

# Abnahmeprüfzeugnis

Inspection Certificate EN 10204:2004-3-2  
Certificat de Réception (EN 10204:1991-3.1C)  
Certificato Collaudo Materiali

Besteller - Customer - Acheteur - Committente:  
Jakob Hulsen GMBH & CO KG  
Maysweg 14  
St Toenis  
47918 Toenisvorst, Germany

Prüf-Nr. - Inspection No.: 10026-12-SW  
Certificat No. - No di collaudo:

Teil - Part - Partie - Parte:  
Blatt-Nr - Sheet No. - Page No. - Pag No.: 1 of 1

Bestell-Nr. - Order No.: 250125  
No de la commande - No dell'ordine:  
Vom - dated - - 21.03.05  
date - in data :

Hersteller - Manufacturer - Fabricant - Produttore:  
B A Tubes  
Studley Road, Redditch  
Worcestershire, B98 7HN, England

Werks-Nr - Works No. - No usine - Commessa No.: 90140

Prüfgegenstand - Article - Produit - Prodotto: Seamless Aluminium Tube

Prüfgrundlagen/Anforderungen - Technical requirements/Demand - Spécifications techniques/Exigences - Norma di controllo/Requisiti:

AD 2000 - Merkblatt W6/1 (Einzelgutachten)

Werkstoff - Material - Matière - Materiale

entsprechend - according to suivant - secondo

Ausgabe Edition - Edizione:

EN AW-5083 -O  
SB 241 5083

EN573-3/754-2  
ASME

1994/1997  
1996

Lieferzustand - State of delivery - Etat de livraison - Stato di fornitura: Soft Annealed

Erschmelzungsart - Melting process - Procédé d'élaboration - Procedimento di elaborazione: Electric.

Kennzeichnung - Marking - Marquage - Punzonatura:

Material: - ASME SB241 5083 - O

EN AW 5083 -O, Cast No,

Tube Nrs: Tube Nr 288938, 288940, 288942, 288944

Herstellerzeichen - Brand of the manufacturer - BAT

Marque du fabricant - Marchio del produttore:

Stempel des Sachverständigen - Inspectors stamp  
Poinçon de l'expert - Punzone dell'ispettore.

T4Ü

| Pos.-<br>Nr./Item<br>No.<br>Poste-No<br>No.pos | Stückzahl<br>Number of<br>Quote<br>Numero pezzi | Gegenstand - Article Désignation du produit - Tipo di prodotto | Schmelz-Nr.<br>Heat No.<br>No Coulée<br>No Colata | Probe-Nr.<br>Test No.<br>No d'éprouvette<br>No di prova |
|--|---|--|---|---|
| 01   | 04  | 274,0 mm O/D. x 7,00mm WT x 5,400 mtrs                         | 1L062   | 288938/939<br>(288938)                                  |
| 01   | 04  | 274,0 mm O/D. x 7,00mm WT x 5,400 mtrs                         | 1L062   | 288940/941<br>(288940)                                  |
| 01   | 02  | 274,0 mm O/D. x 7,00mm WT x 5,400 mtrs                         | 1L062   | 288942/943<br>(288942)                                  |
| 01   | 03  | 274,0 mm O/D. x 7,00mm WT x 5,400 mtrs                         | 1L062   | 288944/945<br>(288944)                                  |

Zusätzliche Angaben - Additional remarks - Autres remarques - Osservazione:

Die gestellten Anforderungen sind lt. Anlagen erfüllt.

The requirements are fulfilled as per annex  
Les conditions imposées sont satisfaites suivant annexes -  
I risultati sono conformi ai requisiti richiesti come da allegati.

