

Boiler Lifting and Positioning - JSA - A

en-SG · Basic task controls · v1.0 · 2026-10-14 · Sources: article section 9

Site: | Item ID: | Work area:

Approval	Work supervisor	Technical reviewer	Release / handover authority

1. Job details and team signatures

Date / time		Location / area		Assessor		Supervisor	
Team signatures							

2. Conditions and hold points

Stage	Time	Location / area	Environment / readings	Item / condition	Controls	Plant / tools	Approval / signature
HP-0 Start							
HP-1 Prepare lift area							
HP-2 Trial lift and move							
HP-3 Secure and release							
HP-4 Hand over							

Complete after actual checks. Recheck after changes, defects or shift handover.

3. JSA risk assessment

Job stage	Hazards and effects	Failure factors	Technical and procedural controls	Site verification	P	S	R	A
1. Plan body and base	1. Dropped boiler 2. Foundation failure 3. Overturning	1. Catalog mass used alone 2. Local reactions omitted 3. CG not established	1. Verify shipping configuration 2. Check support reactions 3. Confirm lift points and CG	1. Actual mass and CG 2. Foundation design reference 3. Lug and saddle details				
2. Prepare lift area	1. Crane instability 2. Suspended-load strike 3. Collision with services	1. Ground capacity unknown 2. Exclusion incomplete 3. Route clearance absent	1. Follow engineered lift plan 2. Separate the danger area 3. Survey route and overheads	1. Equipment configuration 2. Ground and route evidence 3. Service clearance				
3. Trial lift and move	1. Unexpected rotation 2. Unequal sling loading 3. Collision and crushing	1. CG estimate wrong 2. Snagged attachment 3. Route changed	1. Check balance at low height 2. Stop on snag or tilt 3. Move within lift plan	1. Balance and load behaviour 2. All connections clear 3. Route remains controlled				
4. Seat and align	1. Support overload 2. Boiler shift 3. Crushed fingers	1. One saddle not contacting 2. Wrong bearing location 3. Hands used as guides	1. Use planned landing supports 2. Verify level and contact 3. Use hands-clear tools	1. Saddle contact evidence 2. Level and position record 3. Foundation bearing check				
5. Secure and release	1. Sudden load transfer 2. Anchor failure 3. Thermal movement restraint	1. Hook released early 2. Wrong anchor setting 3. Sliding end fixed	1. Install specified restraint 2. Check anchor installation 3. Preserve movement details	1. Anchor inspection record 2. Fixed and sliding checks 3. Grout acceptance evidence				
6. Hand over	1. Premature firing 2. Piping nozzle overload 3. Unrecorded movement limit	1. Placement treated commissioning 2. Next-trade load ignored 3. Drawings not updated	1. Issue mechanical handover 2. Require separate connection review 3. Record movement constraints	1. Installation survey 2. Anchor and grout records 3. Connection and firing limits				

P/S/R/A: Complete only after actual site assessment using the site risk method.

4. Pre-work checklist

☐ Actual mass and CG	☐ Equipment configuration	☐ Balance and load behaviour
☐ Saddle contact evidence	☐ Anchor inspection record	☐ Installation survey
☐ Lug and saddle details	☐ Foundation bearing check	☐ Connection and firing limits