ENGINEERING TEST REQUIREMENTS FOR LIFTING (PULL TEST) APPLIANCES MANUFACTURED BY SARA

Rev	Reason of Change	Date	Made By	Reviewed By	Approved By	Status
0	Initial issue	12-08-2013	USR	J Gulati	KKD	Released
1	Appendix B Format revised	01-02-2024	SKG	USR	JG	Released
2	Acceptance criteria amended of clause 3.5	28-05-2024	PK	USR	JG	Released

ENGINEERING TEST REQUIREMENTS FOR LIFTING APPLIANCES MANUFACTURED BY SARA (PULL TEST)

SCOPE

This procedure covers the qualification of lift lugs for BOP Control Units, HPU and other oilfield equipment which are characterized by evenly distributed loads. The qualification methods can be visualized, TP on customer requirements.

1.0 CLASSIFICATION

1.1 Lifting appliances are any lifting devices that are permanently attached to equipment to be lifted. These items generally consist of lift frames or welded lift eyes, etc.

2.0 PRELIMINARY INSPECTION

2.1 Visually inspect the lifting lugs on eyes and any associated welds for any evidence of discrepancy.

2.2 Verify a surface NDE inspection of the lift lugs or eyes and all associated primary load welds has been performed and recorded. If no inspection record has been made, surface NDE all lift lug surfaces and welds per Sara's NDE Procedures (MPI: SSE/QAD/MT-1/97) (LPT : SES 26-701) as applicable. Record all inspection data.

3.0 PULL TEST

3.1 The safe working load (SWL) of the equipment is equal to the dry weight of the unit as specified by SARA.

3.2 Determine the required proof load for the test. See Appendix "A" for each requirement. Verify proof load shown on assembly drawing (where mentioned).

3.3 Secure the equipment to be tested.

NOTE: Unless otherwise specified, all lift lugs that are to be subjected to simultaneous usage in actual operating conditions to tested simultaneously or tested individually (In other words, a four-arm lift frame requires if all four arms to be loaded at the same time).

3.4 Load to the established proof load of Step 2.2 and isolate the recorder/load cell.

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3.5 Hold the proof load five (5) minutes and relieve load. There should be no significant permanent deformation after testing. Cracks and other minor deformation may be repaired deformation may be repaired in accordance with the requirements stated in the acceptance criteria of lifting eyes mentioned in the respective NDE procedure.

3.6 After the proof loading, a magnetic particle inspection (as per SSE/AQ/MT-1/97) or liquid penetrate inspection (as per SES 26-701) of all accessible surfaces shall be performed to insure the integrity of the lift points and primary load path connections.

3.7 Upon acceptance of the testing, Quality Assurance will complete a "Certification of Testing and Examination of Lifting Pads" (see Appendix "B") certificate of acceptance.

3.8 Using 3/8" to 1/2" low stress steel stamps, stamp each lifting lug with its SWL (in kilograms). Instead of punching may the information can be punched on Name Plate.

Example: SWL : xxxxx KG

To determine the SWL of each lifting lug, divide the SWL of the lifting appliance by the number of lifting lugs that share the load. (For example, a two lug lift frame rated @ 50 tons yields a 25 ton SWL for each lug.) Add the number of lugs to stamp or punch on name plate. Eg 1 of 4, 2 of 4 - - - etc.

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APPENDIX "A"

1. LIFTING APPLIANCES

Safe Working Load in Kg (Tonnes)	Proof Load in lbs.
Up to 10,000 kg (10)	2.0 Safe Working Load
10,000 to 160,000 kg (>10) (160)	1.04 Safe Working Load + 9600 kg
Over 160,000 kg (>160)	1.10 Safe Working Load

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APPENDIX "B"

DOCUMENT NO.
T.C NO DATED

CERTIFICATE OF LOAD TEST FOR LIFTING POINT

CUSTOMER: P.O No.:

DESCRIPTION: DRG. NO.

SARA UNIT No/ JOB No.: QTY:

SARA TEST PROCEDURE: DATE OF TESTING:

LOAD CELL USED (ID No.): CALIBRATION VALID UPTO:

LIFTING SKID NO.	CALCULATED VALUE OF SWL (KG)	PROOF TEST LOAD (KG.)	HOLD TIME	REMARKS

This is to certify that the item listed above has been tested as per SARA SAE Procedure No. SES-26-762 Rev "2" and the results found satisfactory.

QUALITY CONTROL: WITNESS

Sign: Sign:

Name: Name:

Date: Date:

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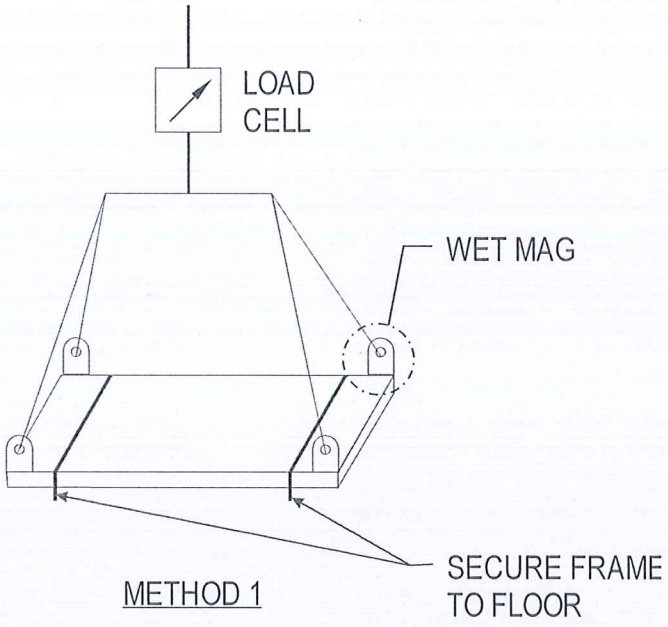
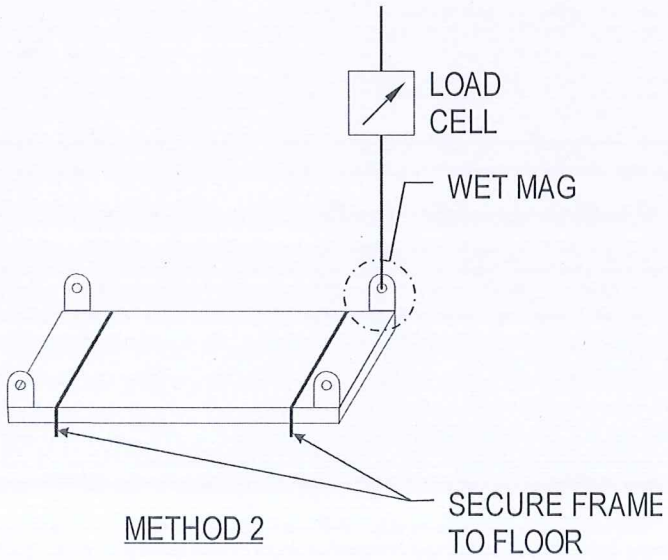


METHOD 1



METHOD 2

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