(Ort - Location - Lieu - Località)

LONDON

(Datum - Date - Data)

20/05/05



**Ergebnis der Prüfungen**  
**Test Results**  
**Résultats des Essais**  
**Risultati delle Prove**

Anlage - Annex - Annexe - Allegato: 1  
Blatt-Nr. 1 of 1  
Sheet-No.  
Page N°  
Pag N°

Prüf-Nr. 10026-12(SW)  
Inspection No.  
Certificat N°  
N° di collaudo

Teil  
Part  
Partie  
Parte

**Mechanische Prüfungen - Mechanical tests - Essais mécaniques - Prove meccaniche**

| Prüfart - Test type - Tipo d'essai - Tipo di prove:<br>Probenart - Specimen size Type de l'éprouvette<br>Tipo di provetta:<br>Probenzustand - Specimen condition -<br>Etat d'éprouvette - Stato della provetta: |  |  | ZUGVERSUCH / TENSILE TEST   |   |   |  |   |   |  |  | HARDNESS HB   |                  |    |    |    |    |  |   |
|---|--|--|---|---|---|--|---|---|--|--|---|------------------|----|----|----|----|--|---|
| Probe-Nr.<br>Test No.<br>No.<br>d'éprouvette<br>N° di prova.  | Probenabmessung<br>Dim. of specimen<br>Dim. de l'éprouvette<br>Dim. della provetta |  | Probenentnahme<br>Specimen<br>Prélevement<br>Prelevamento                                 |   |   | Prüf-temperatur<br>Test Temperature<br>Température d'essai<br>Temperatura di prova<br><br>°C | Streck-/Dehngrenze<br>Yieldpoint/Proof Stress<br>Limite d'élasticité<br>Lim. di snervamento<br><br>0.2<br>N/mm² | Zugfestigkeit<br>Tensile strength<br>Résistance à la traction<br>Carico di rottura<br><br>RM<br>N/mm² | Bruchdehnung<br>Elongation<br>Allongement<br>Allungamento<br><br>A<br>Lo= 5.65<br>√so<br>% | Bruchreduktion<br>Reduction of area<br>Striction/Strizione<br><br>Z<br>% | 1 = [J] Schlagarbeit - Energy of impact<br>Energie de rupture - Energia di rottura<br>2 = [J/cm²] Kerbschlagzähigkeit-Impact Strength<br>Résilience - Resilienza<br>3 = [%] Krist.Bruchanteil - Cryst. proportion<br>Partie cristalline - Proporzione cristallina<br>4 = [mm10-3] Breitung -Expansion<br>5 = [%] Elargissement - Espansione<br>6 = Härte (Einheiten) - Hardness - Dureté -<br>Durezza |                  |    |    |    |    |  | Bemerkung<br>Remarks<br>Remarques<br>Osservazioni |
| Schmelze-Nr.<br>Test No.<br>N° Coulée<br>Colata N°  | Dicke<br>Thickness<br>Epaisseur<br>Spessore  | Breite, Ø<br>Width, Ø<br>Largeur Ø<br>Largh. Ø | Ort - Location<br>Lieu - Zona   | Richtung<br>Direction - Senso<br>Lage - Posizion<br>Posizione | Werte -Values- Valeurs- Valori<br>1 2 3 Σ/n |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 1   | 2  | 3  | 4   | 5   | 6   | 7  | 8   | 9   | 10   | 11   | 12  | 13               | 14 | 15 | 16 | 17 |  |   |
