

5. MRI NO./REV. AS PER PDS		2. P.O FMR/WB2-10-00182 R/2 241916		3. ASME III CODE ITEM Yes ☒ No ☐		4. SR ☒ QR ☐ NQR ☐		MRI NO. REV. WB2-10-00182 R/2 PR*	
6. ITEM/DESCRIPTION HEAT EXCHANGER				7. SUPPLIER: JOSEPH OAT CORP.				8. QUALITY SURV. ASSIGNMENT REQD. ☒ YES ☐ NO	
9. STORAGE LEVEL REQUIREMENTS: A ☐ B ☐ C ☐ D ☐ Outdoor Weatherproof ☒ See Block 10 ☐				10. SPECIAL STORAGE INSTRUCTIONS: N/A					
11. SPECIAL HANDLING INSTRUCTIONS P. O 241916 ITEM 1 CAT ID CQT739A									
12 INITIATED BY RALPH SUDDERTH			DATE: 01-05-11		13. REVIEWED/ AND APPROVED BY (PFQCE): MICHAEL DICARLO <i>Michael Dicarlo</i>			DATE: 05-27-14	
ANI Notified for Witness of Receipt: by			DAVE SHERER			<i>Michael Dicarlo</i>			05-23-14
Printed Name			Signature				Date / Time		
14. RECEIVING INSPECTION REQUIREMENTS FOR SAFETY (SR/QR) AND NON-QUALITY RELATED (NQR) ITEMS					17. METHOD	18. N/A	18A. FE	18B. QCE	18C. DATE
A. VERIFY ITEM(S) ARE FREE OF DAMAGE CAUSED BY SHIPPING					I	☒			05-27-14 MD
B. VERIFY THE LEVEL OF PACKING HAS BEEN MAINTAINED					I	☒			05-27-14 MD
C. VERIFY IDENTIFICATION AND MARKINGS ARE AS SPECIFIED					I	☐		MD	05-27-14
D. VERIFY COATINGS AND PRESERVATIVES ARE AS SPECIFIED					I	☒			05-27-14 MD
E. VERIFY PROTECTION COVERS & SEALS MEET THEIR INTENDED FUNCTION					I	☐		MD	05-27-14
F. VERIFY INERT GAS BLANKET PRESSURE IS WITHIN SPECIFIED LIMITS					I	☐		MD	05-27-14
G. VERIFY DESICCANT IS NOT SATURATED					I	☒			05-27-14 MD
H. VERIFY ITEM(S) MEET SPECIFIED CLEANLINESS					I	☐		MD	05-27-14
I. VERIFY ITEM(S) ARE FREE OF PHYSICAL DAMAGE					I	☐		MD	05-27-14
J. VERIFY DOCUMENTATION:					R	☐		MD	05-27-14
15. RECEIVING INSTRUCTIONS FOR SR/QR ITEMS NOT RELEASED BY PSQS									
A. VERIFY PHYSICAL PROPERTIES (SEE DOCUMENTATION)					R	☐		MD	05-27-14
B. VERIFY DIMENSIONS/CONFIGURATION					I	☐		MD	05-27-14
C. VERIFY WELD PREPARATIONS					I	☒			05-27-14 MD
D. VERIFY WORKMANSHIP					I	☐		MD	05-27-14
E. VERIFY LUBRICANTS/OILS					I	☒			05-27-14 MD
F. VERIFY ELECTRICAL INSULATION					W	☒			05-27-14 MD
G. VERIFY SHELF LIFE					R	☒			05-27-14 MD
H. VERIFY TRACEABILITY					R	☐		MD	05-27-14
I. VERIFY TAGGING					I	☐		MD	05-27-14
J. VERIFY MRR 32537					R	☐		MD	05-27-14
16. UNIQUE INSPECTION REQUIREMENTS FOR ITEM									
A. VERIFY					I	☒			05-27-14 MD
B. VERIFY FORM 8					I	☒			05-27-14 MD
C. VERIFY					I	☒			05-27-14 MD
19. SAMPLING USED: ☐ YES ☒ NO					TRACE NUMBER	SAMPLING TABLE	QUANTITY	20. COMMENT Use additional space if needed	
ITEM DESCRIPTION									
A									
B									
C							OF		
D							OF		
21. Review and acceptance for documentation of N-certificate document holder other than BCOI; ref. 6.5.9.3 -25402-000-GPP-0000-N6104					PFQCE Signature:				

REVIEWED BY:

BRUCE CAISSE
David Sherer

DATE:

6-13-14

=INSPECTION W=WITNESS R=REVIEW

ANI:

N/A

DATE:

N/A 6-12-14

**Watts Bar Unit 2 Construction Completion
MATERIAL RECEIVING REPORT**

SUPPLIER: Joseph Oat Corp.

PO NUMBER: 241916

SHIPPED BY: Joseph Oat Corp.

RELEASE NO.:

SHIPPED POINT:

MRR NUMBER: MRR-32537

DATE RECEIVED: 06-Aug-12

MRR DATE: 06-Aug-12

REMARKS: JOB# 2692-A
JOB# 2692-B

Item Number	Blanket Item No.	Material ID	Quantity Received	UI	Material Description
1		CQT739A			
			2	EA	EXCHANGER, HEAT, QA 1, CLASS 3, FLUID, DESIGN PRESSURE 150 PSIG @ 200 DE. F., RA
Remarks:			Heat Code:		

NOTHING ELSE FOLLOWS

PR# WB2-10-00182 R/2 SAT QL MD 5-27-14

Michael DiCarlo

Michl DiCarlo

Loc: Bellefonte Nuclear Plant.
Hollywood, AL.

Delivery Carrier:

Packing Slip No.: N/A

Delivered To/Location:

Checked & Counted By

DWBurgess 9/16/2013
DWBURGESS

F.B. No.:

OS&D No.:

Delivery Date: 06-Aug-12

P/C: P

Page 2 of 673



Joseph Oat Corporation

ESTABLISHED 1788

JOB No. J-2692-A
CUSTOMER: TVA / Bechtel
P.O. Order No.: 241916
Equipment No.: WBN-0-HTX-078-0031

DOCUMENTATION PACKAGE INDEX

	Pages
1. ASME CODE DATA REPORT	1-2
2. CERTIFICATE OF CONFORMANCE	3
3. MATERIAL RECORD FORM	4-5
4. WELD MATRIX	6-9
5. CERTIFIED MATERIAL TEST REPORTS	10-266
(Including C of C's and Weldwire)	
6. VISUAL INSPECTION REPORTS	267-290
7. PT REPORTS	291-293
8. RADIOGRAPHIC READER SHEETS	294-301
9. HYDROSTATIC TEST REPORTS	302-303
10. AIR TEST	304-306
11. MINIMUM WALL THICKNESS VERIFICATION	N/A
12. PWHT CHART	N/A
13. SDDR's FOR MAJOR REPAIRS AND REPAIR RECORDS	307-327
14. OAT DEVIATION NOTICES (NCR)'s	328-331
15. PAINT REPORT	332



Joseph Oat Corporation

TECHNICAL AND QUALITY ASSURANCE REQUIREMENTS

SUPPLIER'S CERTIFICATE OF COMPLIANCE

Vendor / Supplier: Joseph Oat Corporation
Address: 2500 Broadway, Camden, N.J. 08104
Purchase Order No.: 241916 / TVA / Bechtel

P.O. Item No.	Description	Oat Job No.	Equip. No.
1	Spent Fuel Pool Cooling Heat Exchanger A	J-2692-A	WBN-0-HTX-078-0031

Deviations: DN: 07655

SDDR: 001, 002, 003, 004, 005, 007, 009

Comments:

Joseph Oat Corporation certifies that the item described above is in conformance with the Certified Design Specification and ASME Section III, Class 3, 1974, no edition. Class 3 Shellside and Tubeside, and was Manufactured in accordance with our current quality program. N Certificate Number N-1488 expires 08/04/2012.

CERTIFICATION

The Supplier certifies that the item(s) described above are in conformance with the requirements of the Purchase Order including referenced purchase orders, codes, standards and specifications with the exception of approved deviations listed above. Furthermore, the Supplier has made no substitution of part number.


VENDOR AUTHORIZED SIGNATURE



QC MGR
TITLE

7/25/12
DATE

Page 6 of 673

MATERIAL RECORD

Customer - TVA / BECHTEL

Page 1

Job No. 2692-A

ITEM	HEAT/LOT NUMBER	ITEM DESCRIPTION	ITEM	HEAT/LOT NUMBER	ITEM DESCRIPTION
1	92252 / H0378	U-TUBES	56	0507840-04	NOZZLE C/D IMPIN. PLATE
1	0403903/H0754	U-TUBES	57A-D	A58900	BAFFLES 3/8" THK.
2A	274443	TUBESHEET	57E/F	R7865	BAFFLES 3/8" THK.
3	9AB8	CHANNEL SHELL	57E/F	H0553	BAFFLES 3/8" THK.
4	833955	CHANNEL COVER	57G/H	R7865	BAFFLE U-BEND SUPPORT
5	1165	CHANNEL BODY FLANGE	57J	R7865	BAFFLE U-BEND SUPPORT
6	SS304/L W/GRAP.	GASKETS	58	N110338	TIE RODS
7	DL1010389502	CHANNEL STUDS	59A	2318286	TIE ROD SPACERS
8	SA42971	CHANNEL COVER NUTS	59B	2318286	TIE ROD SPACERS
9A	9AB8	CHANNEL PARTITION PLATES	59C	2318286	TIE ROD SPACERS
9B	949137	CHANNEL PARTITION PLATES	60	A-307-1018	TIE ROD NUTS
9C	833955	CHANNEL PARTITION PLATES	61	SS304/L W/GRAP.	GASKET SHELL FLANGE
10	45161	NOZ. A & B PIPE 10" NPS SCH 40S	62	N88355	NOZZLE C & D PIPE
11	H-602	NOZZLE A & B FLANGES	63	1503092-03	NOZZLE C & D REPADS
12	833955	NOZZLE A & B REPADS	64	LCP3	NOZZLES 'G, H' HALF CPLG.
13	250304	CUSTOM SOCKET WELD HALF CPLG	65	LCP3	NOZZLES 'G, H' PLUGS
14	XPG	THR'D PIPE PLUGS 'E1,E2,F1,F2'	66	217P558	NOZ. 'K1-K4' STUDDING PAD
14	JXH	THR'D PIPE PLUGS 'E1,E2,F1,F2'	67	237366	NOZ. 'K1-K4' BLIND FLANGES
15	249002	NOZ. J1-J5 STUDDING PADS	68	SS304/L W/GRAP.	NOZ. 'K1-K4' GASKETS
16	H595	NOZ. J1-J5 BLIND FLANGES	69	783582	NOZ. 'K1-K4' STUDS
16	H596	NOZ. J1-J5 BLIND FLANGES	70	SW04083	NOZ. 'K1-K4' NUTS
17	SS304/L W/GRAP.	NOZ J1-J5 GASKETS	71	NOT USED	N/A
18	783582	NOZ J1-J5 STUDS	72	R7734-2E	LIFT LUGS
19	SW04083	NOZ. J1-J5 NUTS	73	R4526-39C	LIFT LUG REPADS
20	ELE. / POL.	*ELECTRO-POLISH PASSIVATION	74	R4526-39C	DISK 1/2" THK.
21	247087	PLUG 0.870 x 1-29/32 x 0.750	75	0508650-01	GUIDE BAR
22	247087	PLUG 0.790 x 1-29/32 x 0.670	76	9RB7	BANDING
23	NOT USED	N/A	77	9YF3	BANDING
THRU	NOT USED	N/A	78	NOT USED	N/A
49	NOT USED	N/A	THRU	NOT USED	N/A
50A	0508909-01	SHELL	89	NOT USED	N/A
50B	9100950-02	SHELL	90	491989	NAME PLATE BRACKET
51	NOT USED	N/A	91	S/S	*NAME PLATE
52	9100950-02	HEAD	92	S/S	*AUX. NAME PLATE
53	019638	SHELL BODY FLANGE	100	H0710-13B	FIXED BASE PLATE
54	B51222	U-BEND SUPPORT BARS	101	H0710-13B	SLOTTED BASE PLATE
55	R8775-2B	LONGITUDINAL BAFFLE	102	0508909-03	SADDLE WEB PLATES
55	0507840-04	LONGITUDINAL BAFFLE	103	0508909-03	SADDLE WEAR PLATES

* = No Documentation Req'd.

Page 7 of 623

MATERIAL RECORD

Customer – TVA / BECHTEL

Page 2

Job No. 2692-A[illegible]

*** = No Documentation Req'd.**

Page 8 of 673

J-2692-A WELD MATRIX

Weld	Weld Description	Item No's	Dwg #	WPS Code	NDE Requirements							Rev	Welder	Wire Heat #	Notes
					VT	PT	UT	RT1	RT3	WPS					
100	SHELL (50A) LONG SEAM	50A	D-12609.03	A	X				X	8101 7104 5101	15 11 8	60, 449 449 449, 113	065925 82253 036349/PV027701		
101	SHELL (50B) LONG SEAM	50B	D-12609.03	A	X				X	8101 7104 4101 5101	15 11 18 8	60, 449 449 449 449	065925 82253 T51996 036349/PV027701		
120	HEAD TO SHELL (50B) GIRTH SEAM	50B, 52	D-12609.03	A	X				X	8101 7104 5101	15 11 8	505, 449 449 449	065925 82253 036349/PV027701		
121	FLANGE TO SHELL (50A) GIRTH SEAM	50A, 53	D-12609.03	A	X				X	8101 7104 5101 8101	15 11 8 15	127, 449, 113 449 449, 113 113	065925 82253 036349/PV027701 065925	R1	
122	SHELL (50A) TO SHELL (50B) GIRTH SEAM	50A, 50B	D-12609.03	A	X				X	8101 7104 5101	15 11 8	538, 449 449 449	065925 82253 036349/PV027701		
140	NOZZ C: NECK TO SHELL & REPAD	50B, 62, 63	D-12609.03	A	X					8101 7104	15 11	127, 113 113, 539	065925 82253		
141	NOZZ C: REPAD TO SHELL	50B, 63	D-12609.03	A	X					8101 7104	15 11	127 539	065925 82253		
142	NOZZ D: NECK TO SHELL & REPAD	50B, 62, 63	D-12609.03	A	X					8101 7104	15 11	127, 113 113, 539	065925 82253		
143	NOZZ D: REPAD TO SHELL	50B, 63	D-12609.03	A	X					8101 7104	15 11	127, 539 539	065925 82253		
144	NOZZ K1: STUD PAD TO SHELL (50A)	50A, 66	D-12609.03	A	X					8101 7104	15 11	127, 146, 113 539	065925 82253		
145	NOZZ K2: STUD PAD TO SHELL (50A)	50A, 66	D-12609.03	A	X					8101 7104	15 11	127, 146, 113 539, 113	065925 82253		
146	NOZZ K3: STUD PAD TO SHELL (50B)	50B, 66	D-12609.03	A	X					8101 7104	15 11	127, 146, 539 539	065925 82253		
147	NOZZ K3: STUD PAD TO SHELL (50B)	50B, 66	D-12609.03	A	X					8101 7104	15 11	127, 146, 539 539	065925 82253		
148	NOZZ G: COUPLING TO SHELL (50A)	50A, 64	D-12609.03	A	X					8101 7104	15 11	127, 113 113	065925 82253		
149	NOZZ H: COUPLING TO SHELL (50A)	50A, 64	D-12609.03	A	X					8101 7104	15 11	127, 113 113	065925 82253		

BECHTEL
1133

J-2692-A WELD MATRIX

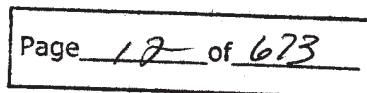
Weld	Weld Description	Item No's	Dwg #	WPS Code	NDE Requirements							Rev	Welder	Wire Heat #	Notes
					VT	PT	UT	RT1	RT3	WPS					
150	LONG BAFFLE TO HEAD & SHELL	50A, 50B, 52, 55	D-12609.03	A	X						8101	15	127	065925	
151	IMPINGEMENT PL TO LONG BAFFLE	55, 56	D-12609.03	A	X						7104	11	539	82253	
152	IMPINGEMENT PL TO SHELL (50B)	50B, 56	D-12609.03	A	X						8101	15	127, 529	065925	
153	NAME PLATE BRKT TO SHELL	50B, 90	D-12609.01	D	X						7104	11	529	82253	
154	U-BEND SUPPORT TACK WELDS	57G, 57H, 54	D-12609.02	A	X						8301	18	98	CT9267-739861	
155	LIFT LUG TO REPAD	72, 73	D-12609.01	A	X						8101	15	98	065925	
											8101	15	127, 539	065925	
156	LIFT LUG REPAD TO SHELL	50A, 50B, 73	D-12609.01	A	X						7104	11	539	82253	
157	NOZZ C: DISK TO NECK	62, 74	D-12609.03	A	X						8101	15	539	065925	
158	NOZZ D: DISK TO NECK	62, 74	D-12609.03	A	X						8101	15	520	065925	
159	ITEM 52 HEAD SPIN HOLE WELD	52	D-12609.03	A	X	X			X		8101	15	505	065925	
160	GUIDE BAR TO SHELL FL. & SHELL CYL.	75, 53, 50A	D-12609.03	A	X						8101	15	538, 520, 98	065925	
161	GUIDE BAR TO LONGIT. BAFFLE	75, 55	D-126609.03	A	X						8101	15	98, 538, 520	065925	
162	BAND END TACK WELDS	76, 77	D-12609.02	B	X						8303	25	98	YT9218-739540	
164	BANDS TO U-BEND SUPPORT ("A" UNIT)	54, 57G, 57H, 57J, 6, 77	D-12609.02	D	X						8301	18	98	YF8184	
300	CHANNEL LONG SEAM	3	D-12609.03	B	X				X		8303	25	60, 453, 529	DT9336-740400	
320	HEAD TO CHANNEL GIRTH SEAM	3, 4	D-12609.03	B	X				X		8303	25	250, 505	DT9336-740400	
321	FLANGE TO CHANNEL GIRTH SEAM	3, 5	D-12609.03	B	X				X		8303	25	453, 529	DT9336-740400	
322	HEAD SPIN HOLE WELD	4	D-12609.03	B	X	X			X		8303	25	538, 453	DT9336-740400	
340	NOZZ A: NECK TO CHANNEL & REPAD	3, 10, 12	D-12609.03	B	X						8303	25	538	DT9336-740400	
341	NOZZ A: REPAD TO SHELL	3, 12	D-12609.03	B	X						7303	16	26	YT9218-739540	
342	NOZZ B: NECK TO CHANNEL & REPAD	3, 10, 12	D-12609.03	B	X						7303	16	113	YT8882-736908	
343	NOZZ B: REPAD TO SHELL	3, 12	D-12609.03	B	X						8303	25	26, 538	DT9336-740400	
344	NOZZ E2: COUPLING TO CHANNEL	3, 13	D-12609.03	B	X						7303	16	538, 26	DT9336-740400	
345	NOZZ F2: COUPLING TO CHANNEL	3, 13	D-12609.03	B	X						8303	25	26, 538	DT9336-740400	
											7303	16	26	YT8882-736908	
											8303	25	26	DT9336-740400	
											8303	25	26	DT9336-740400	

BECHTEL
1133

J-2692-A WELD MATRIX

Weld	Weld Description	Item No's	Dwg #	WPS Code	NDE Requirements						Rev	Welder	Wire Heat #	Notes
					VT	PT	UT	RT1	RT3	WPS				
346	NOZZ J1: STUD PAD TO HEAD	4, 15	D-12609.03	B	X					8303	25	250, 529, 453	DT9336-740400	
										7303	16	529	Y19218-739540	
										8303	25	98	CT9336-740400	
347	NOZZ J2: STUD PAD TO HEAD	4, 15	D-12609.03	B	X					8303	25	250, 529, 453	DT9336-740400	
										7303	16	529	Y19218-739540	
348	NOZZ J3: STUD PAD TO HEAD	4, 15	D-12609.03	B	X					8303	25	250, 529, 453	DT9336-740400	
										7303	16	529	Y19218-739540	
349	NOZZ J4: STUD PAD TO HEAD	4, 15	D-12609.03	B	X					8303	25	250, 529, 453	DT9336-740400	
										7303	16	529	Y19218-739540	
350	NOZZ J5: STUD PAD TO HEAD	4, 15	D-12609.03	B	X					8303	25	250, 529	DT9336-740400	
										7303	16	529	Y19218-739540	
351	PASS PART PL TO HEAD & CHANNEL	3, 4, 9A, 9B, 9C	D-12609.03	B	X					8303	25	26, 538, 529	DT9336-740400	
										7303	16	529, 26	Y19218-739540	
400	NOZZ A: NECK TO FLANGE	10, 11	D-12609.03	B	X					8303	25	538, 539	DT9336-740400	
401	NOZZ B: NECK TO FLANGE	10, 11	D-12609.03	B	X					8303	25	538, 539	DT9336-740400	
402	NOZZ E1: CPLG TO NOZZ "A" NECK	10, 13	D-12609.03	B	X					8303	25	538, 529	DT9336-740400	
403	NOZZ F1: CPLG TO NOZZ "B" NECK	10, 13	D-12609.03	B	X					8303	25	26, 529	DT9336-740400	
500	TUBE TO TUBESHEET WELDS	1, 2A	D-12609.02	C	X	X				305	6	98, 60	N/A	
										305	6	128, 376	N/A	
										8303	25	128	CT9336-740400	
										305	6	200	N/A	R1
501	T.W. NUTS TO TIE ROD & BAFFLE	57A, 57B, 57C, 57D, 58, 60	D-12609.02	A	X					8101	15	98	065925	
600	WEAR PL TO SHELL FIXED SADDLE	50A, 103	D-12609.04	A	X					8101	15	127, 453	065925	
										7104	11	539, 453	82253	
601	WEAR PL TO END PL FIXED SADDLE	103, 104	D-12609.04	A	X					7104	11	529, 453	82253	
										8101	15	127	065925	
602	SUPPORT WELDS FIXED SADDLE	100, 101, 102, 103, 104, 000	D-12609.04	A	X					8101	15	146	065925	
										7104	11	529	82253	
603	WEAR PL TO SHELL SLOTTED SADDLE	50B, 103	D-12609.04	A	X					8101	15	127	065925	
										7104	11	539, 453	82253	
604	WEAR PL TO END PL SLOTTED SADDLE	103, 104	D-12609.04	A	X					7104	11	529, 453	82253	
										8101	15	127	065925	
605	SUPPORT WELDS SLOTTED SADDLE	100, 101, 102, 103, 104, 000	D-12609.04	A	X					8101	15	146	065925	
										7104	11	529	82253	
606	GROUND LUG TO END PL FIXED SADDLE	104, 106	D-12609.04	A	X					8101	15	538	065925	

BECHTEL
1133

[illegible]

Certificate Material Test Report

According to EN10242 3.1, ASME SA 688 Section 18

453-01-11



Cliente: JOSEPH OAT CORP.

Customer:

Ordine N.: 064895

Order Nbr.

Produttore: AD TUBI INOSSIDABILI S.p.A.

Manufacturer: Via Adige 2

22070 Casnate con Bernate (CO)

Italy

Oggetto del Test: Tubo saldato longitudinalmente

Test object: Longitudinal Welded tubes

Codifica Materiale:

TP 304L

Material Code:

The material has been manufactured, tested, and inspected in accordance with ASME SA688, ASME SA249 and customer order

Test results on representative samples meet specification requirements.

No welding with filler metal performed

Secondo Norma: PO 064895

According to standard: ASME SECTION III CLASS 3 Ed.1974

ASME SECTION II 1974 ASTM/ASME A/SA249 ASTM/ASMEA/SA688

Condizioni di consegna:

Solution annealed and quenched

Delivery Condition:

Inside bead rolled

ID surface electropolished

Marcatura:

W HEAT-TUBE ASTM/ASME A/SA688 A.W. EN1.4307 TP 304L 0.75OD" x .049"

Marking:

avg. H. _____ Lot Nr. _____ MADE IN ITALY / EU Cod.Op. date and hour

Processo di colata:

E+AOD

Marchio:

AD

Melting process:

Trade Mark:

Timbro del Resp.: AD

Mill's Inspector stamp:

Descrizione Materiale:

Material Specification:

Colata Heat	Lotto Lot Nbr.	Pezzi Pieces	Lunghezza Length	Oggetto Object
92252	H0378	2388	173941.452"	welded tube .75"x.049" x various lengths
92252	H0378	35	12141.142"	welded tube .75"x.049" x 346.89"

Risultati dei Tests:

La consegna soddisfa le richieste dell'ordine

Tests result:

The delivery satisfies order's requirements



BECHTEL
1133

Casnate con Bernate

10/06/11

AD Tubi Inossidabili S.p.A.

JOSEPH OAT QUALITY CONTROL

Responsabile della Qualità

Mill's Inspector

Allegati: Testing Result

Enclosure:

APP'D Diana Martin 11/2/11

ADDENDA

1974

J-2692 IT-1
P.O. 64895

A.D. TUBI INOSSIDABILI S.p.A.

Ufficio e Stabilimento: 22070 Casnate con Bernate (CO) - Via Adige, 2 Sede Legale: 20135 Milano - Via Trebbia, 6

www.adtubi.com - info@adtubi.com Tel ++39 031 396.341 - Fax ++39 031 4036984

P.IVA CEE IT 12147670169 - Reg. I

Pag. 1 di 2

Page 13 of 623

PAGE 10

Risultati dei Tests:

Testing results

Tolleranza dimensionale secondo ASTM/ASME A/SA688 AW

Dimensional Tolerance acc. To ASTM/ASME A/SA688 AW

Controllo Visivo e Dimensionale:

Visual and gaugin control:

Satisfactory

Test Eddy Current ASTM E426 and ASTM/ASME A/SA688 S1 - Tubi dritti:

100% Satisfactory

Test Eddy Current ASTM E426 and ASTM/ASME A/SA688 S1 - Stright tubes

Test Pneumatico Differenziale ASTM A1047 (150 psig) - Tubi dritti

100% Satisfactory

Differential Pneumatic Test according to ASTM A1047 (150 psig) - Stright tubes

Test Idrostatico secondo PO 064895 ASTM A450 (1000 psi) - Tubi curvati

100% Satisfactory

Hydrostatic Test according to PO 064895 ASTM A450 (1000 psi) : Bended tubes

Test di Svasatura, Flangiatura ASTM/ASME A/SA688

Satisfactory

Flaring, Flanging, Test ASTM/ASME A/SA688:

Test di Schiacciamento e Piega-rovescio ASTM/ASME A/SA688

Satisfactory

Flattening and Reverse-bending Test Test ASTM/ASME A/SA688:

Test di rugosità secondo EN 4288 - Tubi elettrolucidati

Ra = 0,22 - 0,62 µm

Roughness test according to EN 4288 - Electropolished tubes

Test contaminazione da Cloruriri in acc a ASTM/ASME A/SA688 (Par.15.2):

Satisfactory

Chloride salt contamination Test according to ASTM/ASME A/SA688 (Par.15.2):

Trattamento Termico tubi dritti:

Solubilizzazione a 1950°F e raffreddamento rapido

Heat treatment straight tubes

1950 °F solution annealed and rapidly cooled

Trattamento Termico tubi curvati:

Solubilizzazione a 1950°F e raffreddamento rapido

Heat treatment bended tubes

1950 °F solution annealed and rapidly cooled

Prova antimiscuglio (PMI):

Satisfactory

Positive materia identification (PMI)

Prova di Trazione Secondo ASTM E8 (Longitudinale):

Satisfactory

Tensile Test According to ASTM E8 (Longitudinal):

Lot Nr.	Heat	Test Nbr.	Specimen size	Yeld Str./ 0,2% [Mpa]	Tensile Strenght [Mpa]	Hardness [HRB]	Elongation %
Required characteristics				≥ 175	≥ 485	≤ B90	≥ 35
H0378	92252	T7638/11	full size x 300 mm	296 ✓	588,4 ✓	86,1 ✓	64,2 ✓
		T7637/11	full size x 300 mm	293 ✓	583,5 ✓	86,4 ✓	64,0 ✓

Analisi Chimica - Chemical Composition acc to ASTM/ASME A/SA688 PO 064895

Heat	C	Mn	P	S	Si	Cr	Ni	Co	N
Required characteristics	≤ 0,03	≤ 2	≤ 0,040	≤ 0,03	≤ 0,75	18-20	8-13	≤ 0,25	
92252	0,024 ✓	1,770 ✓	0,031 ✓	0,002 ✓	0,430 ✓	18,300 ✓	8,100 ✓	0,160 ✓	0,046

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 11/2/11

ADDENDA

1974
J-2692 IT.1
P.O. 64895

A.D. TUBI INOSSIDABILI S.P.A.

