REPORT

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Reference
1256915-01

Lundmark Safety Technologies AB
Långviken 224
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Load test on Lifting device 5711-050 X-lyft / X-2500

(3 appendices)

1. Summary

RISE have on commission by Lundmark Safety Technologies AB performed load test on Lifting device 5711-050 X-lyft / X-2500, called X-lyft further in the report, see figure 1 and appendix 1 for the X-lyft. Testing was carried out in RISE facilities in Skellefteå on the large test beam. The test item was provided by Lundmark Safety Technologies AB.

The X-lyft is marked with working load limit of 2 500 kg and is tested to manage 1,5 times the work load which is 3 750 kg (36 825 N). The X-lyft manage this load without any permanent deformations.

Table 1. Loads in lifting test.

Test no.	Lifting method	Load (kg)	Load (N)	Comments
1	Lifting strings	3 750	36 825	No visible deformations
		5 500	54 010	Small twist in pos 2
		6 500	63 830	Permanent flat vice deformation, 7 mm on pos 2
2	Lifting hooks	3 750	36 825	No visible deformations
		5 500	54 010	small twist in pos 2

Measurement uncertainty is a measure of the correspondence between the measurement value and the true value of the measurement variable. The measurement uncertainty has been calculated with a 95% confidence interval.

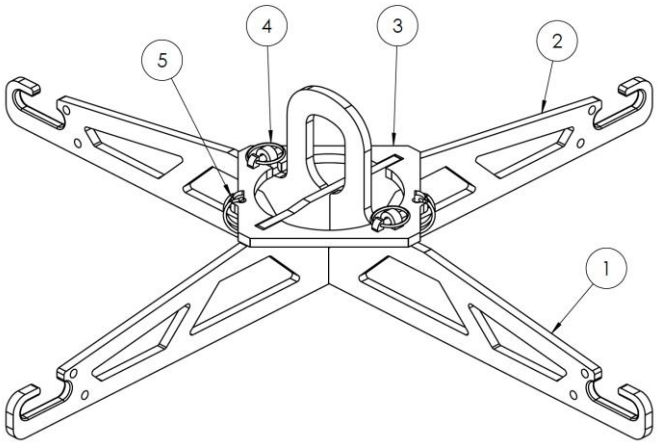


Figure 1. X-lyft.

2. Lifting test

2.1 Test samples

One X-lyft that is marked for working load limit of 2 500kg was tested for safety load, 1,5 times marking load. The X-lyft was also tested for higher load.
The X-lyft is compliance to the Machinery Directive 2006/42/EC clause 4.1.2.3 Mechanical strength.
Note. The tested lyft was not painted.

2.2. Test procedure

The X-lyft was mounted to a hydraulic cylinder with a coupling link and a master link. 1,5 m Lifting strings were mounted in the four corners of the X-lyft and also fastened in the test beam. The X-lyft was also tested with four lifting hooks attached to the special holes in the X-lyft, the lifting string were attached in those hooks. The test followed the procedure below:

1. The X-lyft was tested to a load of 5 500 kg then stopped for examination and evaluation. After 5 500 kg the X-lyft was was tested to a load of 6 500 kg then unloaded and examined for permanent deformation.

Load speed: 14mm/min.

2.3. Test equipment and environment conditions

Test date:	2024-04-05
Measure system:	HBM MX840B
Load cell:	Omegadyne LC412-75K, RISE item no. 47h02
Gravitation:	9,82 N/kg
Temperature:	22 °C
Humidity:	30-35% RF.

