

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 1 of 8

Serial No.	Sub-Activities	Hazards Identified (Generic & Task)	Risks Involved (People & Property)	Risk Rating			Control Measures	Residual Risk
				Severity	Probability	Initial Risk		
1.	Prepare work area	<ul style="list-style-type: none"> Unauthorized, untrained workers 	<ul style="list-style-type: none"> Cuts Abrasions 	2	A	L	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement Task specific safety training to be provided Authorized personnel to undertake the job Daily safety inspection should be carried and eliminate the hazard PTW to be applied and obtained prior to start work 	Low (ALARP)
2	Storage Material	<ul style="list-style-type: none"> Over Loading Improper storing Poor Posture 	<ul style="list-style-type: none"> Crush Slip, trip, fall Property Damage 	2	B	M	<ul style="list-style-type: none"> TBT/DSTI to be conducted by the foreman prior to work commencement Storage of materials in the works structures shall be minimised. Storage should be carried out in good time and in designated places on the site. Task specific safety training to be provided The material should be stored as per the material type and / or quality of the product. Materials that become unstable in bad weather should be covered. Proper PPE to be warned Good housekeeping should be maintained. 	Low (ALARP)
3	Manual Handling	<ul style="list-style-type: none"> Incorrect lifting of loads. Sharp edges. Placing the object while fingers underneath. 	<ul style="list-style-type: none"> Crush Back Injuries Strain and Sprain 	3	C	M	<ul style="list-style-type: none"> No employee should be asked to carry loads above his capacity and in any case no load shall exceed 30kg per man. Avoid manual handling where reasonably practical. e.g use mechanical equipment. TBT/DSTI to be conducted by the foreman prior to work commencement 	Low (ALARP)

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 2 of 8

Serial No.	Sub-Activities	Hazards Identified (Generic & Task)	Risks Involved (People & Property)	Risk Rating			Control Measures	Residual Risk
				Severity	Probability	Initial Risk		
							<ul style="list-style-type: none"> • Take help if load is large/very heavy. • Check the line of travel. Don't allow the load to obstruct the view • The area should be free from fall, slip and trip hazards. • Training personnel in kinetics of manual lifting. • Use personnel protective equipment as provided. (Safety shoes, helmets, coveralls, hand gloves etc.) 	
4.	Working at Height	<ul style="list-style-type: none"> • Possible falls • Falling material • Untrained, Unauthorized workers 	<ul style="list-style-type: none"> • Slip, trip, fall • Fracture • Fatality 	4	C	H	<ul style="list-style-type: none"> • Scaffolding/ladder to be used as per safe work load. • Working platforms should be clear of men and material when the scaffold is being moved. • Incomplete and non standard scaffold should not be allowed for any work. • The practice of moving rolling scaffolds with workers on the platform is strictly prohibited. • Inspection tagged (by authorized person)/ firmly fixed heavy duty ladders / scaffolding should be used. • Wheels will be locked when the scaffolding is in use. • Proper/Adequate access and egress should be provided to scaffold. • The route should be sufficiently clear of overhead wires. • At the end of each working shift the scaffold should be secured against unauthorised access 	Low (ALARP)

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 3 of 8

Serial	Sub-Activities	Hazards Identified	Risks Involved	Severity	Probability	Initial Risk	Control Measures	Residual
							<ul style="list-style-type: none"> • Approved ladders should be used. • No site made wooden ladders should be allowed. • Ladders must be secured before use. In case of any practical difficulties there should be an additional person to hold the ladders. • Ensure that when ladder is used for access to a scaffold, both bottom and top portion of the ladder is secured to prevent displacement. • While ascending or descending, the user shall face the ladder, use both hands and place his feet so that three-point contact is always be used when climbing ladders. • While getting on or off the ladder both hands must Ladders should be inspected prior to use. They must be inspected on a monthly basis by a qualified person. • Destroy any defective ladders immediately or remove them from the site. • Safety harness should be worn if the platform is above 2 metres from the ground level. • TBT/DSTI to be conducted by the foreman prior to work commencement 	
5	Working in excavated area and floor opening area	<ul style="list-style-type: none"> • Material/equipment fall from height • Slip/trip/fall • Workers/ Pedestrians/ fall into excavation 	<ul style="list-style-type: none"> • Serious injury • Fatality • Property Damage 	3	D	M	<ul style="list-style-type: none"> • TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement • Task specific safety training to be provided • Barricade sensitive areas • Ensure falling protection. • Use warning signboards in those areas. 	Low (ALARP)

