

DELIVERY CONDITIONS



TABLE OF CONTENT

1. General Information	3
1.1. <i>Background Information</i>	3
1.2. <i>Validity</i>	3
1.3. <i>Basic Requirements</i>	4
1.4. <i>Drawings and their Information</i>	5
2. Documentation: Certificates and NDT	6
2.1. <i>Steel Construction – Welded Construction</i>	6
2.1.1. <i>Welded components – fording blank</i>	7
2.1.2. <i>Welded components – sheet metals</i>	7
2.1.3. <i>Welded components – sections</i>	7
2.2. <i>Mechanical Engineering – Axles, Shafts, Bolts</i>	8
2.3. <i>Mechanical Engineering Components made of Sheet Metal and Sections</i>	9
3. Surface Treatment	10
3.1. <i>Painting</i>	10
3.2. <i>Hot-dip Galvanizing</i>	10
3.3. <i>Electro Galvanizing</i>	10
4. Heat Treatments	11
4.1. <i>Nitrocarburising in the salt bath (Tenifer Treating)</i>	11
4.2. <i>Carbonitriding</i>	11
4.3. <i>Gas Nitriding</i>	11
4.4. <i>Case Hardening</i>	11
5. Appendices	11

DELIVERY CONDITIONS

INDEX: V2
DATE: 2018-03-12



1. GENERAL INFORMATION

1.1. BACKGROUND INFORMATION

The objective of these Delivery Conditions is smooth cooperation between LCS Cable Cranes GmbH and its suppliers. LCS Cable Cranes GmbH informs its suppliers in these Delivery Conditions of how the ordered components or assemblies should, in principle, be delivered. It may be that additional requirements arise for various projects, which LCS Cable Cranes GmbH will append to the order in the form of a supplementary sheet.

If you have any questions, the staff of LCS Cable Cranes GmbH will be pleased to assist you. These Delivery Conditions apply to all companies and brands included in the LCS Group:



1.2. VALIDITY

The current version of the Delivery Conditions is available on the LCS Cable Cranes GmbH website. The supplier undertakes to familiarise himself with the latest issue under his own responsibility. These Conditions can be sent by the " Purchasing " Department on request.

