HAZARD IDENTIFICATION & RISK ASSESSMENT (HIRA) IN ANY ORGANISATION

Prepared by

Institution of Safety Engineers (India)

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INSTITUTION OF SAFETY ENGINEERS (INDIA)

Welcome

in Free webinar

Hazard Identification & Risk Assessment (HIRA) in Any Organisation

on

29/11/2024

OUR SPEAKER

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ABOUT US

Institution of Safety Engineers (India) is Non - Profitable organization set up in year 2012 under ZJEW Trust & Registered Under Govt. of India with objective to Prevent Accident, Protect Environment & minimize losses during disaster. Institution of safety engineers (India) imparting safety, health, environment & quality related training to needy & provide similar services to industries, organization, institution to achieve zero harm

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HAZARD IDENTIFICATION & RISK ASSESSMENT (HIRA) TECHNIQUES

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- Introduction
- Objective
- Risk Assessment Related Term
- Risk Assessment Techniques
- Risk Control method

Steps of Risk Assessment

Step 1 - Select Activity/ Process
Step 2 - Identify Hazard
Step 3 - Evaluate Risk (To see the Likelihood & Consequence of Hazardous event)
Step 4 - Control the Risk

Risk: Likelihood (Probability) of Hazardous event X Consequences (Severity) of Hazardous Event

Risk Calculation Method :
Risk can be calculated to see/imagine to likelihood of hazardous event & Consequence of Hazardous event that can occur. With the help of below Likelihood & consequence rating, risk can be calculated.

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HAZARD IDENTIFICATION & RISK ASSESSMENT TECHNIQUES (HIRA)

Hazard identification & Risk assessment Techniques (HIRA) is a Technique used to identify hazard, access Risk and viewing that risk is tolerable or not as per organisation policy.

HAZARD IDENTIFICATION & RISK ASSESSMENT TECHNIQUES (HIRA)

Terminology

Risk: Combination of likelihood & consequences of specific hazardous event occurring.

Risk: Likelihood of Hazardous Event X Potential Consequence of Event

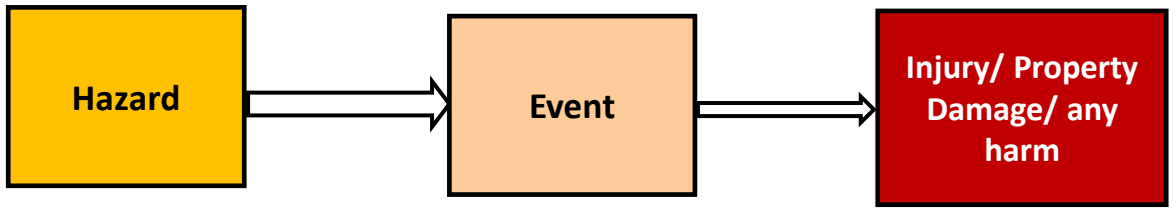
Risk Assessment: The overall process of estimating the magnitude of risk and deciding whether the risk is tolerable.

Tolerable Risk: Risk that has been reduced to a level that can be endured by the organization having regards to its legal obligations and its own OH&S Policy.

Classification & Potential Sources of Hazards

- Mechanical - Sharp points & edges, Unguarded rotating parts, overload.
- Electrical - Insulation damaged, cover broken, Naked wire, Defective DB, JB DB etc.
- Fire - Poor housekeeping, Hot job near Flammable material, Loose electrical connection, Smoking etc
- Biological - Exposed, airborne/blood borne
- Chemical - Expose to carcinogens chemical
- Ergonomics - Expose to unnatural postures

Apart from this, There may be several other hazard in industries



RISK

Likelihood

Severity

What is Risk?

