



MAEDA SEISAKUSHO CO., LTD.

1095 Onbegawa, Shinonoi, Nagano City
Nagano 388-8522, JAPAN
TEL +81-(0) 26-292-2228
FAX +81-(0) 26-293-8499
<http://www.maesei.co.jp/english/index.html>



EC DECLARATION OF CONFORMITY OF THE MACHINERY

Manufacturer

Company Name: Maeda Seisakusho Co., Ltd.
Address: 1095 Onbegawa, Shinonoi, Nagano City
Nagano, 388-8522 JAPAN

European Representative

Company Name: Kranlyft UK Ltd.
Address: Unit 1, IO Centre, Cabot Park, Avonmouth, Bristol BS11 0QL England
TEL +44 117 938 7205

Hereby declares that the machine described below:

Product Name: Telescoping Crawler Crane
Model: CC423S-1 (kw rating = 17.5)
Serial Number: 21022
Year of Manufacture: 2018

-is in conformity with the following directives

Machinery Directive 2006/42/EC
The last two digits of the year in which the CE-marking was fixed are 10

-is in conformity with the following provisions

“ Low Voltage Directive 2006/95/EC ”
“ EMC Directive 2004/108/EC ”
“ Noise emission in the environment by equipment for use outdoors Directive 2000/14/EC,
amended by the Directive 2005/88/EC ”
Measured sound power level = 93.8 dB LWA
Guaranteed sound power level = 101 dB LWA

- And furthermore declares that:

- The following (parts/clauses of) harmonized standards have been applied:

EN ISO12100-2:2010	Safety of machinery – General principles for design – Risk assesment and risk reduction
EN60204-1:2006	Safety of machinery – electrical equipment of machines – Part 1: General requirements
EN13000:2010 (Reference)	Cranes – Mobile cranes
EN61000-6-2:2005	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments
EN61000-6-4:2007	Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission for industrial environments
EN ISO3744:1995	Acoustics. Determination of sound power levels of noise sources using sound pressure. Engineering method in an essentially free field over a reflection plane

Place: Nagano, Japan
Date: March 23, 2018

Kazutaka Kitada
Managing Director / Industrial machinery Division
MAEDA SEISAKUSHO CO., LTD.



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TO WHOM IT MAY CONCERN:

Certificate of Test and Inspection

4 Fall and 2 Fall, 3 Sheave Hook Block
Manufacturer: MAEDA SEISAKUSHO CO., LTD.
Model for: CC423S-1
Serial No. : 20122
Hook Block No. : M8206

We hereby certify that this hook block has been tested and inspected in accordance with the quality standard of our company and we guarantee the quality of this product.

Hook Block Ass'y:	Part No. 541-1230000
	Drawing No. 103-4561600
Specifications:	Refer to the attached document for details
Safe Working Load:	2,950 kg
Sheave rope diameter:	8 mm
Actual value (Internal diameter):	80 mm
Date of Test and Inspection:	March 23, 2017

Signed on behalf of MAEDA SEISAKUSHO CO., LTD.:

Seiichi Yamaguchi
General manager / Quality Assurance Division
MAEDA SEISAKUSHO CO., LTD.



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Manufacturer

Company Name: Maeda Seisakusho Co., Ltd.
Address: 1095 Onbegawa, Shinonoi, Nagano City
Nagano, 388-8522 JAPAN

European Representative

Company Name: Kranlyft UK Ltd.
Address: Unit 1, IO Centre, Cabot Park, Avonmouth, Bristol BS11 0QL England
TEL +44 117 938 7205

Hereby declares that the machine described below:

Product Name: Mini Crawler Crane
Model: Searcher hook
Serial Number: CS002
Year of Manufacture: 2018

-is in conformity with the following directives

Machinery Directive 2006/42/EC

-is in conformity with the following provisions

“ Low Voltage Directive 2006/95/EC ”

“ EMC Directive 2004/108/EC ”

“ Noise emission in the environment by equipment for use outdoors Directive 2000/14/EC,
amended by the Directive 2005/88/EC ”