3. Result

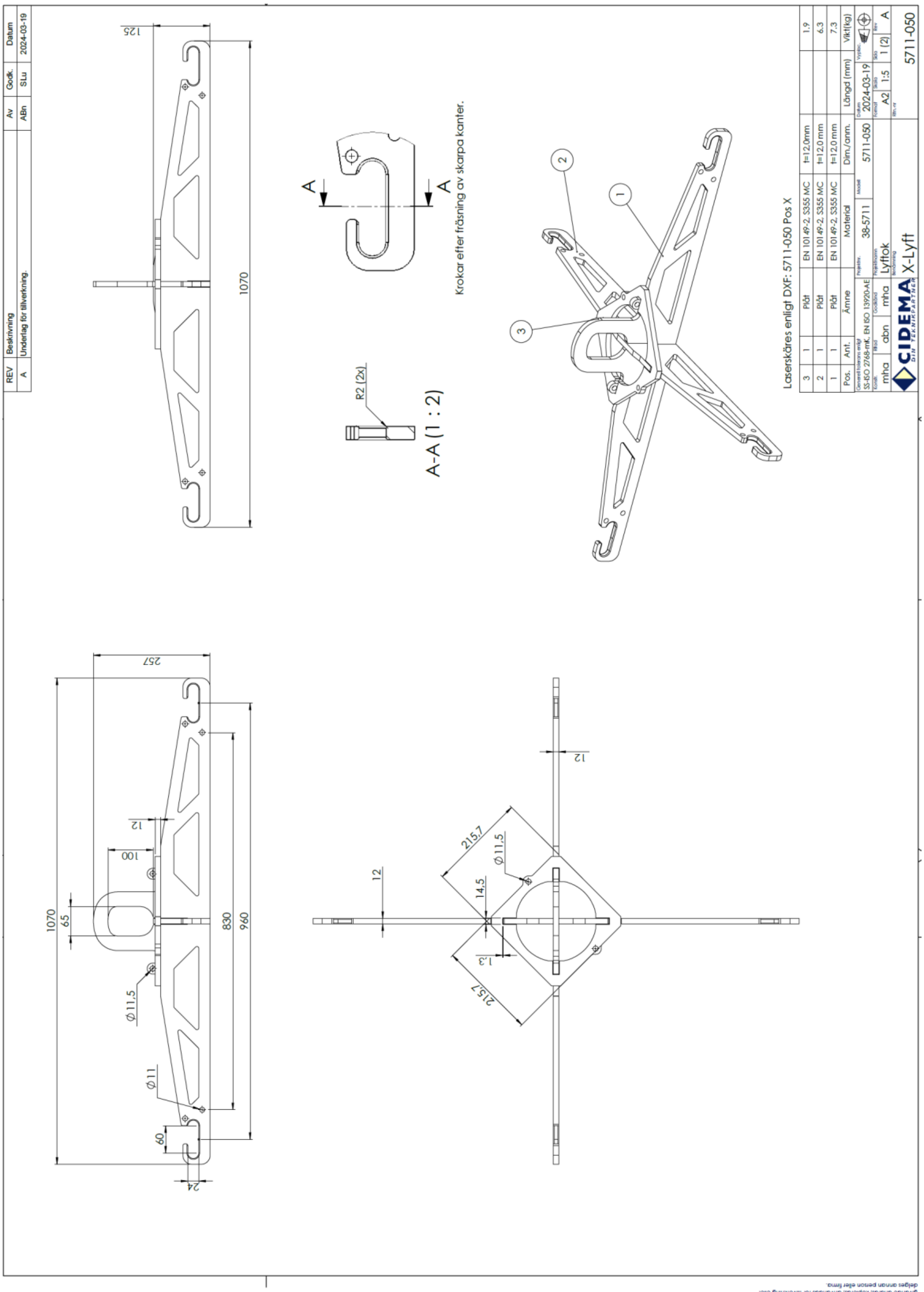
See result in summary and in appendix 2.

RISE Research Institutes of Sweden AB
Department Building and Real Estate - Production Systems and Materials

