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1 Scope

This implementation guideline s valid for all components manufactured by Cloos suppliers. Drawing specifications and order-related agreements are superior to this guideline.

2 Implementation Guidelines for Component Production

2.1 General Part

The scope of services includes the manufacture, mechanical processing, priming and painting of the parts.

The work is carried out in accordance with the drawing(s) provided to you and listed in the order.

The dimensions given in the drawings and parts lists are without machining allowance.

They are based on the VDMA conditions.

Special specifications also apply to the following services, insofar as this is not specified in detail in the order or in the corresponding drawing.

2.2 Welding work

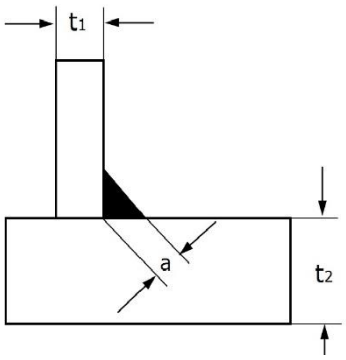
2.2.1 Weld seam execution for steel structures

Steel structures are executed in accordance with the following regulations:

- Steel structures according to DIN EN 1090 / 1 - 3, execution class EXC2 and DIN EN ISO 5817 according to evaluation group C
- Weld seam preparation according to EN ISO 9692
- Free dimension tolerances for welding constructions according to EN ISO 13920AE
- The parts are stress-relieved as necessary and straightened after welding.
- All fillet welds must be through-welded on both sides if accessible.
- All weld seams must be through-welded; exceptions to this are only permitted if explicitly specified in the drawing or with explicit authorisation.
- The surface must be thoroughly cleaned and free of coarse unevenness; individual unclean visible areas must be ground.

2.2.2 Calculation of the fillet weld thickness

t_1 = Smaller sheet thickness (e.g. web thickness) mm
t_2 = Greater sheet thickness (e.g. belt thickness) mm
a = Fillet weld thickness



Fillet weld thickness:

$$a \geq \sqrt{t_1}[mm]$$

Min. fillet weld thickness:

$$a_{\min} = 3mm$$

Max. fillet weld thickness for sheet thickness less than 5mm:

$$a_{\max} = 0{,}7 \cdot t_1[mm]$$

Max. fillet weld thickness for sheet thickness greater than 5mm:

$$a_{\max} = 0{,}4 \cdot t_1[mm]$$

2.2.3 Calculation of butt welds

$$a \geq t[mm]$$

2.3 Mechanical processing of the individual parts

- The component must be completely deburred after machining.
- The component must be cleaned of lubricant residue and swarf.
- The machining surfaces must be machined in one clamping device (reclamping not permitted).
    - Ra 12.5 for control cut/other surfaces
    - Ra 3.2 when machining assembly surfaces
    - Ra 0.8 for reamed fits

2.4 Paintwork

- See implementation guidelines CN 008 and CN 009

2.5 General information

- Coding: All parts must be labelled with our commission number.
- Verbal supplemental agreements are only valid if they are confirmed by us in writing.
- We would like to point out that the drawings made available to you must be treated confidentially, may not be passed on to third parties without our explicit authorisation and must be returned to us after completion of the order.
- The currently valid terms and conditions of purchase of our company apply. We will be happy to send you a copy on request. You can also find the terms and conditions of purchase at www.cloos.de.

3 Revision history

Date	Name	Modification	Rev.
15/02/2016	A. Geiss	• New creation • Chapter 12 'Design guidelines for steel components' was removed from CN002 and transferred to this 'CN 004 General design guidelines for the manufacture of components'. • Chapter 'Mechanical processing of individual parts' added (The component must be cleaned of lubricant residues and swarf). • Execution class for DIN EN 1090 / 1 - 3 added (EXC2). • Contractual penalty removed.	01
11/10/2024	P. Gudelius	• Surface details added • Paintwork: Reference to implementation guidelines changed	02