

Risk Assessment for Erection of Crane Girder
GAYATRI AUTOMATION SYSTEMS PVT.LTD.

DATE : 21.11.2022

SEPL INCHARGE:

Job/Activity Detail

INSTALLATION & COMMISSIONING OF UNDER SLUNG CRANE

Location:

Shop / Work Location:-

Sr.No.	Hazard / Fall hazard / Hot Work Hazard	Who Affected Material / Person	Risk	Existing Control Measures	Risk Rating	Revised / Additional Control Measures	Risk rating	Responsibility
HAZARD REALTED TO HYDRAULIC CRANE								
1	Hydraulic Crane - 12 Ton capacity Movement inside Installation area	Structural building / person in barricaded area / Material handling equipments.	collision with moving equipments at site / Structural Buiding / Overtum of loading vehicle	Signal men should direct Vehicle operator Out riggers of the cranes should be fully supported on the adequately strengthened wooden blocks. Adherence to load Chart / load plan.	5	Material handling activity in the close supervision. Adherence to crane hand signals & traffic management plan. Only authorised person will signal No person should be allowed in the barricaded area except the authorised one.	2	Site Incharge Site Incharge Site Incharge
2	Structural Failure	Structural building / person in barricaded area / Material handling equipments.	Crane Component / Boom lift / Hydraulic rams / Wire rope failure / Operator protection.	Check list wise checking of crane/ Form 10 / Metallic Sling verification / Boom lifting capacity chart at 15 mtr Height	8	Stand by person to ensure no other person allowed near by area. Speed Limit 05 KMPH / Tag Line used to guide Operator and to maintaine balance.	2	Site Incharge Site Incharge
3	Hydraulic Crane Over Turning	Structural building / person in barricaded area / Material handling equipments.	Poor Ground conditions / failure to use or fully extend outriggers or stabilisers / failure to use appropriate outrigger pads / rapid slewing / high wind conditions.	Land Stability should be ensured. Adequately strengten wooden blocks is to be used	4	Safety incharge will check all wooden pieces sizes thoroughly & then only will allow to use / crane load hook will be removed only after proper balance resting of Crane Girder on Wooden blocks. Load chart of the crane is to be strictly followed.	1	Site Incharge
4	Placing of Wooden blocks for resting Crane Girder at Site	Person working inside installation area	Breaking of Wooden block while resting girder / Eye Injury / pinch injury	Wooden block / Pieces should be of Appropriate strength & size to carry load of Crane Girder / Proper Height should be maintained through out girder length to avoid imbalance of Girder after removing Crane load hook.	6	Good quality wooden blocks of Proper size only to be used / Confirm the weight of the load before lifting. All the coormed persons should be trained for safe material handling practice. Adherence to usage of PPEs.	1	Site Incharge
5	Shifting of unused material / waste inside installation area for clear movement of Hydraulic crane	Person working inside installation area	Collision with Other moving equipments at site / Structural Buiding / Accident with workers woking inside installation area	Adherence to signal systems. Adherence to traffic management plan. Usage of Tag Line for safe material handling.	6	Proper capacity Sling / Nylon belt only to be used / Crane Riggers to be fixed properly to avoid Imbalance of Load as well as crane. Trained persons for safe material handling. Adherence to usage of PPEs. Communication with concerned agencies in Daily Coordination Meeting.	3	Site Incharge


