

Major & Critical Lift Permit - Mobile or Non-Mobile Crane				Issue Date: 06.02.18	
Section A - Load & Capacity Data					
1. Project Name EFI00100		2. Contractor GE POWER		3. Lift Date 06.02.18	
4. Lift Location TURBINE HALL, T1 Steam turbine		5. Crane Manufacturer FIKARS, DEMAG, ALG		6. Model # Overhead Crane	
7. Serial # 7614/1976, 2*P1680H40 / P1		8. Total Boom/Boom Ext.&/or Jib Length @ time of Lift: mt		9. Parts of Load Cable on Block:	
10. Max radius during lift (pick, swing, and set)		11. Swing Dir. And Degrees of swing		12. Lift Elevation Max. Min. M Mt	
13. Boom Angle: Pick Set		14. Will Jib and/or Boom Ext be used? Yes ☐ No ☐ If Yes: Length mt Erected mt Stowed mt		15. Who determined weight of load and Lift? Vesa Anttila Drawing 2129261	
16. Component Weights		17. Load Description: T1 Zamech, HP-OUTER CASING		18. Mfg. (100%chart) rated capacity from chart as outlined in Blocks 5 - 14 78800 kgs	
Jib / Boom extension:				19. Weight of Load: 8950 kgs	
Headache Ball Size:				20. Total Lift Load - (Block 16+19) 9000 kgs	
Load Block Size:				21. Load % of Crane Capacity, (Divide Block 20 by 18) 11 %	
Auxiliary Boom Head:					
Weight of Cable (Load Fall):				22. Inspection/Testing: insp. 19.04.20	
Slings, Rigging, Shackles, Etc. : 50 kgs		23. Is Crane Level? Yes ☒ No ☐		Date of Last Certification/Inspection	
Lifting Booms or Bars:		24. Soil Conditions?		Poor ☐ Good ☐	
Allowance for Unaccounted		Calculations?		Required ☐ Not Required ☐	
Material in Equipment:		Crane Mats?		Required ☐ Not Required ☐	
Other:					
Total Component Weights: 50 kgs					
25. Tagline Required? Yes ☒ No ☐		26. Hazards - attach additional sheets as required: Electrical? Yes ☐ No ☒ If Yes, explain Overhead? Yes ☐ No ☒ If Yes, explain Underground? Yes ☐ No ☒ If Yes, explain Others? Yes ☐ No ☐ If Yes, explain			
27. Communications by: HAND OR RADIO ☒ ☐		28. Sketch of Crane relative to lift and rigging to component. Attach additional sheets if required:			
		29. Rigging Component List			
		1 Lifting rope 10ton			
		2 Turnbuckle 9,7ton 2pc			
		3 Lifting rop 5ton 2pc			
		4 Lifting rope 5 ton 2pc			
		5			
		6			
		7			
		8			
		9			
		10			
		11			
		12			
30. Final Load Inspection:					
All moving parts secured?		Yes ☐ No ☐		If No, explain	
All attachments or loose items secured?		Yes ☐ No ☐		If No, explain	
31. Rigging Component Inspection					
Certificates/Tags Checked?		Yes ☐ No ☐		If No, explain	
Rigging in good condition?		Yes ☐ No ☐		If No, explain	

Section B - Signatures:		
Pre-Lift Meeting	Date:	02.06.18
1. Operator	Date:	02.06.18 Signature
2. Rigger	Date:	02.06.18 Signature
3. Designated Signal Person	Date:	02.06.18 Signature
4. Project Construction Manager	Date:	02.06.18 Signature
5. Safety Manager	Date:	02.06.18 Signature
6. Supervisor	Date:	02.06.18 Signature
7. Client (NA if not required)	Date:	02.06.18 Signature