Uffici e Stabilimento: 22070 Casnate con Bernate (CO) - Via Adige, 2 - Sede Legale: 20135 Milano - Via Trebbia, 5
www.adtubi.com - info@adtubi.com Tel ++39 031 398.341 - Fax ++39 031 4036984
P.IVA CEE IT 12147570159 - Reg. I

Pag. 2 di 2

Page 14 of 673

PAGE 11

Certificate Material Test Report

According to EN10242 3.1, ASME SA 688 Section 18

575-01-11

**A.D. TUBI
INOSSIDABILI S.p.A.****Cliente:** JOSEPH OAT CORP.**Customer:****Ordine N.:** 064895**Order Nbr:****Produttore:** AD TUBI INOSSIDABILI S.p.A.**Manufacturer:** Via Adige 2

22070 Casnate con Bernate (CO)

Italy

Oggetto del Test: Tubo saldato longitudinalmente**Test object:** Longitudinal Welded tubes**Codifica Materiale:**

TP 304L

Material Code:

The material has been manufactured, tested, and inspected in accordance with ASME SA688, ✓

ASME SA249 and customer order

Test results on representative samples meet specification requirements.

No welding with filler metal performed

Secondo Norma: PO 064895**According to standard:**

ASME SECTION III CLASS 3 Ed.1974

ASME SECTION II 1974 ASTM/ASME A/SA249 ASTM/ASMEA/SA688

Condizioni di consegna:

Solution annealed and quenched

Delivery Condition:

Inside bead rolled

ID surface electropolished

Marcatura:

W HEAT-TUBE ASTM/ASME A/SA688 A.W. EN1.4307 TP 304L 0.75OD" x .049"

Marking:

avg. H. _____ Lot Nr. _____ MADE IN ITALY / EU Cod.Op. date and hour

Processo di colata:

E+AOD

Marchio:

AD

Melting process:**Trade Mark:****Timbro del Resp.:**

AD

Mill's inspector stamp:**BECHTEL
1133****Descrizione Materiale:****Material Specification:**

Colata Heat	Lotto Lot Nbr.	Pezzi Pieces	Lunghezza Length	Oggetto Object
92252 ✓	H0378	484	140948.921"	welded tube .75"x.049" x various lengths
0403903 ✓	H0754	696	191841.599"	welded tube .75"x.049" x various lengths

JOSEPH OAT QUALITY CONTROL

APPD Diana Martinelli 11/16/12

Risultati dei Tests:**La consegna soddisfa le richieste dell'ordine****Tests result:****The delivery satisfies order's requirements**

ADDENDA

1974

J-2692
P.O. 64895 I.T.L.

Casnate con Bernate

12-23-11

AD Tubi Inossidabili S.p.A.

Responsabile della Qualità

Mill's Inspector

Allegati:

Testing Result

Enclosure:**A.D. TUBI INOSSIDABILI S.p.A.**

Uffici e Stabilimento: 22070 Casnate con Bernate (CO) - Via Adige, 2 - Sede Legale: 20135 Milano - Via Trebbia, 5

www.adtubi.com - info@adtubi.com Tel ++39 031 396.141 - Fax ++39 031 40369801

P.IVA CEE IT 12147570159 - Rep

Pag. 1 di 2

Page 15 of 673

Risultati dei Tests:

Testing results



Tolleranza dimensionale secondo ASTM/ASME A/SA688 AW

Dimensional Tolerance acc. To ASTM/ASME A/SA688 AW

Controllo Visivo e Dimensionale:

Visual and gaugin control:

Satisfactory

Test Eddy Current ASTM E426 and ASTM/ASME A/SA688 S1 - Tubi dritti:

100% Satisfactory

Test Eddy Current ASTM E426 and ASTM/ASME A/SA688 S1 - Stright tubes

Test Pneumatico Differenziale ASTM A1047 (150 psig) - Tubi dritti

100% Satisfactory

Differential Pneumatic Test according to ASTM A1047 (150 psig) - Stright tubes

Test Idrostatico secondo PO 064895 ASTM A450 (1000 psi) - Tubi curvati

100% Satisfactory

Hydrostatic Test according to PO 064895 ASTM A450 (1000 psi) : Bended tubes

Test di Svasatura, Flangiatura ASTM/ASME A/SA688

Satisfactory

Flaring, Flanging, Test ASTM/ASME A/SA688:

Test di Schiacciamento e Piega-rovescio ASTM/ASME A/SA688

Satisfactory

Flattening and Reverse-bending Test Test ASTM/ASME A/SA688:

Test di rugosità secondo EN 4288 - Tubi elettrolucidati

Ra = 0,20 - 0,68 µm

Roughness test according to EN 4288 - Electropolished tubes

Test contaminazione da Cloruriri in acc a ASTM/ASME A/SA688 (Par.15.2):

Satisfactory

Chloride salt contamination Test according to ASTM/ASME A/SA688 (Par.15.2):

Trattamento Termico tubi dritti:

Solubilizzazione a 1950°F e raffreddamento rapido

Heat treatment straight tubes

1950 °F solution annealed and rapidly cooled

Trattamento Termico tubi curvati:

Solubilizzazione a 1950°F e raffreddamento rapido

Heat treatment bended tubes

1950 °F solution annealed and rapidly cooled

Prova antimiscuglio (PMI):

Satisfactory

Positive materila identification (PMI)

Prova di Trazione Secondo ASTM E8 (Longitudinale):

Satisfactory

Tensile Test According to ASTM E8 (Longitudinal):

Lot Nr.	Heat	Test Nbr.	Specimen size	Yeld Str./ 0,2% [Mpa]	Tensile Strenght [Mpa]	Hardness [HRB]	Elongation %
Required characteristics				≥ 175	≥ 485	≤ B90	≥ 35
H0378	92252	T8512/11	full size x 300 mm	289,2	579,7	81	66,2
		T8513/11	full size x 300 mm	284,2	571,2	81,5	65,8
H0754	0403903	T8506/11	full size x 300 mm	294,8	588,4	82	65,0
		T8507/11	full size x 300 mm	297,4	597,3	81,5	63,8

Analisi Chimica - Chemical Composition acc to ASTM/ASME A/SA688 PO 064895

Heat	C	Mn	P	S	Si	Cr	Ni	Co	N
Required characteristics	≤ 0,03	≤ 2	≤ 0,040	≤ 0,03	≤ 0,75	18-20	8-13	≤ 0,25	
92252	0,024	1,770	0,031	0,002	0,430	18,300	8,100	0,160	0,046
0403903	0,023	1,750	0,025	0,001	0,300	18,120	8,020	0,190	0,065

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 11/16/12

ADDENDA

1974
J-2692
P.O. 64895
I.T. 1

A.D. TUBI INOSSIDABILI S.P.A.

Ufficio e Stabilimento: 22070 Casnate con Bernate (CO) - Via Adige, 2 - Sede Legale: 20135 Milano - Via Trebbia, 5

www.adtubi.com - info@adtubi.com Tel ++39 031 396.341 - Fax ++39 031 4036984

P.IVA CEE IT 12147570159 - Reg. I

Pag. 2 di 2

Page 16 of 673

OUTO KUMPU

ABBANDONAMENTO DEI DEPOSITI
DIN. EN 10204 1.1

3-1

855135/001 1 (01)
25-01-01

Designation: INOX 3.2.1.2 VIA MONZA 1 20089 GROSSETO ITALY		DESIGNER: C.D. INOX 3.2.1.2 VIA GRANSCL 7/1 20089 GROSSETO ITALY																									
Material: ASTM A240/A240M-03 ASME 2007 SEC. II PART A SA-240 AD 2000 W2, WID. EN 10028-2 ASTM A240/A240M-03 ASME 2007 SEC. II PART A SA-240		Certificate No.: 00/001883																									
BAND N ROHKAUEN NICHTROSTEND		Addendum: ADD																									
TYPE 304 L 1.4307 TYPE 304		EN 100 9215 1 2006																									
A/SA-240 304L 2B																											
Lot: 1 Size: 2 Weight: 2 92252 2 Dimensions: 1.2 X 3500 300	Lot: 2 Size: 2 Weight: 24150 30 2B																										
<table border="1"> <thead> <tr> <th>Element</th> <th>C</th> <th>Si</th> <th>Mn</th> <th>P</th> <th>S</th> <th>Cr</th> <th>Ni</th> <th>Mo</th> <th>Cu</th> <th>Al</th> <th>Fe</th> </tr> </thead> <tbody> <tr> <td>92252</td> <td>0.024</td> <td>0.042</td> <td>0.27</td> <td>0.032</td> <td>0.002</td> <td>18.3</td> <td>8.3</td> <td>0.048</td> <td>0.15</td> <td></td> <td></td> </tr> </tbody> </table>				Element	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Fe	92252	0.024	0.042	0.27	0.032	0.002	18.3	8.3	0.048	0.15		
Element	C	Si	Mn	P	S	Cr	Ni	Mo	Cu	Al	Fe																
92252	0.024	0.042	0.27	0.032	0.002	18.3	8.3	0.048	0.15																		
<table border="1"> <thead> <tr> <th>Element</th> <th>Yield</th> <th>Tensile</th> <th>Elong.</th> <th>Reduct.</th> <th>Hardness</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>235</td> <td>515</td> <td>53</td> <td>37</td> <td>165</td> </tr> </tbody> </table>				Element	Yield	Tensile	Elong.	Reduct.	Hardness	1	235	515	53	37	165												
Element	Yield	Tensile	Elong.	Reduct.	Hardness																						
1	235	515	53	37	165																						
Inspection: NO WELDING WITH FILLER METAL PERFORMED MATERIALE CONSEGNATO A.D. TUBI NS DOT GES V028188 DEL 29/04/2011 SOFFO FORMA DI NASIRI 120 X180 CL. PORTINO VS ORD. N.RO. 722011																											
OUTOKUMPU Stainless Oy Antti-Pekka Saloniemi ANDRÉ-JACQUES SAGNI																											

JOSEPH OUT QUALITY CONTROL

APPD Dia. no Martin 11/16/12

ADDENDA 1974

J-2492 I.T.I.
P.O. 64855

BECHTEL 1133

H0378

**CERTIFICATO DI COLLAUDO
INSPECTION CERTIFICATE
CERTIFICATE DE RECEPTION
ABNAHMEPRÜFZEUGNIS B***

EN:10204/3.1

0608744

C.P.C. INOX SPA
VIA GRAMSCI 7/9
CORMANO
20032 MI ITALIA

C. P. C. INOX SPA
VIA MONZA 1-ZONA INDUSTRIALE
GESSATE
20060 MI ITALIA

ThyssenKrupp Acciai Speciali Temi S.p.A. con sede in:
Via degli Acciai ThyssenKrupp 5/1000

21066004

EN 10028-1
EN 10088-2
ASTM A 240/01A
ASME SA 240/01

052001214
GAGNE CLIENTE ET
CUSTOMER ORDER ET
COMMANDE DU CLIENT ET
RECHERCHER

8X056333
URGENT INTERCOM
INTERNAL ORDER N
COMMANDE MIT N
VERKUS NA
AVE CH SPENZ
SUPPLY NOTICE N
WTS DEPENDENT N
VERSAND NEECE N
TP092480



~~PRODUCT~~ **STAINLESS STEEL COILS**
~~PRODUCT~~ **NO WELDING WITH FILLER METAL**
~~PRODUCT~~ **PHILGEGENSTAND**

N° PRODOTTO CON N° N° BOONE RANDON	N° COLATA (HEAT N° N° COULÉE SCHMELZE N°)	COMPOSIZIONE CHIMICA - CHEMICAL COMPOSITION - COMPOSITION CHIMIQUE - CHEMISCHE ZUSAMMENSETZUNG												
		% C	% H	% N	% P	% S	% Cr	% Mn	% Mo	% Ni	% Cu	% Co	% Fe	%
018607	0403903	0.023	1.75	30	0.025	0.003	18.12	8.02	.18	.065		190	250	

TYPE D'ACCLINO
STEELTYPE
TYPE D'ACCR
HARDENDE FENICOL

AST 304DL
1.4307
1.4307
304L
304L

TIPO DEL PRODUTTORE:
 PRODUCER TRADE MARK:
 MARQUE DU PRODUCTEUR:
 TIPO DEI DEFORMATI:

TIMBRE DEL RESPONSABLE INCARCADO:
INSPECTOR STAMP
MARQUE DU RESPONSABLE CHARGE
STAMPER DES MESSACINTERSTANDARDIER
TCA 0000



EN ISO 3651-2

TRISTERRAC - ROOMTEMPERATURE 1050°C AIR-ACQUA/NEUTRAL-ALOE
HEAT-TREATMENT: ANNEALING: AIR-WATER SPRAY-WATER COOLING
TRAVELTENT: THERMOLITE: HYDROTRONIC: AIR-CAU-ATMOSFERE-CAU
WARMTHEDRINKING: AEROSOLITE-CAUT: SPRUNWASSER-VIESTER

PROCESSO DELA CRABONE K-ADD-CE
SITILAMING PROCESS
PROCEDE DELA CRABONE
(PSCIBELZINGAS)

LE MATERIALE PRESENTATE ALLA COMMISSIONE INTERGRADUALE SECONDO
 LE MATERIE PRESENTATE ALL'INTERCOMMISSIONE COORDINATA
 LE MATERIE PRESENTATE ALLA COMMISSIONE INTERGRADUALE SECONDO
 LE MATERIE PRESENTATE ALL'INTERCOMMISSIONE COORDINATA

RISULTATI DELLE PROVE / TEST RESULTS / RESULTATS DES ESSAIS / ERGEBNIS DER PRÜFUNGEN (1) Num. : 1 M Pg														US INTRUSIVE RESISTANCE TO CORROSION TESTING DE CORROSION RESISTANCE TESTING INTERPRETATION		
N° COLLO PACKAGE N° N° COLLE KISTEN N°	N° FOTOLO COLLIN N° BOBINE BAND N°	MATERIALE MATERIAL MATERIAL MATERIAL	SPEZZI SPECIES SPECIES SPECIES	FIBRILLI FIBRILLI FIBRILLI FIBRILLI	FESSI FIBRILLI FIBRILLI FIBRILLI	L L L L	L L L L	TRAZIONE - TRACTION - TRACTION - TRACTION			DUREZZA HARDNESS DUREZZA DUREZZA	PESCA BEND PESCA PESCA	GRADO GRAD GRAD GRAD			
								MPa	MPa	MPa				MPa	MPa	MPa
TI0399	018607	.30 X 1520.0	1	2D	26020	T	T	314	342	658	53.1	64.1	82.0			
TI0399		MATERIALE CONSEGNATO AD A.D. TUB NS.DDT GES V028155 DEL 08/11/2011 SOTTO FORMA DI NASTRI 1.20 X 58.5 CL P092864 VS ORD N. PO 216/2011				C	T	308	338	659	55.0	55.2	80.0			

GPO INOX S.p.A.

COMPLIES WITH ED 2000/53/EC

ThyssenKrupp Acetal Special Termi S.p.A.
FIRMA DEL PROPRIETARIO INCARICATO
INSPECTOR SIGNATURE

Certificato emesso automaticamente.

C. GUZZI

1) Soggetti - Località - Tip
A. Città - Top - Anno - Gen
B. Coda - Regione - Paese - Città

2) Stato - Tipo di Trasporto
A. Paese/Azienda - Numero - Quota
B. Longitudine - Latitudine - Altezza - Long.

Unità operativa di Torino 00151 TORINO - C.so Regina M. 400 - Tel. 011/4511201 - F.

MARGARET
MARTINE
MARCOLE
MAYLE O'NEILL

Var. Type:
Hosts: *Callitriche*
Flowers: *Fraxinus*

FORM NO. 08-03-2006

JOSEPH D. QUALITY CONTROL
AND Discrepancy 11/6/12
ADDENDA 1974
J-2692 IT-1
P.O. 64895

H0754

PAGE 15

BECHTEL
1133

PRECISION FINNING & BENDING, INC.

1250 Saint George Street
Suite # 6
East Liverpool, Ohio 43920
Phone: 330-382-9351
Fax: 330-382-9354

CERTIFICATION REPORT

SHOP ORDER #: 12-4-6855B

CUSTOMER ORDER #: 066009-00

PIECES : 22

MATERIAL: 3/4" x .049" AW SA249/304 Welded Stainless Steel U-Bend

N/A STRESS RELIEF ANNEALED @ Degrees F +/- 50 Degrees F

U-BENDS PLUS BEYOND TANGENT BY ELECTRIC RESISTANCE METHOD

 X HYDROSTATIC TESTED @ 1000 PSI FOR 5 SECONDS

 N/A AIR UNDER WATER @ PSI FOR SECONDS

BECHTEL
1133

BY: *Jason Anderson*

DATE: 4-10-12

JOSEPH OAT QUALITY CONTROL

APPD *Diana Martin* 4/16/12

CODE YR. 1974 / ADD

5-2692 Ir.1

P.O. 66009

Page 19 of 673



Joseph Oat Corporation

Date: 6/29/11

SUBJECT: Customer Purchase Order Number 241916
Joseph Oat Job Number 2692
Joseph Oat Item Number 2A

CERTIFIED MATERIAL TEST REPORT

Description: ASME Material Specification SA240 304/304L
Code Year 1974 Addenda N/A Class 3
Size 4 1/2" Thick Plate

Heat Number: 274443

Material Manufacturer Sandmeyer Steel Company (CMTR Attached)

SUPPLEMENTARY TESTS

Chemical Analysis	Accept
Corrosion	N/A
Bend Test	N/A
Ferrite Count	N/A
Grain Size	N/A

CERTIFICATION

We certify that the material described on this report meets the requirements for procurement, material specification and all special requirements of ASME, Section III, Division 1 of the ASME Boiler and Pressure Vessel Code and above references. This material has been processed and supplied in accordance with our Quality System Program, Certificate Number N-1488, which expires 08/04/2012.

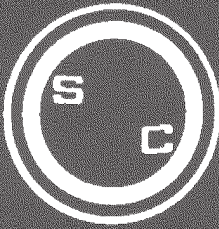
Diana M. Martin
Quality Control Department

2500 Broadway / Drawer 10 / Camden, New Jersey 08104 / (856) 541-2900
Fax (856) 541-0864 / TELEX 834618

Page 20 of 673

CERTIFIED MATERIAL TEST REPORT

SSC ORDER NO. 61603



SANDMEYER STEEL COMPANY

(Incorporated)

ONE SANDMEYER LANE • PHILADELPHIA, PA 19116-3598
800-523-3663 • FAX 215-677-1430 • www.SandmeyerSteel.com

Family Owned and Managed —
Making Stainless Steel and Nickel Alloy Plate Products
Since 1952

BILL
TO

CERTIFICATE OF TEST

JOSEPH OAT CORP.
2500 BROADWAY-DRAWN
CAMDEN, NJ 08104

JOSEPH OAT QUALITY CONTROL

WE CERTIFY THAT THE CHEMICAL ANALYSIS
AND MECHANICAL TEST RESULTS APPEARING
IN THIS CERTIFICATE ARE CORRECT AND
TRUE AS REPORTED BY THE MANUFACTURER.

APP'D Diana Martin 16/27/11

ADDENDA

1974
J-2692 IT.2A 6/15/11
P.D. 45097

SANDMEYER STEEL COMPANY
T. BOHNSACK - MANAGER QUALITY ASSURANCE
AND ENGINEERING

CUSTOMER ORDER NO. 065097-00

DATE: 06/14/11

GRADE: UNS S30403		SPECIFICATION: ASME SA240 2004 ED				HEAT NO: 274443		
PIECES	DESCRIPTION							
	SSC TYPE 304L E-Z DRILL PLATE							
2	60-3/16" OD X 4-1/2" J-2692, IT.2A - 5000-000					PLATE NO. 45701		
1	4-1/2" X 4" X 6" GRAIN TO RUN W/4" DIMENSION - J-2692, 5000-000					PLATE NO. 45701		
MATERIAL MEETS REQUIREMENTS OF 304 E-Z DRILL AND 304L E-Z DRILL								
HEAT NO.	C	Mn	P	S	Si	Ni	Cr	N
274443	0.023	1.400	0.032	0.02600	0.330	8.300	18.290	0.086
PC# 21927								
HEAT NO.	Yield *	Tensile *	Elong	Red	Hardness	Inter Gran		
274443	41,610	85,400	76% IN 2"	64%	RB 85	A-262 E		

BECHTEL
1133

RECORDS OF ALL TESTS ARE MAINTAINED AT SANDMEYER STEEL COMPANY

* LBS/IN2

MATERIAL PRODUCED BY ACRONI
THIS MATERIAL IS FREE FROM MERCURY CONTAMINATION

Page 21 of 673

ACRONI

TEHNIČNA KONTROLA
Telefon: +386 4 584 10 43
Telefax: +386 4 584 10 88
http://www.acroni.si
E-mail: anton.papler@acroni.si

Potrdilo o prevzemu 3.1/ Abnahmeprüfzeugnis 3.1/ Inspection certificate 3.1

Stran/Seite/Page 1/1

EN 10 204 3.1

St./Nr./No.

Datum/Datum/Date

310023030-2

03.03.2011

Narocnik / Kunde / Customer

SANDMEYER STEEL COMPANY

ONE SANDMAYER LANE
PA19116 PHILADELPHIA

UNITED STATES

Narocilo / Bestellung Nr. / Order No.

62116 disp. 32524

Dobavil list / Lieferschein / Dispatch note

310023030 z/vom/rom 28.02.2011

Izdelek / Erzeugnis / Product

Plates

Vrsta peči / Erhmelzungsart / Melting furnace

E+VOD

Znak izvedence TK
Zeichen des sachverständigen
Inspectors' stamp



Znak proizvajalca
Zeichen des Herstellers
Mark of the Manufacturer



Specifikacije / Vorschriften / Specifications

ASTM A 240 Ed.09

ASME SA 240 - 2007 Section II Part A + Add.09

QQ-5-766D

Tip / W.nr. / Type

304LEZ/304EZ

530403/530400

Pov. / Fläche / Finish

No.1

No.:1

Koroz. test / Int.krist.korr. / Corrosion test

ASTM A262 PRACTICE E:OH

AMS 5511H/AMS 5513H

SAE 30304L/30304



NACE MR 0103-2007
NACE MR 0175-2005

Obsag dobave / Umfang der Lieferung / Extent of material delivery

Poz. Pos. Item	St. garza Schmelzen Nr. Heat No.	St. plošče Waltztafel Plate No.	Teža neto Gewicht Weight kg	Dimenzije Abmessungen Dimensions	St. kom. Stückzahl Quantity	St. vzorca Probe Nr. Sample No.
12	274443	21927	9433 45701	4.50 / 78 / 205	1	21927T

Mehanske lastnosti / Mechanische Eigenschaften / Mechanical properties

St. vzorca Probe Nr. Sample No.	Smern. vzorca Proben lage Position	Nap.tecenje Dehn granze Yield 0.2% R _{0.2}	Nap.tecenje Dehn granze Yield 1% R _{0.1}	Nap.tecenje Zugfestigkeit Tensile Str. R _m	Raztezak / Bruchdehnung / Elongation AS % A80 % A80 %	Kontrakt. Einschnürung Red. of area %	Trdota Harte Hardness HRC	Zilavost / Kerbschlag / Impact pri / smer bei / lage at / pos.
Zahteva Anforderung. Requirement.	MIN MAX	30	75	40	92			
21927 T P	41.61	85.4	53.2	75.5	64.4	83	245	239 251 68

G - Glava / Kopf / Top N - Noga / Fuss / Bottom V - Vz dolžno / Längs / Longitudinal P - Prečno / Quer / Transverse Upogib / Biege / Bend:

Kemična analiza / Chemische Zusammensetzung / Chemical Composition

Garza/Schmelzen Nr./ Heat No.	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Cu	%Mo	%Co	%N	%Nb	%Ti	Ferite
274443	0.023	0.33	1.40	0.032	0.026	18.29	8.30	0.34	0.33	0.12	0.0864	0.009	<0.005	

Opombe / Bemerkungen / Remarks

THICKNESS TOLERANCE ACCORDING ASME SA 480/SA 480M - 2007
FREE FROM KNOWN CONTAMINATION WITH MERCURY
NO WELD REPAIR
HEAT TREATMENT: SOLUTION ANNEALED AT 1925°F WATER QUENCHED
POSITIVE MATERIAL IDENTIFICATION (PMI TEST): OK
FREE FROM RADIOACTIVE CONTAMINATION

We confirm herewith that the delivered material complies with the terms of the order.

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 16/27/11

ADDENDA

1974
J-2692 Jr. 2A
P.O.L. 5097 601

Phy 40898



ACRONI Zig in gradis 1974
ACRONI, d.o.o. Brnalska pot 1974
Cesta Borisa Kidričeve 1974
Član skupine SI
Member of Slovenian Steel Group



LABORATORY TESTING INC.

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 * FAX: 800-219-9096

SOLD TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104

Certified Test Report

JOC001-11-06-22180-1



Accredited

Materials Testing Laboratory
Nondestructive Testing

SHIP TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104
ATTN: Justin Kaplan

CUSTOMER P.O.