Performed by	Examined by
Urban Häggström	Tommy Vikberg

Appendices
1. Drawing of X-lyft
2. Load and time diagram
3. Pictures

Appendix 1



Appendix 2

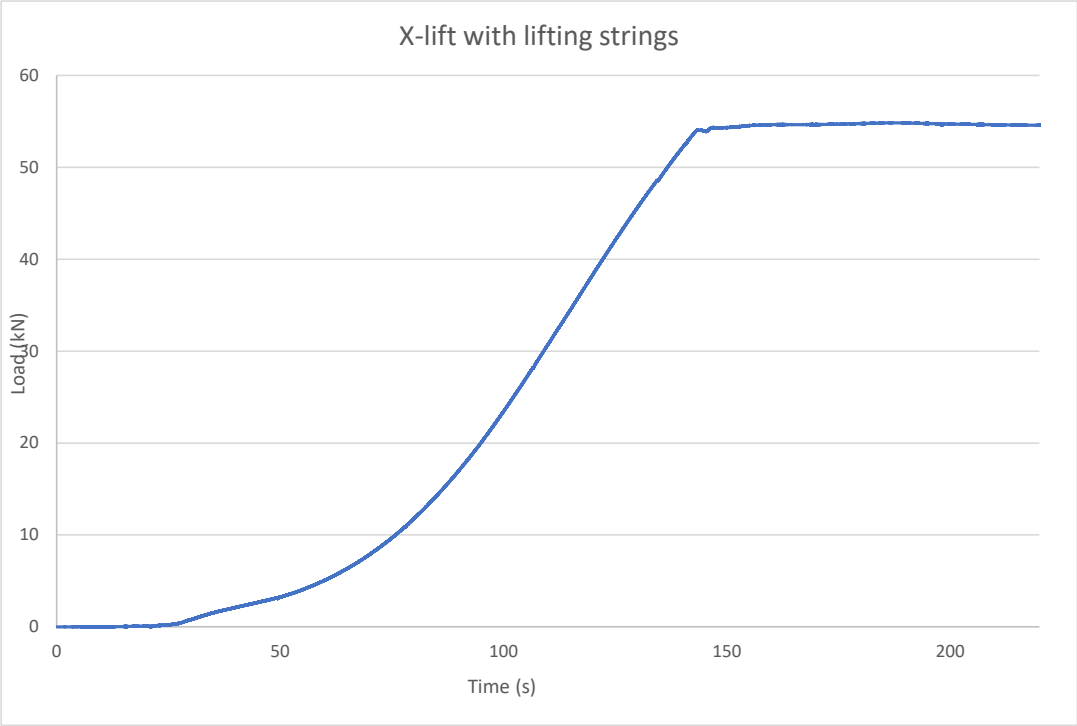


Diagram 1. Load/time graph, X-lyft up to 54 kN with lifting strings.

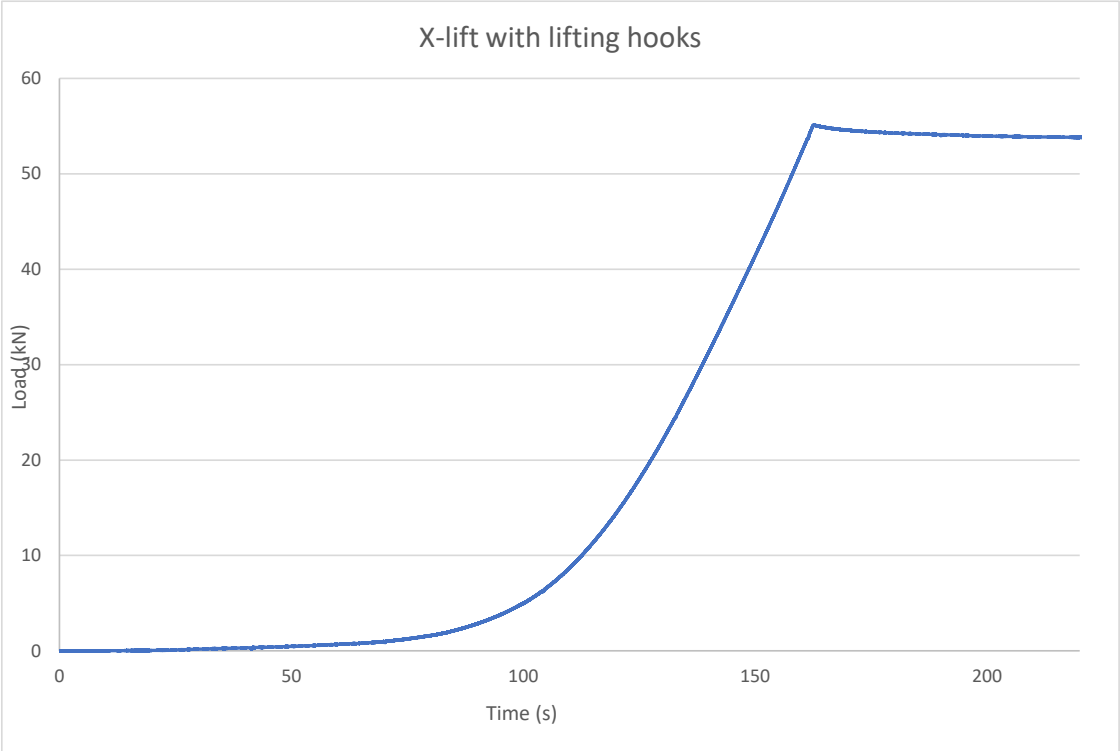


Diagram 2. Load/time graph, X-lyft up to 54 kN with lifting hooks.