File a completed copy of this form in the Site Safety Folder

Appendix 4 Lift Plan

To be completed by the competent person

Lift Plan Title:	T1 Zamech, HP-OUTER CASING		
Site:	TOPPILA 1	SOW:	Steam Other - Major Inspection
Client:	OULUN ENERGIA	Project:	EFI00100
Lift Location:	TURBINE HALL, T1 Steam turbine		Equipment S/N:
Lift Type:	☐ Routine	☒ Non-routine	☒ Critical
	☐ Engineered		
	Note: Engineered lifts requires additional approvals		
References:	Lift Plan No.	2129261	Procedures Ref.
	Risk Assessment No.	28052018 site riskassessment	Drawings Ref.
	Permit to Work No.		2129261

Load Details / Crane Details (maximum hook load not to be exceeded)

Load ID	2129261	Load Dimensions (L/W/H):	~3000 ~2200 ~1100
Center of gravity:	☐ Obvious	☐ Estimated	☒ Drawing
Weather conditions (maximum):		Wind (knots/MPH/KPH)	
Gross lift weight/max hook load in air	9250 Kgs	☒ Actual	☐ Assessed
Crane configuration/mode/type:	Overhead Crane		
SWL at this radius	70000 ft	Design hook height	
Maximum hook height:		Maximum radius:	

Description of lifting operation

REMARK: ORIGINAL LIFTING EQUIPMENT AND ARRANGEMENT IS NOT AVAILABLE . casing earlier HP-UPPER CASING LIFT, DIS-ASSEMBLY LIFT, HP-UPPER CASING LIFT FROM TURBINE ->> ON TO SUPPORTS OR FLOOR. ASSEMBLY LIFT, HP-UPPER CASING LIFT FROM SUPPORTS OR FLOOR ->> ON TO TURBINE	ALTERNATIVE LIFTING EQUIPMENT ACC: SKETC / same as was used for LP-
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Lifting team personnel Attach STA with information on the following and tick as applicable.

Yes	Prevention of person(s) becoming stuck/trapped
Yes	Prevention of person(s) falling/being crushed
	3 Part communications methods
Yes	Crane annual inspection and load test documentation
	Site-specific procedures
	If applicable equipment properly secured in transporter

	Environmental hazards
Yes	Fall hazards
Yes	Currently trained/competent personnel
	Engineer technical data for rigging hardware (lifting beams, others)
	If applicable high angle rescue available for support

Possible safety measures to be considered. Please answer the questions as applicable and provide "step-by-step" details on the following section. To be completed for safety measures by lift supervisor.

YES	Have you confirmed that the crane annual inspection is current and it passed the inspection?	YES	Based on the size of the load have you identified the proper eye bolts, turnbuckles and chainfalls?
YES	Have you confirmed the stability of this load?	NO	Is the load to be transported to a laydown area away from the crane radius?
NO	Is the lifting point available directly overhead? drawing 2129261	NO	Are there conflicting operations?
NO	If this lift an awkward size/shape load with sharp edges?	YES	Do all members of the lifting team speak the same language?
YES	Does the equipment/load have dedicated lift points	YES	If applicable are FME devices ready for use?
YES	Is the operator licensed/certified to operate this crane?		When using mobile cranes or boom-trucks. Have you conducted ground pressure calculations for setting up the outriggers?
	Is the crane capacity adequate for the radius of this lift?		If working on nights do you have the proper load visibility from all angles?
YES	Have you removed all loose objects from the load?	NO	Is this lift going to have blind points?
YES	Do you have proper cribbing material and understand the GE/GSII cribbing requirements?		If working on nights do you have proper lighting for laydown/set-down areas?
YES	Are tag lines required?	YES	Have you established an exclusion zone around the lifting operation?
NO	Are you lifting chemicals?		Is ground cover needed under crane to catch/contain oil spills?
YES	Is access and egress available to connect/remove the rigging hardware?	YES	Do we have suitable/adequate supervision for this lift?
NO	Are you using more than one crane to perform this lift?	YES	Do you have the proper PPE for the task at hand?
NO	Will you be using more than 100% of this crane's total capacity?	YES	Have you and the lift team prepared the STA and reviewed it in the work area as required?
YES	Have you validated the certifications for the rigging hardware that will be use during this lift?	YES	If using lifting beams/spreader bars have you reviewed the technical engineer documentation?
	Do you have the proper mats under each outrigger pad?	YES	Is the working space adequate and unobstructed e.g. scaffolds, pipes?
YES	Have you conducted a visual pre-use inspection of the rigging hardware that will be used for this lift?	YES	Is the general work area free of congestion to minimize slip/trip/fall hazards, and allow the operator to escape in event of unexpected movement or equipment failure?
YES	Have we identified the safe working load (SWL) and crane mode?	YES	Have we identified the Center of Gravity (CG)?
	Calculated Load % of Crane Capacity = 13,21%		
YES	Are wire rope/slings softeners available and used as required?		Are you planning to monitor the wind speed and other weather conditions?
NO	Are you going to fly the load over plant/equipment/assets?	YES	If applicable, are we using sufficient personnel to safely walk the load (spotters)?
NO	Does this lift have restricted head room?	YES	If using an overhead crane, can the operator maintain a safe distance away from the load (for example, 1.5 times the load largest dimension)?
YES	Can the lay-down area support the intended load - strenght/stability?	YES	Are the crane/hoist controls clear and legible so the operator can readily determine each function?
YES	Is the weight of the load verified?		
	Nothing		