065166-00

CERTIFICATION DATE

6/28/2011

SHIP VIA

CUSTOMER PICKUP

DESCRIPTION

Quantity: 1
Type: 4-1/2" Thick Plate
Job No.: 2692A/B, Attachment 2, Rev. 0
Original Manufacture: Sandmeyer Steel
Heat No.: 274443
Plate No.: 21927
Material Type: ASME Section III, Class 3, 1974 Edition, No Addenda;
ASME Section II; ASME SA-240, Grades 304/304L
Size: 4" x 6"

The referenced sample was submitted to chemical content evaluation and it was found to be in conformance to ASME SA-240, 1974 Edition, No Addenda, Types 304 and 304L with the following results:

	304		304L		
-- REQUIREMENTS --					
<u>ELEMENT</u>	<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	<u>ACTUAL</u>
C		0.08		0.03	0.03%
Co		0.25		0.25	0.14%
Cr	18.00	20.00	18.00	20.00	18.41%
Mn		2.00		2.00	1.40%
Ni	8.00	10.50	8.00	12.00	8.22%
P		0.045		0.045	0.031%
S		0.030		0.030	0.018%
Si		1.00		1.00	0.35%



Procedures/Methods: 86-SCA-0, Rev. 11, Direct Reading Atom Emissions Spectroscopy

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 6/29/11

ADDENDA

1974
J-2692 IT. 2A, 601
P.O. 65166

Page 23 of 673



LABORATORY TESTING INC.

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

Certified Test Report

JOC001-11-06-22180-1



Accredited

Materials Testing Laboratory
Nondestructive Testing

TENSILE TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	(PSI) TENSILE STRENGTH	(PSI) YIELD (.2%) STRENGTH	(%) ELONGATION (IN 2")	KEY C/NC/R
REQUIRED	Min	Min	Min	
304	75,000	30,000	40	
304L	70,000	25,000	40	
ACTUAL	83,500	40,600	59	C

HARDNESS TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	HARDNESS READINGS		SCALE	AVG.	SCALE	KEY (C/NC/R)
REQUIRED	MAX 88	SCALE HRBW				
ACTUAL	82	83	83	83	HRBW	C

JOSEPH OAT QUALITY CONTROL

APP'D *Dianna Martin* 6/29/11

ADDENDA

1974
J-2692 Fr. 2A, 601
P.D. 6/5/66

BECHTEL
1133

The provisions of 10CFR21 and 10CFR50, Appendix B apply to this order.

All testing was performed in accordance with L.T.I. Quality System Program Manual, Rev. 18 dated 7/27/07 as audited and approved by Joseph Oat Corporation.

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 18 dated 7/27/07 and ISO/IEC 17025. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. L.T.I. is accredited by PRI to ISO17025 and by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at www.labtesting.com and www.eAuditNet.com. The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

MERCURY CONTAMINATION: During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

NOTE: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherri L. Scheifele
QA Specialist

Sherri L. Scheifele

Authorized Signature (ES)

Page 24 of 623

Haward Corp.
29 Porete Ave.
North Arlington, NJ 07031-6797
Phone: (201) 991-8777 Fax: (201) 991-1903
www.haward.com

AS 9100:2004 Certified

S.O. No	78299
Ship Date	09/07/11
Page	1

Ship To

Joseph Oat Corp
2500 Broadway
Camden, NJ 08104

Bill To

Joseph Oat Corp
2500 Broadway
Camden, NJ 08104
Phone: (856) 541-2900
Fax: (856) 541-6062

Certificate of Compliance

We hereby certify that during processing parts were not contaminated by mercury or mercury compounds.

Qty Received	Part No. & Description	Qty Shipped
2	DISC, MACHINED 60-3/16"DIA X 3-13/16" THICK Specs: ELECTROPOLISH ONE SIDE ASTM B912-02 P.O.#: 065284-00 Job #: 69911 Containers: 2 SKIDS	2
JOSEPH OAT QUALITY CONTROL APP'D <u>Dianna Martin</u> 9/22/11 ADDENDA <u>1974</u> <u>J-2692</u> <u>IT-2A, 601</u> <u>P.O. 65284</u> BECHTEL 1133		

Dean E. Ward

Page 25 of 473



Joseph Oat Corporation

Date: 6/29/11

SUBJECT: Customer Purchase Order Number 241916
Joseph Oat Job Number 2692
Joseph Oat Item Number 3, 9A

CERTIFIED MATERIAL TEST REPORT

Description: ASME Material Specification SA240 304/304L
Code Year 1974 Addenda N/A Class 3
Size 1/2" Thick Plate

Heat Number: 9AB8

Material Manufacturer North American Stainless (CMTR Attached)

SUPPLEMENTARY TESTS

Chemical Analysis	Accept
Corrosion	N/A
Bend Test	N/A
Ferrite Count	N/A
Grain Size	N/A

CERTIFICATION

We certify that the material described on this report meets the requirements for procurement, material specification and all special requirements of ASME, Section III, Division 1 of the ASME Boiler and Pressure Vessel Code and above references. This material has been processed and supplied in accordance with our Quality System Program, Certificate Number N-1488, which expires 08/04/2012.

Diana M. Martin
Quality Control Department

2500 Broadway / Drawer 10 / Camden, New Jersey 08104 / (856) 541-2900
Fax (856) 541-0864 / TELEX 834618

Page 26 of 673



METALLURGICAL TEST REPORT

6870 Highway 42 East
Ghent, KY 41045-9615
(502) 347-6000

Certificate: 637457 01
Customer: 5417 003
Mail To:
JACQUET MID-ATLANTIC
C/O AMERINOX PROCESSING
2201 MT. EPHRAIM AVENUE
CAMDEN, NJ 08104

Ship To:
JACQUET MID-ATLANTIC
C/O AMERINOX PROCESSING
2201 MT. EPHRAIM AVENUE
CAMDEN, NJ 08104

Date: 4/20/2011 Page: 1
Steel: 304/304L
Finish: HRAP

Your Order: 5722

NAS Order: XN 0477476 01

Corrosion: ASTM A262/02aE; 180Bend-OK

PRODUCT DESCRIPTION:

STAINLESS STEEL COIL, HRAP; UNS 30400/30403
ASTM A240/10, A480/10, A666/10; ASME SA240/10, SA480/10, SA666/10
CHEM ONLY ON FOLLOWING ASTM: A276/10, A479/10a, A484/10, A312/09
CHEM ONLY ON FOLLOWING ASME: SA312/10, SA479/10
AMS 5511H/5513J XMRK; MIL-5059D AMD3 (X CRN MEAS); MIL-4043B
NACE MR0175/03, MR0103/07; QQS766D-A X MAG PERM
MIN. SOLUTION ANNEAL TEMP 1900F, WATER QUENCHED

REMARKS:

Mat'l is Free of Mercury Contamination. No weld repairs.
EN 10204:2004 3.1; QQS763F Cond A; RoHS Compliant
Material is Free of Radioactive Contamination
NAS Steel Making Process: EAF, AOD, & Cont. Casting
Product Mfg. by a Quality Mgt. Sys. in Conf. w/ISO 9001
*Melted & Manufactured in the USA; Mat'l is DFARS Compliant

JOSEPH OAT QUALITY CONTROL

Product ID #	Coil #	Thickness	Width	Weight	-----Length-----	Mark	Pieces	APPD <i>Diana Martin 10/17/11</i>
019AB8 D	* 019AB8 D	.4940	60.0000	17,760	COIL	175.20	1	ADDENDA <i>1974</i>

CHEMICAL ANALYSIS

HEAT	CM	C	CO	CR	CU	MN	MO	N	NI	P
9AB8	US	.0179 ✓	.1428	18.3630 ✓	.4878	1.7660	.3225	.0753	8.0388 ✓	.0325 ✓
		S	SI							
		.0010 ✓	.3403 ✓							

MECHANICAL PROPERTIES

Product ID #	Coil #	1 d o i c r	UTS KSI	.2% YS KSI	ELONG %-2"	Hard RE	Tail Hard	R of A %
019AB8 D	019AB8 D	F T	91.62	58.44	51.23	85.50	87.00	70.82

Jacquet NO
14964

NAS hereby certifies that the analysis on this certification is correct and the material meets the specifications stated.

QC ENGINEER

ERIC HESS

4/22/2011

Page 27 of 673

PAGE 24



**LABORATORY
TESTING INC.**

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

Certified Test Report
JOC001-11-06-22362-1

Accredited
Nadcap
Materials Testing Laboratory
Nondestructive Testing

SOLD TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104

SHIP TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104
ATTN: Justin Kaplan

CUSTOMER P.O.
065166-00

CERTIFICATION DATE
6/28/2011

SHIP VIA
CUSTOMER PICKUP

DESCRIPTION

Quantity: 1
Type: 1/2" Thick Plate
Job No.: 2692A/B, Attachment 2, Rev. 0
Original Manufacture: Jacquet
Heat No.: 9AB8
Material Type: ASME Section III, Class 3, 1974 Edition, No Addenda;
ASME Section II; ASME SA-240, Grades 304/304L
Size: 3" x 20"

The referenced sample was submitted to chemical content evaluation and it was found to be in conformance to ASME SA-240, 1974 Edition, No Addenda, Types 304 and 304L with the following results:

	304		304L		
-- REQUIREMENTS --					
<u>ELEMENT</u>	<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	<u>ACTUAL</u>
C		0.08		0.03	0.02%
Co				0.25	0.16%
Cr	18.00	20.00	18.00	20.00	18.46%
Mn		2.00		2.00	1.76%
Ni	8.00	10.50	8.00	12.00	8.08%
P		0.045		0.045	0.027%
S		0.030		0.030	0.002%
Si		1.00		1.00	0.34%

**BECHTEL
1133**

Procedures/Methods: 86-SCA-0, Rev. 11, Direct Reading Atom Emissions Spectroscopy

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 6/29/11

ADDENDA 1974
J-2692 ITS. 3, 9A
P.O. 65166

Page 28 of 673



**LABORATORY
TESTING INC.**

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

Certified Test Report
JOC001-11-06-22362-1



Accredited

Nadcap
Materials Testing Laboratory
Nondestructive Testing

TENSILE TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	(PSI) TENSILE STRENGTH	(PSI) YIELD (.2%) STRENGTH	(%) ELONGATION (IN 2")	KEY C/NC/R
REQUIRED	Min	Min	Min	
304	75,000	30,000	40	
304L	70,000	25,000	40	
ACTUAL	86,500	42,700	66	C

HARDNESS TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	HARDNESS READINGS			SCALE	AVG.	SCALE	KEY (C/NC/R)
REQUIRED	MAX 88	SCALE HRBW					
ACTUAL	83	84	83	84	HRBW	84	HRBW C

JOSEPH OAT QUALITY CONTROL

APPD Diana Martin 6/29/11

ADDENDA

1974
J-2692 Irs 3,9A
P.O. 65166

**BECHTEL
1133**

The provisions of 10CFR21 and 10CFR50, Appendix B apply to this order.

All testing was performed in accordance with L.T.I. Quality System Program Manual, Rev. 18 dated 7/27/07 as audited and approved by Joseph Oat Corporation.

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 18 dated 7/27/07 and ISO/IEC 17025. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. L.T.I. is accredited by PRI to ISO17025 and by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at www.labtesting.com and www.eAuditNet.com. The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

MERCURY CONTAMINATION: During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

NOTE: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherri L. Schelfele
QA Specialist

Sherri L. Schelfele

Authorized Signature (ES)

Page 29 of 473



Joseph Oat Corporation

Date: 6/28/11

SUBJECT: Customer Purchase Order Number 241916
Joseph Oat Job Number 2692
Joseph Oat Item Number 4

CERTIFIED MATERIAL TEST REPORT

Description: ASME Material Specification SA240 304/304L
Code Year 1974 Addenda N/A Class 3
Size 1/2" Thick Plate

Heat Number: 833955

Material Manufacturer Allegheny Ludlum (CMTR Attached)

SUPPLEMENTARY TESTS

Chemical Analysis	Accept
Corrosion	N/A
Bend Test	N/A
Ferrite Count	N/A
Grain Size	N/A

CERTIFICATION

We certify that the material described on this report meets the requirements for procurement, material specification and all special requirements of ASME, Section III, Division 1 of the ASME Boiler and Pressure Vessel Code and above references. This material has been processed and supplied in accordance with our Quality System Program, Certificate Number N-1488, which expires 08/04/2012.

Diana M. Martin
Quality Control Department

2500 Broadway / Drawer 10 / Camden, New Jersey 08104 / (856) 541-2900
Fax (856) 541-0864 / TELEX 834618

Page 30 of 673



CERTIFIED MATERIAL TEST REPORT
CERTIFICATE OF CONFORMANCE

OUR ORDER NO. LP1426580
YOUR ORDER NO. 5532
MEMO NO. 373798-00
CERT. DATE 03/25/2011
WHS-1 DUAL CERT

Bill To: 2277100
JACQUET
191 SOUTH KEIM STREET
SUITE 108
POTTSTOWN PA

Ship To: 000

19464

Tracy McFarland - Director, Corporate Quality Assurance

✓ AL 304/304L HRAP
✓ ASTM A240 10b ASME SA240 10 ASTM A262 10 PRACTICE E
AMS 5511 H AMS 5513 J
PED 97/23/EC;
UNS S30400; UNS S30403

Heat	Matl ID	Slip	Sid	Lot No	Size(Inches)	Pcs	Weight(lb)
833955	09C	11265	AC	243777	.5000 x 79.0000 x 252.0000	1	2973

Heat	C	MN	P	S	SI	NI	CR	MO	CO	CU	N
833955	.017	1.88	.032	.0003	.34	8.10	18.22	.71	.25	.48	.089

Lot No	Gauge	Cond.	Test	Yield Strength	Tensile Strength	Elong %	Red. of Area %	Hardness	Bend	Corrosion	Grain Size
243777	.5000	TRANS	ANNEAL	48.0 KSI	88.0 KSI	61.0	74.0	BHN182	OK	OK	

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED

MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY

MATERIAL IS OF USA MELT AND MANUFACTURE

MATERIAL WAS NOT WELD REPAIRED ✓

DIN EN 10204:2005 3.1 CERTIFICATE

MATERIAL DOES NOT CONTAIN MORE THAN NORMAL BACKGROUND RADIATION ASSOCIATED WITH STAINLESS STEEL

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 17/25/11

ADDENDA 1974
J-2692 IT.4
P.O. 65108

Jacquet NO

14 863

BECHTEL
1133

PAGE 1 FINAL PAGE

THIS CERTIFICATE OF TEST SHALL NOT BE REPRODUCED IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. TESTING WAS PERFORMED AT ALC NADCAP AND ISO/IEC 17025 APPROVED LABORATORIES LOCATED AT NATRONA HEIGHTS, BRACKENRIDGE, LATROBE, MIDLAND AND LEECHBURG, PA FACILITIES OR A NADCAP AND ISO/IEC 17025 ACCREDITED LABORATORY. EN 10204 - 3.1 ALLEGHENY LUDLUM IS APPROVED AS MANUFACTURER ACCORDING TO AD-MERKBLATT WQ/TRD 100 AND THE PRESSURE EQUIPMENT DIRECTIVE PED 97/23/EC.

ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES: C, S BY COMBUSTION/INFRARED, N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY, MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF, B BY OES, AL AND TI (≥ 0.10%) BY WDXRF, OTHERWISE BY OES, PB, BI, AG BY GFAA. CERTIFICATE OF TEST & CHEMISTRY STATEMENTS EXCEPT AS OTHERWISE NOTED, MATERIAL WAS MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO SPECIFICATION/ORDER REQUIREMENTS.

Page 31 of 673
PAGE 28

**LABORATORY
TESTING INC.**

2331 Topaz Drive, Hatfield, PA 19440
Phone: 800-219-9095 • Fax: 800-219-9096

Certified Test Report**JOC001-11-06-22362-2****SOLD TO**

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104

SHIP TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104
ATTN: Justin Kaplan

CUSTOMER P.O.

065166-00

CERTIFICATION DATE

6/28/2011

SHIP VIA

CUSTOMER PICKUP

DESCRIPTION

Quantity: 1
Type: 1/2" Thick Plate
Job No.: 2692A/B, Attachment 2, Rev. 0
Original Manufacture: Jacquet
Heat No.: 833955
Material Type: ASME Section III, Class 3, 1974 Edition, No Addenda;
ASME Section II; ASME SA-240, Grades 304/304L
Size: 3" x 20"

The referenced sample was submitted to chemical content evaluation and it was found to be in conformance to ASME SA-240, 1974 Edition, No Addenda, Types 304 and 304L with the following results:

	304		304L		
-- REQUIREMENTS --					
<u>ELEMENT</u>	<u>MIN</u>	<u>MAX</u>	<u>MIN</u>	<u>MAX</u>	<u>ACTUAL</u>
C		0.08		0.03	0.02%
Co				0.25	0.25%
Cr	18.00	20.00	18.00	20.00	18.26%
Mn		2.00		2.00	1.88%
Ni	8.00	10.50	8.00	12.00	8.01%
P		0.045		0.045	0.026%
S		0.030		0.030	0.002%
Si		1.00		1.00	0.38%

**BECHTEL
1133**

Procedures/Methods: 86-SCA-0, Rev. 11, Direct Reading Atom Emissions Spectroscopy

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 6/29/11

ADDENDA 1974

J-2692 IT. 4
P.O. 65166

Page 32 of 673



**LABORATORY
TESTING INC.**

2331 Topaz Drive, Hatfield, PA 19440
Phone: 800-219-9095 • Fax: 800-219-9096

Certified Test Report

JOC001-11-06-22362-2



TENSILE TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	(PSI) TENSILE STRENGTH	(PSI) YIELD (.2%) STRENGTH	(%) ELONGATION (IN 2")	KEY C/NC/R
REQUIRED	Min	Min	Min	
304	75,000	30,000	40	
304L	70,000	25,000	40	
ACTUAL	88,500	47,600	62	C

HARDNESS TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	HARDNESS READINGS		SCALE		AVG.	SCALE	KEY C/NC/R
REQUIRED	MAX 88	SCALE HRBW					
ACTUAL	82	83	82	83	HRBW	83	HRBW C

BECHTEL
1133

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 16/29/11

ADDENDA 1974
J-2692 IT. 4
P.D. 65166

The provisions of 10CFR21 and 10CFR50, Appendix B apply to this order.

All testing was performed in accordance with L.T.I. Quality System Program Manual, Rev. 18 dated 7/27/07 as audited and approved by Joseph Oat Corporation.

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 18 dated 7/27/07 and ISO/IEC 17025. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. L.T.I. is accredited by PRI to ISO17025 and by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at www.labtesting.com and www.eAuditNet.com. The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

MERCURY CONTAMINATION: During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

NOTE: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherri L. Scheifele
QA Specialist

Sherri L. Scheifele

Authorized Signature (ES)

Page 33 of 673

BRIGHTON TRU-EDGE HEADS
DIV OF ENERFAB
11861 MOSTELLER RD * CINCINNATI OH 45241 * (513)-771-2300
MTR COVER LETTER

JOSEPH OAT CORPORATION
DRAWER 10
CAMDEN NJ 08104

ATTN : QC MANAGER
CUSTOMER P/O: 65102
BRIGHTON S/O: 5286
PRODUCTION ORDER: 1006307

TAG #: J-2692 IT 4

TO WHOM IT MAY CONCERN:

ATTACHED ARE COPIES OF MILL TEST REPORTS FOR THE FOLLOWING MATERIALS PROVIDED ON YOUR REFERENCED PURCHASE ORDER.

FORM ONLY

2.00 - SA240-304/304L - SS ASME F&D 55.3125" OD 0.391" MIN. THK. WITH 1.5" SF 3.375" ICR 55.3125" RAD.

HEAT NUMBER(S)
833955-11265 AC

CERTIFICATE OF COMPLIANCE

NO HEAT TREATMENT WAS PERFORMED BY BRIGHTON.

ALL HEADS WERE COLD FORMED. ALL HEADS ARE IN COMPLIANCE WITH REGULATION UG - 81 AND UG - 79 AS STATED IN SECTION VIII DIVISION I OF THE ASME BOILER AND PRESSURE VESSEL CODE. HEADS WERE FORMED WITHOUT COMING IN CONTACT WITH MERCURY OR ANY OF ITS COMPOUNDS.

IF YOU HAVE ANY FURTHER QUESTIONS CONCERNING MILL TEST REPORTS ONLY, PLEASE CONTACT ME IN CINCINNATI, OHIO AT 1-800-543-1644.

VERY TRULY YOURS,

Rick Seiter

BRIGHTON TRU-EDGE HEADS
DIV. OF ENERFAB

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 17/25/11

ADDENDA 1974
J-2692 IT. 4
P.O. 65102

BECHTEL
1133

MILL TEST REPORTS TO GO WITH SHIPMENT.

Page 34 of 673

PLAN QUALITE REALISATION

QUALITY CONTROL PLAN

CLIENT Customer Forgital USA (Joseph Oat)

COMMANDE Order

47908-00 (064967-00)
18044-00 (065203-00)



LOT Batch

11/826/02/00 +
11/826/02/01

NUANCE Grade

F304 / 304L

COULEE Heat

1165

SPECIFICATIONS

ASME SA 182 F304/304L ED 1974

Requirements

2
SK-2692-5 REV 1

PLAN Drawing

BECHTEL
1133

MATERIEL Material

L2 - 2 PARTS - OAT120 - J-2692 IT 5 FORGINGS PARTS 60-3/16"x54-5/16"x5-3/16"

REV.	DATE Date	REDIGE Writer	APPROUVE Approval	ACCORD CLIENT Customer's acceptance	MODIFICATION Modification
0	29/07/2011	C. CELLE	M. COLLAY		Création First Issue
1	15/09/2011	C. CELLE	A. BATHILY		Modification of PQR

LEGENDE ORGANISMES DE SURVEILLANCE Legend Government Inspection

A POINT D'ARRET	QC CONTROLE QUALITE OU OPERATEUR ForgitalFmdl Manufactured Quality Control or Operator ForgitalFmdl
H Hold Point	
C CONVOCATION	1 CLIENT Joseph Oat Customer
W Witness Point	2 SURVEILLANT Inspector
R REMISE DE DOCUMENTS Report	3 SURVEILLANT Inspector
R* CONFORMITE Conforming	
N/A NON APPLICABLE No Applicable	

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

Réf.doc : FDL036E - 06/04/07

ADDENDA

1974
J-2692 IT.5
P.O. 65209

Forgital Fmdl		PLAN QUALITE REALISATION				N° PQR 11-826-02 AQ - REV 1				
		Quality Control Plan				Number				
						PAGE 2/3				
OPERATION DE FABRICATION ET DE CONTROLE						MANUFACTURING STEP & TYPE OF INSPECTION				
1	Instruction Specification	REV	INTERVENTIONS QC	WITNESS 1	2	3	N° PV	N° NON CONF.	DECISION	DATE
1	PROGRAMME DE FABRICATION						MANUFACTURING PROGRAM			
	PG 014	C	R				MPP 11-826-02 Rev. 1			2/08/11
2	ANALYSE CHIMIQUE COULEE						HEAT ANALYSIS			
	PG 008 PG 009	O J	R				APD N° 165E			28/06/11
3	MARQUAGE DEBIT						IDENTIFICATION SAWING			
	PG 009 PG 008	J O	R*				Conforme			4/08/11
4	FORGE MARQUAGE						FORGING IDENTIFICATION			
	PG 005 PG 009	F J	R*				Conforme			23/08/11
5	TRAITEMENT THERMIQUE + REPORT DE MARQUAGE						HEAT TREATMENT IDENTIFICATION			
	PG 008 PG 009	P J	R				21 997			24/08/11
6	USINAGE POUR US + REPORT DE MARQUAGE						MACHINING AND IDENTIFICATION FOR UT			
	PG 009 PG 008	J O	R				Conforme			11/09/11
7	CONTROLE ULTRASONS						ULTRASONIC TEST			
	PTC 012	B	R				21 4M 21 413			14/09/11
8	PRELEVEMENT POUR ESSAI + MARQUAGE						CUTTING FOR MECHANICAL TEST IDENTIF.			
	PG 009 PG 014	J C	R*				Conforme			21/09/11
9	ANALYSE CHIMIQUE PRODUIT						CHEMICAL ANALYSIS ON PART			
	PG 014	C	R				APD N° C002 25873			10/10/11

Réf.doc : FDL036E - 06/04/07

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

ADDENDA 1974

J-2692 IT.5
P.O. L5209

BECHTEL
1133

Page 36 of 673

**PLAN QUALITE REALISATION**

Quality Control Plan

N° PQR 11-826-02 AQ - REV 1

Number

PAGE 3/3

OPERATION DE FABRICATION ET DE CONTROLE							MANUFACTURING STEP & TYPE OF INSPECTION			
2	Instruction Specification	REV	INTERVENTIONS			WITNESS	N° PV	N° NON CONF.	DECISION	DATE
			QC	1	2					
9 ANALYSE CHIMIQUE PRODUIT							CHEMICAL ANALYSIS ON PART			
	PG 014		R							
10 TRACTION AMBIANTE							ROOM TEMPERATURE TENSILE TESTS			
	PG 014	C	R				3065/2011 3067/2011			10/10/11
11 USINAGE SUIVANT PLAN + REPORT DE MARQUAGE							MACHINING AND IDENTIFICATION FOLLOWING DRAWING			
	PG 009 PG 008	J P	R				Conforme			7/10/11
12 CONTROLE VISUEL ET DIMENSIONNEL							VISUAL AND DIMENSIONAL INSPECTION			
	PG 014	C	R				5143			7/10/11
13 NETTOYAGE + MARQUAGE FINAL							CLEANING FINAL IDENTIFICATION			
	PG 009	J	R				Conforme			7/10/11
14 RECETTE FINALE - EXAMEN DOSSIER et CERTIFICAT DE FIN DE FABRICATION							FINAL INSPECTION - QUALITY FILE INSPECTION & END FABRICATION CERTIFICATE			
	PG 008	P	R				4890			10/10/11

Réf.doc :FDL038E - 08/04/07

BECHTEL
1133**JOSEPH OAT QUALITY CONTROL**APP'D Diana Martin 10/19/11ADDENDA 1974
J-2692 IT.5
P.O. 65209Page 37 of 673



48 bd d'Auvergne,
42500 Le Chambon Feugerolles

**PROGRAMME TECHNIQUE DE
FABRICATION -
MANUFACTURING PROCESS PLAN**

MPP 11-826-02

Rev. 01

Page 1 of 5

CLIENT - CUSTOMER
**Forgital USA (Joseph Oat
Corporation)**

N° DE COMMANDE - N° ORDER
18044-00 (065209-00)

PLAN - DRAWINGS
SK-2692-5 REV 1

SPECIFIQUE -
REQUIREMENTS
**ASME SA 182 F304/304L ED
1974**

PIECE - PIECE
**L2 - 2 PARTS - OAT120 - J-2692 IT 5
FORGINGS PARTS 60-3/16"x54-5/16"x5-
3/16"**

MATIERE - MATERIAL
F304/304L



CE DOCUMENT EST TRANSMIS POUR APPROBATION
DOCUMENT IS TRANSMITTED FOR YOUR APPROVAL



CE DOCUMENT EST TRANSMIS POUR INFORMATION
THIS DOCUMENT IS TRANSMITTED FOR YOUR INFORMATION

ESPACE POUR APPROBATION CLIENT

CUSTOMER APPROVAL SPACE

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martini 10/19/11

ADDENDA 1974

J-2692 IT-5
P.O. 65209

BECHTEL
1133

01	02/08/2011	Modification § 2 - Modification of § 2	<u>C. CELLE</u>	L. DREPTIN	A. BATHILY
00	29/07/2011	Création du document - First issue	C. CELLE	L. DREPTIN	A. BATHILY
REV.	DATE	DESCRIPTION - DESCRIPTION	REDIGE PAR IS ISSUED BY	VERIFIE PAR VERIFIED BY	APPROUVE PAR APPROVED BY

INDEX

- 1) RAW MATERIAL
- 2) ROUGH PARTS DIMENSIONS
- 3) HEAT TREATMENT
- 4) SAMPLING
- 5) PARTS DIMENSIONS CONTROLLED AND DELIVERED
- 6) NON DESTRUCTIVE TESTING AT THE DIMENSIONS OF § 5
- 7) MARKING
- 8) APPENDIX

**BECHTEL
1133****JOSEPH OAT QUALITY CONTROL**APP'D Diana Martin 10/19/11ADDENDA 1974
J-2692 Ir.5
P.O. 65209

1) RAW MATERIAL

Grade ASME SA182 F304/304L

2) ROUGH PARTS DIMENSIONS

L2 - 1 PARTS CB Ø60.83'' x Ø53.66'' x 5.74'' (CB Ø1545/1363 x 146 mm)

1 PARTS CB Ø60.83'' x Ø53.66'' x 6.34'' (CB Ø1545/1363 x 161 mm) With sample

Pudding ratio >3

3) HEAT TREATMENT

Dimensions are the same as § 2

Process : Solution annealed

Furnace(s) used with controlled temperature

These elements are registered

A: Loading temperature

B : Rising time and stabilisation time

C : Holding temperature

D : Holding time

Process

Solution annealed

Process

A

Free

A

B

60' mini

B

C

1040°C minimum

C

D

60-120 minutes

D

Cooling: WATER

BECHTEL
1133

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

ADDENDA

1974

J-2692 IT-5

P.O. 65209

Page 40 of 678

4) **SAMPLING**

See appendix MPP 11-826-02.

