

Lot number **657187**



Date: 29-03-15 Page: 1(2)

BLANC AERO INDUSTRIES UK Limited
Butlers Leap, RUGBY
WARWICKSHIRE, CV21 3RQ
ENGLAND

Phone: +44 (0)1788 559 114
Fax: +44 (0)1788 559 081
Company No 1454059
VAT N GB307 3403 91

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Phone: +44 (0) 1788 559 036
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Approval No
AIRBUS approval SAS30079
BV Registered firm Cert No FR008570
BAE/AG/30584/MAA BAE/AG/20375/MAA
GKN Aerospace GKNAP00007
AgustaWestland Approval AWI0357
Spirit Aerosystems Ltd 0203
Rolls Royce Approval to RR9000 SABRE n° 02044
Bombardier Aerospace SDB/VC/047

Customer name & address

KLX INC
NORDPORTBOGEN 6

D-22848 NORDERSTEDT

Item No	5190683	Drawing Standard	EN6114	PO/Date	OZYMM46 - /29-09-14
Item Description	EN6114K4X8	Rev & Issue date	P8-01/06/14	Order Ack/line	0061038416 / 000001
Customer Item	EN6114K4X8	Technical spec No	EN6116	Customer name	KLX INC
Customer Part	EN6114K4X8	Qty shipped	100 PCE	Shipment No / Index	0552129/10550315
Part Type	BOLT	MO N° /Date Valid	0657187 / 16-09-13	Certificate No/Package No	1367652

MFR C OF C. B/E AEROSPACE RELEASE. RAW MATERIAL CERTS.WE
CANNOT MEET CLAUSE P & A1 OF QAP.33.0 SHIP FEDEX
INTERNATIONAL PRIORITY B/E ACCOUNT # 138361365

Blank/Components	Item No	Item Description	Lot number
	8B00136	PE395-8X2/B	652705/7839

Metallurgical & Physical Inspections	Archive No	Results	Unit	Operator
Hydrogen Content				
HYDROGEN RESULT		11.60	ppm	R36
SPECIFICATION MAXIMUM		125.00	ppm	R36
Metallurgical Inspection				
SAMPLE SIZE		4	—	R67
COATING THICKNESS		0.00026	ins	R67
GRAIN SIZE		N/A	—	R67
METALLURGICAL RESULT		SATISFACTORY	—	R67
BOX No		469/16.09.13	—	R67

Mechanical tests	Archive No	Machine No	Results	Unit	Operator
Fatigue Results					
FATIGUE RESULT			N/A	cyc	R03
Double Shear Results					
SHEAR RESULT			N/A	kN	R03
Tensile Results					
TENSILE RESULT			N/A	kN	R03
HR / ST : Head rupture TF / SE : Thread failure HF / ST : Head failure SP / PL : Shank part NF / SR : No failure					

Inspection report : Non destructive test	Results	Unit	Operator
Dye Penetrant Inspection			
DYE PEN SAMPLE SIZE	20	—	R55
DYE PEN RESULT	SATISFACTORY	—	R55

Inspection report : Dimensional Inspection	Results	Unit	Operator
After Plate Inspection			
PART MARKING	EN6114-4X	—	R89
SURFACE TEXTURE	SATISFACTORY	—	R89
FINISH/COATING	HI-KOTE 1	—	R89
API RESULT	SATISFACTORY	—	R89
After Plate Dimension Inspection			
API SAMPLE SIZE	32	—	R89
API DIMENSIONAL RESULT	SATISFACTORY	—	R89
Final View			
FINAL VIEW RESULT	SATISFACTORY	—	R36
Final View Inspection			
COLOUR CODE	WHITE	—	R36

LI5061_PVCCGCC_000511

STATEMENT OF INSPECTION AND CONFORMITY

Lot number **657187**



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AgustaWestland Approval AW0357
Sprint Aerosystems Ltd 0203
Rolls Royce Approval to RR9000 : SABRE n° 02044
Bombardier Aerospace SDBVC/047

Inspection report : Dimensional Inspection	Results	Unit	Operator
LUBRICATION	CETYL LUBE		R36

We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified.