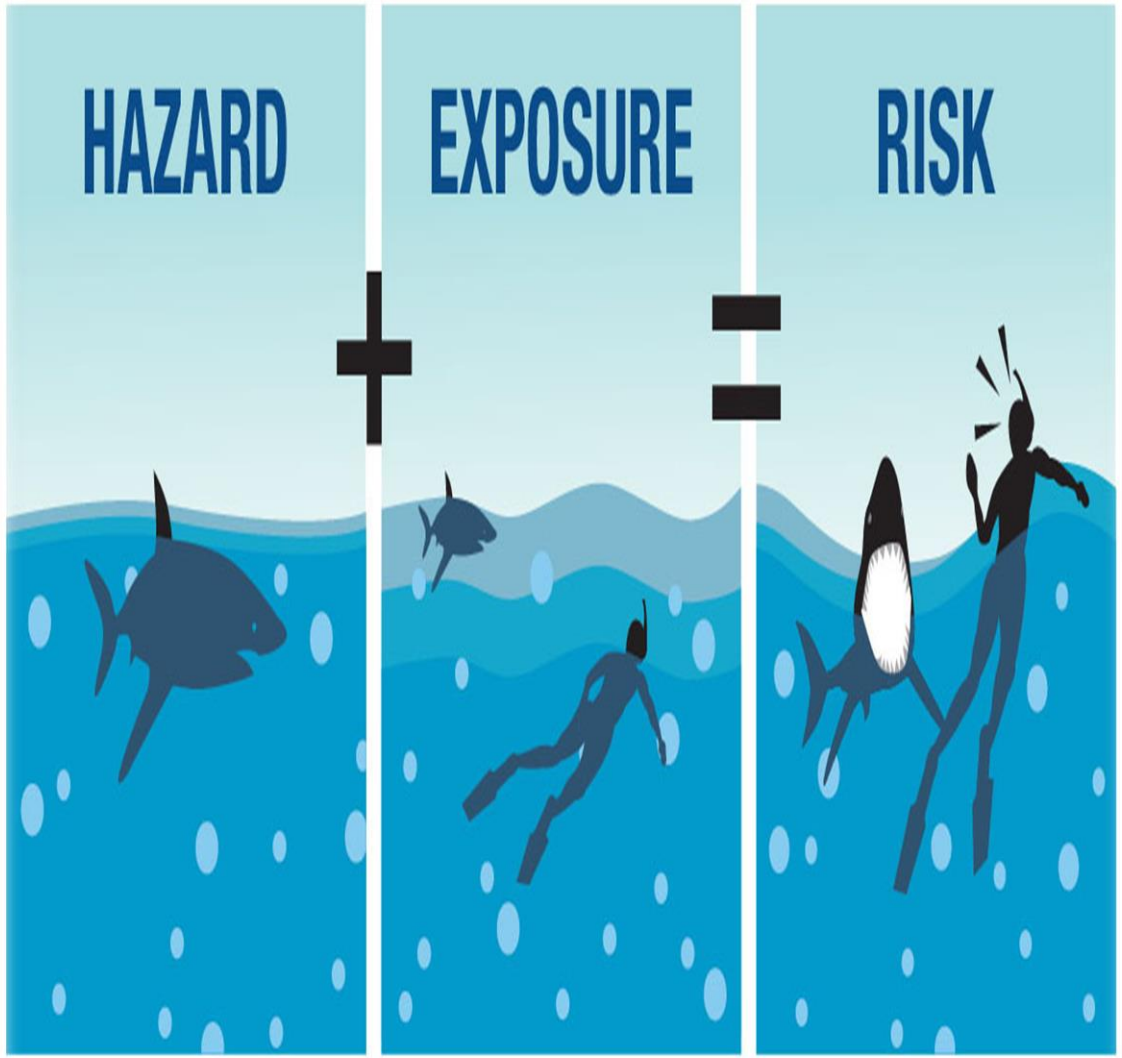
.....the chance of harm being caused

Hazard Vs Risk

A hazard is anything that can cause harm.

A risk is the likelihood of harm from a hazard.