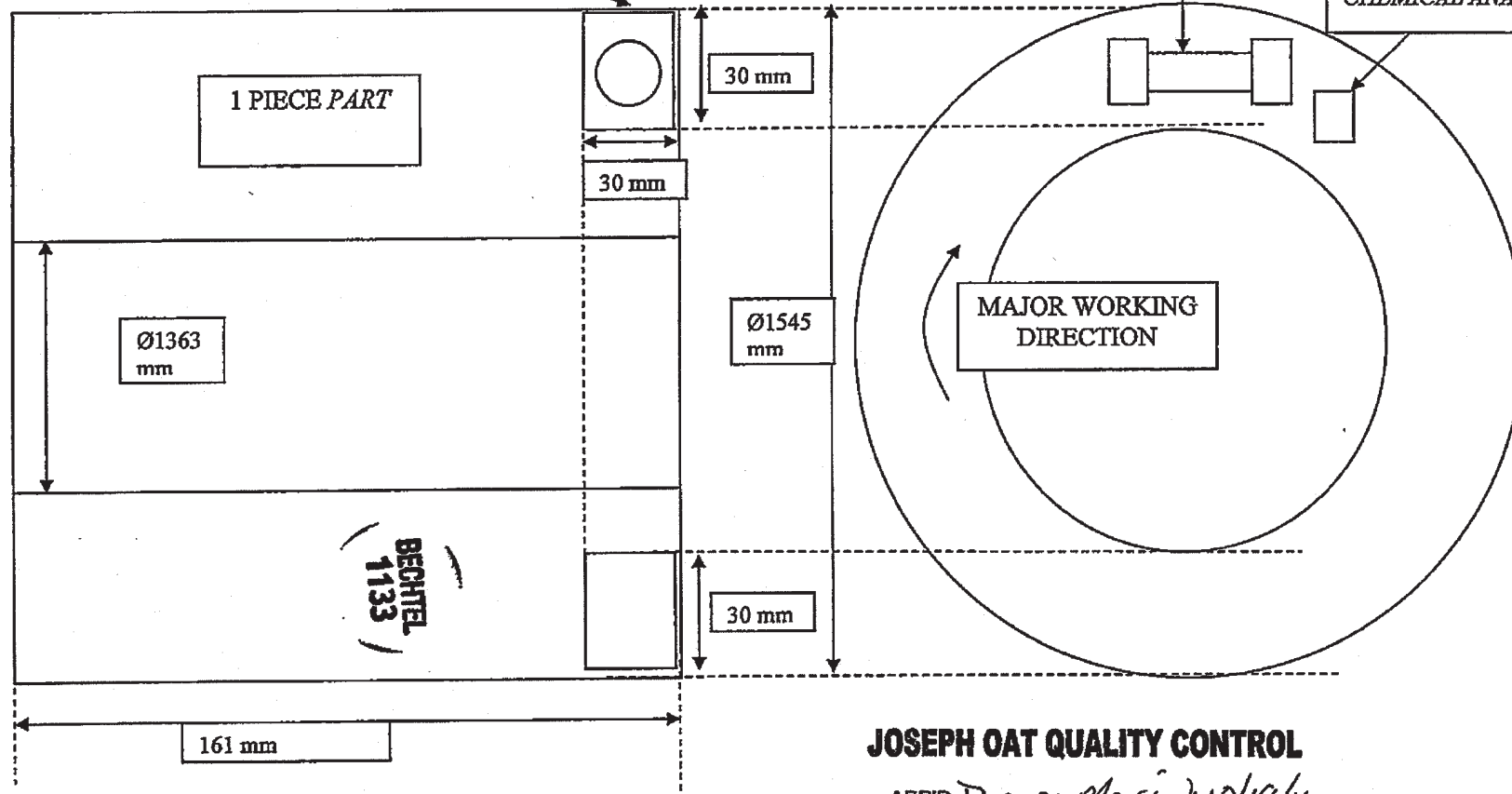
5) **PARTS DIMENSIONS CONTROLLED AND DELIVERED**2 parts OAT120 - L2
Machining following drawing SK-2692-5 REV 16) **NON DESTRUCTIVE TESTING AT THE DIMENSIONS OF § 5**Visual and dimensional inspection
Ultrasonic test shall be performed before final machining7) **MARKING**Cast n°
Grade
ForgitalFmdl
OAT's job
Item n°**BECHTEL
1133****JOSEPH OAT QUALITY CONTROL**APP'D Diana Martin 10/19/11ADDENDA 1974
J-2692 IT-5
P.O. 65209Page 41 of 673

ECHANTILLON SAMPLE

8) APPENDIX MPP 11-826-02 AQ REV 1

1 T12.5 TENSILE TEST AT ROOM TEMPERATURE

CHEMICAL ANALYSIS



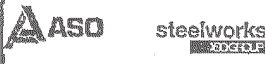
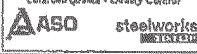
JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

ADDENDA 1974

J-2692 IT.5

P.O. 45209

		CERTIFICATO DI COLLAUDO TEST CERTIFICATE			MOD-F_37 rev. 00					
COMPANY WITH QUALITY SYSTEM CERTIFIED BY ISO 9001:2008		Tipo / Type EN 10204 - 3.1	n° 1165E							
IDENTIFICAZIONE PRODOTTO / PRODUCT IDENTIFICATION										
Tipo di Materiale / Material Grade A182 F304L - cod. P021ST0350				Normativa di riferimento / Reference Standard ASTM A182 - P021 F304L rev.4 (21/11/2007)						
IDENTIFICAZIONE PEZZO / IDENTIFICATION 1165E	GRADO DI LAVORAZIONE / MANUFACTURING DEGREE tornito / rough turned	Ø [mm] 353	SEZIONE / SECTION [mm] 	LUNGHEZZA / LENGTH [mm] 4632						
Note:										
Acciaio prodotto in E.I.F. - Affinazione in A.O.D. - Degasaggio sotto vuoto - Esente da radioattività Steel produced by E.I.F. - A.O.D. Refined - Vacuum Degassed - Radioactivity free										
ANALISI CHIMICA CHEMICAL ANALYSIS %	Numero di colata / Heat number 1165									
	C	Mn	Si	P	S	Cr	Ni	Mo	Al	Cu
	0,026	1,637	0,450	0,029	0,001	18,125	8,084	0,251	0,007	0,310
	Nb	V	Ti	Sn	Sb	As	Bi	Ca	Pb	Zn
	0,008	0,072	0,005	0,009	0,0080	0,0075	0,0018	0,0017	0,0001	0,0085
	Co	W								
	0,139	0,0259								923
Riferimento certificato acciaieria n° Steel mill certificate ref.				1165 - data 20/05/2011						
TRATTAMENTO TERMICO / HEAT TREATMENT										
TIPO DI TRATTAMENTO / TREATMENT TYPE solubilizzazione - solution annealing		TEMPERATURA RISCALDO [°C] HEATING TEMPERATURE 1050		PERMANENZA [h] HOLDING TIME		RAFFREDDAMENTO / COOLING acqua - water				
CARATTERISTICHE MECCANICHE / MECHANICAL PROPERTIES										
Temp. prova / Test temperature [°C]	Senso prelievo / Sampling direction	UTS [Mpa]	σ snerv. / yield point [Mpa]	ε rottura / ε fracture [%]	Strizione / Reduction of area [%]	Durezza Hardness HB	Prova di resilienza / Impact test Kv [J]			
						206	Valore 1 / Value 1	Valore 2 / Value 2	Valore 3 / Value 3	Media / Average
DIMENSIONE GRANO AUSTENITICO / AUSTENITIC GRAIN SIZE ASTM E112					NOTE / NOTES:					
CONTROLLI NON DISTRUTTIVI / NON DESTRUCTIVE TESTING										
ULTRASUONI / ULTRASONIC TESTING				NORMA DI RIFERIMENTO / REFERENCE STANDARD SEP 1921						
STRUMENTO / INSTRUMENT	SONDA / PROBE	MODALITA' DI CONTROLLO / CONTROL MODE				Blocco campione N° / Reference block				
Gilardoni RDG 500	252	() DAC	(X) ADA	DIAMETRO EQ. / EQ. DIAMETER	2	BLOCCO ISO V1				
ACCOPIANTE UTILIZZATO / COUPLING BY:				colla / glue						
CLASSE ACCETTAZIONE / ACCEPTANCE CLASS		SEP 1921 Class E/e [sul prodotto finito]								
ESITO CONTROLLO / CONTROL RESULT		Garanzia su prodotto finito								
Validazione controllo qualità / Quality Control Validation		Operatore controlli non distruttivi / NDT Operator		Ente collaudatore / Test Agency			Data emissione / Issued			
		Operatore 2 livello metodo UT UNI EN 473 / ISO 9712 <i>Andrea Pili</i>					28/08/2011			

JOSEPH OAT QUALITY CONTROL

APPD Diana Martin 10/19/11

ADDENDA 1974

J-2692

P.D. 65209

BECHTEL
1133

Page 43 of 673

ANNEXE PV TTH HEAT TREATMENT REPORT ANNEX	 ForgitalFmdl FORGITALGROUP S.A.S AU CAPITAL DE 1.000.000 EUROS 48 Boulevard d'Auvergne F-42800 LE CHAMBON-FEUGEROLLES (FRANCE) Téléphone : +33 4.77.40.53.70 Télécopieur : + 33 4.77.56.30.57 Télécopieur SERVICE QUALITE : +33 4.77.40.53.83	ASSURANCE  QUALITE
		P.V.N°: 21997 Report N°:

Client : Customer : JOSEPH OAT	Nuance : F304/304L Grade :	N° de charge : 1885/2011 Batch n°
Commande client : 18044-00 Customer order : (065209-00)	N° de coulée : 1165 Heat n°	Traitement : SOLUTION Treatment : ANNEALED

ORDRES INTERNES / INTERNAL ORDERS	QUANTITE + DESIGNATION / QUANTITY + DESIGNATION	DIMENSIONS / DIMENSIONS
11-826-02-00	1 RING	Ø 60.83" X 53.66" X 5.74"
11-826-02-01	1 RING	Ø 60.83" X 53.66" X 6.34"
JOSEPH OAT QUALITY CONTROL APP'D <i>Diana Martin</i> 10/19/11		



ADDENDA 1974
J-2692 IT-5
P.O. 65209

VOIR LA COURBE DES THERMOCOUPLES SUR PIECES POUR LES MODALITES DE TRAITEMENT THERMIQUE SEE THERMOCOUPLES ON PARTS' CURVE FOR HEAT TREATMENT MODALITIES	Vérificateur Qualité : Quality supervisor :	
	Date : date : Le 24/08/2011	
	Nom : name : G. TOURNELLEC Visa :	

Page 2/2

76612 ad

TC on parts' Cuve

FORGITAL FMDL

Service Traitement Thermique

N° de Charge : 1885/100M

N° d'OF : M/B26/2/10 + 2/14

N° Client : JOSEPH OAT

N° Four : 24

Nb de pièces : 1 + 1 P

FITH :

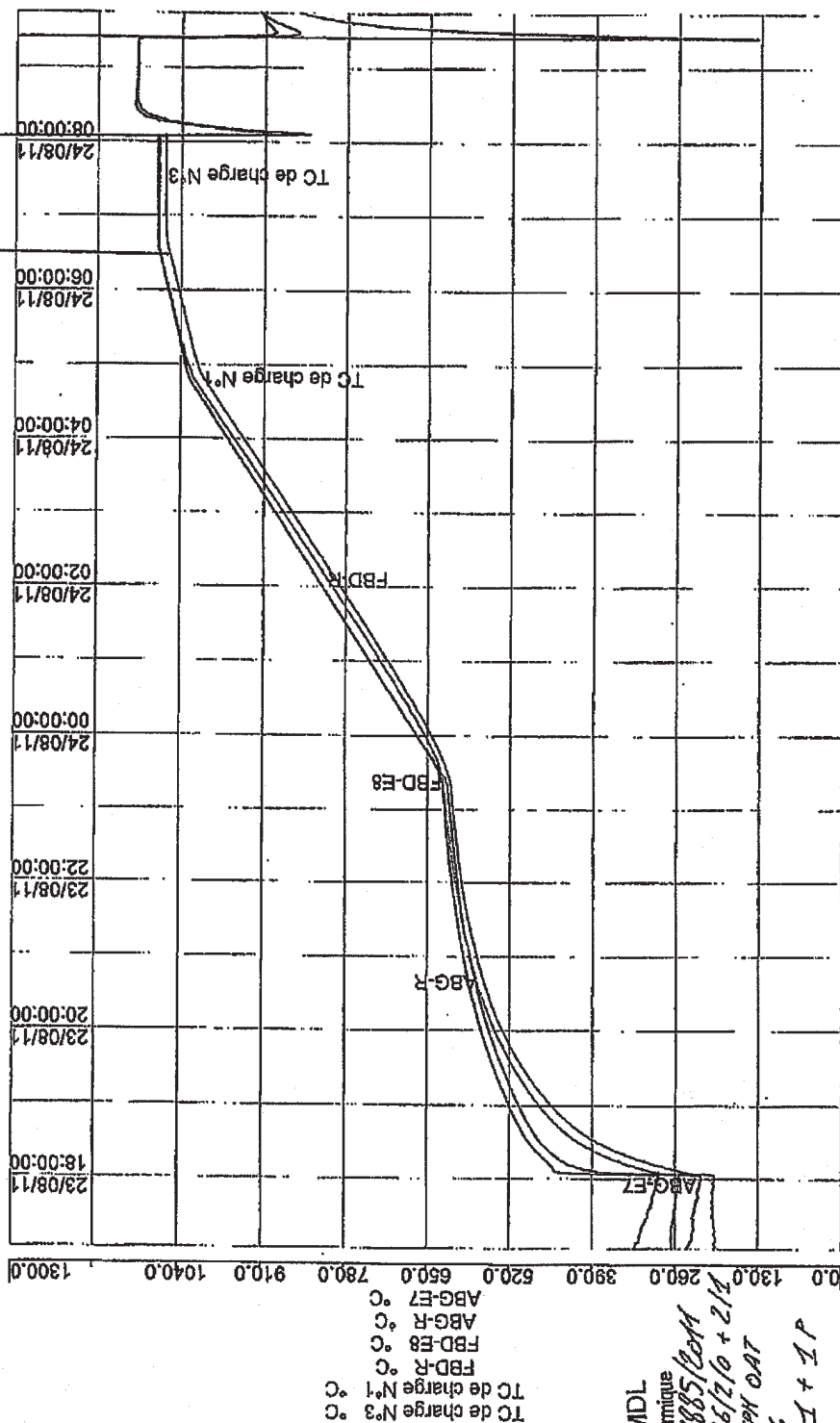
Réfrigérissement : Eau

Conforme : X

Non Conforme :

Visa :

[Signature]



23/08/11 17:04:00
30/08/2011 17:30:11

Diagrammes

24/08/11 09:44:00
Page 1 of 1

BECHTEL
1133

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 10/19/11

ADDENDA 1974
J-2692 IT-5
P.O. 65309

20904/15419
8103/10652

PROCES VERBAL DE CONTROLE ULTRA SON ULTRASONIC EXAMINATION REPORT	 44 Boulevard d'Avignon F-42100 LE CHAMRON-PEUGEROLLES (FRANCE) Téléphone : 04 77.40.53.70 Télécopieur : 04 77.58.30.57 Télécopieur SERVICE QUALITE : 04.77.40.53.83	ASSURANCE  QUALITE
		P.V.N°: 21411 Report N°:

CLIENT Customer	FORGITAL USA INC	N° de PLAN et REPERE Drawing N° - ITEM	SK-2692-5	MATIERE Material	A 182 F304L
N° Cde CLIENT Customer order	18044-00 (Joseph Oat 065209-00)	ETAT DE LIVRAISON Delivery state	MACHINED	N° coulée Heat N°	1155
PIECE Part	1 PIECE	DIMENSIONS Sizes	1529 x 1380 x 132	FOURNISSEUR Supplier	SPECIAL METAL
STADE ET ETENDUE DU CONTROLE Scope of the inspection			100% Control	N° d'ordre Interne Internal Order Number	
SPECIFICATION			ASME SECTION III ED 1974 + PTC012	110008260201	

APPAREILLAGE / Equipment		
MARQUE/TYPE Trade Mark/Type	SONATEST-350M	
REFERENCE Référence	I003110 - 18/11/2011	
PALPEURS UTILISES Search units used	Straight Beam Transducer	T/R Transducer
		45°

	Ondes Waves	Marque et référence Trade Mark and reference	Transducteur (mm) Transducer (mm)	Fréquence Frequency	Angle Angle
1	L	KRAUTKRAMER - B2S	Ø24	2MHz	0°
2	L	KRAUTKRAMER - SEB2	7X18	2MHz	0°
3	T	KRAUTKRAMER - MWB45-N2	6X9	2MHz	45°
4					
5					

--	--	--	--

ETAT DE SURFACE Surface	traité Treated	☐	Moulé Ground	☐	Usiné Machined	☒	Rugosité Roughness
COUPLANT Couplant	Eau Water	☐	Huile Oil	☐	Graisse Grease	☐	Autres Others
SENS SONDAGE Orientation	Sur 2 faces On 2 Faces	☒	2 sens perpendiculaires 2 perpendicular ways	☒	Sur périphérie on periphery	☒	

ETALONNAGE/Seuil de notation Calibration	DAC Ø3mm
SUIVANT PROCEDURE N° In accordance with	ASME SECTION III ED 1974 + PTC012

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

RESULTATS Results	Accepté Accepted	☒	Fiche d'anomalie Discrepancy sheet	☐	ADDENDA <u>1974</u> <u>J-2692</u> <u>IT-5</u> <u>P.O. 65209</u>
-----------------------------	---------------------	-------------------------------------	---------------------------------------	--------------------------	---

OPERATEUR Operator	S. BELEYMET UT / PT level III - EN 473 GS3 - 008 460 Le 14/09/2011	Date et Visa Responsable Contrôle Chief Inspector approval
------------------------------	---	---

RM.doc: FDL031H - 03/11/08

PROCES VERBAL DE CONTROLE ULTRA SON ULTRASONIC EXAMINATION REPORT	 48 Boulevard d'Auvergne F-42000 LE CHAMON-PEUGEROLLES (FRANCE) Téléphone : 04 77.40.53.70 Télécopieur : 04 77.55.30.57 Télécopieur SERVICE QUALITE : 04.77.40.53.83	ASSURANCE  QUALITE
		P.V.N°: 21413 Report N°:

CLIENT <i>Customer</i>	FORGITAL USA INC	N° de PLAN et REPERE <i>Drawing N° - ITEM</i>	SK-2692-5	MATIERE <i>Material</i>	A 162 F304L
N°Cde CLIENT <i>Customer order</i>	16044-00 (Joseph Oat 065209-00)	ETAT DE LIVRAISON <i>Delivery state</i>	MACHINED	N° coulée <i>Heat N°</i>	1185
PIECE <i>Part</i>	1 PIECE	DIMENSIONS <i>Sizes</i>	1529 x 1380 x 132	FOURNISSEUR <i>Supplier</i>	SPECIAL METAL
STADE ET ETENDUE DU CONTRÔLE <i>Scope of the inspection</i>			100% Control	N° d'ordre interne <i>Internal Order Number</i>	
SPECIFICATION			ASME SECTION III ED 1974 + PTC012	110008260200	

APPAREILLAGE / Equipment					
MARQUE/TYPE <i>Trade Mark/Type</i>		SONATEST-350M			
REFERENCE <i>Référence</i>		I003110 - 16/11/2011			
PALPEURS UTILISES <i>Search units used</i>		Straight Beam Transducer	T/R Transducer	45°	

	Ondes Waves	Marque et référence Trade Mark and reference	Transducteur (mm) Transducer (mm)	Fréquence Frequency	Angle Angle
1	L	KRAUTKRAMER - B2S	Ø24	2MHz	0°
2	L	KRAUTKRAMER - SEB2	7X18	2MHz	0°
3	T	KRAUTKRAMER - MWB45-N2	8X9	2MHz	45°
4					
5					

--	--	--	--

ETAT DE SURFACE <i>Treated</i>	☒	Moulu <i>Ground</i>	☐	Usiné <i>Machined</i>	☒	Rugosité <i>Roughness</i>
COUPLANT <i>Couplant</i>	Eau <i>Water</i>	☒	Huile <i>Oil</i>	☐	Graisse <i>Grease</i>	☐
SENS SONDAGE <i>Orientation</i>	Sur 2 faces <i>On 2 Faces</i>	☒	2 sens perpendiculaires <i>2 perpendicular ways</i>	☒	Sur périphérie <i>on periphery</i>	☒

ETALONNAGE/Seuil de notation <i>Calibration</i>	DAC Ø3mm	JOSEPH OAT QUALITY CONTROL
---	-----------------	-----------------------------------

SUIVANT PROCEDURE N° <i>In accordance with</i>	ASME SECTION III ED 1974 + PTC012	APP'D <u>Diana Martin 10/19/11</u>
--	--	---

RESULTATS <i>Results</i>	Accepté <i>Accepted</i>	☒	Fiche d'anomalie <i>Discrepancy sheet</i>	☐	ADDENDA <u>1974</u> <u>J-2692 IT-5</u> <u>P.O. 65209</u>
------------------------------------	-----------------------------------	-------------------------------------	---	--------------------------	---

OPERATEUR <i>Operator</i>	S. BELEYMET UT / PT level III - EN 473 GS3 - 008 460 Le 14/09/2011	Date et Visa Responsable Contrôle Chief Inspector approval
-------------------------------------	---	---

R&I.doc: FDL031H - 03/11/03

ET15/1 Ind 6 01/2009

Client
Customer

FORGITAL FMDL
48 Boulevard d'Auvergne

42500 Le Chambon-Feugerolles
Monsieur CHEUCLE

BECHTEL
1133

Réf. Client / Customer ref.
QUA 1216 / 2011

N° Rapport / Report N°

CCOR 25573

B.T. 1110.37420

Ces résultats ne se rapportent qu'aux objets soumis à l'essai. Ce rapport ne doit être reproduit qu'intégralement, sauf après accord écrit d'A2M Industrie.

