DELIVERY CONDITIONS
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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:

![Gantner, LCS Cranes, LCS Pipelines, ECCON](image)

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.
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

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.

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

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

Bestellnummer: ____________________________
Fertigungsauftrag: ________________________
Art-Nr/Zug.-Nr.: __________________________
Revisionsstand: __________________________
Menge: __________________________
Prüfintervall: __________________________
Firma: __________________________

Fertigungshinweise:

Erstlaufliste

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<th>Q-Nr</th>
<th>Merkmal</th>
<th>Nennmass</th>
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Legende: FM=Fertigungsmessung TW=Tragwerk RL=Rechnung K=Kaliber LE=Lernteil LIM=Lupe MM=Millimeter LU=Lupe MM=Mikrometern

Datum: __________________________ Unterschrift: __________________________

K: Meister/Korrektur/Revisionsdokumentation/Ende/Verantwortlich
ADDITIONAL DELIVERY CONDITIONS

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<th>Projektnummer eingeben.</th>
<th>Date</th>
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Listing of additional requirements and required documents:

1.1. WELDED CONSTRUCTION

- Admission certificate EN1090
- List of deployed welder
- Qualifications welder
- Qualifications NDT inspector
- WPS and WPQR
- Measurement report preheating
- Measurement report annealing
- Klicken Sie hier, um Text einzugeben.

1.2. SURFACE TREATMENT

Special coating specifications:

- Primer
  - layer thickness: µm µm
- Interface
  - layer thickness: µm µm
- Top layer
  - layer thickness: µm µm
- Coating specification
  - Product: Klicken Sie hier, um Text einzugeben.
  - Manufacturer: Klicken Sie hier, um Text einzugeben.

1.3. OTHER ADDITIONAL REQUIREMENTS

- Klicken Sie hier, um Text einzugeben.
- Klicken Sie hier, um Text einzugeben.
- Klicken Sie hier, um Text einzugeben.
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| Project manager | Name des Projektleiters. |