| Req'ts / Anforderungen  |  |  | 1   | 2   | 3   | 20   | min 110   | min 270/<br>350   | min 14   |  | 6   | ≈ 60 HB 2.5/62.5 |    |    |    |    |  |   |
| % Max unless Stated   |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| S.i 0,40 Fe, 0,40 Cu, 0,10 Mn, 0,40 to 1,00 Mg, 4,0 to 4,9 Cr, 0,05 to 0,25 Zn, 0,25 Ti, 0,15.  |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 288938<br>(1L062)   | 7,42   | 12,04  | 1   | 2L  | 3   | 20   | 133   | 295   | 28   |  |   |                  |    |    |    |    |  |   |
| 288937  | 6,68   | 12,23  | 1   | 2T  | 3   | 20   | 160   | 296   | 26   |  | 6   | 76               | HB |    |    |    |  |   |
| 288940<br>(1L062)   | 7,30   | 12,17  | 1   | 2L  | 3   | 20   | 129   | 299   | 28   |  |   |                  |    |    |    |    |  |   |
| 288941  | 7,20   | 12,32  | 1   | 2T  | 3   | 20   | 151   | 289   | 25   |  | 6   | 74               | HB |    |    |    |  |   |
| 288942<br>(1L062)   | 7,08   | 12,33  | 1   | 2L  | 3   | 20   | 130   | 292   | 28   |  |   |                  |    |    |    |    |  |   |
| 288943  | 6,85   | 12,31  | 1   | 2T  | 3   | 20   | 166   | 296   | 23   |  | 6   | 75               | HB |    |    |    |  |   |
| 288944<br>(1L062)   | 7,51   | 11,92  | 1   | 2L  | 3   | 20   | 136   | 292   | 28   |  |   |                  |    |    |    |    |  |   |
| 288945  | 7,32   | 12,12  | 1   | 2T  | 3   | 20   | 163   | 295   | 22   |  | 6   | 74               | HB |    |    |    |  |   |
| Notes   |  |  | 1) From tube end<br>2) L = Longitudinal / T = Transverse<br>3) Full Thickness 3* Mid Wall |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 4) Besichtigung / Maßkontrolle / Visual and Dimensional check - ohne Beanstandung / Satisfactory  |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 5) Chemische / Chemical Analysis: siehe Anlage 2 / See annex 2  |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 6) Wärmebehandlung / Heat Treatment: Annealed at 400°C  |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 7) Technological tests (ring tensile & macro) - ohne Beanstandung / Satisfactory  |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 8) UST tested to SEP1915/1918 - siehe Anlage 2 / See annex 2:   |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |
| 9) Manufacturers 3.1. certificate shows in house tests only.  |  |  |   |   |   |  |   |   |  |  |   |                  |    |    |    |    |  |   |