Information matériau / Material Information		Observation / Remark
Coulée/ Heat	SPS1165	JOSEPH OAT QUALITY CONTROL APP'D <u>Diana Martin 11/10/19/11</u> ADDENDA <u>1974</u> <u>J-2692 IT-5</u> <u>P.O. 65209</u>
Nuance / Grade	A182 F304L	
Repère / Marking	11-826-2-1	
Prélèvement / Sampling	Secteur 30x30	
Information / Information		
Méthode / Method	Spectrométrie d'Emission Optique (Source Etincelle)	

Résultat % de masse											
C	Si	Mn	P	S	Cr	Mo	Ni	Al	Co	Cu	Nb
0.024	0.470	1.65	0.029	0.003	18.87		8.17				
Ti	V	W	Pb	Sn	Mg	As	B	Fe	Zr	Bi	Ca
Ce	Sb	Te	Ta	N	O	H	S	C	CeqFc	CeqFL	

Dosage C et S par combustion
Chemical C and S quantitative analysis

Incertitudes de mesures par analyses SEO selon ET 23 Ind. 01 - 06/2007

Dosage des gaz effectué en sous-traitance

Ce rapport comprend 1 page(s)

Date d'essai/ Date of testing 10/10/2011	Andre CHAMBERT	Signature numérique de Andre CHAMBERT CN: Andre CHAMBERT, o=A2M, ou=COFRAC, email=andre.chambert@a2m- industrie.com, c=FR Date: 2011.10.10 14:00:39 +02'00'	Opérateur - Rédacteur / Operator - Writer A.Chambert
--	-------------------	---	--

Forgital Fmdl FORGITALGROUP				Q. C. DEPT	Certificat d'Inspection/Inspection Test Certificate EN 10204:2004 3.1 No. T 3065/ 2011 /COM pg. 1 / 1 DDT de livraison/Delivery Note					
commande/job 826 / 2011 p. 2 / 0					Client/Customer FORGITAL USA INC 8989, MONROE ROAD HOUSTON, TX 77061					
Spécification /Specification ASME SA 182 F304 Rév/R74										
Matériau /material : ASME SA 182 F304/304L ED 1974										
Exig. suppl./Add. Requirements					Commande/Purchase order 18044-00 (Joseph Oat 065209-00)					
Identification/Identification VOIR GAMME										
coulée/Heat n. 1165 Quantité/Qty 1					poste/position					
fournisseur/supplier ASO S.P.S STEELWORKS SRL					Et.de livr./Shipp. Cond. HYPERTREMPE /SOLUTION ANNEALED					
Elaboration/Melt Method EP+AOD					Dessin/ Drawing SK-2692-5 r.1					
Log Number/Log Number					Code/P. N.					
Article/Descript. CHAN. FLANGE DETAIL Ø60-3/16"x 54-5/16"x 5-3/16" - OAT120 - J2692 IT 5 - L2										
Analyse demandée /Chemical Requirem. min/min max/max		C %	Mn %	Si %	P %	S %	Cr %	Ni %	Co %	
		0,030	2,000	1,000	0,010	0,030	18,000	8,000	0,250	
Analyse obtenue /Actual Chemistry à la coulée/lede analysis sur produit/on product		C %	Mn %	Si %	P %	S %	Cr %	Ni %	Co %	N ppm
		0,026	1,637	0,458	0,029	0,001	18,125	8,084	0,139	923
Traitement thermiques (thermocouple à contact) / Heat Treatment (by contact thermocouple)					Température du bain /Bath Temperature					
Hypertrempe/Solution annealing 1075 °C x 1 Refroidissement à l'eau/water cooling					Charge/HTP 11 001885 Avant/Before Après/After					
Heures/Hour 31 Minutes/minutes										
Essais mécaniques/Mechanical requirements										
Sur pièce/From piece 60 x 60 x 300		Direct.	Rm/UTS MPa	Ys 0.2% MPa	Ys 0.02% MPa	A/A %	Z/Z %			
Temp./Temp. 20 °C Min Max		LONG	517.0	207.0		45.0	50.0			
Norme ASTM										
N. test	Diam mm	Long mm	Direct.					Résilience obtenue/Impact test obtained		
2011 - 826-2-1	12.5	50	LONG	569.0	291.0	66.3	82.0			
Notes/Remarks Quality Assurance Manual rev G Forgital FMDL certifies that the products meet the customer's requirements ANALYSE CHIMIQUE SUR PRODUIT / CHEMICAL ANALYSIS ON PRODUCT : A2MI N°COR 25573 La matière prima ed i prodotti finiti sono testati al fine di assicurare assenza di contaminazione radioattiva/The raw material and the finished products are tested to assure no radioactive contamination										
JOSEPH OAT QUALITY CONTROL APP'D <u>Diana Martin</u> 10/19/11 ADDENDA <u>1974</u> <u>J-2692 IT-5</u> <u>P.O. 65209</u> BECHTEL 1133										
Aucune matière rechargée par soudure/No repair welding performed										
Date/Date 10/10/2011		Exécuté par/Performed by 		Approuvé par/Approved by 		Inspecteur/Inspector				
Page <u>49</u> of <u>673</u>										

Forgital Fmdl FORGITAL GROUP		Q. C. DEPT	Certificat d'Inspection/Inspection Test Certificate EN 10204:2004 3.1	
		No. T 3067 / 2011 / COM Pg. 1 / 1 DDT de livraison/Delivery Note		
commande/Job 826 / 2011 p. 2 / 1			Client/Customer	
Spécification /Specification ASME SA 182 F304 Rév/R.74			FORGITAL USA INC	
Matériau /material : ASME SA 182 F304/304L ED 1974			8989, MONROE ROAD	
Exig. suppl./Add. Requirements			HOUSTON, TX 77061	
Identification/Identification VOIR GAMME			Commande/Purchase order 18044-00 (Joseph Oat 065209-00)	
coulée/Heat n. 1165 Quantité/Qty 1			poste/position	
fournisseur/supplier ASO S.P.S STEELWORKS SRL			Et de livr./Shipp. Cond. HYPERTREMPE/SOLUTION ANNEALED	
Elaboration/Melt Method EF+AOD			Dessin/Drawing SK-2692-5 r.1	
Log Number/Log Number			Code/P. N.	
Article/Descript. CHAN. FLANGE DETAIL Ø60-3/16"x 54-5/16"x 5-3/16" - OAT120 - J2692 IV 5 - L2				
Analyse demandée /Chemical Requirment.				
mic/min max/max				
C %				
Mn %				
Si %				
P %				
S %				
Cr %				
Ni %				
Co %				
N ppm				
à la coulée/analyse sur produit/on product				
0,030				
2,000				
1,000				
0,040				
0,030				
18,000				
8,000				
0,250				
0,026				
1,637				
0,450				
0,025				
0,001				
18,125				
8,004				
0,139				
923				
Traitements thermiques (thermocouple à contact) /Heat Treatment (by contact thermocouple)				
Température du bain /Bath Temperature				
Charge/HTP Avant/Before Après/After				
Hypertrempe/Solution annealing 1075 °C x 1 Refroidissement à l'eau/water 11 001885				
Heures/Hour 31 Minutes/minutes cooling				
Essais mécaniques/Mechanical requirements				
Sur pièce/From piece				
60 x 60 x 300				
Temp./Temp. 20 °C Min Max				
Direct.				
Rm/UTS MPa				
Ys 0,2% MPa				
Ys 0,02% MPa				
A/A %				
Z/Z %				
LONG				
517,0				
207,0				
45,0				
50,0				
Norme				
N. test				
Diam mm				
Long mm				
Direct.				
569,0				
291,0				
66,3				
82,0				
Résilience obtenue/Impact test obtained				
2011 - 826-2-1 12,5 50 LONG 569,0 291,0 66,3 82,0				
Notes/Remarks				
Quality Assurance Manual rev G Forgital FMDL certifies that the products meet the customer's requirements ANALYSE CHIMIQUE SUR PRODUIT / CHEMICAL ANALYSIS ON PRODUCT : A2H1 N°CCOR 15573 La materia prima ed i prodotti finiti sono testati al fine di assicurare assenza di contaminazione radioattiva/The raw material and the finished products are tested to assure no radioactive contamination JOSEPH OAT QUALITY CONTROL APP'D <u>Diana Martin</u> 10/19/11 ADDENDA <u>1974</u> <u>J-2692</u> <u>Tr.5</u> <u>P.O. 65209</u>				
Aucune matière rechargée par soudure/No repair welding performed				
Date/Date 10/10/2011		Exécuté par/Performed by 		Approuvé par/Approved by
Inspecteur/Inspector		Page 50 of 623		

RAPPORT D'ESSAI DE TRACTION suivant ASTM E8 - 04 et/ou ASTM E21 - 03

A dater du présent rapport d'essais, conformément à nos conditions générales de vente hors indications particulières sur la commande, nous conservons les éprouvettes et les chutes respectivement pendant 1 an et 2 mois avant destruction. A sa demande et à ses frais, celles-ci peuvent être retournées au client.

Tél. : 04-77-40-53-70 Fax : 04-77-56-30-57

FORGITAL FMDL
A l'attention de Monsieur CHEUCLE
48 Boulevard d'Auvergne
42500 Le Chambon-Feugerolles

Machine d'essai : T3 (Zwick)
Capteur de force : 600 kN
Rapport d'essai : 11ZW01517

N° commande : QUA 1125/2011
Référence client : 11-826-2-1
Bon travaux : 1109-37129
Nuance : A182F304L Coulée : SPS1165
e-mail : a.cheucle@fmdl.fr

Informations générales

Eprouvette usinée dans un secteur 30x30mm suivant plan PF 11-826-02.

Impositions traction : Rm > 517 MPa Rp0,2 > 207 MPa A% > 45 Z% > 50

Traitement thermique : HT 1075°C

Repère	Sens	Position	Plan	S0	T	L0	E	Rp 0,2	Rp 1	Rm	A	Z	Lieu rupture
				mm²	°C	mm	GPa	MPa	MPa	MPa	%	%	
11-826-2-1	Voir	Info	T12,5	122.13	20	50.00	174	291	324	569	66.3	82	2/3 Lo

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

ADDENDA

1974
J-2692 IT-5
P.O. 65209



Prélèvement : Sens : suivant norme NF EN ISO 3785 X = sens long. Y = sens travers Z = sens travers court Long = sens long client Tang = sens tangentiel client NC = Infos non Communiquées par le client
Position : suivant norme produit. P2 = 2 mm sous la peau PS = pleine section PE = pleine épaisseur E/2 = mi-épaisseur E/4 = quart épais. P12,5 = 12,5 mm sous la peau

Incertitudes de mesures : Rp 0,2 : ±2% Rm : ±1,5% A% : ±2,5% Z% : ±7%

Position de rupture : 2/3Lo = distance entre la rupture et le repère le plus proche supérieur à Lo/3
<1/3Lo = distance entre la rupture et le repère le plus proche inférieur à Lo/3

Francis
ROUSSET
Opérateur-Rédacteur : F.Rousset

Signature numérique de Francis ROUSSET
DN: cn=Francis ROUSSET, o=A2M, ou=Essais
mécaniques, email=contact@A2M-Industrie.fr, c=FR
Date: 2011.09.28 17:05:53 +0100

Date d'édition : 28/09/2011

A2M Industrie ZA du Parc, Secteur Gampille 42 490 FRAISSES Tél : 04 77 40 14 33 Page 1/2

Ces résultats ne se rapportent qu'aux objets soumis à l'essai. Ce rapport ne doit être reproduit qu'intégralement sauf après accord écrit d'A2M INDUSTRIE.

PROCES VERBAL VISUEL ET DIMENSIONNEL <i>Visual and dimensionnal report</i>			N° 5143 PV: 1/1 Page :
CLIENT <i>Customer</i>	FORGITAL USA (JOSEPH OAT)	QUANTITE <i>Quantity</i>	2
N° DE CDE CLIENT <i>Order n°</i>	18044-00 (065209-00)	MATIERE <i>Material</i>	SA 182 F304/304L
ORDER INTERNE <i>INTERNAL ORDER</i>	11-826-02 + -02-01		
DESIGNATION <i>Designation</i>	PARTS - OAT120 - J2692 IT 5 - FD Ø 60-3/16"x 54-5/16"x 5-3/16"	N° DE COULEE <i>Heat n°</i>	1165
		N° PLAN <i>Drawing n°</i>	SK-2695-5 REV 1
<u>ZONE CONTROLEE / Area controlled</u> 100 %			
<u>CONDITIONS D'EXAMEN/Examination conditions</u>			
CONFORME à LA COMMANDE et PG 014 REV C <i>According to the order and PG 014 rev C</i>			
<u>ETAT DE SURFACE/Surface condition</u>			
BECHTEL 1133			
BRUT/Raw ☐ DECAPE/decaped ☐ GRENAILLE/Shotblasting ☐ USINE/Machined ☒ MEULE/Grinded ☐ SABLE/Sanded ☐			
<u>RESULTATS/Results</u>			
ACCEPTE/Accepted ☒ REFUSE/Refused ☐ FICHE ANOMALIE/Discrepancy sheet ☐ N°			
<u>OBSERVATIONS/Comments</u>			
OPERATEUR <i>Operateur</i>	DATE ET VISA CONTROLE QUALITE <i>Date and visa quality control</i>	CONTROLE CLIENT <i>Customer inspection</i>	
G. TOURNELLEC	Le 7/10/11 		

Ref doc : FDL 099 REV A

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

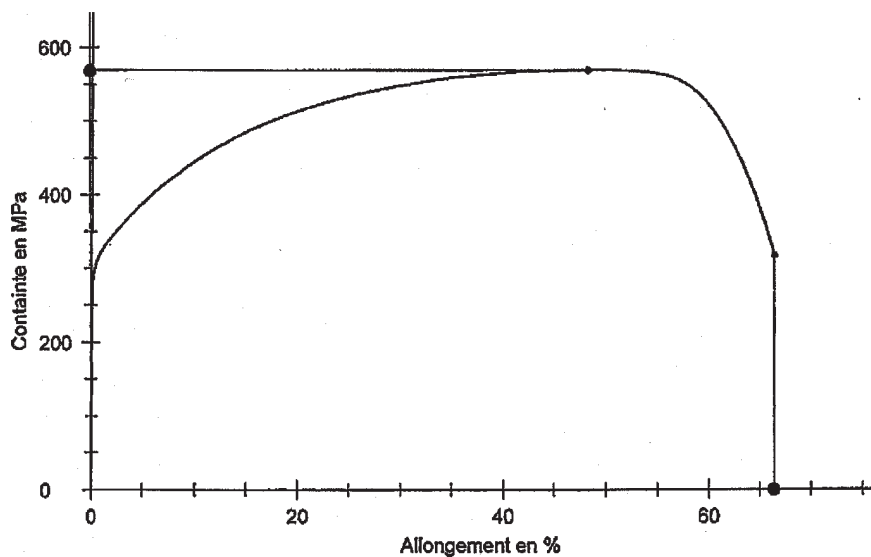
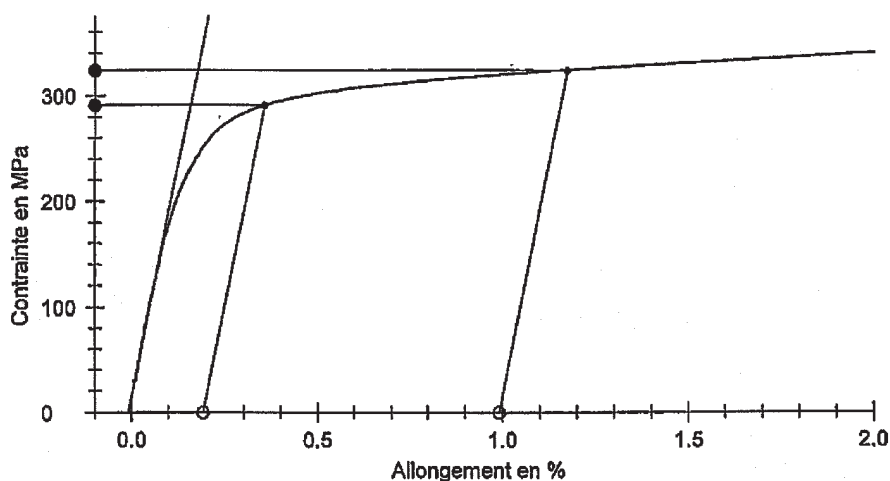
ADDENDA 1974

J-2692 IT-5
P.O. 185209

RAPPORT D'ESSAI DE TRACTION sulant ASTM E8 - 04 et/ou ASTM E21 - 03

Rapport d'essai : 11ZW01517
Bon travaux : 1109-37129
Date d'essai : 28/09/2011

Repère	Sens	Position	Plan	S0	T	L0	E	Rp 0,2	Rp 1	Rm	A	Z	Lieu rupture
				mm²	°C	mm	GPa	MPa	MPa	MPa	%	%	
11-826-2-1	Voir	Info	T12,5	122.13	20	50.00	174	291	324	569	66.3	82	2/3 Lo



JOSEPH OAT QUALITY CONTROL

APPD Dianna Mactio 10/19/11

ADDENDA 1974
J-2692 IT-5
P.O. 65209

BECHTEL
1133

Certificat de Conformité Certificate of Conformity	 S.A.S AU CAPITAL DE 1.000.000 EUROS 48 Boulevard d'Auvergne F- 42500 LE CHAMBON-FEUGEROLLES	ASSURANCE  QUALITE
	Téléphone : 04.77.40.53.70 Télécopieur : 04.77.56.30.57 Télécopieur SERVICE QUALITE : 04.77.40.53.83	N° 4890

CERTIFICAT DE CONFORMITE AUX STIPULATIONS D'UNE COMMANDE

Certificate of conformity with the order's stipulations

Client : Customer : FORGITAL USA (JOSEPH OAT)	Désignation : Designation :
N° de commande client : Customer order number : 18044-00 (065209-00)	2 PARTS - OAT120 - J-2692 IT 5 - FD Ø 60-3/16"X 54-5/16"X 5-3/16" - L2
Conformément à : According to : ASME SA182 F304/304L ED 1974	Marking : CAST N°1165 - F304/304L - ForgitalFMDL - J-2692 IT 5 - ITEM N°3 - 11-826-02-00 + -02-01

Nous certifions que, sauf exceptions ou dérogations énumérées ci-après, les produits cités ont été fabriqués conformément aux spécifications techniques de la commande du Client et que toutes les opérations de contrôle et essais effectués, ils répondent, **SOUS TOUS LES ASPECTS**, aux spécifications particulières jointes aux plans ainsi qu'aux normes et règlements en vigueur s'y rapportant.

We certify that the products mentioned above have been made according to the order's technical specifications and that after all tests and controls, they are conformed IN EVERY POINT to the specifications concerning the plans and to the standards and rules existing.

Renseignements particuliers aux produits livrés, notamment dérogations :
Special information concerning the products supplied, especially derogations

BECHTEL
1133

ETABLI PAR : G. TOURNELLEC	Le Chambon Feugerolles, le 10/10/11	VISA : 
-------------------------------	---	---

Réf.doc: FDL063D - 26/04/06

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/19/11

ADDENDA

1974
J-2692 IT.5
P.O. 165209

Dooley Gasket And Seal Inc.

Certificate of Conformance

To: JOSEPH OAT CORPORATION
2500 BROADWAY
CAMDEN, NJ 08104

From: Dooley Gasket And Seal Inc.

BECHTEL
1133

Packing List No: 71703

Today's Date: 08/23/11

Shipping Date: 08/03/11

PO Number: 065213-00

CERTS

Quantity	Shipped	Unit	Description	Revision	Job Number
8	EA	J-2692 IT.61 GASKETS: 56.9375" (+/- 132) OD X 55.4375" (+/- 1/32) ID X .175" THK (+/- .005) WITH 54-5/16" ID RING PER SKETCH SK-2692-61 REV. 0 MATERIAL: SPIRAL WOUND SS304/304L WINDING WITH GRAPHITE FILLER		60132-01	
8	EA	J-2692 IT.6 GASKETS: 56.9375" (+/- 1/32) OD X 55.4375" ID (+/- 1/32) X .175" THK (+/- .005) WITH WD PASS PARTITION RIBS PER SKETCH SK-2692-6 REV. 0 MATERIAL: SPIRAL WOUND SS304/304L WINDING WITH GRAPHITE FILLER	*	60132-02	
40	EA	J-2692 IT.17 SPIRAL WOUND CGI W/ 304 304L INNER RINGS, TYPE SS304/304L WINDING AND GRAPHITE FILLER; 4" 150# X .175" THK MATERIAL: SPIRAL WOUND SS304/304L WINDING WITH GRAPHITE FILLER		60132-03	
32	EA	J-2692 IT.68 SPIRAL WOUND CGI W/ 304/304L INNER RINGS, TYPE 304/304L WINDING AND GRAPHITE FILLER; 4" 150# X .175" THK MATERIAL: SPIRAL WOUND SS304/304L WINDING WITH GRAPHITE FILLER		60132-04	
2	EA	CRATE CRATES		60132-05	

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 8/22/11

ADDENDA

1974

J-2692 IT. 6, 602
P.O. 65213

Page 55 of 673

Page 1 of 2

Quantity

Shipped

Unit

Description

Revision

Job Number

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 8/22/11

ADDENDA 1974

J-2692 It. 6, 602
P.O. 65213

BECHTEL
1133

Inspector's Initials
Dooley Gasket And Seal Inc.

Stephen N. Nant
Authorized Signature
Dooley Gasket And Seal Inc.

Page 56 of 673
Page 2 of 2



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

MATERIAL CERTIFICATION

CUSTOMER NAME: JOSEPH OAT CORP
CUSTOMER PO: 065105-00
PACKING SLIP: G256-5100 (DIRECT SHIPMENT)
DESCRIPTION:

176 STUDS 3/8"-9 X 15" TFL STUDS WITH 2 HEAVY HEX NUTS
352 NUTS STUD: SA193 GR.B7, NUT: SA194 GR.2H
HEAT: STUD: DL1010389502 H/C: CDW, NUT SA42971 H/C: JUD
MFG: STUD: T&T ENTERPRISES, NUT: KPF (T&T ENTERPRISES)
ITEM# J-2692IT. 7/8

90 STUDS 3/8"-11 X 3 1/2" TFL STUD WITH 2 HEAVY HEX NUTS
180 NUTS STUD: SA193 GR.B7, NUT: SA194 GR.2H
HEAT: STUD: 783582 H/C: CDV, NUT: SW04083 H/C: LXM
MFG: STUD: T&T ENTERPRISES, NUT: KPF (T&T ENTERPRISES)
ITEM# J-2692 IT.18/19

82 STUDS 3/8"-11 X 3 1/2" TFL STUD WITH 1 HEAVY HEX NUTS
82 NUTS STUD: SA193 GR.B7, NUT: SA194 GR.2H
HEAT: STUD: 783582 H/C: CDV, NUT: SW04083 H/C: LXM
MFG: STUD: T&T ENTERPRISES, NUT: KPF (T&T ENTERPRISES)
ITEM# J-2692 IT.6970

BECHTEL
1133

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin, 6/27/11

ADDENDA

1974

J-2692 IT. 7, 8, 603, 604
P.O. 65105



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

CUSTOMER NAME: JOSEPH OAT CORP
CUSTOMER PO: 065105-00
PACKING SLIP: G256-5100 (DIRECT SHIPMENT)

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 12/27/11

ADDENDA

1974
J-2692 IT-7,8,603,604
P.D. 65105

Based on review of supporting documentation attached, we hereby certify that the material described above is in compliance with ASME Section III, Class 3, Subsection ND, 1974 Edition thru NO Addenda, of the Code and your purchase order. This also affirms that the contents of this report are correct and accurate and that all test results, inspections and operations performed by us or our subcontractor are in compliance with the material specification (including dimensions) and the specific applicable material requirements of ASME Section III. Receipt inspection of direct shipped material is the responsibility of the customer.

Quality Systems Certificate (Materials) Number QSC-332 meeting NCA-3800, expiring July 30, 2011 and Q.A. Manual revision 7, dated 03/12/08 apply.

No welding performed by Energy and Process.

The provisions of 10CFR21 & 10CFR50, APPENDIX B apply to this order.

BECHTEL
1133

SODHout
SIGNED

Manager QA
TITLE

6/17/11
DATE

CC: Customer File
P. 2 OF 2

**T & T ENTERPRISES
CERTIFICATE OF CONFORMANCE
CERTIFIED MATERIAL TEST REPORT**

CUSTOMER:

ENERGY & PROCESS CORPORATION
2146-B FLINTSTONE DRIVE
TUCKER, GA 30084-5000

DATE: 6-15-11

PURCHASE ORDER # G256-5100

PACKING SLIP # 11-0899

ITEM#	QUANTITY	MATERIAL DESCRIPTION
04	176	7/8-9 X 15 TFL STUDS ✓ ASME SA193 GRADE B7 ✓ LINE #2, ITEM #J-2692 IT. 7 & IT.8

MATERIAL PROPERTIES

HEAT NO: DL1010389502 ✓ HEAT CODE: CDW ✓
CHEMICAL COMPOSITION: C:.39 MN:.78 SI:.24 P:.010 S:.025 CR:.89 MO:.18 ✓
CHEMICAL OVERCHECK#1: C:.38 MN:.82 SI:.23 P:.010 S:.022 CR:.88 MO:.17

TENSILE & MACRO: SEE STORK REPORT# TTE001-04-06-20441-1

HARDNESS AS SHIPPED: 30 HRC

HEAT TREAT DATA: QUENCHED & TEMPERED @ 1420 DEG. F. RUN SPEED 22.0 FT/MIN

BECHTEL
1133

QUALITY ASSURANCE PROGRAM REQUIREMENTS

VISUAL EXAMINATION SA-614 RU & NX-2582: (PASSED),
SECTION III NCA-3800 SUBSECTION ND CLASS 3 1974 EDITION, NO ADDENDA
MATERIAL WAS UPGRADED IN ACCORDANCE WITH NCA-3855.5(a)1 THRU 4 (1995)
MATERIAL HAS NOT COME IN CONTACT WITH MERCURY OR MERCURY COMPOUNDS, NO WELD
REPAIR WAS PERFORMED ON MATERIAL.
10CFR50B AND 10CFR21 APPLY

QUALITY STATEMENT

This material has been supplied in accordance with T & T Enterprises Quality Assurance Program Revision 2, Dated 06-10-03, which has been surveyed, qualified, and audited by E&P. The contents of this report are correct and accurate and the results are in compliance with the material specification and the requirements of Your Purchase Order# G256-5100

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 16/27/11 [Signature]
Quality Assurance Department

ADDENDA

1974
J-2692 IT. 7, 603
P.O. 65105

Joseph Oat
P.O. 65105-00
IT. 7 & IT. 8
J-2692
IT. 7 & IT. 8
6-17-11



901 E. Third Street #A-3, Corona, Calif. 92879-1604 • (951) 340-0911 • FAX (951) 340-0912

PAGE 56

Page 59 of 613



Vulcan Threaded Products
10 Cross Creek Trail
Pelham, AL 35124
Tel (205) 620-5100
Fax (205) 620-5150

JOB MATERIAL CERTIFICATION

Job																	
Job No: 168747	Certified Date: 3/8/11																
Customer: T & T Enterprises Customer Part No: BAR B7 .798x144 Customer PO No: 101910-wf Order No: 95134	Ship To: 901 E. 3rd St - Unit A-3 Corona, CA 92879 Shipped Qty: 6004 lbs Line No: 4																
Material processed in accordance with Vulcan Threaded Products Inc. Quality Assurance Program and Manual Rev. B, Dated 8-14-2009, which was audited and approved by T&T Enterprises on 2-26-2010. No weld repair performed on the material. No Mercury used in the production of this material. Material manufactured in the USA.																	
Containers: S3699550 S3700032																	
Part																	
Part No: BAR B7 .798x288 Part Group: HT Bar Piece Weight: 40.851 lbs Size (Inches): Major Diameter PRIMARY: .7987 (+.002/- .002) Overall Length PRIMARY: 288 (+1.000/- .000)	Name: Bar Alloy Type: 4100 Alloy - Temper: 4140 -																
BECHTEL 1133																	
Specifications																	
Type	Specification	Rev	Amend	Option													
Heat Treat	ASTM A193 B7/ASME SA193 B7	2007															
Tests																	
Test No: 10731 Test: Quench & Temper Physicals (Lbs)																	
Description	Tensile (psi)	Yield (psi)	Elongation (%)	ROA (%)	Midradius Hardness (HRC)	Surface Hardness (HRC)	Center Hardness (HRC)	Note									
Quench & Temper Physicals Results	135800	120100	22	63	29												
Test No: 10732 Test: Quench & Temper Information (Lbs)																	
Description	Tempering Temp (F)	Run Speed (Ft/min)	Quench Water Temp (F)	Note													
Quench & Temper Information Results	1420	22.0	92.5														
Certified Chemical Analysis																	
Heat No	Origin	C	Mn	P	S	Si	Cr	Mo	Ni	V	Nb	Sn	Al	Cu	DI	RR	META
DL1010389502	USA	0.3900	0.7800	0.0100	0.0250	0.2400	0.8900	0.1800	0.0800	0.0160	0.0050	0.0000	0.0000	0.2700	0.00	87:1	S-2, R-2, C-2
Notes																	
Material was manufactured, tested and inspected in accordance with Vulcan Threaded Products Inc. Quality Assurance Program and Manual Rev. C dated 11/29/06. Processed material is Quenched and Tempered - Stress Free. No weld repair performed on the material. No Mercury used in the production of this material. Melted and Manufactured in the USA.																	
 William Kappen - Supervisor																	
3/8/11 Date																	

Plex Online 3/8/11 10:57 AM vulc.wkap Page 1

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 16/27/11

ADDENDA 1974

J-2692 IT-7, 603
P.O. 65105

Joseph oat
P.O. 65105-00
IT-7 BM 6-17-11
J-2692
IT-7 J-2692 IT-7/8



Page 60 of 673

NUCOR
NUCOR CORPORATION
NUCOR STEEL SOUTH CAROLINA

Mill Certification
7/30/2010

300 Steel Mill Road
 DARLINGTON, SC 29540
 (843) 393-5841
 Fax: (843) 395-8701

Sold To: VULCAN THREADED PRODUCTS
 PO BOX 509
 PELHAM, AL 35124-0509
 (205) 620-5139
 Fax: (205) 620-5150

Ship To: PINSON VALLEY HEAT TREATING
 6179 SUNRISE DRIVE
 PINSON, AL 35126
 (205) 681-8595

Customer P.O.	P214669	Sales Order	120048.3
Product Group	Special Bar Quality	Part Number	31000844000DDWD
Grade	4140JS - ASTM A322-91	Lot ID	DL10103895
Size	27/32" (.8438) Round Coil	Heat ID	DL1010389502
Product	27/32" (.8438) Round Coil 4140JS	B.L. Number	C1-534370
Description	4140JS - ASTM A322-91	Load Number	C1-220802
Customer Spec		Customer Part #	RMC4140 27/32

I hereby certify that the material described herein has been manufactured in accordance with the specifications and standards listed above and that it satisfies those requirements.