HEIGHT WORK RISK / FALL HAZARD

1	Person falling from height	Person working on height / Man power standing in barrication area.	Fall from Height gantry structure / Falling on Moving equipments	Ensure double life line on standing platform / JLG / Boom lift must be near working area	9	Use of proper PPE for fall protection / Safety belt with double rope must only be allowed to work on site / JLG equipments with driver must be present on site for immediate rescue of person in case of any accident / Life line should be of proper strength & size to hold weight of person on working height. Medical fitness of the person is to be ensured.	3	Site Incharge
2	Object falling from height / Slipping of Tools while working	Person working on height / Man Lifter standing in barrication area.	Serious injury in case object fall, head / Eye sight may get affected	Tie all working tools & tackles with rope while working / No person movement inside barrication area	6	Working Area complete barrication / Tie rope should be of proper strength / No person movement inside working area. Training on the safe driving of Man Lifter.	1	Site Incharge
3	Collapse of structure	Person working on height / Man Lifter standing in barrication area.	Walking Platform / chuckle plate not there / Hand rail break	No person on girder gantry while resting crane Girder on Compound rail	9	Visual checking of working platform before starting work on height / Ensure complete strength of Platform / Tightening of all Bolt & Nuts of Gantry girder / Chuckle plate / Check proper welding of Guard hand rail.	2	Site Incharge
4	Unsafe ground conditions	Person working near installation area	Person falling inside PIT / Hydraulic crane collision with Other material handling equipment.	Signal men for Hydraulic crane movement / Ensure complete barrication near PIT area / Barricaton tape should be Visible to All	6	Signal Men near PIT area while hydraulic crane movement / No Movement of Crane will be allowed near Column / Remove all standing equipments if they are not in working condition. Adherence to usage of PPEs.	3	Site Incharge
5	Poor lighting conditions	Person working in installation area	Collision with other working equipments	Proper lightening in working area	6	No Major height work will be planned in Night time. If any work is there we will Communicate to concerned agencies in Daily Coordination Meeting.	3	Site Incharge
5	Lifting of Crane Girder	Person working inside installation area, Person Working at Height	Improper fixing of Slings across Girder / Failure of lifting nylon belt / failure of crane hook block/ Slipping of Load from hook , Collision of Crane girder with structural building	Proper Size & capacity of Nylon belt must be used to lift Crane Girder / 3rd Party certification or FORM 10 need to submitted well in advance before starting work activity at site / Crane bottom hook safety latch must be checked / Proper barrication of area to avoid collision. For mobile crane riggers support purpose we will use wooden blocks	9	For precaution Nylon belt to be fixed & cross checked for supporting Lifting of Girder / No twisting of belt during Crane Girder resting on floor / Minimum lift of Load on Crane load hook. Rescue arrangement is to be done. Adherence to usage of PPEs.	3	Site Incharge
6	Resting of Crane Girder on Wooden Blocks by Crane	Person working inside installation area, Person Working at Height	Sudden break of Wooden Blocks / Imbalancing of Crane Girder during unloading / resting / Hit to workers inside barrication.	Placing of CR rail to Carry Load of Girder / Complete Area barrication & no workers movement.	6	Complete Photo Images of Wooden block at time of resting Crane Girder / Barrication is more place extra Wooden blocks. Training on the materil stacking is to be imparted.	1	Site Incharge


HOT WORK RISK HAZARD

1	Hot work operation / Welding / Cutting of Hand rail / Grinding.	Person working inside installation area, Person Working at Height	Chances of fire if contacted with Flammable Mateial / Serious burning injury.	All flammable and combustible materials within a 35-foot radius of Hot work must be removed / Floor and surfaces within 35 Foot radius of hot work must be deaned	6	Alternative method other than welding must be used / All flammable & combustible material must be removed from site / Hot work must be performed in designated area only / Fire extinguishers & communication device must be there at site . Training on the usage of the fire extinguishers is to be imparted. Adherence to usage of PPEs. Hot Work Process Confirmation is to be done prior to commence the said activity.	3	Site Incharge
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Severity	Probability	Risk rating
NLWD	1 Rarely occur	3 3 6 9
LWD	2 Frequently occur	2 2 4 6
Fatal / amputation	3 Will occur	1 1 2 3

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Confirmed by: Jitender Kumar


For Gayatri Automation Systems (P) Ltd.
 Jitender Kumar
 (CEO)
 Authorised Signatory