- And furthermore declares that:

- The following (parts/clauses of) harmonized standards have been applied:

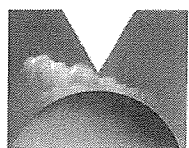
EN ISO12100-1:2010	Safety of machinery – General principles for design – Risk assesment and risk reduction
EN60204-1:2006	Safety of machinery – electrical equipment of machines – Part 1: General requirements
EN13000:2010 (Reference)	Cranes – Mobile cranes
EN61000-6-2:2005	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments
EN61000-6-4:2007	Electromagnetic compatibility (EMC) – Part 6-4: Generic standards – Emission for industrial environments
EN ISO3744:1995	Acoustics. Determination of sound power levels of noise sources using sound pressure. Engineering method in an essentially free field over a reflection plane

Place: Nagano, Japan

Date: March 23, 2018

Kazutaka Kitada

Managing Director / Industrial machinery Division
MAEDA SEISAKUSHO CO., LTD.



MAEDA

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CERTIFICATE FOR LOAD TEST

We herewith confirm that following model:

MC104CER	LC383M-5
MC174CRM	LC785M-8B
MC285CRM	MK1033CW-1
MC285CRME	MK1033CWH-1
MC285CGRM-2	MK1033CWE-1
MC285CRM-2	MK1033CWEH-1
MC285CRME-2	MC815CWM
MC305CRM-2	MC815CWME
MC305CRME-2	CC985S-1
MC405CRM	CC1485S-1
MC405CRME	CC423S-1

Have been test-lifted with 1.25 times the rated total load at our factory.

We also confirm that the group of classification of the mechanism as a whole is M3

and type of crane is A1 in accordance with ISO 4301-2 (JIS B 8822-1).

Place: Nagano, Japan
Date: March 23, 2018

Kazutaka Kitada
Managing Director / Industrial machinery Division
MAEDA SEISAKUSHO CO., LTD.

Hook Structural Calculation Sheet

Cross section performance of risky cross-section

$$I = \frac{(B+b)^2 + 2Bb}{36(B+b)} \cdot h^3$$

$$= \frac{(40+16)^2 + 2 \times 40 \times 16}{36(40+16)} \times 57^3$$

$$= 405660.9 \text{ (mm}^4\text{)}$$

$$e1 = \frac{1}{3} \times \frac{2B+b}{B+b} \cdot h$$

$$= \frac{1}{3} \times \frac{2 \times 40 + 16}{40 + 16} \times 57 = 33 \text{ (mm)}$$

$$e2 = h - e1 = 57 - 33 = 24 \text{ (mm)}$$

$$\sigma_A = \frac{W}{A} + \frac{P(a+e2)e1}{I}$$

$$= \left(\frac{2950}{1596} + \frac{2950 \times 64 \times 33}{405660.9} \right) \times 9.81$$

$$= 132.5 \text{ (N/mm}^2\text{)}$$

$$S = \sigma_0 / \sigma_A = 687 / 132.5 = 5.18$$

$$\sigma_B = \frac{W}{A} + \frac{P(a+e2)e2}{I}$$

$$= \left(\frac{2950}{1596} + \frac{2950 \times 64 \times 24}{405660.9} \right) \times 9.81$$