Any further safety measures (as identified in the risk assessment)

Communications

Communications available:

Primary: ☐ Radio ☒ Hand signal ☒ Voice ☐ Other: _____

Secondary: ☐ Radio ☒ Hand signal ☒ Voice ☐ Other: _____

Communication checks:

☐ Primary Checked

☐ Secondary checked

Lifting equipment and accessories to be used (specify type, SWL, Serial # and configuration)

1	Lifting rope 10ton	7	
2	Turnbuckle 9,7ton 2pc	8	
3	Lifting rop 5ton 2pc	9	
4	Lifting rope 5 ton 2 PC	10	
5		11	
6		12	

Step-by-step details of lifting operation

(Responsible)

Technical review

Has a technical review conducted?

☐ Yes (attach details)

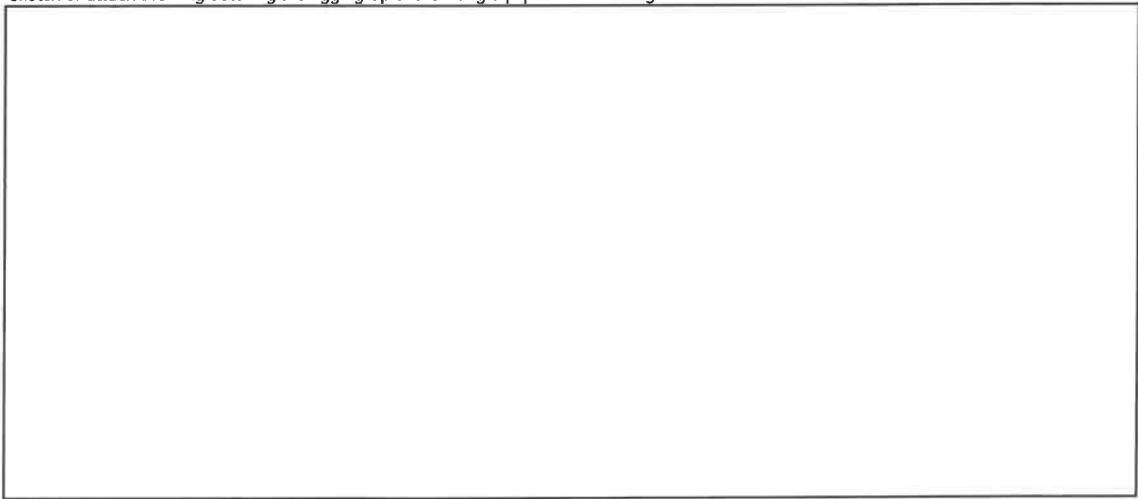
☐ No

Details

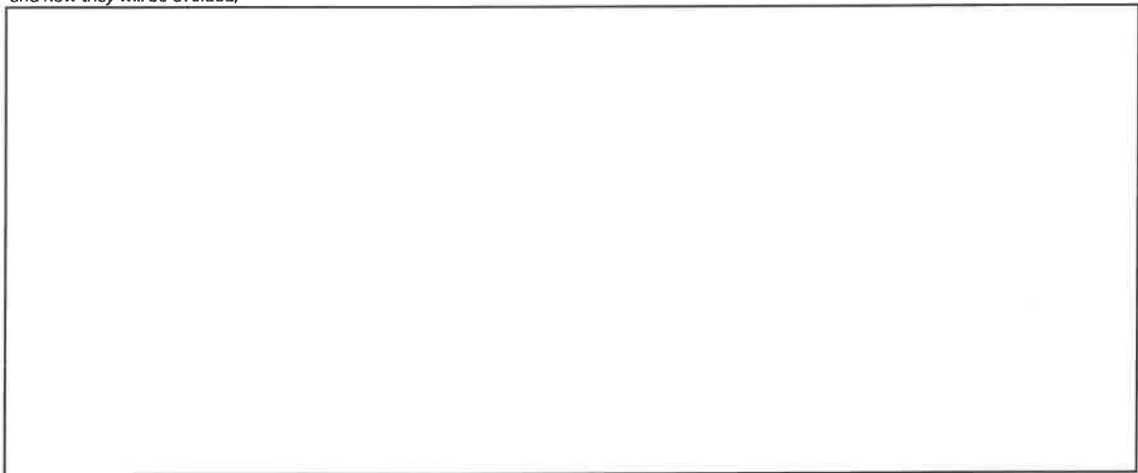


Sketches

Sketch or attach Drawing detailing the rigging-up of the lifting equipment and lifting accessories



Sketch of initial pick-up location, load path and lay-down area (include any obstructions or equipment clashes that may occur and how they will be avoided)



Health and Safety at Work etc Act 1974

Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)

Provision and Use of Work Equipment Regulations (PUWER) 1998

Control of Substances Hazardous to Health Regulations 2002

Manual Handling Operations Regulations 1992 as amended 2002