RISK



RISK EVALUATION METHOD

RISK ASSESSMENT

Diffrence between Hazard & Risk

Hazards VS Risk

RISK EVALUATION METHOD

1.Classify work activities - prepare a list of work activities covering plant, raw materials/ chemicals handled, premises, people and procedures, and gather information about them;

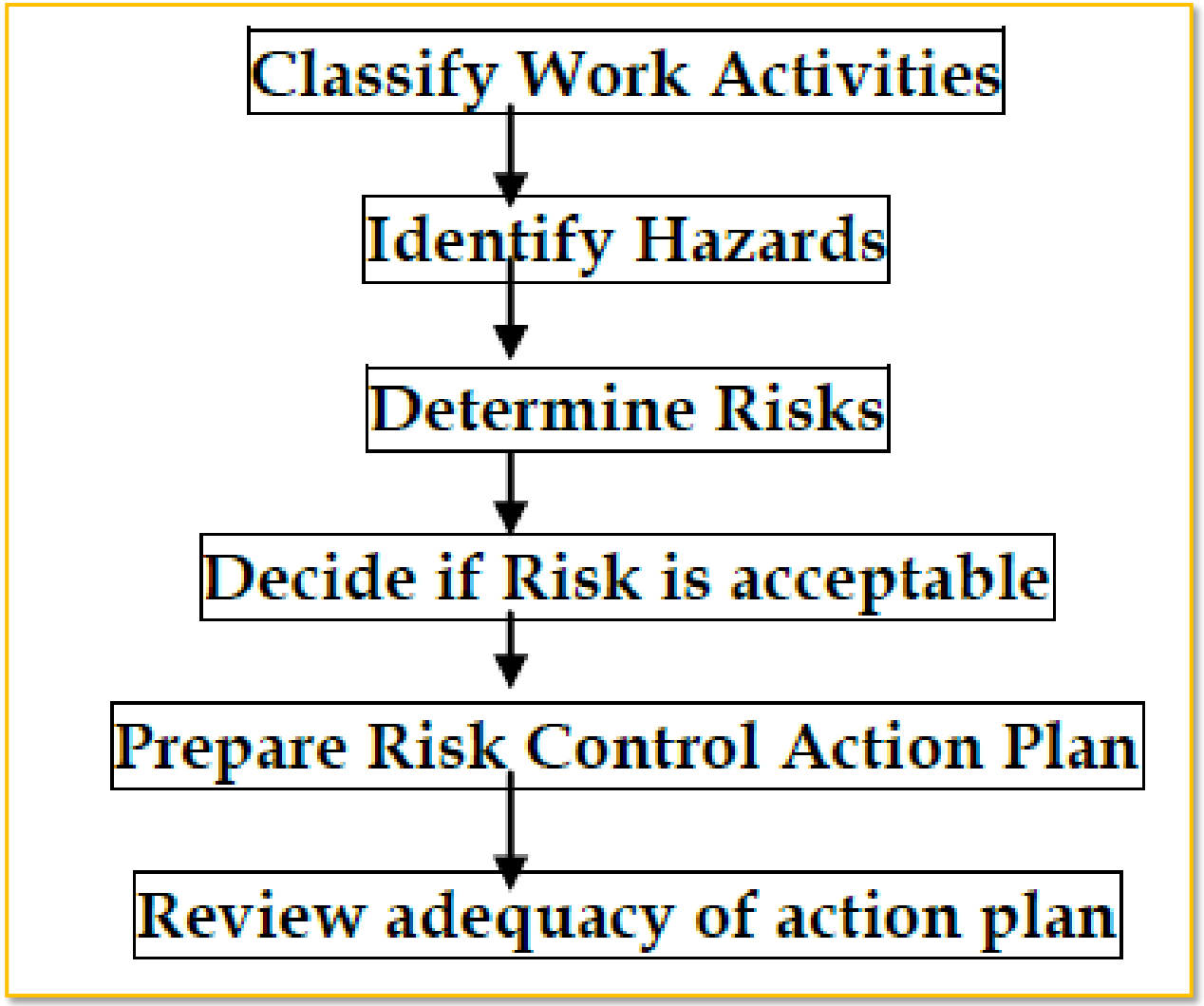
2.Identify hazards - identify all hazards relating to each work activity. Consider who might be harmed and how; what might be damaged and how;

3.Determine risk - make a subjective estimate of risk associated with each hazard assuming that planned or existing controls are in place. Assessors should also consider the effectiveness of the controls and the consequences of their failure;

4.Decide if' risk is tolerable - judge whether planned or existing OH&S precautions (if any) are sufficient to keep the hazard under control and meet legal requirements;