Appendix 3

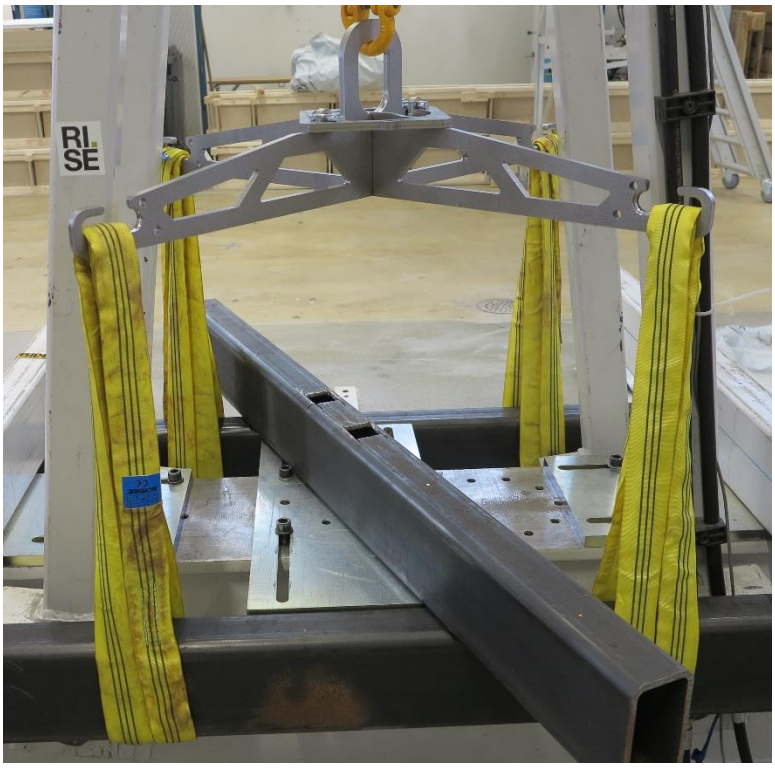


Figure 2. Test set up with lifting strings.

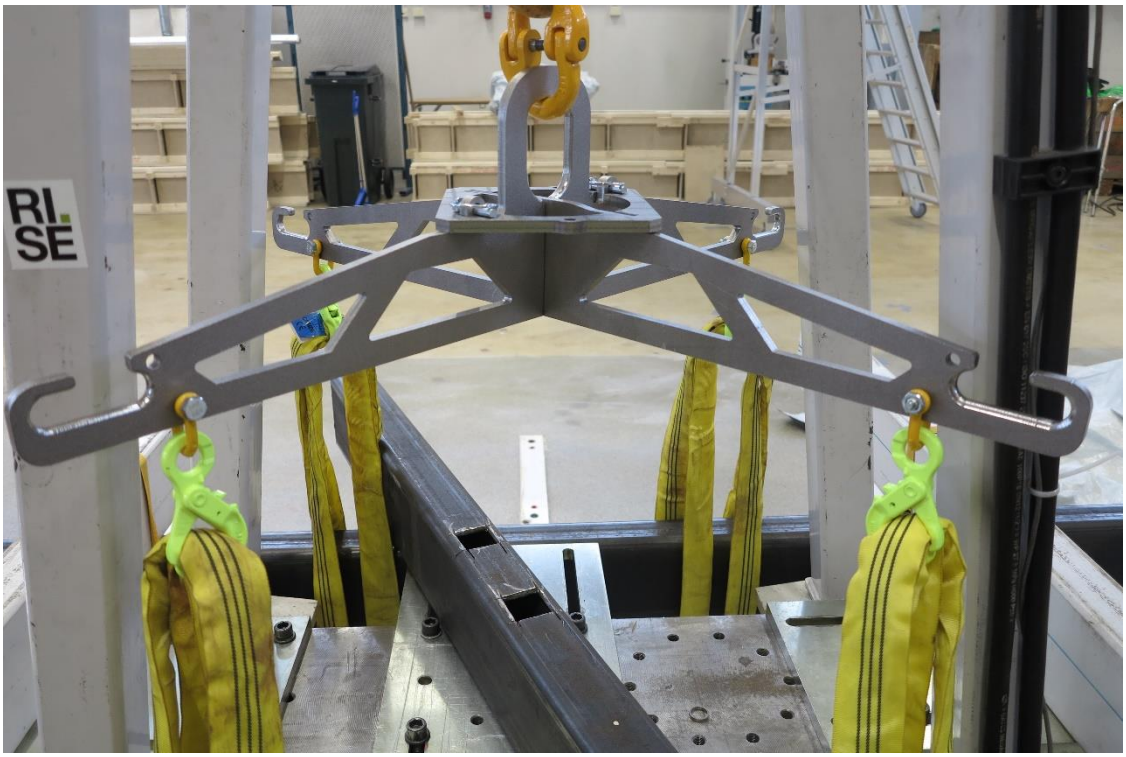


Figure 3. Test set up with lifting hooks.

Appendix 3

Figure 4. Twist in pos 2 at 6 500 kg.

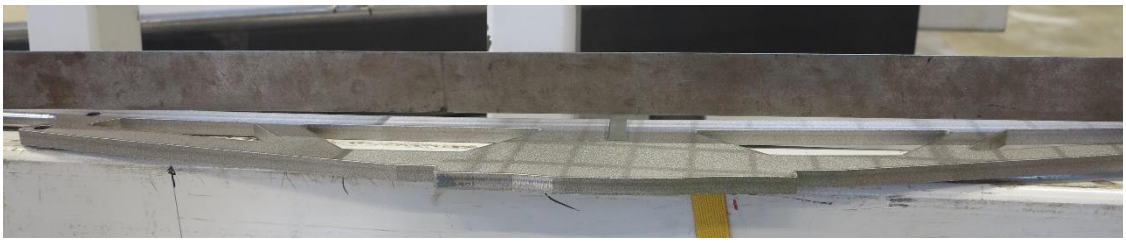


Figure 5. Flatwise deformation in pos 2 after 6 500 kg.

Verifikat

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Dokument

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