BS7121 Safe Use of Cranes part 1 – General 2006

BS7121 Safe Use of Cranes part 3 – General 2000

OSHA 1910.179 & 184 General industry

OSHA 1926.1400 Construction, 1926.1432 Multi-crane/derricks, 1926.753 Hoisting & rigging

ASME B30.1 Hydraulic industrial rollers, air casters and hydraulic gantries

ASME B30.2 Overhead and Gantry Cranes (top running bridge, multiple girder, top running trolley hoist)

ASME B30.9 Slings

ASME B30.26 Rigging Hardware

ASME B30.20 Below the Hook Lifting Devices

ASME B.17 Overhead and Gantry Cranes (top running bridge, single girder, underhung hoist)

[illegible]

Skill/Expertise	Name	Signature	Date
Appointed Person/Supervisor			06.02.18
Customer Liaison			06.02.18
Banksman/Signal Person			06.02.18
Rigger			06.02.18
Crane Operator			06.02.18
Tag Line Operator #1			06.02.18
Tag Line Operator #1			06.02.18
Mechanical Fitter #1			06.02.18
Mechanical Fitter #2			06.02.18
Mechanical Fitter #3			06.02.18
Mechanical Fitter #4			06.02.18
Field Engineer			06.02.18

Attended pre task briefing Read and understands the lift plan.

Debrief and learning points *(did the lift go as planned or are changes to the lift plan required?)*

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Competent person(s)