C	Mn	V	Si	S	P	Cu	Cr	Ni	Mo	Cb
0.39%	0.78%	0.016%	0.24%	0.025%	0.010%	0.27%	0.89%	0.08%	0.180%	0.005%

Reduction Ratio 87 :1

Specification Comments: MACROETCH S2-R2-C2 OR BETTER

1. WELDING OR WELD REPAIR WAS NOT PERFORMED ON THIS MATERIAL
2. MELTED AND MANUFACTURED IN THE USA
3. MERCURY, RADIUM, OR ALPHA SOURCE MATERIALS IN ANY FORM HAVE NOT BEEN USED IN THE PRODUCTION OF THIS MATERIAL

BECHTEL
1133

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 16/27/11

ADDENDA 1974

J-2692 IT. 7,603
 P.O. 65105

Joseph oat
 P.O. 065105-00
 IT# BM 6-11-11
 Job# J-2692
 IT# J-2692 IT. 7/8

6-17-11
E&P CORP
12
 QA OK

James H. Blew

James H. Blew
 Division Metallurgist

Page 2 of 3

NBMG-10 May 12, 2009

Page 61 of 673

PAGE 58

Material Testing and Non-Destructive Testing

Contact: Dan McDevitt
T & T Enterprises
901 E. Third Street

CORONA, CA 91719

15062 Boisa Chica
Huntington Beach, CA 92649

Telephone : (714) 892-1961
Telefax : (714) 892-8159
Website : www.storksmti.com

Date: 4/12/2011 P.O. No.: 11-0488-30

W/O No.: TTE001-04-06-20441-1

CORRECTED TEST CERTIFICATE — EAR-CONTROLLED DATA 4/13/11

Coupon Size:	2 PCS 7/8-9 x 6
Heat#:	DL1010389502
Spec.:	ASME SA193-2010 W/O ADDENDA GR. B7***

TENSILE						
Test Method:	ASTM A 370-10					
Sample No.	Tensile Strength	Yield Strength At 0.2% Offset	Elongation in 2.0"(4D)	Reduction of Area	Diameter	Area
	Min (ksi)	Min. (ksi)	Min. (%)	Min. (%)	(in)	(in ²)
Requirements :	125	105	16.0	50		
RTT#-01	131	112	23.0	66	0.5040	0.1995
RTT#-02	135	117	24.0	63	0.5050	0.2000

MACRO-BAR			
Etchant used:	1		
Sectioning and preparation was performed in accordance with ASTM E 381 and etched in 50% HCL and 50% H2O at 160/180 degrees F for 5-15 minutes.			
Results: Uniform, homogeneous, and fine, with no evidence of deleterious structure / imperfections.			
The rating is as follows:	S1	R1	C1
Maximum Requirements:	S2	R2	C3

Material was tested in accordance with Stork-SMT&I's Quality Program and Manual, Edition 1, Revision 7, Dated 09/24/2010, which was audited and approved by T & T Enterprises on 11/19/10.

10 CFR 21 applies (as applicable to testing laboratories).
MATERIAL CONFORMS TO SPECIFICATION

BECHTEL
1133

"Stork Material Testing and Inspection does not perform welding or weld repair on material supplied by T&T Enterprises."

This document contains technical data whose export and re-export/re-transfer is subject to control by the U.S. Department of Commerce under the Export Administration Act and the Export Administration Regulations. The Department of Commerce's prior written approval is required for the export or re-export/re-transfer of such technical information to any foreign person, foreign entity or foreign organization whether in the United States or abroad.

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 4/27/11

ADDENDA

1974
J-2692 IT.7
P.O. 65105 603

Respectfully submitted

Darcy R. Urea
Darcy Urea
Quality Administrator

Joseph Oat
P.O. 65105-00
IT.7 8M
J-2692
IT.7-2692 IT.7/8



The information contained in this certification represents only the material submitted and is certified only for the quantities tested. Reproduction except in full is reserved pending written approval. The recording of false, fictitious, or fraudulent statements or entries on the certificate may be punishable as a felony under federal law. All testing was performed in a mercury free environment.

All testing performed in accordance with the latest edition of the applicable ASTM, or other Federal Test Method in effect at the time of test.
Stork Materials Testing and Inspection is an operating unit of Stork materials Technology B.V., Amsterdam, The Netherlands, which is a member of the Stork group

**Pinson Valley
Heat Treating Co., Inc**

6179 Sunrise Drive Pinson, Al. 35126

Phone:205-6818595 Fax 205-681-4673

March 4, 2011

Mr. Jeff Hayes
Vulcan Threaded Products
10 Crosscreek Trace
Pelham, Al. 35124

Re: Heat treating of bars and coils

Dear Jeff

This is regarding the email you sent about the heat treating processing we are doing on your bar and coils at this time. The only processing Pinson Valley Heat Treating is providing at this time is stress relieving and LP Annealing on bars and coils. We are not performing any type of quench and tempering processing on any of these parts. I hope this is the information you needed, but if you need more feel free to contact me.

There has, to my knowledge, not been any mercury used in our processing on this material. There has not been any welding of any kind on any bar or coil product at Pinson Valley Heat Treating. Thank you for your business and again, please let me know if you need any additional information.

Thank You

Benny Grissom
Vice President
205-602-304

BECHTEL
1133

www.pvht.com

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martini 6/27/11

ADDENDA 1974

J-2692 It. 7, 603
P.O. 65105

Joseph oat
P.O. 65105-00
~~It. 7 8M 6-17-11~~
~~Job # J-2692~~
It. 7-2692 It. 7/8

6-17-11



Page 63 of 673

**T & T ENTERPRISES
CERTIFICATE OF CONFORMANCE
CERTIFIED MATERIAL TEST REPORT**

CUSTOMER:

ENERGY & PROCESS CORPORATION
2146-B FLINTSTONE DRIVE
TUCKER, GA 30084-5000

DATE: 6-15-11

PURCHASE ORDER # G256-5100

PACKING SLIP # 11-0899

ITEM#	QUANTITY	MATERIAL DESCRIPTION
04	352	7/8-9 HEAVY HEX NUTS ASME SA194 GRADE 2H LINE #2, ITEM #J-2692 IT. 7 & IT.8

**BECHTEL
1133**

MATERIAL PROPERTIES

HEAT NO: SA42971 / HEAT CODE: "JUD"
CHEMICAL COMPOSITION: C:.46 MN:.81 SI:.21 P:.016 S:.004 ✓
CHEMICAL OVERCHECK#1: C:.48 MN:.81 SI:.25 P:.014 S:.011

CONESTRIP PROOFLOAD: 60,271 LBS

MACROETCH (E381): PASSED

HARDNESS AS SHIPPED: 30 HRC

HARDNESS AFTER 24 HOURS @ 540 DEG. C.: 28 HRC

HEAT TREAT DATA: QUENCHED & TEMPERED @ 520 DEG. C. FOR 90 MINUTES.

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 6/27/11

ADDENDA

1974
J-2692 IT. 8, 604
P.D. 65105

Joseph Oat
P.O. 065105-00
IT. 7 BM 6-17-11
J-2692
IT. 7 J-2692 IT. 7 / 8
6-17-11



QUALITY ASSURANCE PROGRAM REQUIREMENTS

VISUAL EXAMINATION SA-614 RU & NX-2582: (PASSED),
SECTION III NCA-3800 SUBSECTION ND CLASS 3 1974 EDITION, NO ADDENDA
MATERIAL WAS UPGRADED IN ACCORDANCE WITH NCA-3855.5(a) 1 THRU 4 (1995)
MATERIAL HAS NOT COME IN CONTACT WITH MERCURY OR MERCURY COMPOUNDS, NO WELD
REPAIR WAS PERFORMED ON MATERIAL.
10CFR50B AND 10CFR21 APPLY

QUALITY STATEMENT

This material has been supplied in accordance with T & T Enterprises Quality Assurance Program Revision 2, Dated 06-10-03, which has been surveyed, qualified, and audited by E&P. The contents of this report are correct and accurate and the results are in compliance with the material specification and the requirements of Your Purchase Order# G256-5100


Quality Assurance Department

Page 64 of 673

INSPECTION CERTIFICATE

Certificate No. : J420080908119

P/O No. : 4506-JAT

L/C No. : CAD-T&T

Date Issued : 2008/09/08

Date Shipped : 2008/09/11

Date Tested : 2008/08/08

Date Manufactured : 2008/07/24

Specifications : ASTM A194/A194M - 04a

Customer : T & T ENTERPRISES

Description : ASTM A194 GR.2H HEAVY HEX NUTS, PLAIN

Grade : GR.2H

Size : 7/8-SUNC

Marking : 2H, JUD, KPF LOGO

Surface Condition : PLAIN

Lot No. : FZH1482000

Q'ty Shipped : 29,550 PCS



FACTORY : 601 YONGTAN-DONG, CHUNGJU-CITY,
CHUNGCHONGBUK-DO, KOREA 380-250

TEL : (043) 849 - 1114

FAX : (043) 849 - 1234



FIELD OF TESTING : MECHANICAL, CHEMICAL

LAB. ID. : 111983

CERT. NO. : 0882-01, 0882-02



STANDARD OF CERTIFIED : ISO 9001, ISO 14001, OHS18000

CERT. NO. : AC-01899, EAC-03556, MD-01899

PAGE 1/2

1. Chemical Composition (%)

Heat No.	C x100	Si x100	Mn x100	P x1000	S x1000	Cr x100	Mo x100	Ni x100	B x10000	Cu x100	Ti x100	V x100	Al x1000
Spec.	Min.	40											
	Max.		40	100	40	50							
SM2971	46	21	81	16	4								

2. Macroetch Meet

Division	Surface Condition	Random Condition	Center Segregation	Spec. of Test Method
Spec.	S2	R2	C2	ASTM E381 -
Results	S2	R1	C2	
Tested By	K.R. LEE			

3. Mechanical Properties

Division	Hardness		Specimen Tensile				Proof Load		Tensile Load	Sample Nut Hardness 540C/24hr	Impact Test		Bending Test	Bolt Retemporing Hardness	Tap Wrench Fit Test	Decarburi zation Test By Hardness
	Surface	Core	Yield Strength	Tensile Strength	Elongation	Reduction of Area	Load	Elongation			Individual	Average				
	n = 5						n = 5									
Unit	Min.	HRC					lbf			HRB						
	Max.	HRC					80,850			88						
Spec.	Min.	24														
	Max.	35														
Results	1	HRC	30				GOOD			HRC	28					
	2		30				GOOD				28					
	3		30				GOOD									
	4		30				GOOD									
	5		29				GOOD									
	6		30				***									
	7															
	8															
	9															
	10															
	Avg.															
Tested By	G.Y. HWANG						G.Y. HWANG			G.Y. HWANG						
Spec. of Test Method	ASTM A370 -						ASTM A370 -			ASTM A370 -						

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 6/27/11

ADDENDA 1974

J-2692 Tr. 8, 604
P.O 65105

Reference : MATERIAL MANUFACTURED IN ACCORDANCE WITH KPF (KOREA PARTS AND FASTENER) QUALITY ASSURANCE PROGRAM AND MANUAL REV.0 DATED 1-03-06, AND HEAT TREATING PROCEDURE NUMBER S-013 REV 0 DATED 3-14-06, WHICH WAS AUDITED AND APPROVED BY T&T ENTERPRISES ON 3-20-06. NO WELD REPAIR ON MATERIAL

This is to certify that the above results are true and correct in every details

BECHTEL
1133

IN-SUB CHOE

IN-SUB CHOE
Chief of Quality Management Dept.

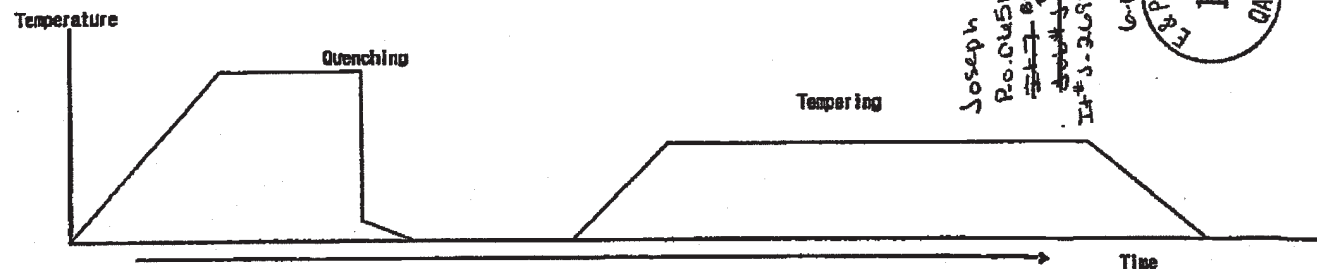
KPF

4. Others

Division		Plate Thickness	Salt Spray Test	Decarburization Test By Microscope		Torque Tension Test		Prevailing Torque Test						Remark
				Partial Decarb. (Base Metal Height)	Gross Decarb. Depth.	Clamp Load	Tightening Torque	1st Initial Prevailing Torque	Clamp Load	1st Rem.Hight Prevailing Torque	1st Rem.Low Prevailing Torque	5th Rem.Hight Prevailing Torque	5th Rem.Low Prevailing Torque	
Unit	Min.													
	Max.													
Spec.	Min.													
	Max.													
Results	1							JOSEPH OAT QUALITY CONTROL APP'D <u>Diana Martin</u> 4/27/11 ADDENDA <u>1974</u> <u>J-2692</u> <u>IT-8, 604</u> <u>P.D. 65105</u>						
	2													
	3													
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	Avg.													
Tested By														
Spec. of Test Method														

5. Heat Treatment

Quenching	Min. Temp.	
	Max. Temp.	
	Working Temp.	860 °C
	Holding Time	30 min.
Tempering	Min. Temp.	455 °C
	Working Temp.	520 °C
	Holding Time	90 min.



Joseph oat
P.O. # 5105-00
~~7-17-11~~
~~6-17-11~~
T# 3-3682 I# 7(2)



This is to certify that the above results are true and correct in every details

1133 BECHTEL



**CERTIFIED MATERIAL TEST REPORT
CERTIFICATE OF CONFORMANCE**

Bill To: 2277100
JACQUET
191 SOUTH KEIM STREET
SUITE 108
POTTSTOWN PA

Ship To: 000

19464

OUR ORDER NO. LP1426640
YOUR ORDER NO. 5585
MEMO NO. 374632-00
CERT. DATE 04/14/2011
WHS-1 DUAL CERT

Tracy McFarland
Tracy McFarland - Director, Corporate Quality Assurance

AL 304/304L ✓ HRAP
ASTM A240 10b ASME SA240 10 ASTM A262 10 PRACTICE E
AMS 5511 H AMS 5513 J
PED 97/23/EC;
UNS S30400; UNS S30403

Heat	Matl	ID	Slip	Sid	Lot No	Size(Inches)	Pcs	Weight(lb)
949137	03	13290	AA	244205	.5000 x 79.0000 x 260.0000	1	3067	

Heat	C	MN	P	S	SI	NI	CR	MO	CO	CU	N
949137	.022	1.46	.032	.0003	.33	8.07	18.46	.30	.16	.41	.091

Lot No	Gauge	Cond.	Test	Yield Strength	Tensile Strength	Elong %	Red. of Area %	Hardness	Bend	Corrosion	Grain Size
244205	.5000	TRANS	ANNEAL	42.8 KSI	87.0 KSI	65.0	76.0	BHN179	OK	OK	

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY
MATERIAL IS OF USA MELT AND MANUFACTURE
MATERIAL WAS NOT WELD REPAIRED
DIN EN 10204:2005 3.1 CERTIFICATE
MATERIAL DOES NOT CONTAIN MORE THAN NORMAL BACKGROUND RADIATION ASSOCIATED WITH STAINLESS STEEL

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 4/27/11

ADDENDA 1974
J-2692 IT-9B
P.D. 65108

Jacquet NO

14960

PAGE 1 FINAL PAGE

THIS CERTIFICATE OF TEST SHALL NOT BE REPRODUCED IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. TESTING WAS PERFORMED AT ALC NADCAP AND ISO/IEC 17025 APPROVED LABORATORIES LOCATED AT HATTONA HEIGHTS, BRACKENRIDGE, LATROBE, MIDLAND AND LEECHBURG, PA FACILITIES OR A NADCAP AND ISO/IEC 17025 ACCREDITED LABORATORY. EN 10204-3.1 ALLEGHENY LUDLUM IS APPROVED AS MANUFACTURER ACCORDING TO AD-MERKBLATT WQ/TRD 100 AND THE PRESSURE EQUIPMENT DIRECTIVE PED 97/23/EC.

ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES: C, S BY COMBUSTION/INFRARED. N, O, H BY INERT FUSION/THERMAL CONDUCTIVITY. MN, P, SI, CR, NI, MO, CU, CO, V BY WDXRF. S BY OES. AL AND TI (≥ 0.10%) BY WDXRF. OTHERWISE BY OES. Pb, Bi, Ag BY GFAA.
CERTIFICATE OF TEST & CHEMISTRY STATEMENTS EXCEPT AS OTHERWISE NOTED, MATERIAL WAS MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO SPECIFICATION/ORDER REQUIREMENTS.

Page 47 of 673



2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

SOLD TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104

Certified Test Report
JOC001-11-06-23011-1



SHIP TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104
ATTN: Justin Kaplan

CUSTOMER P.O.
065166-00

CERTIFICATION DATE
7/6/2011

SHIP VIA
CUSTOMER PICKUP

DESCRIPTION

Quantity: 1
Type: 1/2" Thick Plate
Job No.: 2692
Original Manufacture: Jacquet
Heat No.: 949137
Material Type: ASME Section III, Class 3, 1974 Edition, No Addenda;
ASME Section II; ASME SA-240, Grades 304/304L
Size: 3" x 20"

The referenced sample was submitted to chemical content evaluation and it was found to be in conformance to ASME SA-240, 1974 Edition, No Addenda, Types 304 & 304L with the following results:

ELEMENT	304		304L		ACTUAL
	MIN	MAX	MIN	MAX	
C		0.08		0.030	0.020%
Co					0.16%
Cr	18.00	20.00	18.00	20.00	18.34%
Mn		2.00		2.00	1.44%
Ni	8.00	10.50	8.00	12.00	8.13%
P		0.045		0.045	0.033%
S		0.030		0.030	0.003%
Si		1.00		1.00	0.33%

BECHTEL
1133

Procedures/Methods: 86-SCA-0, Rev. 11, Direct Reading Atom Emissions Spectroscopy

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 7/7/11

ADDENDA 1974
J-2692 IT. 9B
P.O. 65166

Page 68 of 673



**LABORATORY
TESTING INC.**

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

Certified Test Report

JOC001-11-06-23011-1



Accredited

Materials Testing Laboratory
Nondestructive Testing

TENSILE TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	(PSI) TENSILE STRENGTH	(PSI) YIELD (.2%) STRENGTH	(%) ELONGATION (IN 2")	KEY C/NC/R
REQUIRED	Min	Min	Min	
304	75,000	30,000	40	
304L	70,000	25,000	40	
ACTUAL	86,500	46,200	67	C

BECHTEL
1133

HARDNESS TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	HARDNESS READINGS			SCALE	AVG.	SCALE	KEY (C/NC/R)
REQUIRED	MAX 88	SCALE HRBW					
ACTUAL	82	83	82	83	HRBW	83	HRBW C

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 17/7/11

ADDENDA 1974
J-2692 IT-9B
P.O. 65166

The provisions of 10CFR21 and 10CFR50, Appendix B apply to this order.

All testing was performed in accordance with L.T.I. Quality System Program Manual, Rev. 18 dated 7/27/07 as audited and approved by Joseph Oat Corporation.

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 18 dated 7/27/07 and ISO/IEC 17025. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. L.T.I. is accredited by PRI to ISO17025 and by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at www.labtesting.com and www.eAuditNet.com. The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

MERCURY CONTAMINATION: During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

NOTE: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherri L. Scheifele
QA Specialist

Sherri L. Scheifele

Authorized Signature (ES)

Page 69 of 673



CERTIFIED MATERIAL TEST REPORT
CERTIFICATE OF CONFORMANCE

Bill To: 2277100
JACQUET
191 SOUTH KEIM STREET
SUITE 108
POTTSTOWN PA

Ship To: 000

19464

OUR ORDER NO. LP1426580
YOUR ORDER NO. 5532
MEMO NO. 373798-00
CERT. DATE 03/25/2011
WHS-1 DUAL CERT

Tracy McFarland
Tracy McFarland - Director, Corporate Quality Assurance

AL 304/304L HRAP
ASTM A240 10b ASME SA240 10 ASTM A262 10 PRACTICE E
AMS 5511 H AMS 5513 J
PED 97/23/EC;
UNS S30400; UNS S30403

Heat	Matl ID	Slip	Sid	Lot No	Size(Inches)	Pcs	Weight(lb)
833955	09C	11265	AC	243777	.5000 x 79.0000 x 252.0000	1	2973

Heat	C	MN	P	S	SI	NI	CR	MO	CO	CU	N
833955	.017	1.88	.032	.0003	.34	8.10	18.22	.71	.25	.48	.089

Lot No	Gauge	Cond.	Test	Yield Strength	Tensile Strength	Elong %	Red. of Area %	Hardness	Bend	Corrosion	Grain Size
243777	.5000	TRANS	ANNEAL	48.0 KSI	88.0 KSI	61.0	74.0	BHN182	OK	OK	

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) ABOVE 1900F AND WATER QUENCHED
MATERIAL WAS PRODUCED WITHOUT KNOWN CONTACT WITH MERCURY
MATERIAL IS OF USA MELT AND MANUFACTURE
MATERIAL WAS NOT WELD REPAIRED
DIN EN 10204:2005 3.1 CERTIFICATE
MATERIAL DOES NOT CONTAIN MORE THAN NORMAL BACKGROUND RADIATION ASSOCIATED WITH STAINLESS STEEL

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 6/17/11

ADDENDA 1974
J-2692 ITS. 9C, 12
P.O. 65108

Jacquet NO
14 863

BECHTEL
1133

PAGE 1 FINAL PAGE

THIS CERTIFICATE OF TEST SHALL NOT BE REPRODUCED IN FULL WITHOUT THE WRITTEN APPROVAL OF THE COMPANY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. TESTING WAS PERFORMED AT ALC NADCAP AND ISO/IEC 17025 APPROVED LABORATORIES LOCATED AT MATRONA HEIGHTS, BRACKENRIDGE, LATROBE, MIDLAND AND LEECHBURG, PA FACILITIES OR A NADCAP AND ISO/IEC 17025 ACCREDITED LABORATORY. EN 10204 - 3.1 ALLEGHENY LUDLUM IS APPROVED AS MANUFACTURER ACCORDING TO AD-MERKBLATT W07RD 100 AND THE PRESSURE EQUIPMENT DIRECTIVE PED 97/23/EC.

ALLEGHENY LUDLUM PERFORMS CHEMICAL ANALYSIS BY THE FOLLOWING TECHNIQUES: C, S BY COMBUSTION/INFRARED. H, O, H BY INERT FUSION/THERMAL CONDUCTIVITY. MN, P, SI, CR, NI, MO, CU, CB, CO, V BY WDXRF. B BY CES. AL AND TI (p=0.10%). BY WDXRF, OTHERWISE BY CES, PB, BI, AG BY GFAA. CERTIFICATE OF TEST & CHEMISTRY STATEMENTS EXCEPT AS OTHERWISE NOTED, MATERIAL WAS MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO SPECIFICATION/ORDER REQUIREMENTS.



2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

SOLD TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104

Certified Test Report

JOC001-11-06-22362-2



SHIP TO

Joseph Oat Corporation
2500 Broadway, Drawer #10
Camden, NJ 08104
ATTN: Justin Kaplan

CUSTOMER P.O.

065166-00

CERTIFICATION DATE

6/28/2011

SHIP VIA

CUSTOMER PICKUP

DESCRIPTION

Quantity: 1
Type: 1/2" Thick Plate
Job No.: 2692A/B, Attachment 2, Rev. 0
Original Manufacture: Jacquet
Heat No.: 833955
Material Type: ASME Section III, Class 3, 1974 Edition, No Addenda;
ASME Section II; ASME SA-240, Grades 304/304L
Size: 3" x 20"

The referenced sample was submitted to chemical content evaluation and it was found to be in conformance to ASME SA-240, 1974 Edition, No Addenda, Types 304 and 304L with the following results:

ELEMENT	304		304L		ACTUAL
	MIN	MAX	MIN	MAX	
C		0.08		0.03	0.02%
Co				0.25	0.25%
Cr	18.00	20.00	18.00	20.00	18.26%
Mn		2.00		2.00	1.88%
Ni	8.00	10.50	8.00	12.00	8.01%
P		0.045		0.045	0.026%
S		0.030		0.030	0.002%
Si		1.00		1.00	0.38%

BECHTEL
1133

Procedures/Methods: 86-SCA-0, Rev. 11, Direct Reading Atom Emissions Spectroscopy

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 6/29/11

ADDENDA

1974
J-2692 Ins. 9C, 12
P.O. 65166

Page 71 of 673



LABORATORY TESTING INC.

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

Certified Test Report

JOC001-11-06-22362-2



Accredited

Materials Testing Laboratory
Nondestructive Testing

TENSILE TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	(PSI) TENSILE STRENGTH	(PSI) YIELD (.2%) STRENGTH	(%) ELONGATION (IN 2")	KEY C/NC/R
REQUIRED	Min	Min	Min	
304	75,000	30,000	40	
304L	70,000	25,000	40	
ACTUAL	88,500	47,600	62	C

JOSEPH OAT QUALITY CONTROL

APP'D Diana Marchini 12/29/11

ADDENDA

1974
J-2692 I-9C, 12
P.O. 65166

HARDNESS TEST:

APPLICABLE SPECIFICATIONS: ASME SA240, 1974 Edition, No Addenda, 304/304L

KEY: C - Conforms NC - Non-Conformance R-Report for Information

	HARDNESS READINGS		SCALE	AVG.	SCALE	KEY (C/NC/R)
REQUIRED	MAX 88	SCALE HRBW				
ACTUAL	82	83	82	83	HRBW	C

BECHTEL
1133

The provisions of 10CFR21 and 10CFR50, Appendix B apply to this order.

