REV	PARTICULARS OF REVISION INCLUDING ORIGINATOR & DATE	
A	REFERENCES MADE TO CONSTRUCTION DETAILS ON DRAWINGS C7071-12-10&11 Alan Bown 1-Feb-2007	
B	ESKOM TITLE BLOCK ADDED. "APPROVED FOR MANUFACTURE" LABEL ADDED. SOOT LANCE OPENING RE-LOCATED AT ORIGINAL LEVEL +134'-5" LIST OF PARTS; RE-USED SOOT LANCE OPENING DELETED. PIECE No. C707112009-4 DELETED. DETAIL OF PIECE No. C707112009-4 DELETED. PIECE No. C707112009-1 QTY INCREASED FROM 112 TO 122. PIECE No.s C707112010-8 & 9 DELETED. PIECE No'S C707112010 & 011 MAT'L 50x12.5 FLAT BAR WAS 60x12 FLAT BAR DRAWING VIEW "ELEVATION ON ECONOMISER" ELEMENT PITCHES ADDED. MOUNTING PLATES C707112010-8 & 9 AND NOTE DELETED. A.Chadwick 05-Apr-2007	F1-H1 E1-F1 D7 G3 J7 H6-J6 B6-G6 F1
C	ALL 6mm THK FINS AND SHELVES TO BE NOW SITE WELDED AS REQUESTED BY SUBCONTRACTOR. L.Kojoch 17-Aug-2007	
D	DRAWING TITLE ALTERED TO REFLECT THAT THIS DRAWING IS APPLICABLE TO BOILERS 1, 2, 4, 5 & 6 ONLY. QUANTITIES CORRECTED FOR ITEMS:- C707112009-1-5 (WAS 2 OFF) C707112009-2-5 (WAS 1 OFF) C707112009-2-7 (WAS 1 OFF) C707112009-3-5 (WAS 1 OFF) C707112009-3-7 (WAS 1 OFF) C707112010-11 (WAS 48 OFF) UNIT 3 "AS-BUILT" DRAWING NUMBERS REFERENCED Alan Bown 6-Feb-2008	

GENERAL NOTES

DESIGN DATA
- BOILER MAX PERMISSIBLE WORKING PRESSURE PRESSURE = 195.86 Barg
- ECONOMISER CALCULATION PRESSURE (DESIGN PRESSURE) = 199.2 Barg
- DESIGN TEMPERATURE:-390°C (Max)
- SITE HYDRAULIC TEST PRESS = 245 Barg
- HYDRAULIC TEST TEMPERATURE 7°C MIN - 50° MAX
- DESIGN, MANUFACTURE, INSPECTION, TESTING AND QUALITY REQUIREMENTS TO EN 12952:2002 AND IS TO BE CONTROLLED BY A MANUFACTURE, INSPECTION AND TEST CONTROL DOCUMENT PRODUCED BY THE MANUFACTURER.
- ALL NDT TO BE TO THE REQUIREMENTS OF EN12952:2002
- ALL TUBE BENDING AND BEND TESTING TO BE TO EN12952:2002
- APPLICABLE FABRICATION SPECIFICATION C7071-10-086
- ALL TUBE ATTACHMENTS ARE NON LOAD BEARING.
- NOTE 1

THE MATCHING OF TUBES BORES IS TO MEET THE REQUIREMENTS OF EN12952. WHERE SPECIFIC BUTT WELD DETAILS ARE ARE NOT GIVEN ON THIS DRAWING, THESE REQUIREMENTS ARE TO BE EFFECTED BY SELECTION, DRIFTING, MACHINING, SWAGING OR BY THE USE OF A SUITABLE EXPANDER. WHERE ANY OF THE ABOVE OPERATIONS ARE CARRIED OUT ON THE TUBE ENDS, THE RESULTING TUBE THICKNESS SHALL NOT BE LESS THAN THE NOMINAL TUBE THICKNESS MINUS THE ALLOWABLE TUBE THICKNESS TOLERANCE.
- SW** DENOTES SITE WELD ON PRESSURE PARTS, ** REPLACED BY IDENTIFICATION LETTER (eg.SWE) REFER TO DRAWING C7071-12-016 FOR DETAILS.

