



SERIAL NUMBER: 4-406 COOK DATE: 10-27

MOLD SIZE _____ BY _____ PO _____

ORDER DATE 26 OCT 24 SHIP DATE: _____

FOR: Yellow jacket

SIZE 4.5 x 3.625 TYPE XDS

THREAD _____ OTHER Their 4 3/8 WP

MATRIX (H) 36881 WEIGHT _____

MATRIX (S) 36701 WEIGHT _____

BINDER M00033523) WEIGHT _____

BLANK 143480 TJ Ther

BILLET _____ TUBE Their

WELD Ro MPI Ro MPI PIC Ro BRAZE _____

THREAD GAGE _____ STAND OFF _____

FINAL DIAMOND GRIND SIZE _____

LENGTH TO WELD 37"

FINISHED PIC TAKEN BY Ro CRATED BY Ro DATE: 10-27

International _____ domestic _____

SHORT BIT & TOOL CO
225 GOLD STREET
GARLAND TX 75042
972-205-1011
shortbits@gmail.com



Certificate of Conformance

Serial Number	Size	Type	Steel or Matrix	Shank Diameter	Bore
U-406	4.5 X 3.625	XDS	Matrix		

Component	Material	Vendor	Lot or Heat Number
Blank	8620	RHW	143480
Hard Powder	WC	SURFACE	36881
Soft Capping Powder	W2	SURFACE	36701
Tool Joint			
MIG Weld			
Tubing			

Inspection								
Diamond Grinding To Size								
Weld MPI								
Thread Gaging								

Signed By: *P. Beys* date: *10/28/2024*



Surface Engineering Powders

Certified Material Test Report

Company Short Bits P.O.#: Vickie
 Alloy Type: PWMP010 Size: 80/325 Mesh: 80/325 Micron: 180/45um
 Description MATRIX POWDER H Quantity: 50lbs
 Specification N/A Type/Class: N/A
 Heat Number SE-36881

Chemical Analysis Actual: _____ Nominal: X

The data contained herein were obtained from samples considered to be representative of the products in the subject shipment and are believed to be reliable. All operations performed comply with the material specification and the purchase order.

Element Concentrations (Weight Percent)

Al:	B:	Be:	C: 5.63	Co:	Cr:	Cu:	Fe: 0.16
Mn:	Mo:	N2:	Nb:	Ni: 2.03	O2:	P:	S:
Si:	Ta:	Ti:	V:	W:	Wc:	TAO:	
Oth:	Fc:0.03	Analytical Process(es):		_____			

Sampling Procedure / Spec: ASTM B215-10	Powder Mesh / Spec: ASTM B214-07-2011
Hall Flow / Spec: ASTM B213-13	Apparent Density / Spec: ASTM B212-13

Physical Properties
 Material Hardness Scale: Rc: N/A HB: _____ Hv: _____ Hk: _____

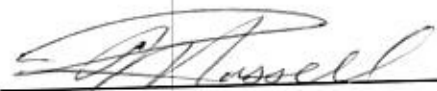
Hall Flow N/A **Sec./50g Apparent Density: 7.5 g/cm3**

Particle Size Distribution: Size Microns(um)/U.S. Sieve (mesh)

180/80: 4.45	150/100: _____	125/120: 14.25	106/140: _____
90/170: 13.50	75/200: _____	63/230: Bal	53/270: _____
45/325: 16.45	38/400: 34.45	32/450: _____	25/500: _____
20/635: _____	15/800: _____	+10: _____	+5: _____
Other: _____			

Surface Engineering Alloy Company hereby certifies the above listed material meets all requirements of the above listed specifications in addition to the confirmation that during the manufacturing process, testing, and inspection, the product was completely void of contact with the element Mercury or any of its compounds. In addition, this certification validates that all test results and operations performed by Surface Engineering Alloy Company, or its subcontractors, are in compliance with the material specification and the specific applicable material requirements of ASME SFA 5.21, of ASME Section II. The requirements of Federal Law, Title 18, Chapter 47 apply to this order and to sub-tier suppliers.

SM-1000-CERT-P Rev A 4/18/2023


 Reporting Officer
 Michael Russell

8/5/2024
 Date

2895 46th Ave North
 St. Petersburg, FL
 Main Office: 727.528.7998
 www.surfaceengineering.com



**Surface Engineering Powders
Certified Material Test Report**

Company _____ P.O.#: _____
 Alloy Type: CTPM001 Size: 80/325 Mesh: 80/325 Micron: -180/+45um
 Description Crystalline Tungsten Powder Quantity: _____
 Specification N/A Type/Class: N/A
 Heat Number SE-36701

Chemical Analysis Actual: X Nominal: _____

The data contained herein were obtained from samples considered to be representative of the product in the subject shipment and are believed to be reliable. All operations performed comply with the material specification and the purchase order.