All testing was performed in accordance with L.T.I. Quality System Program Manual, Rev. 18 dated 7/27/07 as audited and approved by Joseph Oat Corporation.

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 18 dated 7/27/07 and ISO/IEC 17025. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. L.T.I. is accredited by PRI to ISO17025 and by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at www.labtesting.com and www.eAuditNet.com. The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

MERCURY CONTAMINATION: During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

NOTE: The recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherri L. Scheifele
QA Specialist

Sherri L. Scheifele

Authorized Signature (ES)

Page 72 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

MATERIAL CERTIFICATION

CUSTOMER NAME: JOSEPH OAT CORPORATION
CUSTOMER PO: 065184-00
PACKING SLIP: 211643-1
DESCRIPTION:

4 EA 10" S/40 X 6 3/8" LG. SMLS PIPE, SA312 TP304/304L
HEAT: 45161 MFG: PRODUCTOS TUBULARES (SHAW APP) ITEM: J-2692 IT.10

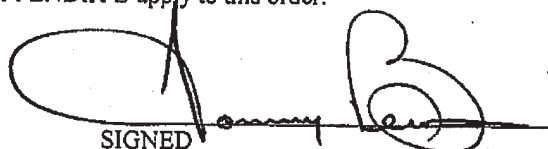
ASME SECTION II, PART A, 1974 EDITION THRU NO ADDENDA.

Based on review of supporting documentation attached, we hereby certify that the material described above is in compliance with ASME Section III, Class 3, Subsection ND, 1974 Edition thru NO Addenda, of the Code and your purchase order. This also affirms that the contents of this report are correct and accurate and that all test results, inspections and operations performed by us or our subcontractor are in compliance with the material specification (including dimensions) and the specific applicable material requirements of ASME Section III. Receipt inspection of direct shipped material is the responsibility of the customer.

Quality Systems Certificate (Materials) Number QSC-332 meeting NCA-3800, expiring October 31, 2011 and Q.A. Manual revision 7, dated 03/12/08 apply.

No welding performed by Energy and Process.

The provisions of 10CFR21 & 10CFR50, APPENDIX B apply to this order.


SIGNED

Assistant Q.A. Manager
TITLE

7/26/2011
DATE

CC: Customer File

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 18/19/11

ADDENDA 1974
J-2692 IT.10
P.O. 65184

Page 73 of 673

 Productos Tubulares, s.a.u. Carretera Galindo a Ugarte, s/n 48510 Valle de Trápaga - Vizcaya ESPAÑA Tel.: (34)- 94 495 50 11 Fax: (34)- 94 472 84 18 - 94 472 84 19	CERTIFICADO DE INSPECCION (EN 10204/3.1) MILL TEST CERTIFICATE (EN 10204/3.1) CERTIFICAT DE RECEPTION (EN 10204/3.1) ABNAHMEPRÜFZEUGNIS (EN 10204/3.1)		N° Cert./Certificate N° Zeugnis Nr./Certificat N° 2653/10 Rev. 01	Pág. de Page 1 of 3 Page de Seite von
			Fecha/Date Date / Datum 30/11/2010	

1. Cliente / Customer Kunde / Client SHAW ALLOY PIPING PRODUCTS, INC.	2. Ref. cliente / Order No Bestell-Nr / No commande P.O. 43506	3. Producto: Article: Prüfgegenstand: Fourniture: Tubo de acero sin soldadura laminado en caliente Hot-finished seamless steel pipes Nahtlose warmgewalzte Stahlrohre Tube sans soudure en acier laminé à chaud	4. Ref. de fábrica / Works-Nr Werks-Nr / No interne 688/777/107
--	---	--	--

5. Material (norma) / Material (specification) Werkstoff (Normbez) / Matériel (spécification) TP304/TP304L TP304 TP304/TP304L TP304 --- --- ---	Según / According to Entsprechend / Selon ASME SA312 ASME SA376 ASTM A312 ASTM A376 NACE MR-01-75 NACE MR0103 PED 97/23/CE	Edición / Edition Ausgabe / Edition 2007 2007 2008 2006 2003 2003 1997	6. Condiciones impuestas / Requirements Conditions de réception / Anforderungen	7. Marca fabricante / Manufacturer's mark Zeichen des Herstell./ Poisson fournisseur 
---	---	---	--	--

8. Proceso de fusión. A O D Melting process. Erschmelzungsart. Procédé de fusion.	9. Distintivo / Marking Kennzeichnung / Caractère	10. Quality management system approval Approval n°: SGI 1922571 	11. Puzón de inspec. / Inspector's stamp Stempel des Werkspr./ Poinçon de l'insp. 
--	--	---	---

12. Descripción del suministro / Description of delivery / Umfang der Lieferung / Description de la livraison								
Pos.No Item No Pos-Nr Poste No	Pos.No. PT Item No. PT Pos-Nr. PT Poste No. PT	N° de tubos N° of pipes Stückzahl N. de tube	Dimensiones Dimensions (inch x inch x Feet) Abmessungen Dimensions	Cantidad Number (Feet) Menge Nombre	Peso Weight (Lbs.) Gewicht Poids	Colada No Heat No Schmelze No. Coulée	Probeta Specimen Probe-Nr No d'essai	Otros Others Sonstiges Autres
	1	2	10" SCH. STD X 17'-24'	46.457	2,088	45161	5338-G	
	1	8	10" SCH. STD X 17'-24'	177.264	7,974	48399	5339-G	
	1	2	10" SCH. STD X 17'-24'	45.079	2,026	48527	5336-G	
	1	2	10" SCH. STD X 17'-24'	45.932	2,066	48674	5337-G	
	2	1	10" SCH. 100 X 19'-29'	26.772	2,191	43565	5143-G	
	2	2	10" SCH. 100 X 19'-29'	50.230	4,112	48791	5228-G	
	3	6	12" SCH. XS X 17'-24'	129.462	9,002	48527	5137-G	
	4	6	12" SCH. 40 X 17'-24'	129.396	7,359	48791	5138-G	
"P.M.L. Test Satisfactory"								

STEEL MELTED IN ITALY / PIPES MANUFACTURED IN SPAIN

THIS CERTIFICATE CANCELS AND SUPERSEDES THE PREVIOUS ISSUED ON THE NUMBER 2653/10 Rev. 00

INSPECCION OFICIAL / SURVEYOR 	INSPECTOR DEL CLIENTE / CUSTOMER INSPECTOR JOSEPH OAT QUALITY CONTROL APP'D <i>Diawan Martin</i> 18/19/11 ADDENDA 1974	PRODUCTOS TUBULARES, S.A.U. GARANTIA DE CALIDAD / QUALITY ASSURANCE Control de Calidad 
--	--	---

ADDENDA

1974
 J-2692 IT.10
 P.O. 65184

Page 74 of 673

PAGE 71

IT. 10
 J-2692
 IT. 10
 JOSEPH OAT P.O. 065184-00



Productos Tubulares, s.a.u.
 Carretera Galindo a Ugarte, s/n
 48510 Valle de Trápaga - Vizcaya
 ESPAÑA
 Tel: (34)- 94 495 50 11
 Fax: (34)- 94 472 84 18 - 94 472 84 19

RESULTADOS DE LOS ENSAYOS
TEST RESULTS
RESULTATS DES ESSAIS
ERGEBNIS DER PRÜFUNGEN

Nº Cert./Certificate Nº
 ZeugnisNr./CertificatNº
2653/10 Rev. **01**
 Fecha/Date
 Date / Datum
30/11/2010

Pág. de
 Page 2 of 3
 Page de
 Seite von

1. Control visual y dimensional / Visual insp. and dimensional check Besichtigung und Abmessung / Insp. et vérification des dimensions O.K.	2. Ensayo de anillo / Ring test Ringversuch / Essais d'anneau Flattening Test = OK	3. Ensayo de Corrosión Intergranular / Intergranular Corrosion Test. acc.to Interdistribución-korrosions Prüfung / Essai de corrosion intergranulaire ASTM A 262 FRAC "E" "ACC. TO MIL-P-24691/3 ACCEPTABLE" WITH SATISFACTORY RESULT.	4. Partículas magnéticas / Magnetic particle test Magnetpulverprüfung / Particule magnétique
5. Ensayo de líquidos penetrantes según / Dy penetrant test acc. to Farbeindring prüfung / Essai par ressuage	6. Ensayo ultrasonidos según/Ultrasonic test accord. to Ultraschallprüfung gemäß / Essais d'ultrasons selon	7. Tratamiento térmico / Heat treatment Wärmebehandlung / Traitement thermique Heating to a minimum 1050°C and Quenching in water	

Pos. Item Pos. Poste	Prb. hidráulica Hidraulic test Epreuve hydr. P.S.I.	Probeta No Specime. Probe-Nr N. d'essai	L T Z	°C	Dimensión Dimensions Abmessun. Dimensions inch	Limite elástico Yield point Streckgrenze Limite elastique	Resistencia Tensile strenght Zugfestigkeit Resistance	Alargamiento Elongation Dehnung Allongement %	L T Z	°C	Dimensiones Dimensions Abmessun. Dimensions inch	Resiliencia Impact test Kerbschlagzähigk Résilience	Estricción Reduc. of area Einschnürung Striction	Expa. Lateral Lateral Expa. Later. Breit Expa. Latéral	Dureza Hardn. Härte Dureté				
						%	wt. inch	P.S.I.	wt. inch	P.S.I.	wt. inch	%	ISO V		%	inch	HRB		
Condic. impuestas / Requirements / Anforderungen / Conditions						0.2		30,000		75,000		35						90	
											35				19.91				
1	1200 PSI	5336-G-1.1	L	20	0.793 X 0.488	0.2	38,900	78,200	63.6	L	20	0.39 x 0.39	221.27	221.27	221.27		81		
		5337-G-1.1	L	20	0.795 X 0.472	0.2	38,900	80,800	59.7	L	20	0.39 x 0.39	221.27	221.27	221.27		83		
		5338-G-1.1	L	20	0.795 X 0.472	0.2	38,100	81,200	59.5	L	20	0.39 x 0.39	221.27	221.27	221.27		83		
		5339-G-3.1	L	20	0.795 X 0.484	0.2	38,900	80,100	60.9	L	20	0.39 x 0.39	221.27	221.27	221.27		83		
2	2200 PSI	5143-G-1.1	L	20	Ø 0.5	0.2	39,900	84,700	58.5	L	20	0.39 x 0.39	221.27	221.27	221.27		85		
		5228-G-1.1	L	20	Ø 0.5	0.2	37,100	82,400	60.6	L	20	0.39 x 0.39	221.27	221.27	221.27		83		
3	1400 PSI	5137-G-2.1	L	20	0.793 X 0.591	0.2	35,700	76,700	68.7	L	20	0.39 x 0.39	221.27	221.27	221.27		80		
4	1100 PSI	5138-G-1.1	L	20	0.793 X 0.496	0.2	39,200	84,100	64.2	L	20	0.39 x 0.39	221.27	221.27	221.27		85		

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 18/19/11

ADDENDA 1974
J-2692 Ir. 10
P.O. 65184



L = Longitudinal; T = Transversal ; Z = Radial

INSPECCION OFICIAL / SURVEYOR	INSPECTOR DEL CLIENTE / CUSTOMER INSPECTOR	PRODUCTOS TUBULARES, S.A. / GARANTIA DE CALIDAD QUALITY ASSURANCE
		I. SANTA EUFEMIA Q.C.MANAGER

Condiciones / Requirements Anforderungen / Conditions		Min	C	Mn	Si	P	S	Cr	Ni	Co										
		Max	0.03	2	0.75	0.04	0.03	18 20	8 11											
Colada N° / Schmelze N° Heat N° / Coulée N°		Análisis de colada / Ladle analysis / Schmelzanalyse / Analyse de coulée																		
➔	48527	0.014	1.81	0.34	0.026	0.0006	18.2	10.16	0.107											
	48791	0.02	1.81	0.37	0.022	0.0003	18.18	10.19	0.088											
	43565	0.017	1.84	0.37	0.024	0.0007	18.14	10.21	0.077											
	45161	0.022	1.84	0.3	0.023	0.0003	18.29	10.25	0.076											
	48674	0.019	1.83	0.38	0.024	0.0004	18.23	10.32	0.076											
	48399	0.022	1.82	0.41	0.026	0.0002	18.18	10.14	0.083											
		JOSEPH OAT QUALITY CONTROL APP'D <u>Diana Martin</u> 8/19/11 ADDENDA <u>1974</u> <u>J-2492</u> <u>IT-10</u> <u>P.O. 605184</u>																		
Condiciones / Requirements Anforderungen / Conditions																				
Probeta / Specime. Probe / N° d'essai	Colada/Schmelze Heat / Coulée	Análisis de producto / Product Analysis / Stückanalyse / Analyse de produit																		
11-81-1 20 P. CORR. 1153 BECHTEL																				

OBSERVACIONES

"NO HA SIDO UTILIZADO NINGUN PRODUCTO QUÍMICO CLASE I, QUE DAÑE LA CAPA DE OZONO" / "NO CLASS I OZONE DEPLETING CHEMICAL HAS BEEN USED"

"NO SE HA REALIZADO NINGUNA REPARACION MEDIANTE SOLDADURA" / "NO REPAIR BY WELDING HAS BEEN CARRIED OUT"

"MATERIAL LIBRE DE CONTAMINACION DE MERCURIO" / "MATERIAL FREE OF MERCURY CONTAMINATION"

"EL MATERIAL SUMINISTRADO CUMPLE CON LAS NORMAS ESPECIFICADAS Y LOS REQUISITOS DEL CLIENTE" / "THE SUPPLIED PIPES ARE IN COMPLIANCE WITH THE REQUIREMENTS OF THE SPECIFIED STANDARDS AND THE ORDER"

INSPECCION OFICIAL / SURVEYOR	INSPECTOR DEL CLIENTE / CUSTOMER INSPECTOR	PRODUCTOS TUBULARES, S.A. / GARANTIA DE CALIDAD. QUALITY ASSURANCE
		L SANTA EUFEMIA Q.C.MANAGER



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 18/19/11

ADDENDA 1974
J-2692 Tr. 10
P.O. 65184

No. 33451C
www.energyandprocess.com

Certified Material Test Report

Customer:
Joseph Oat Corp.

CUSTOMER P.O.

065184-00

PACKING SLIP #

211643

TEST DATE

07/21/11

Tr. # J-2692 Tr. 10

DESCRIPTION:

Test a representative section of 10" S/40 Smls. Pipe, Productos Tubulares, Heat #45161, for compliance with chemical requirements of SA312 Type 304/304L & Customer Requirement.

I. Chemical

Chemical test results represent an average of three measurements. Required values are maximums unless otherwise noted. The test results are as follows:

<u>ELEMENT</u>	<u>REQUIRED</u>	<u>OBTAINED</u>
	304/304L/Cust.	
C	0.08/0.035/0.030	0.024
Mn	2.00/2.00	1.93
P	0.040/0.040	0.029
S	0.030/0.030	0.005
Si	0.75/0.75	0.34
Cr	18.00-20.00/18.00-20.00	18.46
Ni	8.00-11.00/8.00-13.00	10.55
Co	----/----/0.25	0.09

BECHTEL
1133

The above results were found to be in conformance with the chemical requirements of SA312 Type 304/304L & Customer Requirement. All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 28, Rev.4.



Richard Buffington
Laboratory Technician

J. R. Buffington
Authorized Signature

Page 77 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

No. 33451T
www.energyandprocess.com

Certified Material Test Report

BECHTEL
1133

Customer:
Joseph Oat Corp.

CUSTOMER P.O.

065184-00

IT# J-2692 IT.10

PACKING SLIP #

211643

TEST DATE

07/21/11

DESCRIPTION:

Test a representative section of 10" S/40 Smls. Pipe, Productos Tubulares, Heat #45161, for compliance with tensile requirements of SA312 Type 304/304L.

II. Tensile

Required values are minimums unless otherwise noted. The tensile test results are as follows:

<u>PROPERTY</u>	<u>REQUIRED</u> 304/304L	<u>OBTAINED</u>
Tensile Strength, ksi	75/70	84 -
Yield Strength min., ksi (0.2% offset)	30/25	41 -
Elongation in 2 in., min. %	35/35	60 -

The test results for the above material was found to be in conformance with the tensile requirements of SA312 Type 304/304L.

All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 26, Rev. 1.

Richard Buffington
Laboratory Technician

Gage Width: 1/2"


Authorized Signature



7-21-11

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 8/19/11

ADDENDA

1974
J-2692 IT.10
P.O. 65184

Page 78 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

BECHTEL
1133

No. 33451F
www.energyandprocess.com

Certified Material Test Report

Customer:
Joseph Oat Corp.

CUSTOMER P.O.

065184-00

IT.# J-2692 IT.10

PACKING SLIP #

211643

TEST DATE

07/21/11

DESCRIPTION:

Test a representative section of 10" S/40 Smls Pipe, SA312 Type 304/304L, Productos Tubulares, Heat #45161, for compliance with flattening requirements of SA530/SA999.

VI. Flattening Test

The flattening test results are as follows:

<u>Step</u>	<u>Distance (in)</u>	<u>Observation</u>
First	3.227	No Frac-Passed
Second	Opposite walls in contact	No Frac-Passed

The test results for the above material was found to be in conformance with the flattening test requirements of SA530/SA999.

All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 30, Rev. 1.

Richard Buffington
Laboratory Technician

J.R. Buffington
Authorized Signature



7-21-11

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 8/19/11

ADDENDA

1974
J-2692 IT. 10
P.O. 65184

Page 79 of 673



**Energy & Process
Corporation**

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

No. 33447H
www.energyandprocess.com

Certified Material Test Report

Customer:
Joseph Oat Corp.

CUSTOMER P.O.

065184-00

IT.# J-2692 IT.10

PACKING SLIP #

211643

TEST DATE

07/21/11

DESCRIPTION:

10" S/40 Smls Pipe, SA312 Type 304/304L, Productos Tubulares,
Heat #45161, for compliance with Hydrostatic requirements of
SA530/SA999.

IV. Hydrostatic:

Hydro tested at 1000 psi for 5 seconds minimum.
lpc. 3 feet 8 inch total Footage.

**BECHTEL
1133**

The above results were found to be in conformance with the
Hydrostatic requirements of **SA530/SA999**. All testing was
conducted according to the requirements of the Energy and Process
Corporations Quality Assurance Program using the procedures
outlined within Q.C.P. 29, Rev.2.

Richard Buffington
Laboratory Technician

Richard Buffington

Authorized Signature



7-21-11

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 8/19/11

ADDENDA 1974

J-2692 IT.10
P.D. 65184

Page 80 of 673



a world of Solutions™

Memorandum

2555 LANTRAC COURT, DECATUR, GA 30035 • 770-808-7834 • FAX 770-808-8130 • THE SHAW GROUP INC.®

To: ENERGY AND PROCESS
Mr. Randy Dunster
From: Ken Boltinghouse
Quality Assurance Manager
Date: February 11, 2011
Re: NO WELD REPAIR STATEMENT

ALLOY PIPING PRODUCTS DOES NO WELD REPAIR ON PIPE WE STOCK..

Regards,

Ken Boltinghouse

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 8/19/11

ADDENDA 1974
J-2692 IT.10
P.O. 065184

BECHTEL
1133



2-11-11

JOSEPH OAT PO* 065184-00 IT.* J-2692 IT.10

CONFIDENTIALITY NOTICE: the information contained in this memo is intended for the use of the individual or entity named and may contain information that is confidential, privileged and/or otherwise exempt from disclosure under applicable law. If you are not the intended recipient, any dissemination, distribution or copying of this communication is strictly prohibited. If you received this communication in error, please notify us immediately by telephone and return the original memo to us at the address shown. Thank you.

Revised 10/14/05

Page 81 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, Ga. 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, Ga. 30085-0125

www.energyandprocess.com

MATERIAL CERTIFICATION

CUSTOMER: JOSEPH OAT CORPORATION
CUSTOMER P.O. NUMBER: 065184-00
PACKING SLIP NUMBER: 211643-3
DESCRIPTION:

4 EA 10" 150# S/40 RFWN FLANGE J-2692 IT.11 SA182 F304/304L ✓
HEAT: H-602 MFG: NEWMAN FLANGE & FITTING ITEM: 9

ASME SECTION II, PART A, 1974 EDITION THRU NO ADDENDA

Based on review of supporting documentation attached, we hereby certify that the material described above is in compliance with ASME Section III, Class 3, Subsection ND, 1974 Edition thru NO Addenda, of the Code and your purchase order. This also affirms that the contents of this report are correct and accurate and that all test results, inspections and operations performed by us or our subcontractor are in compliance with the material specification (including dimensions) and the specific applicable material requirements of ASME Section III. Receipt inspection of direct shipped material is the responsibility of the customer.

Quality Systems' Certificate (Materials) Number QSC-332 meeting NCA-3800, expiring October 31, 2011 and Q.A. Manual revision 7, dated 03/12/08 apply.

, No welding performed by Energy and Process.

The provisions of 10CFR21 & 10CFR50, APPENDIX B apply to this order.

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/4/11

ADDENDA 1974
J-2692 IT. 11
P.O. 65184

CC: Customer File

SIGNED

TITLE

DATE

BECHTEL
1133

Page 82 of 673

NEWMAN FLANGE & FITTING CO.

P.O. BOX 905 - NEWMAN, CALIFORNIA 95360

PHONE (209) 862-2977 - FAX (209) 862-1416

Test Report

TO: ENERGY & PROCESS CORPORATION
TUCKER, GA

PURCHASE ORDER NO.: G256-5561
NEWMAN FLANGE NO.: 19241

MATERIAL FREE FROM MERCURY CONTAMINATION
NO WELD REPAIR PERFORMED ON MATERIAL

HEAT NO.: H-602
MATERIAL: A/SA182 F304/304L
ELECTRALLOY - HEAT# 50319

FLANGES MANUFACTURED IN THE USA

QTY.	DESCRIPTION	CHEMICALS	PHYSICALS
4	10" 150# RF WN SCH 40 B16.5	CARBON: 0.011 ✓	YIELD STR.PSI 42,720 ✓
1	1" X 1" X 6" LONG TEST COUPON	MANGANESE 1.77 ✓	
		PHOSPHORUS 0.030 ✓	TENSILE STR.PSI 85,150 ✓
		SULPHUR 0.021 ✓	
		SILICON 0.51 ✓	ELONG. IN 2" 59.9% ✓
		NICKEL 8.13 ✓	
		CHROMIUM 18.21 ✓	RED.OF AREA 70.4% ✓
		MOLY .	
		COPPER .	BECHTEL 1133
		TIN .	
		ALUMINUM .	
		VANADIUM .	
		COBALT 0.1500	
		BORON .	
		LEAD .	
		COLUMBIUM .	
		TITANIUM .	
		TANTALUM .	
		TUNGSTEN .	
		ZINC .	
		IRON .	
		NITROGEN 0.078	

MATERIAL IS PRODUCED UNDER THE
NEWMAN FLANGE & FITTING COMPANY
QUALITY ASSURANCE SYSTEM AS
DOCUMENTED IN QA MANUAL REVISION
D DATED JUNE 2006 CONFORMING TO
NCA-3800

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 10/4/11

ADDENDA *1974*
J-2692 *IT. 11*
P.O. 65184

THE ABOVE WAS FORGED AT 2000°F., REHEATED TO 1900°F. MIN. AND HELD FOR
APPROXIMATELY ONE (1) HOUR PER INCH OF THICKNESS AND WATER QUENCHED
IN CIRCULATING COLD WATER.

Joseph Oat
PO# 065184-00
IT. 9

WE CERTIFY THIS TO BE TRUE COPY OF TEST REPORT SHEETS NOW ON FILE IN OUR OFFICE, AND
MANUFACTURED IN ACCORDANCE WITH SPECIFICATIONS LISTED.

9-20-11
3
QA OK

DATE: 8/31/2011

SIGNATURE: *Charles Freitas*

**MATERIAL CERTIFICATION REPORT and
CERTIFICATION OF QUALITY CONFORMANCE**



ELECTRALLOY
G. O. CARLSON PLATE



175 Main Street
Oil City PA 16301
1 (800) 458-7273

Customer Address

NEWMAN FLANGE & FITTING CO.
P O BOX 905
NEWMAN, CA 95360

Shipping Address

NEWMAN FLANGE & FITTING CO.
1649 L STREET
NEWMAN, CA 95360

Print Date Time

22-Aug-2011 16:53

Ship Note

110158

Certification ID

110434-3

Revision

*1

Customer Order

36186

Sales Order

109088

Grade: 304L

Specification: Type 304/304L (UNS S30400/S30403) - ASTM A182/A182M -08a. Chemistry Only

Condition: FORGED AND AIR COOLED

Finish: FULLY CONDITIONED

Sales Order	Quantity	Heat	Lot ID	Weight	Size	Customer Mark
109088-1	1	50319	50319-1A	575 LB Length: 133.6200 in; Width: 4.0000 in		
109088-1	1	50319	50319-1B	845 LB Length: 199.5000 in; Width: 4.0000 in		
109088-1	1	50319	50319-1C	835 LB Length: 196.3100 in; Width: 4.0000 in		
109088-1	1	50319	50319-1D	840 LB Length: 195.8700 in; Width: 4.0000 in		
109088-1	1	50319	50319-1E	830 LB Length: 189.1800 in; Width: 4.0000 in		
109088-1	1	50319	50319-1F	830 LB Length: 188.1800 in; Width: 4.0000 in		
109088-1	1	50319	50319-1G	870 LB Length: 199.0000 in; Width: 4.0000 in		
109088-1	1	50319	50319-1H	875 LB Length: 198.3700 in; Width: 4.0000 in		
109088-1	1	50319	50319-1I	875 LB Length: 198.9300 in; Width: 4.0000 in		
109088-1	1	50319	50319-1J	765 LB Length: 176.7500 in; Width: 4.0000 in		

NEWMAN FLANGE HEAT CODE H602

Lot	Test	Result	Low Limit	High Limit
SPECIFICATION RESULTS				
FINAL LADLE CHEMISTRY FOR AIRMELT				
50319	Co	0.1500	0.0000	0.2000
50319	C	0.011	0.000	0.030
50319	Mn	1.77	0.00	2.00
50319	P	0.030	0.000	0.045
50319	S	0.021	0.000	0.030
50319	Si	0.51	0.00	1.00
50319	Cr	18.21	18.00	20.00
50319	Ni	8.13	8.00	11.00
50319	N	0.078	0.000	0.100

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/4/11

ADDENDA 1974
J-2692 IT-11
P.O. 65184

Joseph Oat
PO# 065184-00
IT. 9

7-20-11



BECHTEL
1133

**MATERIAL CERTIFICATION REPORT and
CERTIFICATION OF QUALITY CONFORMANCE**



ELECTRALLOY
G. O. CARLSON PLATE



175 Main Street
Oil City PA 16301
1 (800) 458-7273

Customer Address

NEWMAN FLANGE & FITTING CO.
P O BOX 905
NEWMAN, CA 95360

Shipping Address

NEWMAN FLANGE & FITTING CO.
1649 L STREET
NEWMAN, CA 95360

Print Date Time

22-Aug-2011 16:53

Ship Note

110158

Certification ID

110434-3

Revision

*1

Customer Order

36186

Sales Order

109088

Quality Statements:

* Include Co - Revise - Reissued - DEK - 08-22-11

ASTM E1019-08, ASTM E572-02a (2006)e2 and ASTM E1086-08 are methods used to determine the chemical analysis for Fe Base (High Alloy) alloys utilizing XRF, OES and Combustion and Fusion Methods.