Name and title

Stamp

Signature

Date 29-03-15

Refer to Stamp and Signature -



STATEMENT OF INSPECTION AND CONFORMITY

Lot number 652705



Date : 29-03-15 Page : 1(1)

BLANC AERO INDUSTRIES UK Limited
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GKN Aerospace GKNAP00007
AgustaWestland Approval AW/0357
Sprint Aerosystems Ltd 0203
Rolls Royce Approval to RR9000 : SABRE n° 02044
Bombardier Aerospace SDB/VC/047

Item No	8B00136	Drawing Standard		Order Ack/line/date	
Item Description	PE395-8X2/B	Rev & Issue date	-//	MO No/Customer Ref.	0652705
Customer Item		Technical spec No		Manufactured Qty	5177 PCE
Customer Part		Part Type	BLANKFORG	MO Date Valid	16-03-13

Raw Material

Item No	8R7109	Material	W AMS4967L Ti-6Al-4V COIL 6.78/81 [0.267/8]		
Heat Number		Lot number	1302007839	Material Source	PERRYMAN COMPANY
Procurement Spec No	AMS4967 Ti6Al4V (DTM104)		Melt Source		

Inspection report	Results	Unit	Operator
Heat Treatment			
HEAT TREAT LOT 1	657-01001561	-	R23
HEAT TREAT LOT 2	M13-0201	-	R23
In Process Shear Results			
FORGE METHOD	WARM	-	R23
FORGE MACHINE	101	-	R23
OPERATOR NUMBER	134	-	R23
IN PROCESS SHEAR RESULT	102.17	ksi	R23
IN PROCESS SHEAR RESULT	102.85	ksi	R23
IN PROCESS SHEAR RESULT	102.21	ksi	R23

Inspection report : Dimensional inspection	Results	Unit	Operator
Final View			
FINAL VIEW RESULT	SATISFACTORY	-	R67

We hereby declare, barring exceptions, reservations, or exemptions listed in this statement of conformity, that the listed supplies comply with the contract requirements and that, after completion of testing and verification, they completely satisfy all specified.

Name and title

Stamp



Signature

Date 29-03-15

Refer to Stamp and Signature -



PACKING LIST

Perryman company
Specialty Titanium Products
213 Vandale Drive Houston, PA 15342 USA
Phone: 724.746.9390 Fax: 724.746.9392

(Vers 0)
Bill of Lading Nbr: 00047352
Page: 1
Date Shipped: 01/28/2013
Master Nbr:
Seq Nbr:

PACKING LIST

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading.

"Shipper's imprint in lieu of stamp, not a part of bill of lading approved by the Interstate Commerce Commission."

"If the shipment moves between two ports by a carrier by water, the law requires that the bill of lading shall state whether it is 'Carrier's or shipper's weight.'"

NOTE - Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property.

The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding

Per _____

Subject to Section 7 of Conditions of applicable bill of lading, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement.

The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

SHIPPER
PERRYMAN COMPANY

Per _____
213 VANDALE DRIVE
HOUSTON, PA 15342
PERMANENT POST OFFICE ADDRESS
OF SHIPPER

CARRIER _____

AGENT, Per (Owner's Signature) _____

Material as covered by this B/L has been placed on the truck specifically under the driver's instructions and must be protected from weather in transit.

Material loaded by Perryman free of moisture, carrier to tarp and assume responsibility for any moisture or damage in transit.

Material loaded free from magnetism. Carrier responsible for any magnetism induced during transit.

Ship To: Blanc Aero Industries UK
Butlers Leap
Warwickshire, CV21 3RQ
United Kingdom

Carrier: DBShenkers
Car/Trailer Nbr:
Freight Charges: Delivered At Place

CUSTOMER'S ITEMS

Customer Comments: WO 064861 2 coils
Commodity Code CE 8108903030

P.O. Nbr: 8027121
Date: 12/13/2012

S.O. Nbr: 032162
Date: 12/13/2012

FOB: Destination

Ln	Part Nbr / Description	Lot#	W.O.#	KGS
0	C030500.2670535005 Coil - 3X, Ti6Al/4V, 00.2670"	PVD1859	064861	161 2
Total				161 2

ship asap!