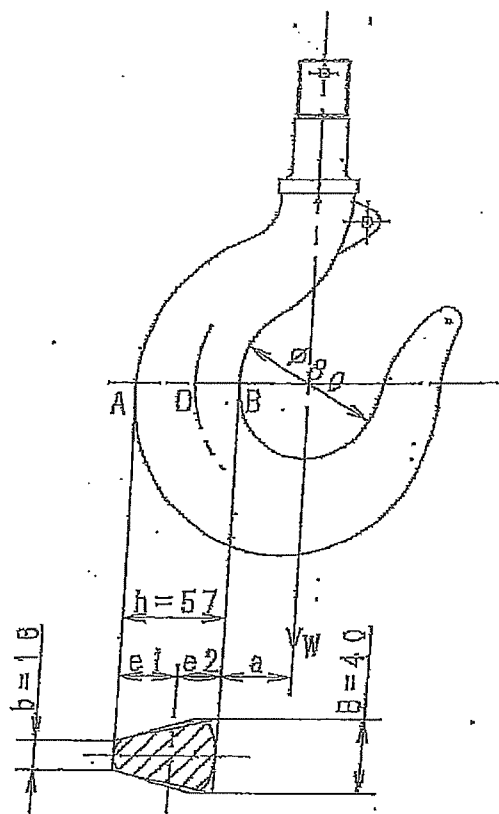
$$= 127.7 \text{ (N/mm}^2\text{)}$$

$$S = \sigma_0 / \sigma_B = 687 / 127.7 = 5.38$$

Material of hook: S45C

Tensile strength: $\sigma_0 = 687 \text{ (N/mm}^2\text{)}$

Yield strength : 491 (N/mm²)



W: Rated load 2950 kg
A: Cross section area

$$A = \frac{B+b}{2} \times h$$

$$= \frac{40+16}{2} \times 57 = 1596 \text{ (mm}^2\text{)}$$

Hook Structural Calculation Sheet

MODEL CC423S-1

Drawing No. 103-4561600

TESAC

ワイヤロープ証明書

CERTIFICATE FOR STEEL WIRE ROPE

No. 0107296

2018, 02, 26

TW0V00314-1

株式会社テサックワイヤロープ
TESAC WIRE ROPE CO., LTD.
二色浜製造所 NISHIKINOHAMA MANUFACTORY
大阪府堺市二色町1-1
11 NISHIKI NAKAMACHI,
KAIZUKA-SHI, OSAKA, JAPAN

本ワイヤロープは下記規格により検査し本記載通りの検査成績であることを証明致します。

We hereby certify that this steel wire rope is examined and tested strictly according to the undermentioned specification at our works and we guarantee the quality of the article.

適用規格 [SPECIFICATION]

TESAC SPEC.

製品番号 [PRODUCT NO.] HB00678-011
ロープの構成 [CONSTRUCTION] IWRC 6 X WS(26) 0/0
ロープの径 [NOMINAL DIA. OF THE ROPE].. 8 (ACT. 8.16) mm
ロープの長さ [LENGTH] 73 m
種 別 [GRADE] B
規定破断力 [SPECIFIED BREAKING LOAD].... 42.4 kN
実際破断力 [ACTUAL BREAKING LOAD] 46.1 kN
外 観 [APPEARANCE] GOOD
素線試験 [WIRE TEST] GOOD
備 考 [NOTE]

CONTINUOUS LENGTH

PRODUCT NO.	LENGTH	PRODUCT NO.	LENGTH
HB00678-012	73 m	HB00678-013	73 m
HB00678-014	73 m	HB00678-015	73 m
HB00678-016	73 m	HB00678-017	73 m
HB00678-018	73 m	HB00678-019	73 m
HB00678-020	73 m	HB00678-021	73 m
HB00678-022	73 m		

部番 : 336844500001

生番 : XX592242

74 Ueki

INSPECTING SECTION



Minatojima-nakamachi 5-1-1, Chuo-ku, Kobe 650-0046, JAPAN
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Strength Calculation

Product: **Swivel Hook BKL-7/8-10 (WLL = 2.0 t)**

Certificate No.: MT15-1456

Date: 2017/11/22

Calculation of tensile strength at critical section A – A and section B – B as shown in figure 1.

1. Strength of critical section A – A

The strength of section A – A is calculated according to the strength calculation method of the critical section of the hook specified in JIS B 2803 (Hooks). The tensile stress σ_t on the tensile side of the critical section A – A shown in figure 1, where the maximum stress occurs, is calculated with the following equation.

