

Customer**Bridge Constructors Europe Ltd.**

Engineering Plaza 456
75001 Paris
FR
procurement@bridgeconstructors.example.com

Manufacturer**ACME Metal Works GmbH**

Industrial Park 123
52066 Aachen
DE
quality@acme-metal.example.com

Certificate Receiver**Civil Infrastructure Authority**

Government Building 789
Administration Wing
1000 Brussels
BE
inspections@infra-authority.example.gov.be

Digital Material Passport

<i>ID</i>	DMP-METAL-007	<i>Version</i>	1.0.0
<i>Issue Date</i>	2025-05-20	<i>Certificate Type</i>	EN 10204 3.1

Business Transaction

Order		Delivery	
<i>Order ID</i>	PO-98765	<i>Delivery ID</i>	DN-12345
<i>Position</i>	5	<i>Position</i>	1
<i>Date</i>	2025-04-20	<i>Date</i>	2025-05-19
<i>Quantity</i>	20000 kg	<i>Quantity</i>	20000 kg

Product Information

<i>Product Name</i>	Structural Steel S420N Plate
<i>Batch ID</i>	H-45678-01
<i>Surface Condition</i>	Shot blasted and primed
<i>Production Date</i>	2025-05-18
<i>Country of Origin</i>	DE

Product Norms

<i>Standard</i>	EN 10025-3 (2019)
<i>Standard</i>	EN 1090-2 (2018)

Material Designations

<i>Name (EN)</i>	1.8902
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Product Shape

<i>Form</i>	Plate
<i>Length</i>	12000 mm
<i>Width</i>	2500 mm
<i>Thickness</i>	25 mm

Chemical Analysis

<i>Heat Number</i>	H-45678
<i>Melting Process</i>	EAF+LF+VD
<i>Casting Date</i>	2025-05-17
<i>Casting Method</i>	Continuous Casting
<i>Sample Location</i>	Ladle

Elements

Symbol	C	Mn	Si	P	S	Nb	V	Ti	CEV
Unit	%	%	%	%	%	%	%	%	%
Min	-	1	-	-	-	-	-	-	-
Max	0.22	1.7	0.6	0.025	0.02	0.05	0.05	0.03	0.48
Actual	0.16	1.38	0.32	0.016	0.008	0.022	0.034	0.009	0.4

Formula Definitions

CEV = C+Mn/6+(Cr+Mo+V)/5+(Ni+Cu)/15: 0.4%

Mechanical Properties

Property	Symbol	Actual	Minimum	Maximum	Method	Status
Tensile Strength					EN ISO 6892-1	✓
3 specimens tested at 20°C, transverse to rolling direction						
Individual Values		# 1		# 2		# 3
Value [MPa]		548		550		552
Statistics		Mean		Min/Max		Std Dev
		550		548 / 552		
Yield Strength					EN ISO 6892-1	✓
3 specimens tested at 20°C, transverse to rolling direction						
Individual Values		# 1		# 2		# 3
Value [MPa]		438		440		442
Statistics		Mean		Min/Max		Std Dev
		440		438 / 442		
Elongation after fracture					EN ISO 6892-1	✓
3 specimens tested, gauge length 5.65#S ₀ , transverse to rolling direction						
Individual Values		# 1		# 2		# 3
Value [%]		20.5		21		21.5
Statistics		Mean		Min/Max		Std Dev
		21		20.5 / 21.5		
Charpy V-notch Impact Energy					EN ISO 148-1	✓
3 specimens tested at -20°C, transverse to rolling direction						
Individual Values		# 1		# 2		# 3
Value [J]		63		65		67
Statistics		Mean		Min/Max		Std Dev
EN ISO 148-1 statistical analysis		65		63 / 67		2 (Sample)

Supplementary Tests

Property	Actual	Target/Min	Maximum	Method	Status
Ultrasonic Testing Class S2E2	Yes No recordable indications exceeding acceptance criteria	-	-	EN 10160	✓
Through-thickness Properties	Z25	-	-	EN 10164	✓
Weldability	Yes Satisfactory welding properties	-	-	Internal Method based on - EN ISO 15614-1	✓

Validation

We hereby certify that the material described above has been manufactured and tested in accordance with the requirements of EN 10025-3:2019 and EN 10204:2004 type 3.1. The product complies with the Construction Products Regulation (EU) No 305/2011 and is suitable for use in structural applications according to EN 1090-2:2018, up to and including Execution Class EXC3.

Validated By

Name	Title	Department	Date
John Smith	Quality Manager	Quality Assurance	2025-05-20



Maria Schmidt	Quality Manager	Quality Assurance	2025-05-20
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Data schema maintained by [Material Identity](#).

<https://schemas.materialidentity.org/metals-schemas/v0.1.1/schema.json>