#### Manufacturer

#### **Advanced Steel Technologies GmbH**

Industriestraße 15 52070 Aachen DE quality@advanced-steel.de

#### Customer

## **Precision Engineering Ltd.**

Manufacturing Park 42 Birmingham B1 1AA GB procurement@precision-eng.co.uk

## **Digital Material Passport**

 ID
 DMP-2024-ARR-001
 Version
 0.1.0

 Issue Date
 2024-12-15
 Certificate Type
 EN 10204 3.1

## **Business Transaction**

 Order
 Delivery

 Order ID
 PO-2024-7890
 Delivery ID
 DN-2024-3456

 Quantity
 Quantity
 500 kg

# **Product Information**

Product NameHardenability Test SteelBatch IDHTB-2024-045

## **Product Shape**

Form RoundBar
Length 1000 mm
Diameter 100 mm

# **Chemical Analysis**

Heat NumberH-2024-078Sample LocationLadle

#### Elements

Symbol	С	Mn	Si	P	S	Cr	Ni
Unit	%	%	%	%	%	%	%
Min	0.42	0.5	-	-	-	-	-
Max	0.5	0.8	0.4	0.03	0.025	0.25	0.25
Actual	0.45	0.65	0.25	0.015	0.008	0.12	0.08

# **Mechanical Properties**

Property	Syi	mbol	Actual	Mir	nimum	Maxin	num	Method		Status
Jominy Hardenability Test								ISO 377		$\checkmark$
Distance from - quenched end (mm)	1.5	3	5	7	9	11	15	20	25	30
Value [HRC]	45	43	40	36	33	31	27	25	28	27
Min	42	39	35	32	29	26	22	20	-	-
Max	47	46	44	41	39	37	33	31	<= 30	<= 29
Status	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass	Pass

**Coating Thickness Profile** 

100
108
>= 100

ISO 2178

Position along length (mm)	0	50	100
Value [μm]	125	115	108
Min	>= 120	>= 110	>= 100
Max	<= 130	<= 125	<= 120
Status	Pass	Pass	Pass

## **Validation**

We hereby certify that the material described above has been manufactured and tested in accordance with EN 10083-1 and ISO 377. All hardenability requirements have been met.

## **Validated By**

Title Name Department Date Dr. Maria Schmidt Metallurgical Engineer **Quality Control Laboratory** 2024-12-15

Data schema maintained by Material Identity.

https://schemas.materialidentity.org/metals-schemas/v0.1.0/schema.json