The evaluation is OK, if σ_t is equal to or less than $\frac{1}{3}$ of the tensile strength of the material used for the hook.

$$\sigma_t = \frac{W \times 1,000 \times R}{Z} + \frac{W \times 1,000}{A} \quad (\text{N/mm}^2)$$

W: Working load limit (WLL): kN

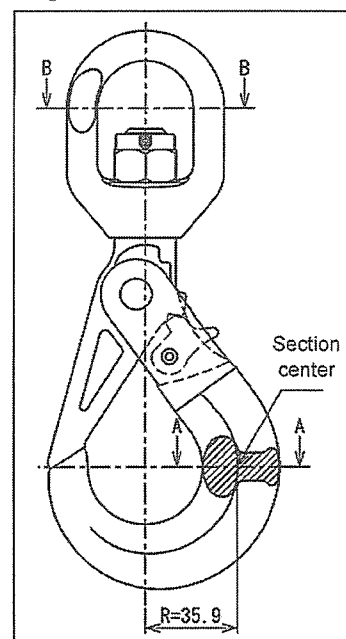
R: Distance from center of hook to center of critical section: mm

Z: Cross section coefficient of critical section: mm³

A: Area of critical section: mm²

σ_b : Tensile strength of material = 1,290 N/mm²
 (Nickel-Chromium-Manganese Steel: Gunnebo Material No. 368.6)

Figure 1



Product	Working load limit (WLL) W		Area A mm ²	Coeff. Z mm ³	Distance R mm	Tensile stress σ_t N/mm ²	Tensile strength σ_b N/mm ²	$\sigma_b / 3$ N/mm ²	Evaluation $\sigma_t \leq \sigma_b / 3$
	ton	kN							
BKL-7/8-10	2.0	19.6	458	2,355	35.9	341.8	1,290	430	OK

Sufficient strength according to the above.



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 www.martec.co.jp E-mail: info@martec.co.jp

Strength Calculation

Product: Swivel Hook BKL-7/8-10 (WLL = 2.0 t)	Certificate No.: MT15-1456
	Date: 2017/11/22

2. Strength calculation of section B – B

The tensile stress occurring at section B – B shown in figure 1 is calculated with the following equation.

The evaluation is OK, if the safety factor is 5 or higher.

$$\sigma t1 = \frac{W \times 1,000}{A1} \quad (\text{N/mm}^2)$$

W: Working load limit (WLL): kN

A1: Combined areas of section B – B (figure 2): mm²

σb : Tensile strength of material = 1,290 N/mm²

(Nickel-Chromium-Manganese Steel: Gunnebo Material No. 368.6)

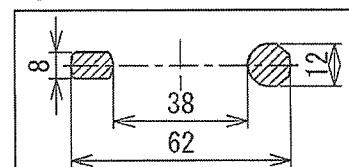
S: Safety factor, calculated as follows:

$$S = \frac{\sigma b}{\sigma t1}$$

Product	Working load limit (WLL) W		Area A1 mm ²	Tensile stress $\sigma t1$ N/mm ²	Tensile strength σb N/mm ²	Safety factor S	Evaluation $S \geq 5$
	ton	kN					
BKL-7/8-10	2.0	19.6	200	98.3	1,290	13.13	OK

Sufficient strength according to the above.

Figure 2



MARTEC Co., Ltd.
 Technical Department

Hirosuke Urano
 Hirosuke Urano
 Quality Control Manager

Test Certificate

Manufacturer	Gunnebo Industrier AB	Certificate no.	:	MTC-6593
Contract no.		Customer	:	
Drawing no.		Order no.	:	

[illegible]

Safety factor 5:1

We hereby certify the above test data.