ALL OTHER WELDS ARE TO BE IN ACCORDANCE WITH WELDING NOTES IN THE QUALITY ACCEPTANCE STANDARDS BLOCK.

CONTRACT NUMBER C7071
6 BOILERS IN CONTRACT

5 BOILERS 1,2,4,5 and 6 TO THIS DRAWING △D

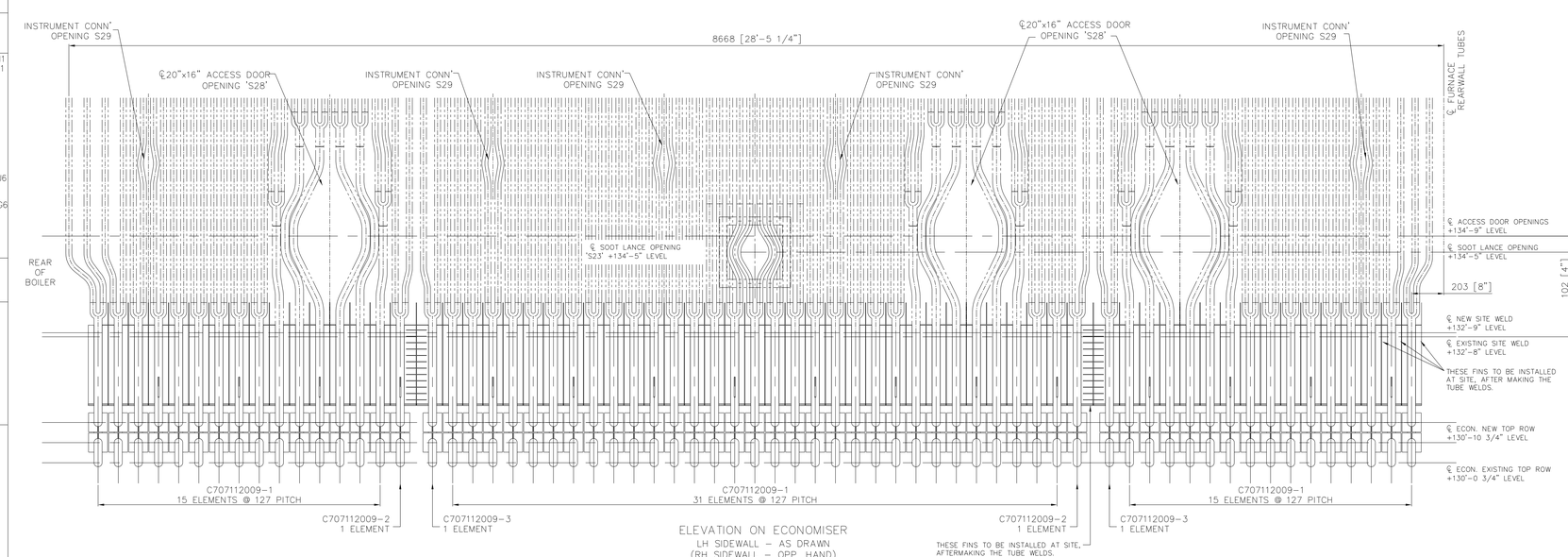
1 BOILER No. 3 "AS-BUILT" TO DRAWING C7071-12-056

MANUFACTURE TO BE IN ACCORDANCE WITH THE FOLLOWING COMPANY QUALITY ACCEPTANCE/BRITISH STANDARDS UNLESS OTHERWISE STATED

ALL DIMENSIONS SHOWN ARE IN mm

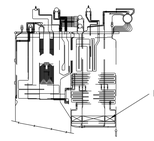
Dok Type A — IF IN DOUBT ASK. DO NOT SCALE

