

TEST CERTIFICATE

B.S.I Registered to ISO 9001 : 2008 / AS9100 Cert No. FM 266

BOLT CERTIFICATE

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PART NUMBER: HL110VF8-6 (ISS 25) dan5-8-6x		BATCH NUMBER: A000044156-0000	
FORGING NUMBER: X20228		QUANTITY: 8310	DATE: 29/08/2014
DOCKET NO: 9920		PROC SPEC: HS342	CAST/MILL HEAT NO: 8R34559
MATERIAL SPEC: AMS 4967 (6AL 4V,TA28)		MATERIAL SUPPLIER: DYNAMET	RELEASE NO: 503357
MICRO EXAMINATION as per LI20 and Procurement Specification: HS342 SPS SAMPLE PACKET NUMBER: 11290814 NUMBER OF SAMPLES: 5 Metallographic examination conforms to procurement specification requirements in all respects.			
CHEMICAL ANALYSIS (%) The chemical analysis results have been taken from the original mill certificate and are not UKAS accredited			
Al: 6.18	C: 0.018	Fe: 0.20	H ₂ : 0.0045 N ₂ : 0.011
O ₂ : 0.15	Ti: BAL	V: 4.06	Y: <0.005

HEAT TREATMENT RESULTS: 1. Test Bar tested per BS EN ISO 6892-1:2009 B20

U.T.S. (MPA)	.2% P.S. (MPA)	(* L of P)	ELONGATION %	R.A.%
-	-	-	-	-

ULTIMATE TENSILE per NASM1312 Test No. 8/108			DOUBLE SHEAR per NASM1312 Test No. 13/113		
1	N/A	11	1	740	11
2		12	2	736	12
3		13	3	736	13
4		14	4		14
5		15	5		15
6			6		
7		Min:	7		Min: 655
8		Max:	8		Max:
9		Unit:	9		Unit: MPa
10			10		

H = Head Failure T = Thread Failure D = Test Discontinued

Shear testing performed on material from the same material release as the product, heat treated with the product and tested in the bare metal condition per SPS procedure LI12 Appendix 4, and meets the material requirement.

TENSION-TENSION FATIGUE per NASM1312 Test No 11/111

Machine Test No: N/A Samples tested: All tests disc. @ cycles

HYDROGEN ANALYSIS OF FINISHED PART per LI16

Specification Requirements: 125ppm max. Test Result: 44 ppm

OTHER TEST DATA OR COMMENTS

N/A = Test not applicable as per procurement specification.

ANODISE TO HS306 CETYL ALC HS305

Certified that this is a true and accurate record of the tests carried out on this batch

END OF TEXT

Signed

Date 29/8/14

For and on authority of SPS Technologies Ltd.

K NOWOROL
TEAM LEADER