



Delivery conditions



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1. GENERAL INFORMATION

The aim of these delivery conditions is the smooth cooperation between LCS Holding GmbH including its subsidiaries (hereinafter referred to as "LCS") and its suppliers. In these delivery conditions, LCS informs the suppliers of the type of components or assemblies that are to be delivered. There may be additional requirements for various projects, which LCS will attach to the order in the form of an additional supplement.

If you have any questions, please do not hesitate to contact the LCS staff.

2. VALIDITY

The current version of the delivery conditions is available on the website of LCS Cable Cranes GmbH (www.lcs-cablecranes.com). The supplier is obliged to obtain knowledge of the latest edition independently. Upon request, these will be sent by the "Purchasing" department.

These delivery conditions shall apply between LCS and the supplier until revoked.

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 splatter (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 provided with a label or tag with the LCS 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 drawing are defined as follows:
 - up to 3 pcs. only the first part
 - up to 5 pcs. first and last part
 - up to 30 pcs. every / each 5th part and the last part
 - from 30 pcs. every 10th part and last part

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

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
Dokumentenart Bearbeitungszeichnung	erstellt/ created	genehmigt/ approved	Oberfläche / Surface SA 2,5
	Datum / Date		Maßstab / Scale 1 : 5
	Name / Name		Masse / Mass 28,4 kg
			Entgraten/ Deburr
			Bezeichnung / Title Flanschplatte
			Projekt / Project GC100
			Blatt / Sheet 1
			Ident-Nr. / Identity Number GC100-01-28-05
			Revision 0
			Maße / Dimensions mm
			A4

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

5. 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.

5.1. 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

5.1.1. 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

5.1.2. 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

5.1.3. WELDED COMPONENTS - SECTIONS

Required documentation:

CAT 0

- No certificates and documentation required

CAT 1

- Certificate in accordance with EN 10204 3.1

5.2. 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

5.2.1. MECHANICAL ENGINEERING – COMPONENTS MADE OF SHEET METAL AND SECTIONS

Required documentation:

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

6. SURFACE TREATMENT

6.1. 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.

6.2. HOT-DIP GALVANISING

- Execution in accordance with EN ISO 1461

6.3. ELECTRO GALVANISING

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

7. HEAT TREATMENT

7.1. NITROCARBURISING IN THE SALT BATH (TENIFER TREATING)

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

7.2. CARBONITRIDING

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

7.3. GAS NITRIDING

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

7.4. CASE HARDENING

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

8. APPENDIX

Appendix 1 Specimen Test Report ("Fertigungsdokumentation")

Appendix 1 Specimen Test Report (“Fertigungsdokumentation”)

FERTIGUNGSDOKUMENTATION



Fertigungsauftrag

Ersteller:		Datum:	
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Art. Nr. / Zng. Nr.	
Revisionsstand	
Menge:	
Prüfintervall:	
Arbeitsplatz:	

Fertigungshinweise

Erstlaufliste

Q-Nr.	Merkmal	Nennmaß	Toleranz	Prüfm.	Ist-Mass	1.Korr.
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						

Legende: FM-Fortigungsmaß, HM-Hilfsmaß, HL-Haarlineal, K-Kaliber, LE-Lehre, LM-Längenmozzor, LU-Lupe, M-Mikrometer, MM-Mozzmaschine, MS-Mozztift, MT-Mozztarter, MTH-Heidenhain Mozzarter, OM-Oberflächenmozzgerät, Pr-Pragrum, S-Schiebelehre, SE-Schnellarter, TMB-Tiefenmozzbrücke, Vi-Viruell, Wkz-Werkzeug

Datum:	
Visum:	