Ort - Location - Lieu - Località)

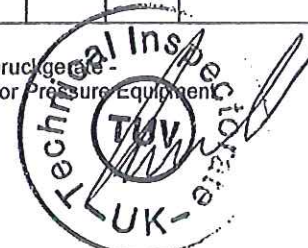
(Datum Date - Data)

LONDON

20/05/05

Prüfstelle für Druckgeräte -  
Notified Body for Pressure Equipment  
S Worrall

|                  |             |           |   |       |          |
|------------------|-------------|-----------|---|-------|----------|
| TUV-UK DOC. No.: | FORM.: 0001 | REV. No.: | 3 | DATE: | 05.11.04 |
|------------------|-------------|-----------|---|-------|----------|





# BA TUBES LIMITED

Studley Road, Redditch, Worcestershire B98 7HN, England  
Telephone (01527) 484500, Facsimile (01527) 484501



# Inspection Certificate

No. 102974/1

## Customer

JAKOB HULSEN GMBH & CO KG  
MAYSWEG 14  
ST. TOENIS  
47918 TOENISVORST  
GERMANY

Your Order No 250125  
Your Part No M2R2747  
Our Order No 90140/1  
Packing Note No 134547  
Date 20/05/05  
Packages 1 CASE

## Other Tests Passed

RING TENSILE TEST  
ULTRASONIC TEST

## Size / Description

SEAMLESS DRAWN TUBE 274.000MM O/D 7.000MM W/T 5083 Alloy  
Length - 5400.00 mm

Specification  
5083  
0  
ASME SB241M EN573-3

| ASME SB241M EN573-3 |                       | Chemical Analysis % |   |  |                         |                     |                     |     |     |     |     | H<br>cc/<br>100<br>gm |     |    |             |    |     |     |
|---------------------|-----------------------|---------------------|---|--|-------------------------|---------------------|---------------------|-----|-----|-----|-----|-----------------------|-----|----|-------------|----|-----|-----|
| No of<br>Pieces     | Nett<br>Weight<br>Kgs | Tensile Test        |   |  |                         | Brinell<br>Hardness | Chemical Analysis % |     |     |     |     |                       |     |    |             |    |     |     |
|                     |                       | Test No             | 0.2% Proof<br>Stress<br>N/mm <sup>2</sup> | Tensile<br>Strength<br>N/mm <sup>2</sup> | %<br>Elongation<br>50mm |                     | Heat or<br>Cast No  | Si  | Fe  | Cu  | Mn  | Mg                    | Cr  | Ni | Zn          | Na | Ti  |     |
| 2                   | 172                   | 288942 L            | 131                                       | 292                                      | 28                      | 76                  | 1L062               | .13 | .25 | .03 | .51 | 4.45                  | .14 |    | .03 <0.0001 |    | .02 | .10 |
| 3                   | 258                   | 288944 L            | 131                                       | 293                                      | 28                      | 75                  | 1L062               | .13 | .25 | .03 | .51 | 4.45                  | .14 |    | .03 <0.0001 |    | .02 | .10 |
|                     |                       | T                   | 167                                       | 296                                      | 23                      |                     |                     |     |     |     |     |                       |     |    |             |    |     |     |
|                     |                       | T                   | 164                                       | 295                                      | 22                      |                     |                     |     |     |     |     |                       |     |    |             |    |     |     |

Anlage 2 Page 1 of 5  
Prüf Nr. 10026-12 (S)

Remarks TEST CERTS TO EN10004 2 1 P 3 ASME SB241

Anlage 2 Page 1 of 5  
Prüf Nr. 10026-12 (S)

Remarks TEST CERTS TO EN10204 3.1.B & ASME SB241  
TOLERANCES TO EN754/7 UNLESS SPECIFIED

TIVUK Ltd

*Rae*

Witnessed / Date 10/6/05  
Reviewed / Date  
Signature

Certified that the whole of the supplies detailed hereon have been inspected, tested and unless otherwise stated, conform in all respects with the requirements of the contract or order. The quality control adopted in respect of these supplies are in accordance with the conditions of our BS EN 9001 registration.

For and on behalf of BA Tubes Limited 06/06/05

Registered in England No. 3681395  
Registered Office: Victoria House,  
150-152 The Quay, Salford, M50 3SP, England.  
VAT Registration No. GB 668 2142 26

( THIS CERTIFICATE CONFORMS TO THE REQUIREMENTS OF EN 10204 3.1 Edition 2004 )

# BA TUBES LIMITED

Studley Road, Redditch, Worcestershire B98 7HN, England  
Telephone (01527) 484500, Facsimile (01527) 484501



# Inspection Certificate

No. 102973/1

Customer

JAKOB HULSEN GMBH & CO KG  
MAYSWEG 14  
ST. TOENIS  
47918 TOENISVORST  
GERMANY

Your Order No 250125  
Your Part No M2R2747  
Our Order No 90140/1  
Packing Note No 134546  
Date 20/05/05  
Packages 1 CASE

Other Tests Passed  
RING TENSILE TEST  
ULTRASONIC TEST

Size / Description  
SEAMLESS DRAWN TUBE 274.000MM O/D 7.000MM W/T 5083 Alloy  
Length - 5400.00 mm