Element Concentrations (Weight Percent)

Al: _____	B: _____	Be: _____	C: 0.006	Co: _____	Cr: _____	Cu: _____	Fe: 0.0011
Mn: _____	Mo: 0.007	N2: _____	Nb: _____	Ni: _____	O2: 0.015	P: _____	S: _____
Si: _____	Ta: _____	Ti: _____	V: _____	W: 99.9	Wc: _____	TAO: 0.03	
Oth: _____	Analytical Process(es): _____						

Sampling Procedure / Spec: ASTM B215-10 Hall Flow / Spec: ASTM B213-13	Powder Mesh / Spec: ASTM B214-07-2011 Apparent Density / Spec: ASTM B212-13
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Physical Properties

Material Hardness Scale: Rc: NA HB: _____ Hv: _____ Hk: _____

Hall Flow 10 Sec./50g Apparent Density: 8.16 g/cm3

Particle Size Distribution: Size Microns(um)/U.S. Sieve (mesh)

180/80: 0.1	150/100: _____	125/120: _____	106/140: _____
90/170: _____	75/200: 49.9	63/230: 0.00	53/270: _____
45/325: 41.2	38/400: 8.7	32/450: _____	25/500: _____
20/635: _____	15/800: _____	+10: _____	+5: _____
Other: _____			

Surface Engineering Alloy Company hereby certifies the above listed material meets all requirements of the above listed specifications in addition to the confirmation that during the manufacturing process, testing, and inspection, the product was completely void of contact with the element Mercury or any of its compounds. In addition, this certification validates that all test results and operations performed by Surface Engineering Alloy Company, or its subcontractor, are in compliance with the material specification and the specific applicable material requirements of ASME SFA 5.21, of ASME Section II. The requirements of Federal Law, Title 18, Chapter 47 apply to this order and to sub-tier suppliers.

SM-1000-CERT-P Rev A 4/18/2023

Reporting Officer
 Dylan Marhafer

9/16/2024
 Date

2895 46th Ave North
 St. Petersburg, FL
 Main Office: 727.528.7998
 www.surfaceengineering.com



330 Belmont Avenue, Brooklyn, NY 11207-4000 U.S.A
tel:+1.718.342.4900 fax:+1.718.342.0175

Certificate of Analysis

Item No: 4483D

Virgin Grade Binder Alloy

Shape: 1/2" x 1/2" x 3/4" Tumbled Sheared Pcs.

335231

CU	47.29
MN	24.43
NI	20.20
ZN	7.75
B	.11
SI	.14
FE	.03
PB	<.05
SN	<.02

Customer Order No:

June 26, 2024

VERBAL-VICKIE

Customer ID:

SHORTC

Customer Name:

Short Bits & Tool

Sales Order No:

48182

BELMONT METALS, INC.

Nasir Naseer

QC Administrator

BELMONT



METALS



ASIL ÇELİK
SANAYİ ve TİCARET A.Ş.
<http://www.asilcelik.com.tr>



KALİTE BELGESİ
QUALITY CERTIFICATE / MILL TEST CERTIFICATE



Döküman No / Document Number
1410430

Tarih / Date
08.10.2014

Sayfa /Page
1

Müşteri /Customer
COMMERCIAL METALS COMPANY

Müşteri Sip. No / Your Order No
69421

Sip.No./ Our Order No.
1111407974

Belge Norm/Document Norm
EN 10204/3.1

Sip. Miktarı / Order (Kg)
40000

Kalite / Quality
AISI 8620

Kesit / Dimension
Y/Rd 4.50 "

Döküm No./ Heat No.
143480

Ağırlık / Weight (Kg)
91128 Lbs

Adet/Number of pieces
87

Malzeme / Product

HOT ROLLED ROUND STEEL BARS
ACC.TO TD-PUR-430 (3.21.2007) & ASTM A388, A322, A29

Onaylayan / Approved By
Subutay SEZGIN

Çelik Yapım Metodu / Steelmaking Process : Ark Ocağı / EAF, Pota Fırını / LF, Vakumda Gaz Alma / VD
Pota Kimyasal Analizi / Ladle Chemical Composition (%)

C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Sn	V
21	26	.79	.009	.020	.51	.20	.54	.025	.20	.011	.011

Sertleşebilirlik / End Quench Test J1/16 inch (HRC)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	18	20	22	24	26	28	30	32
46	45	40	33	29	26	25	24	23	23	22	21	21	21	20	20	19	18	18	18	17	16	16	15

Mekanik Özellikler / Mechanical Properties

Sertlik
Hardness

197 HB

Tane Büyüklüğü
Grain Size
(ASTM E-112)

7 - 8

Ezme Oranı
Reduction Ratio

İngot : 29.1/1

% 100 ULTRASONIC TESTED ACC TO ASTM A388 AND THE RESULTS WERE OK
% 100 MIX-UP CONTROLLED & SURFACE CRACK TESTED
FREE FROM RADIOACTIVITY & FREE FROM MERCURY NO WELD REPAIR PERFORMED
COUNTRY OF ORIGIN - TURKEY

YÜKARIDA BELİRTİLEN MALZEMELERİN TEST EDİLDİĞİ VE SİPARİŞ ŞARTLARINA UYGUN OLDUĞU ONAYLANIR
WE HEREBY CERTIFY, MATERIAL DESCRIBED ABOVE HAS BEEN TESTED AND COMPLIES WITH THE TERMS OF ORDER CONTRACT.