Form: Coil - 3X
Grade: Ti6Al/4V
Size: 00.2670"
Customer: LISI

MS IC iss 7, AMS 4967K, AMS 4928S

.267/.268"

TAG DETAIL

Tag Nbr	Lot#	W.O.#	Qty	Um	Pcs	Weight	Um
064861-001	PVD1859	064861	75	KGS		166	Lbs
064861-002	PVD1859	064861	86	KGS		190	Lbs
Total				161	KGS	356	Lbs

RAW MATERIAL RECEIPT STAMP

OPERATION	STAMP/ SIGN	DATE
WEIGHT/SIZE/ CONDITION CHECKED	BAI UK 97	3/2/13
LAB CLEARANCE	BAI UK 54	4/2/13
INDEPENDENT VERIFICATION YES/NO	BAI UK 54	4/2/13
RAW MATERIAL No.	1302007839	



Perryman company
213 Vandale Drive Houston, PA 15342 USA
phone: 724-746-9390 fax: 724-746-9392

CERTIFIED TEST REPORT

Customer: BLANC AERO INDUSTRIES UK LIMITED
BUTLERS LEAP, RUGBY
WARWICKSHIRE CV21 3RQ ENGLAND

Heat No: PVD1859
Melting Source: PERRYMAN COMPANY
Work Order No: 064861

Date: 01-25-13
Weight: 161 KGS.

Customer Order No: 8027121
Customer Order Date: 12-13-12
Specification: MS 1C Rev 7
AMS 4928S, AMS 4967K

Product: TI-6AL-4V .2671.268" DIA 3X COIL
ANNEALED 760 C - 2 HOURS

Chemistry: Wt %

ASTM E 1447: Post processing Hydrogen Determination

Hi: .0008

Metallographic Examination:

ASTM E 407:

Microstructure - Equiax alpha-beta

ASTM E 407:

No alpha case

Mechanical Properties:

Tensile Results - ASTM E8 / EN 2002-001:2005 E

Shear Results
NASM1312-13
Shear Strength, ksi
0 90

Condition

Annealed 760 C - 2 hours

Solution treated and aged
954 C - 1 hour - WQ
538 C - 4 hours - AC

Solution treated and aged
927 C - 1 hour - WQ
510 C - 4 hours - AC

Tensile
Strength
ksi

.2% Yield
Strength
ksi

Elongation
4D
%

Reduction
Of Area
%

47

54

19

11

143.6

176.5

128.4

164.7

176.5

158.4

106.7

105.4

106.1

105.4

This is to certify that all test results conform to the specifications listed above and that all tests required were performed by Perryman Company.

Attached is a copy of the Ingot Chemistry.

The test results relate only to the lots tested and are contained in the records of Perryman Company. The Certified Test Report cannot be reproduced except in full, without written approval.

Zachary S. Oragan
Zachary S. Oragan
Laboratory Manager
01/25/13



Perryman company

625 Technology Dr., Coal Center, PA 15423 USA

phone: 724-746-9390 Fax: 724-746-9392

SHIP TO

Perryman Company
213 Vandale Dr
Houston, PA 15342

CERTIFICATE OF TEST
For TITANIUM INGOT

WORK ORDER
009146

HEAT NUMBER
PVD1859

QUANTITY 12450 Lbs		PCS 1										
DESCRIPTION Grade: Ti6Al4V Size: 30" Form: Ingot												
SPECIFICATION CAPABILITY P-101 Rev 4												
Chemistry (WT%) Top												
O	N	C	Fe	Al	V	Si	Cu	Pd	Y	H	B	Ru
.15	.007	.018	.18	6.24	4.00	.019	.004	<.002	<.001	.0006	<.001	<.001
Chemistry (WT%) Bottom												
O	N	C	Fe	Al	V	Si	Cu	Pd	Y	H	B	Ru
.15	.007	.016	.16	6.26	3.96	.018	.004	<.002	<.001	.0005	<.001	<.001
Comments												
Melting Process: EBCHR-VAR Calculated Beta Transus T/B: 1816F/1818F Residual Elements, total < .3% Residual Elements, each < .1% Balance Titanium. Melted in the United States of America. The material is free of radioactive and mercury contamination. Oxygen/Nitrogen tested in accordance with ASTM E1409. Carbon tested in accordance with ASTM E1941. Hydrogen tested in accordance with ASTM E1447. B, Y, Pd, Ru tested BY ICP. Metallics by Spark-AES.												

Nadcap
Materials Testing Laboratory

Page 1 of 1

This material conforms to the chemistry and quality system requirements of the specifications referenced. The results relate only to the lot tested and the results are contained in the records of Perryman Company.
The certificate of test cannot be reproduced except in full without the written approval of the laboratory, and the recording of false, fictitious, or fraudulent statements or entries on this document may be punished as a felony under federal law

Terrance J. Marth
Laboratory Supervisor