AO — ORIGINAL FRAME SIZE 791 x 1139 — 1st ANGLE PROJECTION



ELEVATION ON ECONOMISER
LH SIDEWALL - AS DRAWN
(RH SIDEWALL - OPP. HAND)
(LOOKING FROM OUTSIDE OF BOILER)
SCALE 1:12.5

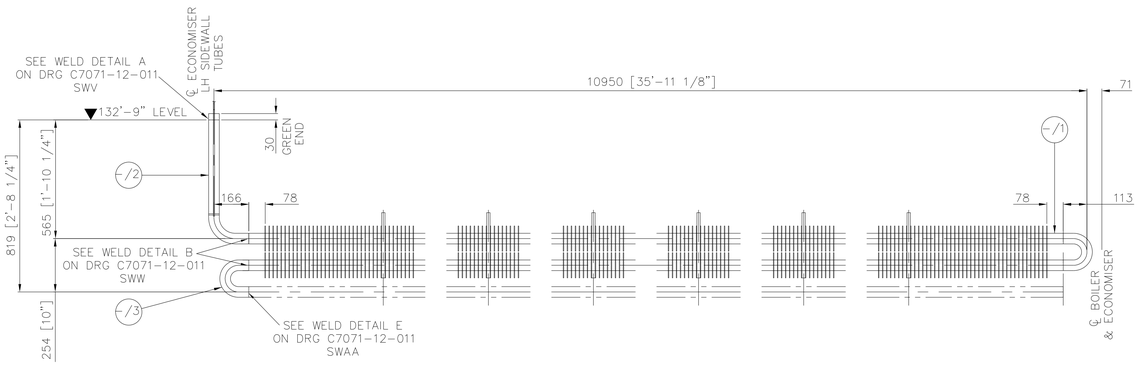
KEY SKETCH



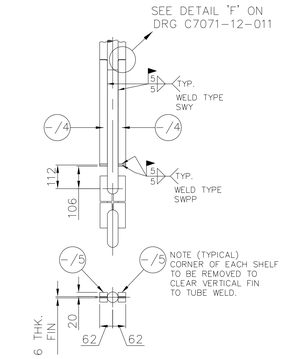
LIST OF PARTS FOR PIECE Nos C707112009-1 to 3