MARTEC K.
Technical Dept





CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF CRANE

Name and address of maker of crane:	Maeda Seisakusho Co., Ltd.
Type of crane and nature of power.	Hydraulic tracked diesel engined telescopic crawler crane, Mode CC423S-1
Date of manufacture of crane.	2018
IDENTIFICATION NUMBER:	(a) Maker's serial number : 21022 (b) Owner's distinguishing Mark or number (if any): not registered
Make and type of automatic safe load Make and type of derricking interlock , if required:	Maeda Seisakusho Co., Ltd. N/A
Date of last previous test of crane:	New machine
Date of last previous thorough examination of crane:	New machine
Safe working load or loads:	See attached sheets 1 to 4(5)
In the case of a crane with a derricking jib or jibs the max. radius at which the jib or jibs may be worked (in feet):	See attached sheets 1 to 4(5)
Defects noted and alterations or repairs required before crane is put into service:	None.

I hereby certify that the crane described in this certificate was tested and thoroughly examined on 20/3/2018 and that the above particulars are correct.

Signature: M. Kitajima

Qualification Engineer

Name and address of person , company or association by whom
The person conducting the test and examination is employed. Maeda Seisakusho Co., Ltd.
1095 Onbegawa , Shinonoi ,
Nagano city , Nagano prefecture
388-8522 , Japan

Date of certificate: 20/3/2018

For notes see overleaf.

CERTIFICATE No. NB423E

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF CRANE				PAGE 1	
• Safe working load or loads.	LENGTH OF JIB (METRES)	RADIUS (METRES)	ANGLE °	TEST LOAD KG	SAFE WORKING LOAD KG
In the case of a crane with a	3.18m boom	1.50		3663	2930
variable operating radius (including	1 boom	2.00		NIL	1730
a crane with a derricking jib or with		2.50		NIL	1200
interchangeable jibs of different		2.85		NIL	980
lengths) the safe working load at					
various radii of the jib , jibs,					
or crab must be given. Test loads at					
various radii should be given in					
column (IV) and in the case of a					
safe working load which has been					
calculated without the application of					
a test load "NIL" should be entered					
in that column .					
• In the case of a crane with a					
derricking jib or jibs the maximum					
radius at which the jib or jibs may					
be worked is : 2.85m					
• We herewith confirm that we test lift all our manufactured cranes individually with 1.25 times the rated load before delivering .					
• We also confirm that the group of classification of the mechanism as a whole is M3 (for hoist) and type of crane is A1 in accordance with JIS B 8822-1 (ISO 4301-2).					
• I hereby certify that the crane described in this certificate was tested and thoroughly examined on 20/3/2018 and that the above particulars are correct .					
MAEDA SEISAKUSHO CO., LTD.					
TEL : +81-(0)26-292-2304 FAX : +81-(0)26-293-8768					

DATE OF CERTIFICATE : 20/3 2017 SIGNATURE M. Kitajima

SERIAL NO: 21022

MAEDA

CC423S-1

CERTIFICATE No. NB423E

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF CRANE				PAGE 2	
• Safe working load or loads.	LENGTH OF JIB (METRES)	RADIUS (METRES)	ANGLE °	TEST LOAD KG	SAFE WORKING LOAD KG
In the case of a crane with a	5.03m boom	1.50		NIL	2930
variable operating radius (including	1+2 boom	2.00		NIL	1710
a crane with a derricking jib or with		2.50		1488	1190
interchangeable jibs of different		2.85		NIL	980
lengths) the safe working load at		3.00		NIL	900
various radii of the jib , jibs,		3.50		NIL	720
or crab must be given. Test loads at		4.00		NIL	600
various radii should be given in		4.50		NIL	500
column (IV) and in the case of a		4.70		NIL	460
safe working load which has been					
calculated without the application of					
a test load "NIL" should be entered					
in that column .					
• In the case of a crane with a					
derricking jib or jibs the maximum					
radius at which the jib or jibs may					
be worked is : 4.70m					
• We herewith confirm that we test lift all our manufactured cranes individually with					
1.25 times the rated load before delivering .					
• We also confirm that the group of classification of the mechanism as a whole is M3					
(for hoist) and type of crane is A1 in accordance with JIS B 8822-1 (ISO 4301-2) .					
• I hereby certify that the crane described in this certificate was tested and thoroughly					
examined on 20/3 2018 and that the above particulars are correct .					
MAEDA SEISAKUSHO CO., LTD.					
TEL : +81-(0)26-292-2304 FAX : +81-(0)26-293-8768					

