable) limit, the training to be repeated for low-scoring cases.

Ensuring the Quality of Training Programmes:

The HSE Department shall ensure that all the training programmes conducted are effective and of high standards by:

- ✓ Engaging trained trainers, who are well versed in their respective topics
- ✓ Employing services of experts in training when required
- ✓ Ensuring that the training premises are neat & clean and atmosphere is conducive to learning
- ✓ Ensuring that adequate refreshments and comfort is provided to trainees in case of long duration programmes

All assistance shall be provided by top site management towards meeting the requirements of training programmes.

Evaluating the Effectiveness of Training Programmes:

The HSE department shall periodically measure and review the effectiveness of training programs and requirement of new programmes through the following:

- Observation of worker behaviour during regular site visits
- Periodic on the spot interviews with workers and employees
- Analysis of underlying causes of near misses, incidents and accidents, wherever the underlying cause is identified as lack of awareness



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11.0 Recordkeeping & Reporting

All BHEL Official and Subcontractor training records shall be maintained by Site HSE Coordinator, preferably in electronic form.

All Worker Training Records shall be maintained by respective Subcontractor Safety Officer and also BHEL Safety Officer, preferably in electronic form.

Monthly report issued by site to Region- HQ shall include details of the training programmes conducted at site

Review

A review shall be carried out to ensure the content of this procedure is still applicable, current and practicable. A review should take place:

- a. Whenever the process/equipment changes
- b. At a periodic frequency (every two years)
- c. Whenever required in course of operation.

whichever is earlier

Any proposed changes to this procedure shall be brought to the notice of Head, HSE, ISGHQ through Head, HSE, ISG



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FORMATS

HSEP04:F01 - Training Calendar (sample) (See Table 6.1)

Format No. HSEP04:F01		HSE Training Calendar for Officials		
Site:		Date:		
Training calendar for the Financial Year:				
Date	Site	Training Title	Responsibility	Trainers
Prepared by: BHEL Site HSE				
Reviewed by: BHEL Site HR				
Approved by: BHEL Site In-charge				

HSEP04:F02 - Training Calendar (sample) (See Table 6.1)

Format No. HSEP04:F02		HSE Training Calendar for Workers		
Site & Subcontractor:		Ref. & Date		
Training calendar for the Financial Year:				
Month	Day	Training Title	Responsibility	
April				
May				
Toolbox Talks are to be conducted daily by each supervisor in his/her area				
Prepared by: Subcontractor Safety Officer				
Approved by: BHEL Safety Officer				

HSEP04:F03 – Running List of Supervisors

Format No. HSEP04:F03						Master List of Supervisors		
Site & Subcontractor:								
Last Updated On (Date):								
S. No	Name	Designation	Identity Number	Age	Joining Date	Sub-contractor		
Prepared by (Subcontractor)								
Approved by (BHEL)								



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HSEP04:F04 – Training Attendance Sheet

Format No. HSEP04:F04			Training Attendance Sheet	
Site:		Batch No.:	Training Code.:	
Date:				
Faculty :				
Name	Agency	Identity Number	Signature	Scores
Prepared by (Training coordinator)				
(Evaluation sheet attached)				

HSEP04:F05 – Worker's Competency Card to be provided by each subcontractor to workers

Subcontractor
Name

Trainee
Photo

Project Name

Competency
Details - Sample

COMPETENCY CARD	
Name :	
Gate Pass :	
Designation :	
Authorised for : 1	
2	
Authorised by :	

TRAINING COMPETENCY		s/c	BHEL
SAFETY INDUCTION			
WORK AT HEIGHT			
SCAFFOLDING			
LIFTING & RIGGING			
CONFINED SPACE			
ELECTRICAL			
GRINDING			
FIRE FIGHTING			
FIRST AID			
DEFENSIVE DRIVING			
EMERGENCY RESUE			
PPE			
OTHERS			



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Record of Revisions

Clause	Rev. No.	Brief of Revision	Authorized by	Date
	00	First Issue		



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