Specification  
5083  
ASME SB241M EN573-3

| No of Pieces                          | Nett Weight Kgs | Tensile Test |                                     |                                    |                   |    | Brinell Hardness | Chemical Analysis % |     |     |     |      |     |     |         |    |     | H cc/ 100 gm |  |  |
|---------------------------------------|-----------------|--------------|-------------------------------------|------------------------------------|-------------------|----|------------------|---------------------|-----|-----|-----|------|-----|-----|---------|----|-----|--------------|--|--|
|                                       |                 | Test No      | 0.2% Proof Stress N/mm <sup>2</sup> | Tensile Strength N/mm <sup>2</sup> | % Elongation 50mm |    |                  | Heat or Cast No     | Si  | Fe  | Cu  | Mn   | Mg  | Cr  | Ni      | Zn | Na  |              | Ti                                       |  |
| 4                                     | 344             | 288938 L     | 134                                 | 295                                | 28                | 76 | 1L062            | .13                 | .25 | .03 | .51 | 4.45 | .14 | .03 | <0.0001 |    | .02 | .10          |  |  |
|                                       |                 | T            | 160                                 | 296                                | 26                |    |                  |                     |     |     |     |      |     |     |         |    |     |              |  |  |
| Remarks                               |                 |              |                                     |                                    |                   |    |                  |                     |     |     |     |      |     |     |         |    |     |              | TEST CERTS TO EN10204 3.1 B & ASME SPC44 |  |
| Anlage 2 Page.....Z.....of.....5..... |                 |              |                                     |                                    |                   |    |                  |                     |     |     |     |      |     |     |         |    |     |              | Prüf Nr.:.....1.0026-1.2(Sw.).....✓      |  |

Anlage 2 Page 2 of 2  
Prüf Nr. 10026-12 (S)

Remarks TEST CERTS TO EN10204 3.1.B & ASME SB241  
TOLERANCES TO EN7547 UNLESS SPECIFIED

Certified that the whole of the supplies detailed herein have been inspected, tested and unless otherwise stated, conform in all respects with the requirements of the contract or order. The quality control adopted in respect of these supplies are in accordance with the conditions of our BS EN 9001 registration.

*Rae*

For and on behalf of BA Tubes Limited 06/06/05

Registered in England No. 3981395  
Registered Office: Victoria House,  
150-182 The Quays, Salford, M50 3SP, England.  
VAT Registration No. GB 666 2142 26

( THIS CERTIFICATE CONFORMS TO THE REQUIREMENTS OF EN 10204 3.1 Edition 2004 )



# BA TUBES LIMITED

Studley Road, Redditch, Worcestershire B98 7HN, England  
Telephone (01527) 484500, Facsimile (01527) 484501



FM 10669

## Inspection Certificate

No. 102972/1

|   |                 |   |                                     |  |                  |  |                 |     |     |     |     |      |              |     |         |    |     |     |
|---|-----------------|---|-------------------------------------|--|------------------|--|-----------------|-----|-----|-----|-----|------|--------------|-----|---------|----|-----|-----|
| Customer  |                 | JAKOB HULSEN GMBH & CO KG<br>MAYSWEG 14<br>ST. TOENIS<br>47918 TOENISVORST<br>GERMANY   |                                     | Your Order No<br>250125<br>Your Part No<br>M2R2747<br>Our Order No<br>90140/1<br>Packing Note No<br>134545<br>Date<br>20/05/05<br>Packages<br>1 CASE |                  | Other Tests Passed<br>RING TENSILE TEST<br>ULTRASONIC TEST |                 |     |     |     |     |      |              |     |         |    |     |     |
| Size / Description  |                 | SEAMLESS DRAWN TUBE 274.000MM O/D 7.000MM W/T 5083 Alloy<br>Length - 5400.00 mm   |                                     | Specification<br>5083<br>0<br>ASME SB241M EN573-3  |                  |  |                 |     |     |     |     |      |              |     |         |    |     |     |
| No of Pieces  | Nett Weight Kgs | Tensile Test  |                                     |  | Brinell Hardness | Chemical Analysis %  |                 |     |     |     |     |      | H cc/ 100 gm |     |         |    |     |     |
|   |                 | Test No   | 0.2% Proof Stress N/mm <sup>2</sup> | Tensile Strength N/mm <sup>2</sup>   |                  | % Elongation 50mm  | Heat or Cast No | Si  | Fe  | Cu  | Mn  | Mg   |              | Cr  | Ni      | Zn | Na  | Ti  |
| 4   | 344             | 288940 L  | 129                                 | 300  | 28               | 76   | 11062           | .13 | .25 | .03 | .51 | 4.45 | .14          | .03 | <0.0001 |    | .02 | .10 |
|   |                 | T   | 151                                 | 289  | 25               |  |                 |     |     |     |     |      |              |     |         |    |     |     |
| Remarks   |                 | TEST CERTS TO EN10204 3.1.B & ASME SB241<br>TOLERANCES TO EN754/7 UNLESS SPECIFIED  |                                     |  |                  |  |                 |     |     |     |     |      |              |     |         |    |     |     |
| Certified that the whole of the supplies detailed hereon have been inspected, tested and unless otherwise stated, conform in all respects with the requirements of the contract or order. The quality control adopted in respect of these supplies are in accordance with the conditions of our BSEN 9001 registration. |                 | <div style="display: flex; justify-content: space-between;"> <div> <p>For and on behalf of BA Tubes Limited 06/06/05</p> <p><i>Rae</i></p> </div> <div> <p>Reviewed Signature <i>[Signature]</i></p> <p>Date <i>19/6/05</i></p> </div> </div> |                                     |  |                  |  |                 |     |     |     |     |      |              |     |         |    |     |     |