5.Prepare risk control action

RISK EVALUATION METHOD



RISK ASSESSMENT

HAZARD IDENTIFICATION METHODS:

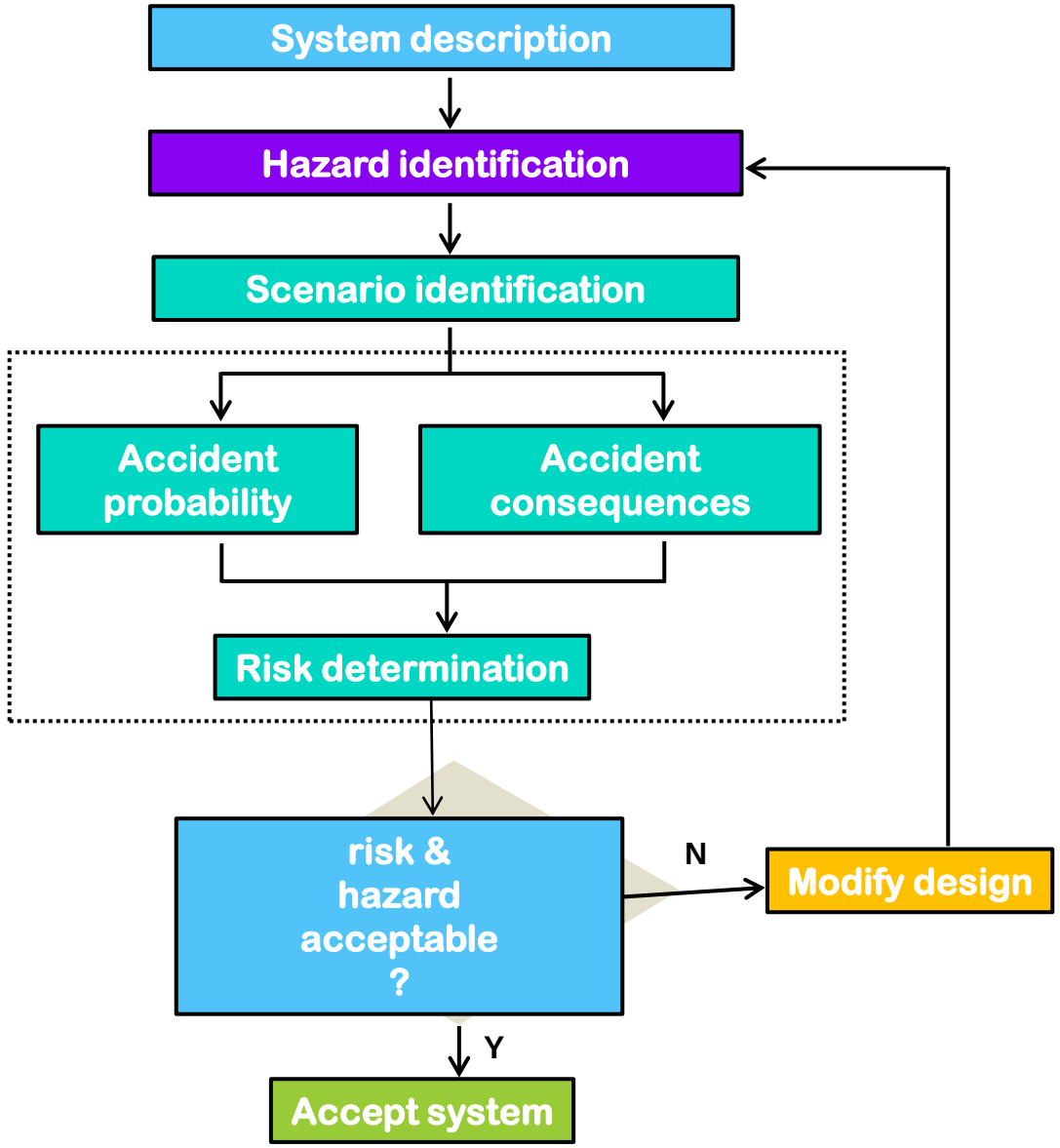
- Process/Construction hazard checklist
- Hazard survey
- Safety review

RISK ASSESSMENT:

- What can go wrong & how ?
- What are the chances ?
- Consequences ?