DATE OF CERTIFICATE : 20/3 2018 SIGNATURE M. Kitajima

SERIAL NO: 2/022

MAEDA

CC423S-1

CERTIFICATE No. NB423E

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF CRANE					PAGE 3
• Safe working load or loads.	LENGTH OF JIB (METRES)	RADIUS (METRES)	ANGLE °	TEST LOAD KG	SAFE WORKING LOAD KG
In the case of a crane with a	6.87m boom	1.50		NIL	1870
variable operating radius (including	1+2+3 boom	2.00		NIL	1710
a crane with a derricking jib or with		2.50		1488	1190
interchangeable jibs of different		2.85		NIL	980
lengths) the safe working load at		3.00		NIL	900
various radii of the jib , jibs,		3.50		NIL	720
or crab must be given. Test loads at		4.00		NIL	600
various radii should be given in		4.50		NIL	500
column (IV) and in the case of a		4.70		NIL	460
safe working load which has been		5.00		NIL	430
calculated without the application of		5.50		NIL	370
a test load "NIL" should be entered		6.00		NIL	330
in that column .		6.54		NIL	290
•In the case of a crane with a					
derricking jib or jibs the maximum					
radius at which the jib or jibs may					
be worked is : 6.54m					
•We herewith confirm that we test lift all our manufactured cranes individually with 1.25 times the rated load before delivering .					
•We also confirm that the group of classification of the mechanism as a whole is M3 (for hoist) and type of crane is A1 in accordance with JIS B 8822-1 (ISO 4301-2).					
•I hereby certify that the crane described in this certificate was tested and thoroughly examined on <u>20/3/2018</u> and that the above particulars are correct .					
MAEDA SEISAKUSHO CO., LTD.					
TEL : +81-(0)26-292-2304 FAX : +81-(0)26-293-8768					

DATE OF CERTIFICATE : 20/3/2018 SIGNATURE M. Kitajima

SERIAL NO: 2/022

MAEDA

CC423S-1

CERTIFICATE No. NB423E

CERTIFICATE OF TEST AND THOROUGH EXAMINATION OF CRANE				PAGE 4	
• Safe working load or loads.	LENGTH OF JIB (METRES)	RADIUS (METRES)	ANGLE °	TEST LOAD KG	SAFE WORKING LOAD KG
In the case of a crane with a	8.71m boom	1.50		NIL	1190
variable operating radius (including	1+2+3+4 boom	2.00		NIL	1190
a crane with a derricking jib or with		2.50		1488	1190
interchangeable jibs of different		2.85		NIL	980
lengths) the safe working load at		3.00		NIL	900
various radii of the jib, jibs,		3.50		NIL	720
or crab must be given. Test loads at		4.00		NIL	600
various radii should be given in		4.50		NIL	500
column (IV) and in the case of a		4.70		NIL	460
safe working load which has been		5.00		NIL	430
calculated without the application of		5.50		NIL	370
a test load "NIL" should be entered		6.00		NIL	330
in that column.		6.54		NIL	290
		7.00		NIL	260
• In the case of a crane with a		7.50		NIL	235
derricking jib or jibs the maximum		8.00		NIL	215
radius at which the jib or jibs may		8.38		NIL	200
be worked is : 8.38m					
• We herewith confirm that we test lift all our manufactured cranes individually with 1.25 times the rated load before delivering.					
• We also confirm that the group of classification of the mechanism as a whole is M3 (for hoist) and type of crane is A1 in accordance with JIS B 8822-1 (ISO 4301-2).					
• I hereby certify that the crane described in this certificate was tested and thoroughly examined on 20/3 2018 and that the above particulars are correct.					
MAEDA SEISAKUSHO CO., LTD.					
TEL : +81-(0)26-292-2304 FAX : +81-(0)26-293-8768					

DATE OF CERTIFICATE : 20/3 2018 SIGNATURE M. Kitajima