( THIS CERTIFICATE CONFORMS TO THE REQUIREMENTS OF EN 10204 3.1 Edition 2004 )

Registered in England No. 3881395  
Registered Office: Victoria House,  
150-182 The Quay, Salford, M50 3SP, England.  
VAT Registration No. GB 656 2142 26



# Morgan-Ward

(NON-DESTRUCTIVE TESTING) LTD

DALE ROAD - NEW MILLS - HIGH PEAK - DERBYSHIRE - SK22 4NW  
Tel: 01663 747061 Fax: 01663 746837 E-mail: admin@morganward.co.uk

APPROVALS

Civil Aviation Authority  
Civil Aviation Authority  
FAA (Cert. No. M01V000001)  
UKAS  
Orion Aerospace  
MAGD  
NAFLIC



## ULTRASONIC TEST REPORT

Page 1 of 2

|   |  |   |                                     |
|---|--|---|-------------------------------------|
| <b>CLIENT</b><br>BA Tubes Limited<br>Studley Road<br>Redditch<br>Worcestershire<br>B98 7HN  |  | <b>REPORT No:</b> 61590/ULT   |                                     |
|   |  | <b>DATE OF TEST:</b> Completed 13/5/05  |                                     |
|   |  | <b>JOB No:</b>  |                                     |
|   |  | <b>ORDER No:</b>  |                                     |
| <b>COMPONENT / AREA TESTED</b><br>Contact scanning of: 14 off 274mm o/d x 7mm w/t x 5.4M long<br><br>Batch Nos: 90140-1-1 A, B, C + D.<br>-1-2 A, B, C + D.<br>-1-3 A, B + C.<br>-1-4 A, B + C.<br><br>P/No. 5677 |  |   |                                     |
| <b>MATERIAL</b><br>5083   | <b>SURFACE CONDITION</b><br>As drawn                     | <b>PROCEDURE / STANDARD</b><br>SEP1915/1918 ASTM B594   | <b>Issue No. / Date</b><br>2/3 2004 |
| <b>EQUIPMENT</b><br>K.K. USIP 12 U.F.D.   |  | <b>ACCEPTANCE CRITERIA</b><br>SEP1915/1918 ASTM B594<br>Class A   | <b>Issue No. / Date</b><br>2/3 2004 |
| <b>SERIAL No.</b><br>UT 101   | <b>CALIBRATION DATE</b><br>6/6/05                        | <b>TECHNIQUE NUMBER</b><br>49487/ULT (✓) 49601/ULT (Imm.) ( )   |                                     |
| <b>COUPLANT</b><br>Water  | <b>TEST / REFERENCE BLOCKS</b><br>SEP1915/18/L<br>B594/1 | <b>SCANNING PATTERN</b><br>50% probe overlap  |                                     |
| <b>PROBES USED</b>  | 0°   | 45°   | 45°                                 |
| <b>MAKE &amp; TYPE</b>  | Sonatest S/C   | Phoenix S/C   | Phoenix S/C                         |
| <b>FREQUENCY</b>  | 5 MHz  | 4 MHz   | 4 MHz                               |
| <b>SIZE</b>   | 10mm   | 10mm  | 10mm                                |
| <b>PROBE SERIAL No.</b>   | 339/17   | A3845/A2443   | A2444/A2441                         |