DELIVERY CONDITIONS

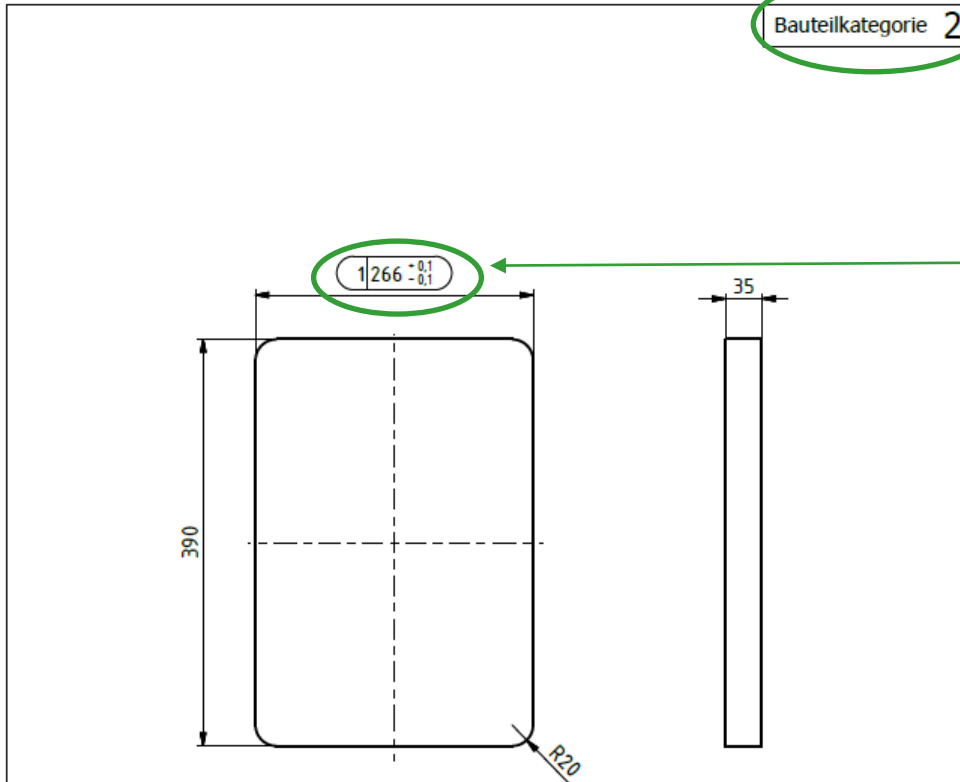
INDEX: V2
DATE: 2018-03-12



1.3. BASIC REQUIREMENTS

- Weld seams must be welded through (not stitched), unless otherwise agreed.
- Welded components and seams must be cleanly dressed and free of welding spatter (e. g. sanded).
- Bright components and surfaces must be preserved (e. g. turned and milled parts) .
- Components must be packed in such a way that they are safely transported and protected against corrosion (painted and / or coated components must be secured against scratching).
- The articles are to be with provided with a label or tag with the LCS Cable Cranes GmbH article number.
- **The required delivery notes, test reports and documentation must be enclosed with the goods in paper form.**
- Test intervals for the marked dimensions (test dimensions with number and tolerance) on the drawings are defined as follows:
 - Up to 03 units. – Only the first part
 - Up to 05 units. – First and last part
 - Up to 30 units. – Every / each 5th part and the last part
 - From 30 units. – Every 10th part and the last part

1.4. DRAWINGS AND THEIR INFORMATION



Bauteilkategorie 2

The category of components indicates the necessary tests and documents described in the following.

Control dimensions on the drawing are to be checked accordingly and entered on the check sheet; see Appendix 1.

Doppelungsprüfung:
 - UT nach EN 10160 S3/E4 - 100%
 - Z-Qualität nach EN 10164: 15

Additional component requirements are to be confirmed with test reports and / or material certificates.

35 mm	S355J2+N	390x266	Autogen
Dimension/Blechstärke	Werkstoff	Abmaße	Schnitt
Allgemeintoleranz ISO 2768 T1/2 - m/K General tolerance ISO 2768 P1/2- m/K	Form u. Lagetoleranzen DIN ISO 1101 Geometrical tolerance DIN ISO 1101	Allg. Toleranzen Schweißteile EN ISO 13920-BF Gen. tolerance welded parts EN ISO 13920-BF	Oberflächenangaben DIN ISO 1302 Surface specification DIN ISO 1302
Dokumententart Bearbeitungszeichnung	erstellt/ created	genehmigt/ approved	Oberfläche / Surface SA 2,5
 Firma / Company LCS Cable Cranes GmbH Industriestraße 8 A-6832 Sulz www.lcs-cablecranes.com	Datum / Date	11.10.2017	Maßstab / Scale 1 : 5
	Name / Name	PA	Masse / Mass 28,4 kg
Bezeichnung / Title Flanschplatte		Entgraten/ Deburr	
Ident-Nr. / Identity Number GC100-01-28-05		Blatt / Sheet 1	Revision 0
<small>Schutzvermerk / Copyright DIN ISO 15014 Der Inhalt dieser Zeichnung ist unser geistiges Eigentum. Die Zeichnung ist dem Empfänger nur zum persönlichen Gebrauch anvertraut. Ohne unsere schriftlichen Bewilligung darf sie weder ververvielfältigt, noch Dritten Personen zugänglich gemacht werden. Zuwiderhandeln wird von uns gerichtlich verfolgt. The content of this drawing is our copyright property. The drawing was handed over to the receiver for personal use only and without our written permission it must not be reproduced or made available to any third parties. Any infringement will be prosecuted.</small>		Maße / Dimensions mm	A4

DELIVERY CONDITIONS

INDEX: V2
DATE: 2018-03-12



2. DOCUMENTATION: CERTIFICATES AND NDT

Components and welded assemblies of LCS Cable Cranes GmbH are subdivided into 4 categories. Depending on the category, there are different requirements with regard to the documentation to be supplied, such as material certificates and non-destructive tests. The product category is shown on the top right of the drawing.

2.1. STEEL CONSTRUCTION – WELDED CONSTRUCTION

Documentation is to be drawn up for the entire welded assembly, which contains the following, depending on the category:

CAT 0

- No certificates and documentation required

CAT 2

- Minimum welding qualification: EN ISO 3834-2
- Permanent identification on the component with article and order number (engraving or similar)
- Overview of raw material and related certificates according to EN 10204 3.1
- Test reports of non-destructive tests as per drawing

CAT 3

- Minimum welding qualification EN ISO 3834-2
- Permanent identification on the component with article and order number (engraving or similar)
- Overview of raw material and related certificates according to EN 10204 3.1
- Test reports of non-destructive tests as per drawing

DELIVERY CONDITIONS

INDEX: V2
DATE: 2018-03-12

2.1.1. Welded components – fording blank

Required documentation:

CAT 0

- No certificates and documentation required

CAT 1

- Certificate in accordance with EN 10204 3.1

CAT 2

- Certificate in accordance with EN 10204 3.1
- Test reports of non-destructive tests as per drawing

2.1.2. Welded components – sheet metals

Required documentation:

CAT 0

- No certificates and documentation required

CAT 1

- Certificate in accordance with EN 10204 3.1

CAT 2

- Certificate in accordance with EN 10204 3.1
- Certificate for Z-quality EN 10164 according to drawing
- Test reports of non-destructive tests as per drawing

2.1.3. Welded components – sections

Required documentation:

CAT 0

- No certificates and documentation required

CAT 1

- Certificate in accordance with EN 10204 3.1

DELIVERY CONDITIONS

INDEX: V2
DATE: 2018-03-12

2.2. MECHANICAL ENGINEERING – AXLES, SHAFTS, BOLTS

Required documentation:

CAT 0

- No certificates and documentation required

CAT 2

- Permanent identification on the component with article and order number (engraving or similar)
- Certificate in accordance with EN 10204 3.1
- Test reports of non-destructive tests as per drawing

DELIVERY CONDITIONS

INDEX: V2
DATE: 2018-03-12

2.3. MECHANICAL ENGINEERING COMPONENTS MADE OF SHEET METAL AND SECTIONS

CAT 0

- No certificates and documentation required

CAT 1

- Certificate in accordance with EN 10204 3.1
- Permanent identification on the component with article and order number (engraving or similar)

CAT 2

- Permanent identification on the component with article and order number (engraving or similar)
- Certificate in accordance with EN 10204 3.1
- Test reports of non-destructive tests as per drawing

DELIVERY CONDITIONS

INDEX: V2
DATE: 2018-03-12

3. SURFACE TREATMENT

3.1. PAINTING

The quality of the surface treatment of welded constructions and components must meet the following requirements:

- Surfaces must be cleaned and degreased, steel components must in addition be sand blasted SA2,5
- The RAL shade must correspond to the specification on the drawing
- Degree of gloss: "satin gloss"
- 2-coat system (primer / top coat) minimum 80 µm each
- Primer: **Feycotect Universal primer white 2014-9010 RAL 9010**
- Top coat: **Feycotect 626 PU DTM**
- **For special painting, the colour is stated on the order.**
- Coat structure C3 in accordance with ISO 12944-2
- Protection time medium
- Bright or primed surfaces according to the drawing – bright surfaces conserved
- Welds without full penetration are to be sealed prior to painting
- Open cavities (e. g. in box profiles) must be preserved with cavity protection (contact LCS for advice)

In order to avoid differences in colour and gloss, other paint manufacturers must be agreed with the purchase department of LCS Cable Cranes GmbH.

3.2. HOT-DIP GALVANIZING

- Execution in accordance with EN ISO 1461

3.3. ELECTRO GALVANIZING

- Execution in accordance with EN ISO 2018
- Minimum layer thickness 10 µm, maximum layer thickness 25 µm, post-treatment blue passivated

4. HEAT TREATMENTS

4.1. NITROCARBURISING IN THE SALT BATH (TENIFER TREATING)

- Tenifer-Q or Tenifer-QP process according to specification on the drawing and order
- Air cooling

4.2. CARBONITRIDING

- Hardening depth and degree of hardness according to specification on the drawing and order

4.3. GAS NITRIDING

- Hardening depth and degree of hardness according to specification on the drawing and order

4.4. CASE HARDENING

- Hardening depth and degree of hardness according to specification on the drawing and order

5. APPENDICES

- Appendix 1 – Specimen Test Report
- Appendix 2 – Specimen Supplementary Delivery Conditions for Components

APPENDIX 1

INDEX: V2
 DATE: 2018-03-12



Fertigungsdokumentation



LCS Cable Cranes GmbH
 6832 - Sulz, Industriestraße 8

Bestellnummer: _____	Prüfer: _____
Fertigungsauftrag: _____	Blatt-Nr.: _____
Art.-Nr./Zng.-Nr.: _____	Arbeitsplatz: _____
Revisionsstand: _____	Firma: _____
Menge: _____	
Prüfintervall: _____	

Fertigungshinweise:

Erstlaufliste

Q-Nr.	Merkmal	Nennmass	Toleranz	Prüfm.	Ist-Mass	1. Korr.
0	Abmaß	32	- 0,100 - 0,200			
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						

Legende: FM=Fertigungsmaß HIM=Hilfsmaß HL=Haarlineal K=Kaliber LE=Lehre LM=Längenmesser LU=Lupe M=Mikrometer
 MM=Messmaschine MS=Meißstift MT=Messtaster MTH=Heidenhain Messtaster OM=Oberflächenmessgerät PR=Programm
 S=Schidbelehre SE=Schnellfaster TMB=Tiefenmessbrücke VL=Visuell WKZ=Werkzeug

Datum: _____ Unterschrift: _____

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