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 4 of 8

No.	(Generic & Task)	(People & Property)	Severity	Probability	Initial Risk	Control Measures	Risk	
Serial	Sub-Activities	Hazards Identified	Risks Involved		Risk Rating		Residual	
						<ul style="list-style-type: none"> • Use Head protection with PTW to be applied and obtained prior to start work • Prevent items falling from scaffolding onto people below- use toe boards and warning signs. • The slab openings should be provided with secure cover. 		
6.	Working with hand held tools/ Power tools	<ul style="list-style-type: none"> •Defective equipment •Improper use of equipment •Poor maintenance •Untrained workers 	<ul style="list-style-type: none"> •Hand, Finger Injury •Eye Injury 	3	C	M	<ul style="list-style-type: none"> • TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement • Task specific safety training to be provided • Defective tools should not be issued or used to perform a task. • All portable power tools should be fitted with adequate fuse protection either in the tool body or in its electrical plug. • The weight, size and type of tool should be selected to suit the job being carried out. • Only those persons who have been adequately trained and experienced in the use of the tool should be allowed to use the same. • Tools should be maintained in good working condition and tested at regular intervals. • All tools & machines should be neatly and correctly stored when not in use. • Appropriate PPE Should use 	M (ALARP)

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 5 of 8

No.	(Generic & Task)	(People & Property)	Severity	Probability	Initial Risk	Control Measures	Risk	
Serial	Sub-Activities	Hazards Identified	Risks Involved		Risk Rating		Residual	
7.	Gas Cutting	<ul style="list-style-type: none"> • Fire • Untrained, Unauthorized Worker • Gas Leakage 	<ul style="list-style-type: none"> • Electric Shock • Burns • Skin Effect • Eye Injury 	4	C	H	<ul style="list-style-type: none"> • Hot work permit must be obtained before carrying out any hot works. • All Flammable /combustible materials should be removed from the area where welding & gas cutting operations are carried out. • Signage boards should be provided. • Fire blankets should be used to contain sparks and molten metal's within the floor and should not be allowed to fall from height. Areas below cutting shall be barricaded. • The cylinders should be kept in a trolley always. It should not be laid on floor; it should be in upright position. • TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement • Task specific safety training to be provided • Suitable fire extinguishers should be ready for instant use in any location where hot work is being performed. • Anti flashback arrestor must be provided in all gas cutting set. • Hoses should be of approved type and should be free 	Low (ALARP)
8	Noise atmosphere	<ul style="list-style-type: none"> • Improper maintenance of Tools • PPE awareness 	<ul style="list-style-type: none"> • Deafness 	2	B	M	<ul style="list-style-type: none"> • Noise measurements should be carried out where noise is produced and at other work places where operatives may be subject to higher level than their work generates. • Use of alternative, less noisy tools and equipments or methods. • Appropriate ear protectors must be worn. 	Low (ALARP)