| <b>SENSITIVITY SETTING</b>  | 66dB   | 30dB  | 36dB                                |
| <b>ATTENUATION /<br/>TRANSFER LOSS</b>  | 0dB  |   |                                     |
| <b>TEST DETAILS &amp; RESULTS:</b><br>1 off tube found to contain rejectable defects, as detailed on page 2.<br>Remaining areas/tubes acceptable to specification.  |  |   |                                     |
| <div style="float: right; border: 1px solid black; padding: 5px;">             Anlage 2 Page... 4 ... of ... 5<br/>             Prüf Nr. ... 10026-12 (Su)           </div>                                       |  |   |                                     |
| <b>TEST LOCATION</b>  | Morgan-Ward (NDT) Limited                                |   |                                     |
| <b>OPERATOR</b>   | J. Francomb  |   |                                     |
| <b>QUALIFICATION</b>  | PCN LII  |   |                                     |
| <b>CERTIFICATE No.</b>  | 113163   |   |                                     |
|   |  | <b>SIGNED</b><br><b>AUTHORISED SIGNATORY FOR</b><br><b>MORGAN WARD NDT LIMITED</b><br><b>NAME: J. FRANCOMB</b> <b>DATE: 16/5/05</b> |                                     |



# Morgan-Ward

(NON-DESTRUCTIVE TESTING) LTD

DALE ROAD - NEW MILLS - HIGH PEAK - DERBYSHIRE - SK22 4NW

Tel: 01663 747061

Fax: 01663 746837

E-mail: [admin@morganward.co.uk](mailto:admin@morganward.co.uk)

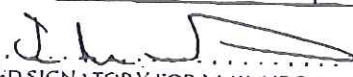
### APPROVALS

Civil Aviation Authority  
Joint Aviation Authority  
P.A.A. (Conf. No. MWY20001)  
U.K.A.S.  
British Aerospace  
Master Deputy  
M.D.D.  
N.A.F.L.C.



# ULTRASONIC TEST REPORT

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|  |  |   |
|--|--|---|
| <b>CLIENT</b><br><br>BA Tubes Limited<br>Studley Road<br>Redditch<br>Worcestershire<br>B98 7HN |  | REPORT No: 61590/ULT  |
|  |  | DATE: 16/5/05   |
|  |  | JOB No:   |
|  |  | ORDER No:   |
| <b>TEST RESULTS</b>  |  |   |
| <b>TUBE I/D NO.</b>  | <b>COMMENTS</b>  | <b>REJECT STD.</b>  |
| 90140-1-3C   | 1 x 120mm defect at ident end, 1 x 10mm long defect 2800mm from ident end, and 1 x 90mm long defect 3800mm from ident end. | ASTM B594 Class A   |
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| OPERATOR   | J. Francomb  | SIGNED <br>(AUTHORISED SIGNATORY FOR M-W (NDT) LTD.)<br><br>NAME: J. FRANCOMB |
| QUALIFICATION  | PCN LII  |   |
| CERTIFICATE No.  | 113163   |   |
|  |  | DATE: 16/5/05   |

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