

1106/60a

INSPECTION CERTIFICATE

Quality System Compliance :-
EN 10204:2004 - 3.1
ISO 9001 - AFNOR Certification
EN/AS/JISQ 9100 - AFNOR Certification
ISO/TS 16949 (by agreement) - AFNOR Certification
TUV Approval to AD - Merkblatt WO/TRD 100
RR9000:SABRe Approval No. 1506
For tests performed by IncoTest :-
ISO/IEC 17025 - UKAS



Certificate No. **1337171**

Dated 20/05/2011

Page No. 1

CONSIGNEE BY POST

Customer's Order No. / Contract No.

Inspector 78

Product Description & Dimensions
NIMONIC alloy 90. Hot Rolled Sheet. Descaled. Softened.
4.75 THK X 1200 WIDE X 1500 MM CUT

Our Reference No.	Quantity	Weight or Length	Mill Batch No.	Cast No.	Incoming Certificate No.	Advice Note
GAH4130/01	9	623 Kg	GAH4130/01	NTE2323		A48087

Specifications:
BS 2HR 202 + AMD 1 ISS FEB 73 | ABB STAL 63 73 50 ISS 1 | SIEMENS DL 1641-2 ISS 8

	Chemical Composition									
	Weight % (except where stated ppm)									
	C	Si	Mn	P	S	Ag (ppm)	Al	B	Bi (ppm)	
	0.079	0.13	0.04	<0.005	0.001	<0.1	1.44	0.003	0.2	
Max	0.13	1.0	1.0	0.015	0.015	5	2.0	0.020	1	
Min							1.0			
	Co	Cr	Cu	Fe	Ni	Pb (ppm)	Ti	Zr		
	15.6	19.44	0.03	0.51	Bal	1.1	2.4	0.063		
Max	21.0	21.0	0.2	1.5	Balance	20	3.0	0.15		
Min	15.0	18.0					2.0			

Test Report No.
802868A 802629A

Mechanical Tests				
Test Report No.	Temp. °C	0.2% PS MPa	Ten.Str. MPa	%Elong. on 50mm
802868A	20	854	1207	28.8

Hardness		
Test Report No.	Batch HV 30	Test pce HV 30
802868A		357
802868A	246	
802868A	212	
802868A	227	

Creep Tests				
Test Report No.	Stress MPa	Temp. °C	LIFE h Rupture	% Elong. on 5.65/A
802629A	140	870	110	16.2

Heat treatment
Batch: 3M 1150 C WQ
Test piece: From batch + 4H 750 C AC
Creep Test piece: 8H 1080 C AC + 16H 700 C AC

Certificate continued

QS072B/Rev.05/02.05