33.23.149.A4 (1)

33.23.149.A4 (1)

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Faks : +90 224 280 62 00
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Gemiç Köyü Mevki 16800 Orhangazi / BURSA

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Çelik Servis Merkezi / Steel Service Center
TOSB Organize San. Böl. 13. Sok. No:3 41420
Şekerpınar/KOCAELİ

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+90 262 781 60 05

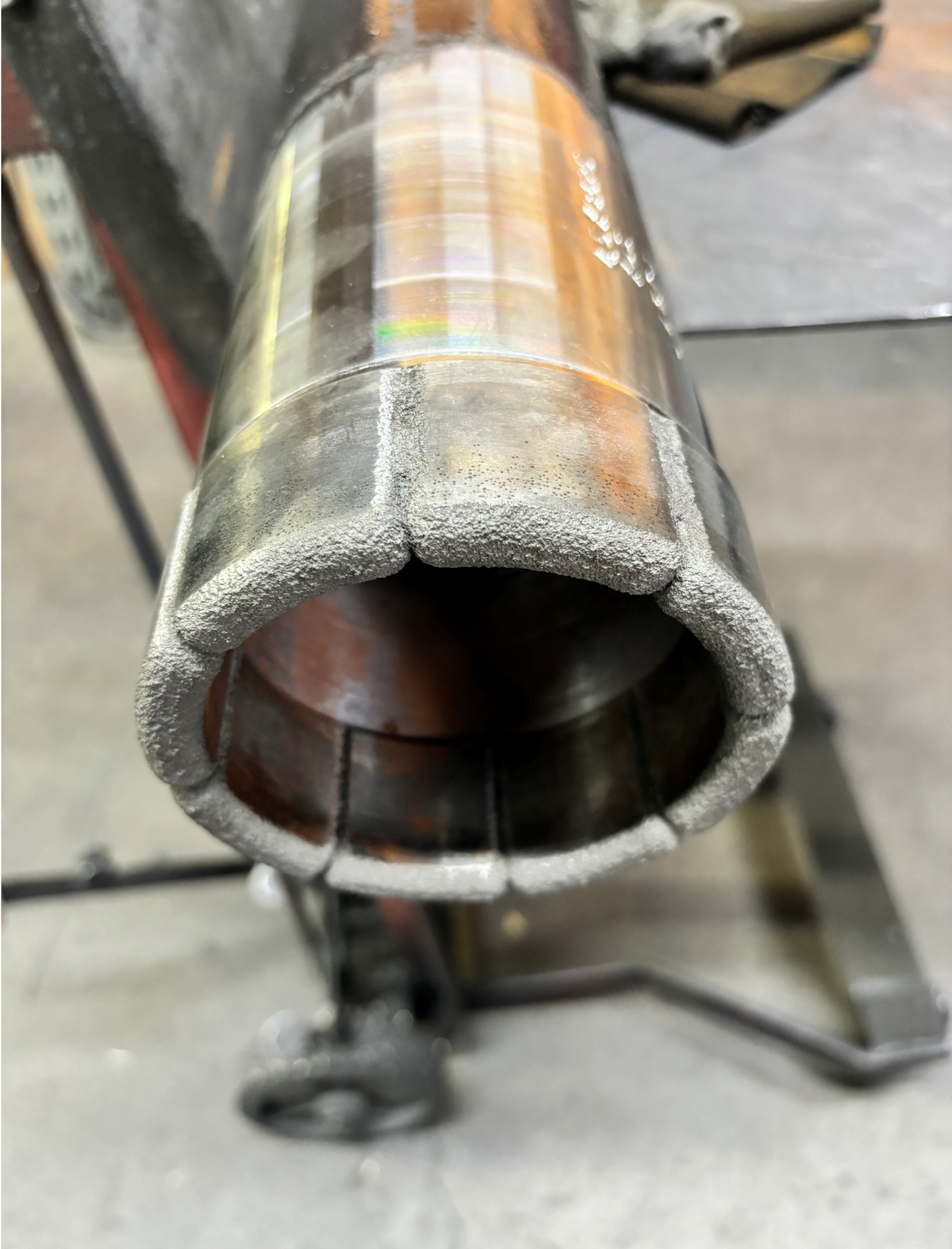
Vergi Dairesi : Büyük Müktefler Vergi Dairesi Başkanlığı
Vergi No : 0860052518 Ticaret Sicil: 125642 / 72672

4.5 X 3.625

XDS

U4106

MADE
IN
USA





35
36
37
38