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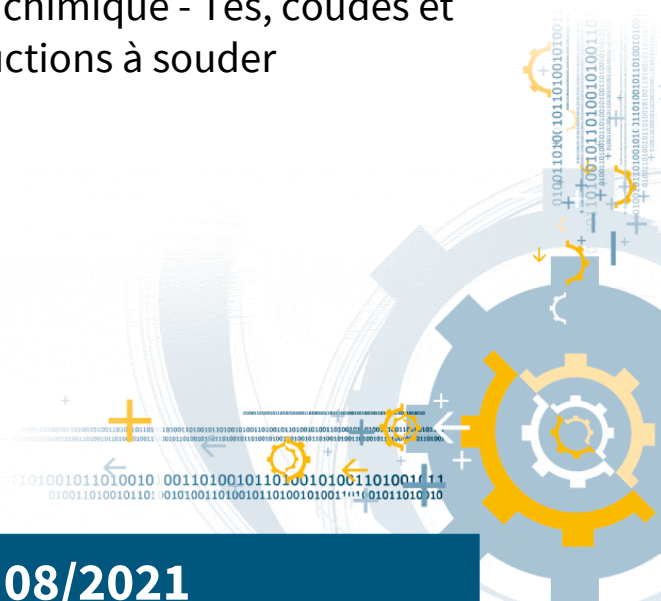
ILNAS-EN 10374:2021

Welded fittings for the food and chemical industries - Tees, bends and reducers for welding

Formstücke zum Anschweißen in der
Lebensmittel- und chemischen Industrie
- T-Stücke, Bogen und Reduzierstücke
zum Anschweißen

Raccords soudés pour l'industrie
alimentaire et chimique - Tés, coudes et
réductions à souder

08/2021



National Foreword

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EUROPEAN STANDARD ^{ILNAS-EN 10374:2021} **EN 10374**
NORME EUROPÉENNE
EUROPÄISCHE NORM

August 2021

ICS 23.040.40

English Version

**Welded fittings for the food and chemical industries - Tees,
bends and reducers for welding**

Raccords soudés pour l'industrie alimentaire et
chimique - Tés, coudes et réductions à souder

Formstücke zum Anschweißen in der Lebensmittel-
und chemischen Industrie - T-Stücke, Bogen und
Reduzierstücke zum Anschweißen

This European Standard was approved by CEN on 11 July 2021.

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European foreword

This document (EN 10374:2021) has been prepared by Technical Committee CEN/TC 459/SC 10 “Steel tubes and fittings for steel tubes”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 2022, and conflicting national standards shall be withdrawn at the latest by February 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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1 Scope

This document specifies dimensions, tolerances, internal and external surface characteristics and marking of welded fittings for the food and chemical industry.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 10028-7, *Flat products made of steels for pressure purposes - Part 7: Stainless steels*

EN 10088-1, *Stainless steels - Part 1: List of stainless steels*

EN 10088-2, *Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

EN 10204, *Metallic products - Types of inspection documents*

EN 10216-5, *Seamless steel tubes for pressure purposes - Technical delivery conditions - Part 5: Stainless steel tubes*

EN 10217-7, *Welded steel tubes for pressure purposes - Technical delivery conditions - Part 7: Stainless steel tubes*

EN 10253-4, *Butt-welding pipe fittings - Part 4: Wrought austenitic and austenitic-ferritic (duplex) stainless steels with specific inspection requirements*

EN 10357, *Austenitic, austenitic-ferritic and ferritic longitudinally welded stainless steel tubes for the food and chemical industry*

EN 13018, *Non-destructive testing - Visual testing - General principles*

EN 13480 (series), *Metallic industrial piping*

EN ISO 1127, *Stainless steel tubes - Dimensions, tolerances and conventional masses per unit length (ISO 1127)*

EN ISO 4288, *Geometrical product specifications (GPS) - Surface texture: Profile method - Rules and procedures for the assessment of surface texture (ISO 4288)*

EN ISO 6520-1, *Welding and allied processes - Classification of geometric imperfections in metallic materials - Part 1: Fusion welding (ISO 6520-1)*

ISO 13715, *Technical product documentation - Edges of undefined shape - Indication and dimensioning*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN ISO 6520-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

3.1

elbow

elbow fitting to allow a change direction of the pipeline with an angle of 45 °, 90 ° or 180 °

3.1.1

elbow form BS

elbow with standard weld ends

Note 1 to entry: Short execution.

3.1.2

elbow form BL

elbow with prolonged welding ends

Note 1 to entry: Long execution.

3.2

reducer

fitting that reduces the pipeline size from larger to a smaller diameter

3.2.1

reducer form RCS

concentric reducer with short length

Note 1 to entry: Short type.

3.2.2

reducer form RCL

concentric reducer with long length

Note 1 to entry: Long type.

3.2.3

reducer form RES

eccentric reducer with short length

Note 1 to entry: Short type.

3.2.4

reducer form REL

eccentric reducer with long length

Note 1 to entry: Long type.

3.3

T-piece

T-shaped fitting with a straight run and a branch perpendicular to the run

3.3.1

T-piece form TL

T-piece with equal tube diameters

3.3.2

T-piece form TS

T-piece with a short branch and equal tube diameters

3.3.3**T-piece form TRL**

T-piece with a branch tube diameter smaller than the run tube diameter

3.3.4**T-piece form TRS**

T-piece with a short branch and a branch tube diameter smaller than the run tube diameter

4 Symbols and abbreviated terms

For the purposes of this document, the symbols and abbreviated terms in Table 1 shall be applied.

Table 1 — Symbols and abbreviated terms

Symbol	Unit	Description
d_1, d_2	mm	specified inside diameter for reducers
D, D_1, D_2	mm	specified outside diameter for T-pieces and elbows
l_0	mm	<ul style="list-style-type: none"> — distance from the axis of the branch outlet to the face of the centre body of the T-pieces — distance from the centre of one welding end to the centre of a 90 ° elbow form BS at the welding ends — distance from one welding end to the axis of the centre line for elbow form BS-180
l_{0BS5}	mm	distance from the centre of one welding end to the centre of a 90 ° elbow form BS5 at the welding ends
l_1	mm	<ul style="list-style-type: none"> — distance from the centre of one welding end to the centre of a 90 ° elbow form BL at the welding ends — distance from one welding end to the axis of the centre line for elbow form BL-180 — face to face distance of reducer form RCL
l_2	mm	<ul style="list-style-type: none"> — distance from the axis of centre line of the run to the face of the branch outlet of tees — distance from one welding end to centre for elbow form BL-45 — face to face distance of reducer form REL
l_3	mm	— difference between elbow form BL5-90 and BS5-90, BL-45 and BS-45, BL-90 and BS-90, BL-180 and BS-180 at the welding ends aka tangent length
l_4	mm	centre to centre distance for elbows 180 °
l_{1BL5}	mm	distance from the centre of one welding end to the centre of a 90 ° elbow form BL5 at the welding ends
l_5	mm	distance from the extrados of a BS-45 or a BL-45 elbow to the face of the welding end
O	%	out-of-roundness
R, R_{BS5}, R_{BL5}	mm	bending radius of elbows
s, s_1, s_2	mm	specified wall thickness at the welding ends for T-pieces, elbows and reducers