



## PROCESS CHECK REPORT

<b>Company:</b>		
<b>Process Title</b>	FUSION WELDING & BRAZING (Oxy-Acetylene and T.I.G. for Aluminium, Steel & Stainless Steel)	
<b>Category(s) of Approval</b>	6c; 6d, 6e, 6f, 6g, 6h & 6j	
<b>Process Check Report Ref. No:</b>		
<b>Date Of Process Audit:</b>		
<b>Auditor (please print name):</b>		
<b>Nadcap Reference (if applicable)</b>		
<b>Invoked Documents:- HBIFSAS/QA/SC1, QAIS Doc Ref Q5B-008H</b>		
<b>QA Element</b>	<b>Yes</b>	<b>No</b>
	✓	X
<b>Calibration Status:</b> All Inspection, Measuring and Test Equipment used in this Process is calibrated, and certified against equipment traceable to National Standards		
<b>Materiel Usage:</b> All Materiel used in this Process is in accordance with requirements of the relevant Process Specification/Standard		
<b>BAEP/BS:</b> All work has been processed in accordance with the latest issue of the relevant BAEP(s) and/or National Standards		
<b>Technique Sheets:</b> All applicable Technique Sheets used, including Inspection Plans, are to the latest issue and have been approved by HBQSC		
<b>Training/Qualification:</b> All relevant personnel involved with this Process are appropriately trained, qualified and assessed periodically		
<b>Internal Audit:</b> The Internal Audit for this Process is current, with no outstanding CAs		
<b>If No to any of the above QA Elements - give details below:</b>		
 <b>Audit Comments:</b>  		
<b>Auditor:</b>	<b>QA Manager:</b>	<b>Approved by (HBQSC):</b>



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## Invoked Documents Listing

### 1. Process Specifications

Reference No.	Title	Issue
BAEP 4521	Fusion Welding and Brazing	3
BAEP 4534	Manual Welder & Brazer Competency Testing	1

### 2. Quality Assurance Instructions To Suppliers

Reference No.	Title	Issue

### 3. Other Technical Documents Invoked

Reference No.	Title	Issue

### 4. General

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### AUDIT FINDINGS

Details Of Check	Result / Remarks	Action Required
Are all the relevant process specifications and invoked documents available and held at the correct issue.		
Does an internal procedure exist and what is its reference/issue status.		
Is welding satisfactorily incorporated into the planning.		
Are welders/brazers approved to the requirements of BCAR Chap A8-10 (or BAEP 4534) for the process and type of material being processed.		
Are regular checks/tests as to the continued proficiency of operators submitted to an approved Laboratory at intervals not exceeding 6 months for BAEP 4534 (or 2 months for BAEP 4521).		
Are records kept as to the scope of approval of welding/brazing operators and are they current.		
Do all approved operators carry an identification number to identify their work.		
Are all mechanised welding machines approved and controlled by a machine technique sheet quoting the approved settings for all essential variables for each material and gauge.		



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<b>AUDIT FINDINGS</b>
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Details Of Check	Result / Remarks	Action Required
Are the welding/brazing processes employed in accordance with approved drawing or order requirements for the particular components being welded.		
Are the parent materials being welded/brazed correct to drawing requirements.		
Is there satisfactory system in operation for the cleaning of components and metal surfaces prior to welding.		
Is at least 6mm (1/4in) of clean metal provided on each side of the weld zone.		
Is the weld/braze area prior to processing freshly cleaned, abraided or by pickling to BAEP 9057 or BAEP 9099 Method 1 for aluminium alloys.		
Are edges to be welded free from burrs or cracks.		
Are the edges of material thinner than 10mm prepared to meet the requirements of the shapes shown in BAEP 4521 Figs. 1.1 to 1.3 before welding.		
Are parts degreased to BAEP 9053 immediately prior to welding.		



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### AUDIT FINDINGS

Details Of Check	Result / Remarks	Action Required
Where filler rods are employed are they appropriate to the material being welded as designated by the drawing, BAEP 4521 table 1.2 refers and/or BAEP 4520 App 1.		
Are filler rods segregated and readily identifiable at the operation work bench.		
Are the manufacturers instructions for the storing and drying of electrodes being followed.		
If oxy-acetylene welding is being carried out are the fluxes used those recommended by the manufacturer of the relevant welding rod.		
Is the acetylene gas employed of the required purity as demonstrated by the test given in BAEP 4521 para 1.4.4 (1)		
Are the operators employed in this type of welding using a neutral or slightly reducing flame.		
Is the argon gas employed certified as being 99.99% min purity.		



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<b>AUDIT FINDINGS</b>
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Details Of Check	Result / Remarks	Action Required
Is gas backing provided to ensure freedom from contamination of the under-bead.		
Are the machine settings and gas flow adjusted to the values indicated on the relevant Technique Sheet.		
Is the process being carried out on an approved machine.		
If a consumable electrode is used, is the type and size as indicated on the relevant Technique Sheet.		
Is a satisfactory system employed whereby welds are cleaned of all traces of flux (if used) slag and scale after welding in accordance with requirements.		
Where full heat treatment is carried out, are welded test samples provided for each batch of material welded in accordance with BAEP 4521 para 1.6.3 (3) and (4).		
Are all welds subjected to visual inspection to ensure that:- i) The correct weld bead penetration and profiles required by BAEP 4521 Fig 1.1 to 1.3, as relevant, are being obtained.		



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<b>AUDIT FINDINGS</b>
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ii) That all tack welds are covered by the main welding run. iii) The welds are free from oxide, flux and surface defects such as notches, cracks, porosity and burning. iv) The welded components have not been reduced in thickness by the operation e.g., undercutting.		
Where required by the "Inspection Group" shown on the drawing, are welded components being subjected to the appropriate method of flaw detection.		
Where required by the "Inspection Group" shown on the drawing, are welded components being subjected to radiographic examination.		
Where required by the drawing is pressure testing carried out with the test pressure as per drawing.		
Are the operators given satisfactory training prior to welding.		