FE Name _____ 06.02.18

Supervisor Name _____ 06.02.18

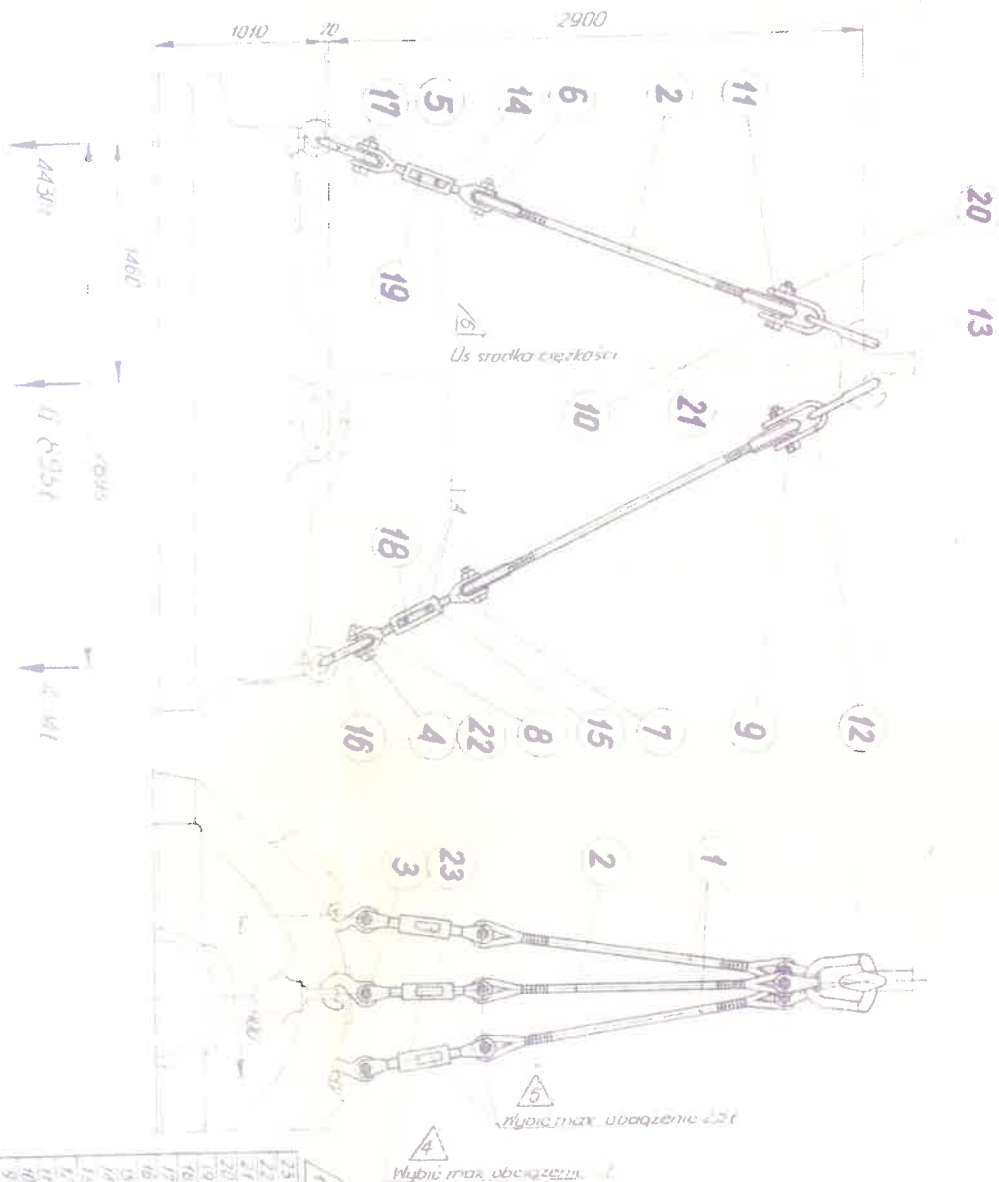
Rigger Name _____ 06.02.18

Name

Signature

Date

2129261



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- Uwagi:**
1. Dopuszczalne obciążenie robocze podwiesza pojedynczego 5t. Obciążenie próbne 6,25t.
 2. Dopuszczalne obciążenie robocze podwiesza doz 1 wynosi 2,5t. Obciążenie próbne 3,2t.
 3. Maksymalne obciążenie robocze wycią wysokości 11m 12mm.

Wzrost resztkowy 21 80 kV

TK-25 Podnośnik kabinowy
kabinowy WD

1:20

2129261



SKETCH
EXAMPLE
SIMPLE ARRANGEMENT THAN LP-CRACKING