



GLORIA MATERIAL TECHNOLOGY CORP.

INSPECTION CERTIFICATE

52525  
2/18

1FL., NO. 35, HSIN CHUNG RD., HSIN YING, TAINAN, TAIWAN, ROC

TEL: (06)6520000  
FAX: (06)6520088

Messrs: ASA ALLOYS INC.  
Order No: 2006000901 Grade: 316L P.O.NO.: 056095-CV  
FILE NO: 2006005426-A Size: 14" Date: 08/30/2006  
HEAT-Lot No: U0659-20AG Weight: 2910.0KG 6415.44LB P'cs: 1  
Condition: HF-Solution Annealed-Turned

Chemical Composition (wt%)										
	C	Si	Mn	P	S	Ni	Cr	Mo	Cu	N
Min.					0.020	10.0	16.0	2.00		
Max.	0.030	1.00	2.00	0.045	0.030	14.0	18.0	3.00	0.75	0.10
Result	0.019	0.40	1.56	0.030	0.027	10.2	16.9	2.11	0.57	0.06

Mechanical Properties Spec.			
	Hardness(1/2R)	Grain Size	Carbide Dist.
Spec.Min.			
Spec.Max.	223HBW		
Result	149HBW	5.5	OK

Tensile Test				
	Elongation(A)	Tensile Strength(Rm)	Yield Strength(Rp)	Reduction of Area(Z)
Unit	%	KSI	KSI	%
Min.	40	79	37	50
Max.				
Result	65	79	39	74

- Specification:
1. ASTM A182/A182M-05a.
  2. ASTM A193/A193M-05 class 1 B8M.
  3. ASTM A262-02 practice E.
  4. ASTM A276-05a.
  5. ASTM A314-97(reapproved 2002).
  6. ASTM A320/A320M-05a class 1 B8M.
  7. ASTM A479/A479M-05.
  8. ASTM A484/A484M-05a.
  9. ASME SA-182 E04.
  10. ASME SA-479 E04.
  11. ASME SA320 E04 B8M CL1.
  12. ASME SA 193 E04 B8M CL1.
  13. AMS 5648K.
  14. AMS 5653F.
  15. AMS QQS 763A condition A.



Mars Wang  
QA SECTION  
*Mars Wang*

Our quality and environment management systems have been certified by AS9100, ISO9001 QMS and 14001 EMS. We hereby certify that the material described herein has been manufactured and tested with satisfactory results in accordance with the requirement of the above material specification. We hereby the Inspection Certificate comply with en 10204 3.1.



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- 16. MIL-S-862B.
- 17. MIL-S-7720A.
- 18. NACE MR0175/ISO 15156-3(2003).
- 19. DIN 50049-3.1B.,

Remark:

- 1. SOLUTION ANNEALING TEMPERATURE AND TIME : 1900? x30 MIN/INCH, WATER COOLED.
- 2. MATERIAL FREE FROM CONTINUOUS CARBIDE NETWORK.
- 3. MACRO/MICRO STRUCTURE : GOOD.
- 4. CORROSION TEST : PASSED PER ASTM A262 PRACTICE E.
- 5. MATERIAL FREE FROM KNOWN CONTACT WITH MERCURY & RADIUM.
- 6. MATERIAL FREE FROM WELDS OR WELD REPAIRS.
- 7. MELTING PROCESS : EAF+LHF+VOD.
- 8. HOT WORKING PROCESS : F ? 90mm FOR FORGED ; F < 90mm FOR ROLLED.
- 9. NO PRODUCT THAT CONTAIN OR WERE MADE WITH ODC'S.
- 10. ASTM E112-88.
- 11. Equivalent to DIN 1.4404



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