A = ADVISABLE ITEM (ie SENT TO SITE SEPARATELY) | QUANTITIES QUOTED ARE FOR ONE BOILER - L/H AND R/H ASSEMBLIES

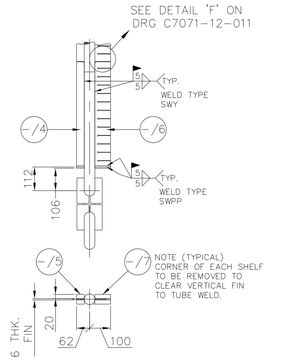
A	CALL OUT	PIECE No	DESCRIPTION	MATERIAL	QTY	FINISHED LENGTH(mm)
		C707112009-1	ECONOMISER ELEMENT EACH COMPRISING:-		122	
	-/1	C707112010-1	TUBE 50.8 O/D x 5.4 THK	SEE DRG. C7071-12-010	1	
	-/2	C707112010-2	SHORT 'J' TUBE	SEE DRG. C7071-12-010	1	
	-/3	C707112010-6	RETURN BEND	SEE DRG. C7071-12-010	1	
	-/4	C707112010-3	36mm WIDE FIN PLATE	SEE DRG. C7071-12-010	2	
	-/5	C707112010-5	SHORT SHELF PLATE	SEE DRG. C7071-12-010	4 △D	
		C707112009-2	ECONOMISER ELEMENT EACH COMPRISING:-		4	
	-/1	C707112010-1	TUBE 50.8 O/D x 5.4 THK	SEE DRG. C7071-12-010	1	
	-/2	C707112010-2	SHORT 'J' TUBE-LEFT	SEE DRG. C7071-12-010	1	
	-/3	C707112010-6	RETURN BEND	SEE DRG. C7071-12-010	1	
	-/4	C707112010-3	36mm WIDE FIN PLATE	SEE DRG. C7071-12-010	1	
	-/5	C707112010-5	SHORT SHELF PLATE	SEE DRG. C7071-12-010	2 △D	
	-/6	C707112010-4	74mm WIDE FIN PLATE	SEE DRG. C7071-12-010	1	
	-/7	C707112010-8	LONG SHELF PLATE	SEE DRG. C7071-12-010	2 △D	
		C707112009-3	ECONOMISER ELEMENT EACH COMPRISING:-		4	
	-/1	C707112010-1	TUBE 50.8 O/D x 5.4 THK	SEE DRG. C7071-12-010	1	
	-/2	C707112010-2	SHORT 'J' TUBE-RIGHT	SEE DRG. C7071-12-010	1	
	-/3	C707112010-6	RETURN BEND	SEE DRG. C7071-12-010	1	
	-/4	C707112010-3	36mm WIDE FIN PLATE	SEE DRG. C7071-12-010	1	
	-/5	C707112010-5	SHORT SHELF PLATE	SEE DRG. C7071-12-010	2 △D	
	-/6	C707112010-4	74mm WIDE FIN PLATE	SEE DRG. C7071-12-010	1	
	-/7	C707112010-8	LONG SHELF PLATE	SEE DRG. C7071-12-010	2 △D	
		C707112010-10	50x12x2035 LG FLAT BAR	SEE DRG. C7071-12-010	24	
		C707112010-11	50x12x1390 LG FLAT BAR	SEE DRG. C7071-12-010	36 △D	
			M16 x 70Lg HEX BOLTS	BS3692 Gr8.8	780	
			M16 HEX NUTS	BS3692 Gr8	780	
			M16 WASHERS	BS43290	780	



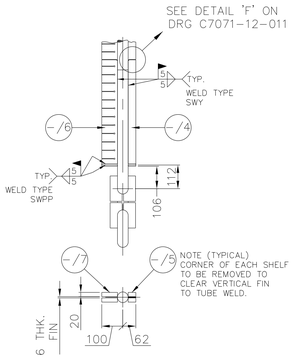
PIECE No. C707112009-1
PIECE No. C707112009-2
PIECE No. C707112009-3
(LOOKING TOWARDS REAR OF BOILER)
SCALE 1:10



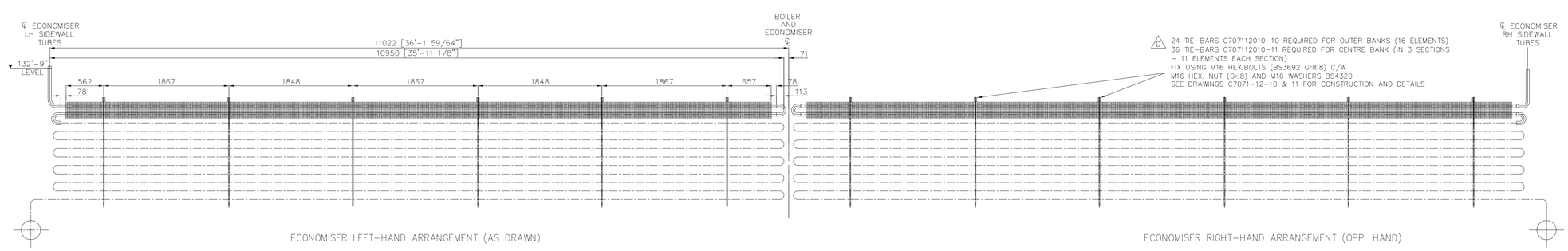
PIECE No. C707112009-1
SCALE 1:10



PIECE No. C707112009-2
SCALE 1:10



PIECE No. C707112009-3
SCALE 1:10



ECONOMISER LEFT-HAND ARRANGEMENT (AS DRAWN)