EXTREMES:

- Low probability
- Minimal consequences



RISK EVALUATION METHOD

RISK EVALUATION METHOD

Risk Rating Score

Likelihood that hazardous event will occur	
1	Very unlikely
2	Unlikely
3	Fairly likely
4	Likely
5	Very Likely

Consequence of hazardous event	
1	Insignificant – no injury
2	Minor – minor injuries needing first aid
3	Moderate – up to three days' absence
4	Major – more than seven days' absence
5	Catastrophic – death

Action Level Table

Risk rating	Action	
17-25	Unacceptable	Stop activity and take immediate action
10-16	Tolerable	Improve within specified timescale
5-9	Adequate	Look to improve at next review or if there is a significant change
1–4	Acceptable	No further action but ensure controls are maintained and reviewed

RISK ASSESSMENT PERFORMA

Name of Depart./Contractor: **Job No. :** **Date:**

Activity	Hazard	Who might be harmed	Existing control measure	Current risk rating			Additional Control Measure	Residual risk			Remarks
				L	C	R		L	C	R	

Organizations should prepare a simple Performa that can be used to record the findings of an assessment, typically covering:

- Work activity;
- Hazard(s);
- Controls in place;
- Personnel at risk;
- Likelihood of harm;
- Severity of harm;
- Risk level;
- Residual Risk
- Remarks and
- Administrative details, for example, name of assessor, date, etc.

QUESTION & ANSWER

THANK YOU

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"Aim to prevent Accident, Protect Environment & minimise Losses during disaster"

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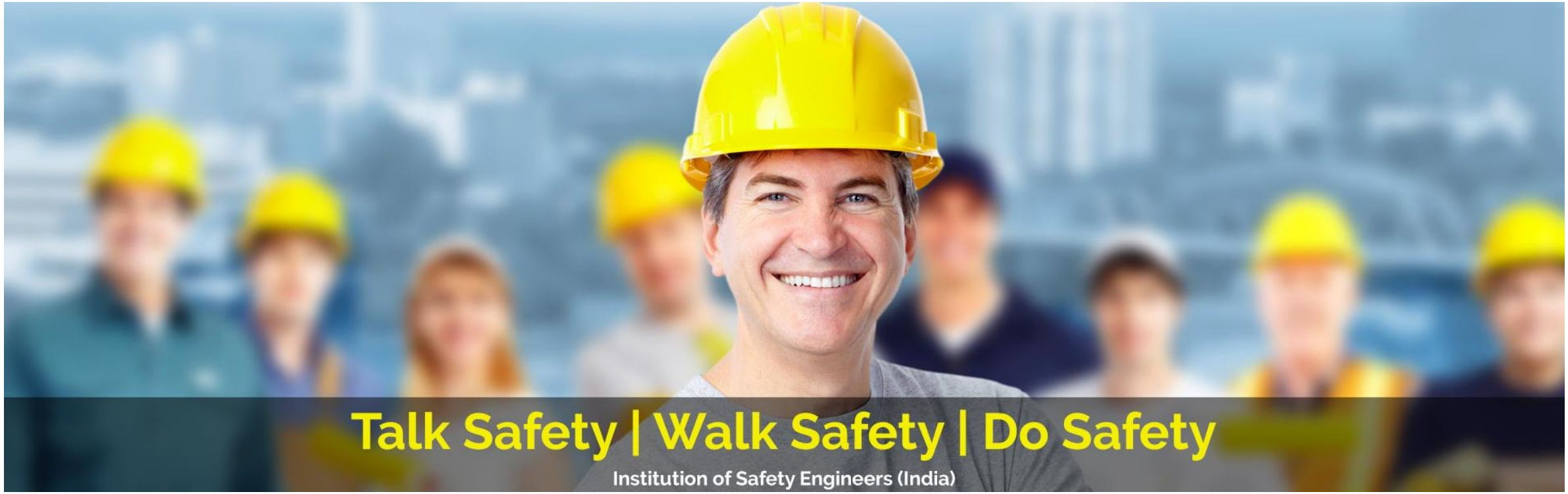

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