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 6 of 8

No.		(Generic & Task)	(People & Property)	Severity	Probability	Initial Risk		Risk
Serial	Sub-Activities	Hazards Identified	Risks Involved		Risk Rating		Control Measures	Residual
9	Operating with Thread Machine	<ul style="list-style-type: none"> •Defective Machine •Improper use of Machine •Poor maintenance •Untrained, Unauthorized workers 	<ul style="list-style-type: none"> • Cuts • Crush • Skin Effect • Entanglement • Eye, finger injury 	4	C	H	<ul style="list-style-type: none"> • PTW to be applied and obtained prior to start work • TBT/DSTI to be conducted by the foreman/ safety officer prior to work commencement • Task specific safety training to be provided • Defective machine should not be issued or used to perform a task. • Only those persons who have been adequately trained and experienced in the use of the machine should be allowed to use the same. • Machine should be maintained in good working condition and tested at regular intervals. • Appropriate PPE Should use • Good housekeeping should be maintained. 	M (ALARP)
10.	While working at night shift	<ul style="list-style-type: none"> • Poor illumination • Fall from height 	<ul style="list-style-type: none"> • Fatality • Slip/trip/fall 	3	B	M	<ul style="list-style-type: none"> • Proper illumination to be provided • light post to be secured from fall • Proper cable management system to be Followed • All materials to be staged in proper manner without obstacles 	Low (ALARP)

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 7 of 8

No.		(Generic & Task)	(People & Property)	Severity	Probability	Initial Risk		Risk
11	Working in hot weather	• Heat	<ul style="list-style-type: none"> • Dehydration • Sunburn • Skin Cancer 	2	B	M	<ul style="list-style-type: none"> • Drink plenty of water • Proper awareness to be on the symptoms of heat stress • Avoid highly physical tasks during the hottest part of the day • Isotonic drinks to be provided 	Low (ALARP)
12	Work Completion	• Poor housekeeping	<ul style="list-style-type: none"> • Fire • Slip/trip/fall 	2	A	L	<ul style="list-style-type: none"> • General housekeeping, Remove all surface, unwanted waste materials from the building • All necessary precautions will be adopted to prevent fire 	Low (ALARP)

RISK MATRIX

Probability

PROJECT NAME

ACTIVITY– INSTALLATION & TESTING FOR FIRE FIGHTING PIPING SYSTEM AND ACCESSORIES

Ref No:
Rev.No:0
Page 8 of 8

					A	B	C	D	E
Severity	People	Assets	Environment	Reputation	Improbable 1 in 100,000 Years	Remote 1 in 10,000 Years	Occasional 1 in 1000 years	Probable 1 in 100 years	Frequent 1 in 10 years
5-Catatrophic	Multiple fatalities or permanent total disabilities	Extensive damage	Massive effect	International impact	<div style="background-color: yellow; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <div style="background-color: red; width: 50%; height: 100%;"></div> <div style="background-color: yellow; width: 50%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p>High Risk</p> </div> </div>	<div style="background-color: yellow; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <div style="background-color: red; width: 50%; height: 100%;"></div> <div style="background-color: yellow; width: 50%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p>Medium Risk (ALARP)</p> </div> </div>	<div style="background-color: yellow; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <div style="background-color: red; width: 50%; height: 100%;"></div> <div style="background-color: yellow; width: 50%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p>High Risk</p> </div> </div>	<div style="background-color: yellow; width: 100%; height: 100%; display: flex; align-items: center; justify-content: center;"> <div style="background-color: red; width: 50%; height: 100%;"></div> <div style="background-color: yellow; width: 50%; height: 100%; display: flex; align-items: center; justify-content: center;"> <p>High Risk</p> </div> </div>	
4-Severe	Single fatalities or permanent total disabilities	Major damage	Major effect	National impact					
3-critical	Major injury or health effects	Local damage	Localised effect	Considerable impact					
2-Marginal	Minor injury or health effects	Minor damage	Minor effect	Minor impact					
1-Negligible	Slight injury or health effects	Slight Damage	Slight effect	Slight impact					
					<p>Low Risk</p>				

MEP Contractor :
Designation :
Date :
Sign :

Main Contractor :
Designation :
Date :
Sign :

Reviewed By:
MEP Contractor:
Designation :
Date :
Sign :

Main Contractor :
Designation :
Date :
Sign :

HIGH	<p>3-E 4-C,D,E 5-B,C,D,E</p>
MEDIUM	<p>1-D,E 2-B,C,D,E 3-A,B,C,D 4-A,B 5-A</p>
LOW	<p>1-A,B,C 2A</p>