ECONOMISER RIGHT-HAND ARRANGEMENT (OPP. HAND)

ECONOMISER ELEMENT ARRGANGEMENT
(LOOKING TOWARDS REAR OF BOILER)
SCALE 1:25

QUALITY ACCEPTANCE STANDARDS
Applicable for manufacture except where stated otherwise

HOLES
1 Not holes to be drilled
2 Drilled holes are unsilerenced
3 Reamed holes to be H7 BS 4500
4 Depth dimensions refer to depth of cylindrical hole and not drill point
5 Counterbored holes to have sharp corners removed as shown
6 Countersunk holes to have full dia. penetrating to a depth of 0.5mm to 1.0mm

Machining Tolerances
Dimensions quoted to one decimal place e.g. 1.5 , 10.0 etc. ±0.1mm
Dimensions up to and including 300mm ±0.5mm
Dimensions above 300mm ±0.5mm

Cutting Tolerances
Overall length of items must be within:-
saw (hand or m/c) ±1mm of the nominal dimension
machine flame cut ±1mm of the nominal dimension
hand flame cut ±2mm of the nominal dimension

Drilling Tolerances (not expanded tube holes)
positional tolerance for all holes ⌖ Ø0.8

Assembly Tolerances
Assemblies up to and including 600mm to be within ±2mm of the nominal dimension
Assemblies above 600mm to be within ±3mm of the nominal dimension
NOTE: All tolerances are non-accumulative

WELDING
General
All weld symbols are to BS 499-2c:1999
All welds are to be free from slag
All welds to be full penetration
Weld sizes given denote weld leg length.
All welding to be undertaken by qualified welders in accordance with an approved weld procedure.

NDT
All welds to be 100% visually inspected.
Welds requiring NDT will be identified by the appropriate weld symbol, e.g.

Weld Acceptance Criteria
Unless stated otherwise acceptance criteria for all welds to be in accordance with BS EN ISO 5817:2003 Limit D.
Welds requiring acceptance criteria to a minimum above will be identified by the appropriate weld symbol, e.g.

REFERENCE DRAWINGS
C7071-14-001 ARRGT. OF BOILERS 1,2,4,5 & 6 ECONOMISER CASING MODIFICATIONS
C7071-12-009 ARRGT. OF BOILERS 1,2,4,5 & 6 ECONOMISER MODIFICATIONS
C7071-12-010 DETAILS OF BOILERS 1,2,4,5 & 6 ECONOMISER MODIFICATIONS
C7071-12-011 DETAILS OF BOILERS 1,2,4,5 & 6 ECONOMISER MODIFICATIONS
C7071-12-016 WELDING SCHEDULE

THIS DRAWING TO BE READ IN CONJUNCTION WITH C7071-12-011 FOR SITE CONSTRUCTION/ASSEMBLY, AND WELDING SCHEDULE C7071-12-016

APPROVED BY
ESKOM HOLDINGS LTD. REG No. 2002/015527/06

ARNOT POWER STATION

APPROVED FOR MANUFACTURE

Eskom

26.41/40031 SHEET 4 REV 4

CLIENT	ESKOM	PLANT	ARNOT POWER STATION: ACIP
SCALE		© COPYRIGHT 2006 THIS DRAWING MUST NOT BE USED WITHOUT THE WRITTEN CONSENT OF ALSTOM Power Limited	
DRAWN	N. Arnon		
CHECKED	T.Bentley		
APPROVED	Alan Bown		
DATE	04-Sep-2006	Performance Projects, Sinfin Lane, Derby, England	ALSTOM
TITLE	ARRANGEMENT OF BOILERS 1,2,4,5 & 6 ECONOMISER MODIFICATIONS	DRAWING NUMBER	C7071-12-009
		SHEET 001 OF 001 SHTS	REV D