All items are in full compliance with all purchase order and specification requirements.

At time of shipment, material represented had not come in contact with Mercury or any of its compounds nor with any mercury containing device employing a single boundary of containment.

HWRR - 27.4-1

Material Certification Conforms to Certificate 3.1 as in EN10204:2004

Material represented was not weld repaired.

Material represented was produced in accordance with the Electralloy Quality Control Program dated 08/23/2010, which meets the requirements of ISO9001(2008), MIL-I-45208A and

ASME Code Section 3, Subsection NCA 3800.

Melting and Refining Source - Electralloy

Method of Melt, stainless steel billet, electric arc furnace melted, A.O.D. refined.

SUITABLE for HOT WORK ONLY!

Ultrasonic Inspection performed to Electralloy In House Procedure WU1001 - Results Pass - Sound Center.

Material represented was melted and manufactured in the USA

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 10/4/11

ADDENDA 1974

Joseph Oat
PO# 065184-00
IT.9

J-2692 IT-11
P.O. 65184

BECHTEL
1133

Meets EU Electrical "RoHS". Contains NO "WEEE" relevant substances. Complies with DFARS-225.1-Buy American Act-Supplies. HWRR = Minimum Hot Working Reduction Ratio. Electralloy only accepts residual and trace elements to the limits invoked by the specification and or customer. This document shall not be reproduced, except in full, without the written approval of Electralloy / GOC Plate. We hereby affirm that the reported results on this certification are correct and accurate. All tests and results and operations performed by (Electralloy/G.O. Carlson Plate) or its subcontractors are in compliance with the applicable material/customer specification(s).

The parties agree that when title transfers for the products subject to this agreement, or when the products are delivered to purchaser, whichever occurs first, responsibility for the submission of any required export or re-export licenses or related export control approvals for these products also transfers to purchaser. Any export license requirement under any applicable export control statute, regulation, or practice, from any U.S. government agency, including but not limited to the Department of Commerce's Bureau of Industry and Security, the Department of Treasury, Office of Foreign Assets Control, the U.S. Department of State, Directorate of Defense Trade Controls, and the Nuclear Regulatory Commission, are solely the responsibility of the purchaser. Further, purchaser warrants that it will comply with all applicable export and re-export controls related to these products.

Name: Duane E. Kline

Title: QC Technician/UT Technician/Works Inspector

By: Duane E. Kline



The recording of false, fictitious, or fraudulent statements or entries on this document may be punishable as a felony under Federal Statute.
The above are true and correct results of tests on samples of the material. Results conform to the specification(s) listed above and are on record.

Page 2 of 2



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

No. 33851C

www.energyandprocess.com

Certified Material Test Report

Customer:
Joseph Oat Corp.

CUSTOMER P.O.
065184-00 Ir.9

PACKING SLIP #
211643-3

TEST DATE
09/21/11

DESCRIPTION:

Test a representative section of **Test Bar, Newman Flange & Fitting, Heat #H-602**, for compliance with chemical requirements of **SA182 Grade F304/304L & Customer Requirement**.

I. Chemical

Chemical test results represent an average of three measurements. Required values are maximums unless otherwise noted. The test results are as follows:

<u>ELEMENT</u>	<u>REQUIRED</u>	<u>OBTAINED</u>
	304/304L/Cust.	
C	0.08/0.035/0.03	0.022 ✓
Mn	2.00/2.00	1.59 ✓
P	0.040/0.040	0.027 ✓
S	0.030/0.030	0.021 ✓
Si	1.00/1.00	0.51 ✓
Cr	18.00-20.00/18.00-20.00	18.47 ✓
Ni	8.00-11.00/8.00-13.00	8.46 ✓
N	----/----	0.07
Co	----/----/0.25	0.11

BECHTEL
1133

BECHTEL
1133

The above results were found to be in conformance with the chemical requirements of **SA182 Grade F304/304L & Customer Requirement**. All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 28, Rev.4.

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 110/4/11

ADDENDA

1974

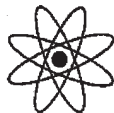
J-2692 Ir.11
P.O. 65184



Richard Buffington
Laboratory Technician

J.R. Buffington
Authorized Signature

Page 86 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

No. 33851T
www.energyandprocess.com

Certified Material Test Report

Customer:
Joseph Oat Corp.

CUSTOMER P.O.
065184-00 *IT. 9*

PACKING SLIP #
211643-3

TEST DATE
09/21/11

**BEGTEL
1133**

DESCRIPTION:

Test a representative section of **Test Bar, Newman Flange & Fitting, Heat #H-602**, for compliance with tensile requirements of **SA182 Grade F304/304L**.

II. Tensile

Required values are minimums unless otherwise noted. The tensile test results are as follows:

<u>PROPERTY</u>	<u>REQUIRED</u>	<u>OBTAINED</u>
	304/304L	
Tensile Strength, ksi	75/70	85 ✓
Yield Strength, ksi (0.2% offset)	30/25	41 ✓
Elongation in 2 in., %	45/30	60 ✓
Reduction of Area, %	50/50	75 ✓

The test results for the above material was found to be in conformance with the tensile requirements of **SA182 Grade F304/304L**.

All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 26, Rev. 1.

Richard Buffington
Laboratory Technician

Richard Buffington
Authorized Signature

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 10/4/11

ADDENDA *1974*
J-2692 IT. 11
P.O. 65184



Page 87 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

MATERIAL CERTIFICATION

CUSTOMER NAME: JOSEPH OAT CORPORATION
CUSTOMER PO: 065184-00
PACKING SLIP: 211643-2
DESCRIPTION:

8EA 3/4" 6000# SW x NPT HALF COUPLING SA182 F304/304L
PER SKETCH: SK-2692-13 REV. 1 HT CODE: 250304 MFG: CGP ITEM: 5

ASME SEC II, PART A, 1974 EDITION THRU NO ADDENDA

Based on review of supporting documentation attached, we hereby certify that the material described above is in compliance with ASME Section III, Class 3, Subsection ND, 1974 Edition thru NO Addenda, of the Code and your purchase order. This also affirms that the contents of this report are correct and accurate and that all test results, inspections and operations performed by us or our subcontractor are in compliance with the material specification (including dimensions) and the specific applicable material requirements of ASME Section III. Receipt inspection of direct shipped material is the responsibility of the customer.

Quality Systems Certificate (Materials) Number QSC-332 meeting NCA-3800, expiring October 31, 2011 and Q.A. Manual revision 7, dated 03/12/08 apply.

No welding performed by Energy and Process.

The provisions of 10CFR21 & 10CFR50, APPENDIX B apply to this order.

BECHTEL
1133

SIGNED

TITLE

DATE

CC: Customer File

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 18/19/11

ADDENDA 1974
J-2692 IT. 13
P.O. 65184

Page 88 of 673

CGP MFG, INC.

6313 WINFREE
HOUSTON, TX 77087
Phone: 713-641-5544
FAX: 713-641-5564

Material Test Report

Page : 2 of 2

SALES ORDER #: 79087

SOLD TO:

ENERGY & PROCESS
P.O. BOX 125
TUCKER, GA 30085-0125

SHIP TO:

ENERGY & PROCESS
2146 B. FLINTSTONE DRIVE
TUCKER, GA 30084

CUST P.O.#: G256-5559

TAG NUMBER:

DATE SHIPPED:

ITEM #	QUANTITY	ITEM DESCRIPTION
3	8 EA	3/4 6000 SWV HALF CPLG SA182-2008A F304/L PER DWG SK-2692-13 REV. 1

ITEM #	HEAT CODE	CHEMICAL ANALYSIS								
		C	Mn	P	S	Si	Ni	Cr	Co	N
3	250304	.016	1.90	.03	.03	.49	8.17	18.38	.10	.088

ITEM #	PHYSICAL PROPERTIES				
	TENSILE (PSI)	YIELD (PSI)	ELONG (2 IN)	REDUCTION OF AREA %	HARDNESS
3	91000	48000	52.00	63.00	184 BHN

ITEM #	SUPPLEMENTAL INFORMATION
3	SOLUTION ANNEALED@1940°F/ 5HRS WATER QUENCHED NO WELD REPAIR PERFORMED MFG FROM MAT'L SUPPLIED FROM E&P EN 10204-3.1B

JOSEPH OAT QUALITY CONTROLAPP'D Diana Martin 8/19/11ADDENDA 1974J-2692 IT-13
P.O. 65184**BECHTEL**
1133

CGP Certifies that the material is manufactured/supplied/tested in accordance with our
Quality System Program dated 10/05/09 Issue 2.

WE CERTIFY THAT THE FITTINGS COVERED BY THIS REPORT WERE MANUFACTURED PER THE SPECIFICATIONS NOTED & THAT THE PHYSICAL & CHEMICAL
PROPERTIES ARE THOSE REFLECTED IN THE RECORDS OF THE COMPANY. MERCURY FREE MFG IN THE USA

Joseph Oat
P.O. 005184-00
IT.



8-3-11

QUALITY ASSURANCE

07/20/2011

Acciaierie Valbruna S.p.A.



36100 VICENZA (Italia) - Viale della scienza, 25 z.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliero / Endoth / Endoth / Endoth
VALBRUNA STAINLESS INC.
2400 TAYLOR STREET WEST
46801-FORT WAYNE, IN 46801-USA

Produttore: STABILIMENTO DI BOLZANO
Hersteller / Fabricator

Oggetto Prova: Polished Annealed Peeled
Prüfunggegenstand / Inspection / Prüfung

Avviso di Spedizione: D-BZ10000545
Lieferungsercheinigung / Invoice

Ordine nr: 26007 STOCK - TUCKER
Bestell / Auftragsnummer

Tipo di Elaborazione: E+AOD
Erzeugnis / Herstellung / Prozess / Methode / Verfahren

CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2005) , 3.1

Certificato nr: MEST830069/2010/
Prüfung / Zeitschein

Conferma ordine nr: E109007072
Bestätigung / Auftrag / Auftrag

Marchio di Fabbrica:
Zeichen des Herstellers
Trade mark
Signe de l'usine productrice

Punzone del Collaudatore:
Stempel des Werkstoffprüfers
Inspector's stamp / Stempel des Inspekteurs



Specifiche:
Anforderungen / Requirements / Exigences

VSI 0 304/304L A
AMS-QQ-S-763 B 304/304L A
ASME SA276 2007 S30400/03 A 2
ASTM A182 2008A S30400/03 A 5
ASTM A276 2008A S30400/03 A
ASTM A370 2008A
MIL-S-882 B/F 304/304L
(1) SEC.II P.T.A 2007 EDITION ADD. 2008a
(2) SEC.II P.T.A 2007 EDITION ADD. 2008a
(3) SEC.II P.T.A 2007 EDITION ADD. 2008a
(4) Chemical analysis only and mechanical properties.
(5) Chemical analysis only and mechanical properties.
(7) ISO 15156-3

AMS 5639 H S30400 A
ASME SA182 2007 S30400/03 A 5
ASME SA320 2007 B8 CLASS1
ASTM A193 2008 B8 CLASS1
ASTM A314 2008 S30400/03
ASTM A473 2001 S30400/03
NACE MR0175 2003 S30400/03 A 7

AMS 5647 H S30403 A
ASME SA193 2007 B8 CLASS1 (1)
ASME SA479 2007 S30400/03 A (2)
ASTM A262 2002A PRACTICE E
ASTM A320 2008 B8 CLASS1
ASTM A479 2008 S30400/03 A
QQ-S-763 F 304/304L A

Chemical analysis only and mechanical properties.
2SEC.II P.T.A 2007 EDITION ADD. 2008a
4SEC.II P.T.A 2007 EDITION ADD. 2008a
Chemical analysis only.

Qualità: 304/304L
Werkstoff / Grade / Qualité

Marca: MVAISL MAXIVIAL
Markenbezeichnung / Brand / Marque

Funzione: 304/304L
Nutzung / Verwendung / Application

Pos. nr. Pos. nr. No. de position	Oggetto Description Description des produits	Dimensioni - in Dimensions Dimensions	Tolleranza Tolerance Tolérance	Lunghezza - in Length Longueur	Colata Schmelze Coulée	Pezzi Stückzahl Pièces	Peso - LB Gewicht Poids	Lotto nr. Losnr. Lot n°
0080	Round	2,0000	484-08	141 / 159	250304		5.893	925300470

Sono state soddisfatte tutte le condizioni richieste
Die geforderten Anforderungen sind erfüllt. Anlage erfüllt.
The material has been handled in accordance with the requirements
Le matériel a été traité conformément aux exigences

Controllo antiriscaldamento: OK
Vermittlungsfähigkeit: spezifiziert / spezifiziert
Anforderung / Anforderung / Anforderung
Controlle antiriscaldamento: OK

Controllo visivo e dimensionale: soddisfa le esigenze:
Sichtprüfung und Abmessung: ohne Beanstandung
Visual inspection and dimensional check: satisfactory
Controlle visuel et dimensionnel: satisfaisant

TEST ALLO STATO DI FORNITURA									
TEST	Prove / Versuche Description des essais Description des essais	F F F	Snervamento Tensile strength Tensile strength	Snervamento Tensile strength Tensile strength	Resistenza Tensile strength Tensile strength	Allungamento Elongation Elongation	Sinisione Reduction of area Reduction of area	Resistenza Tensile strength Tensile strength	Durezza Hardness Hardness
	Valori richiesti / Anforderungen / Requirements	min max	30 k.s.l.	-	75 115 k.s.l.	40 %	50 %	-	140 223 HB
A	12,5	68	L	48	91	52	63		184

Mechanical properties according to ASTM A370.

(K.-Anforderungen / K.-Anforderungen / K.-Anforderungen)

Analisi chimica

Chemische Zusammensetzung / Chemical Analysis / Analyse chimique

Colata / Schmelze / Casta	min - max 0,030	1,00	2,00	18,00 20,00	1,00	1,00	8,00 10,50	-	0,040	0,030 0,030	0,100	-	-	-	-
250304	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %				
	0,016	0,49	1,90	18,38	0,50	0,46	8,17	0,100	0,030	0,030	0,088				

Produced without class I-II Ozone depleting substances.
Solution heat treated free from continuous carbide network.
Annealing temperature: 1940°F for 5 h/water.
Micro and macro etch test: OK

Bolzano, 04/02/10 BR/II (Mod. MCR)	Il collaudatore di stabilimento / der Werkstoffprüfer / Works Inspector / L'agent d'usine M. Rizzotto	Pagina - 1 di 2
--	--	-----------------



Page 90 of 673

JOSEPH OAT QUALITY CONTROL

APPD Diana Martin 18/19/11

ADDENDA 1974

J-2692 IT-13

P.O. 45184

BECHTEL 1133

Acciaierie Valbruna S.p.A.



36100 VICENZA (Italia) - Viale della scienza, 25 r.l.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Clienti / Kunden / Customers
VALBRUNA STAINLESS INC.
2400 TAYLOR STREET WEST
46801-FORT WAYNE, IN 46801-USA

Produttore: STABILIMENTO DI BOLZANO
Hersteller/Usine producer

Oggetto Prove: Polished Annealed Peeled
Poliergeschliffen hergestellt Polierage

Avviso di Spedizione: D-BZ10000545
Unterzugsfrachting in B.L.

Ordine nr: 26007 STOCK - TUCKER
Bestell/Nr. order/Commande

Tipo di Elaborazione: E+AOD
Erweiterungsanfertigung prozesshafte d. elaboration

CERTIFICATO DI COLLAUDO
ABNAHMEPRUEFZEUGNIS
INSPECTION CERTIFICATE
CERTIFICAT DE RECEPTION
EN 10204 (2005) , 3.1

Certificato nr: MEST830069/2010/
Prüfung/Exam

Conferma ordine nr: EI09007072
Werte/OrderRef nr.

Marchio di Fabbrica:
Zeichen des Unternehmens
Trade mark
Signe de l'usine producer

Firma del Collaudatore:
Stempel des Werkstoffprüfingen
Inspector's stamp/Prüfer des T. Inspektion



Intergranular corrosion test per ASTM A262 pract. E: ok.
Material is OFARS Compliant

Milled and manufactured in Italy No welding or weld repair Material free from Mercury contamination
We declare that the finished product is checked for radioactive contamination through Portal System when it leaves the production plant.
The Quality Management System is Certified acc. Pressure Equipment Directive (97/23/EC) Annex 1, p. 4.3 by TÜV and LLOYD'S

BECHTEL
1133

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martini 8/19/11

ADDENDA 1974
J-2692 Fr. 13
P.O. 65184



3-7-11

Bolzano, 04/02/10 NR. 11 (not. MGR)	Il collaudatore di stabilimento / der Werkstoffversänder / Works inspector / L' agent d' usine M. Rizzotto	Pagina - 2 di 2
---	---	-----------------

Page 91 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flinstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

No. 32326C
www.energyandprocess.com

Certified Material Test Report

Customer:
Stock

CUSTOMER P.O.
G256-2728

PACKING SLIP #
N/A

TEST DATE
03/08/12

DESCRIPTION:

Test a representative section of 2" Round Bar, Acciaierie Valbruna, Heat #250304, for compliance with chemical requirements of A/SA182 Grade F304/304L.

I. Chemical

Chemical test results represent an average of three measurements. Required values are maximums unless otherwise noted. The test results are as follows:

<u>ELEMENT</u>	<u>REQUIRED</u>	<u>OBTAINED</u>
	304/304L	
C	0.08/0.035	0.017 -
Mn	2.00/2.00	1.89 .
P	0.045/0.045	0.032 -
S	0.030/0.030	0.028 -
Si	1.00/1.00	0.53 ,
Cr	18.00-20.00/18.00-20.00	18.51 .
Ni	8.00-11.00/8.00-13.00	8.35 .
N	0.10/0.10	0.09
Co	----/----	0.105

BECHTEL
1133

The above results were found to be in conformance with the chemical requirements of A/SA182 Grade F304/304L. All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 28, Rev.3.

Richard Buffington
Laboratory Technician

Richard Buffington

Authorized Signature



3-8-11

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 18/19/11

ADDENDA 1974

J-2692 Fr.13
P.O. 065184

Page 92 of 673



**Energy & Process
Corporation**

A FERGUSON SUBSIDIARY

2146-B Flinstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

No. 32326T
www.energyandprocess.com

Certified Material Test Report

Customer:
Stock

CUSTOMER P.O.
G256-2728

PACKING SLIP #
N/A

TEST DATE
03/08/11

BECHTEL
1133

DESCRIPTION:

Test a representative section of 2" Round Bar, Acciaierie Valbruna, Heat #250304, for compliance with tensile requirements of A/SA182 Grade F304/304L.

II. Tensile

Required values are minimums unless otherwise noted. The tensile test results are as follows:

<u>PROPERTY</u>	<u>REQUIRED</u>	<u>OBTAINED</u>
	304/304L	
Tensile Strength, ksi	75/70	95
Yield Strength, ksi (0.2% offset)	30/25	56
Elongation in 2 in., %	30/30	47
Reduction of Area, %	50/50	71

The test results for the above material was found to be in conformance with the tensile requirements of A/SA182 Grade F304/304L.

All testing was conducted according to the requirements of the Energy and Process Corporations Quality Assurance Program using the procedures outlined within Q.C.P. 26, Rev. 0.

JOSEPH OAT QUALITY CONTROL

APP'D Diana Martin 18/19/11

ADDENDA 1974
J-2692 IT-13
P.O. 65184



Richard Buffington
Laboratory Technician

Richard Buffington
Authorized Signature

Page 93 of 673



Energy & Process Corporation

A FERGUSON SUBSIDIARY

2146-B Flintstone Drive
Tucker, GA 30084-5000
Phone: (770) 934-3101
Fax: (770) 938-8903

Reply to: P.O. Box 125
Tucker, GA 30085-0125

www.energyandprocess.com

MATERIAL CERTIFICATION

CUSTOMER NAME: JOSEPH OAT CORPORATION
CUSTOMER PO: 065184-00 REV. 2
PACKING SLIP: 228242
DESCRIPTION:

6 PCS $\frac{1}{2}$ " THREADED SQUARE HEAD PLUG J-2692 IT. 14
SA182 F304/304L HEAT CODE: XPG MFG: ASP LINE: 11

ASME SECTION II, PART A, 1974 EDITION THRU NO ADDENDA

Based on review of supporting documentation attached, we hereby certify that the material described above is in compliance with ASME Section III, Class 3, Subsection ND, 1974 Edition thru NO Addenda, of the Code and your purchase order. This also affirms that the contents of this report are correct and accurate and that all test results, inspections and operations performed by us or our subcontractor are in compliance with the material specification (including dimensions) and the specific applicable material requirements of ASME Section III. Receipt inspection of direct shipped material is the responsibility of the customer.

Quality Systems Certificate (Materials) Number QSC-332 meeting NCA-3800, expiring April 28, 2014 and Q.A. Manual revision 8, dated 12/15/11 apply.

No welding performed by Energy and Process.

The provisions of 10CFR21 & 10CFR50, APPENDIX B apply to this order.



SIGNED

TITLE

DATE

CC: Customer File

JOSEPH OAT QUALITY CONTROL

APPROVED Diana Martin 7/10/12

CODE YR. 1974 / ADD -
J-2692 IT. 14
P.O. 65184

Page 94 of 673



ALLOY STAINLESS PRODUCTS COMPANY INC.

SALES DIVISION OF KNICKERBOCKER MACHINE SHOP INC.

611 UNION BOULEVARD, TOTOWA, NEW JERSEY 07512, U.S.A.

TEL: (973)256-1616

FAX: (973)256-5256

TEST REPORT CERTIFICATION

File No. 76304-01

Quality Control
Approval By:

William Rodriguez

William Rodriguez, QA Mgr

Date 1/12/2011

Page 1

ASP
Pack
List No.

165726

ASP
Order
No.

169178

Cust.
Order
No.

G2562268

Tag(s)

Line No.

Heat Code

Quantity

Material Description

Sold To: ENERGY & PROCESS CORPORATION
TUCKER

GA 300850125

Shipped To: ENERGY & PROCESS CORPORATION
TUCKER

GA 30084

4 XPG 20

1401919Y 1/2" SQ HD PLUG ANSI 304/304L

A182-07 B16.11-01 SA182Add09

All material was produced in accordance with ASME Section III, Division 1, Subsection NC-Class 2, 2007 Edition thru 2009 Addenda in compliance with Subsection NA/NCA, Subarticle NA-3700/NCA-3800 and ASME Section II 2007 Edition thru 2009 Addenda. The provisions of 10CFR Part 21 and 10CFR Part 50 Appendix "B" apply.

No welding, weld repair, or nondestructive testing has been performed. Material conforms to ASTM-A-182-07/ASME-SA-182. Fittings manufactured from forgings were solution annealed at a temperature of 1900 deg. F. minimum and water quenched to below 500 deg F. in accordance with ASTM-A-182-07 Table 1, and to below 800 deg F. in less than 3 minutes. Fittings manufactured from barstock, as permitted by ASTM-A-182 Para. 5.4 & 6.5 were solution annealed in accordance with ASTM-A-479-04 at a temperature of 1900 deg. F. minimum and water quenched to below 800 deg. F. in less than 3 minutes.

Materials used for electrochemical marking of these fittings contain no more than 300 ppm Sulfur, 100 ppm Chloride, 100 ppm Fluoride, 200 ppm Total Halogens.

In the production, testing and inspection of material and fittings, Mercury has not come in contact with the material or been handled in the immediate vicinity of manufacture.

Items were supplied in accordance with our Quality System Program Revision 14, dated 4/07/08.

Line Heat Heat
No. Code No.

Chemical Analysis % / Mechanical Properties / Test Results / Heat Treat Condition

4 XPG E91316

C .021 Mn 1.730 P .034 S .024 Si .275 Ni 8.070 Cr 18.160 Mo .360
Cu .468 Co .127 N .089 Nb+Ta .009 Nb .009 Ti .002 Al .005 V .090
Sn .016 B .001 UTS Ksi 90.9 YS Ksi 38.3 Elong 53.0 RedA% 76.4 Bhn 170

Material was manufactured, sampled, tested and inspected in accordance with the specifications referenced and was found to meet the requirements. The chemical analysis and mechanical properties herein certified are correct as contained in the records of the Alloy Stainless Products Co. Inc.

FORM NO. MTR

JOSEPH OAT QUALITY CONTROL

APPROVED DATE 1/12/11

DATE 1/12/11

J-2692 IT-14

PD. 65184

JOSEPH OAT CORP PO#0065184-00 LINE#11



RECEIVED
1133

Page 95 of 1673



ALLOY STAINLESS PRODUCTS COMPANY INC.

SALES DIVISION OF KNICKERBOCKER MACHINE SHOP INC.

611 UNION BOULEVARD, TOTOWA, NEW JERSEY 07512, U.S.A.

TEL: (973)256-1616

FAX: (973)256-5256

TEST REPORT CERTIFICATION

File No. 76304-01

Quality Control
Approval By:

William Rodriguez

William Rodriguez, QA Mgr

Date 1/12/2011

Page 2

ASP
Pack
List No.

165726

ASP
Order
No.

169178

Cust.
Order
No.

G2562268

Tag(s)

Line No.

Heat Code

Quantity

Material Description

Sold To: ENERGY & PROCESS CORPORATION
TUCKER

GA 300850125

Shipped To:

ENERGY & PROCESS CORPORATION

TUCKER

GA 30084

Line Heat Heat
No. Code No.

Chemical Analysis % / Mechanical Properties / Test Results / Heat Treat Condition

Rb 85 E112 7 A262E OK A262A OK UTS Mpa 627 YS Mpa 264 SA/LQ

JOSEPH OAT QUALITY CONTROL

APPROVED *Martin* 7/10/12

CODE YR. 1974 ADD -

J-2692 IT.14

P.O. 65184



Page 96 of 1073

Material was manufactured, sampled, tested and inspected in accordance with the specifications referenced and was found to meet the requirements.
The chemical analysis and mechanical properties herein certified are correct as contained in the records of the Alloy Stainless Products Co. Inc.

FORM NO. MTR

JOSEPH OAT CORP PO#0065184-00 LINE#11

**OUTO
KUMPU**

NUCLEAR

Certificate of Test

Penn-K46696

90591002
heat
Tag: A111861

* RE-CERTIFICATION *

ASP/KMS	
HEAT CODE ASSIGNMENT	
ASP NO. 2010 REV 0	
HEAT CODE	map
CHECKED BY	DATE
Ch	6/7/10

HEAT: E91316 ORDER: 609406/ 01 BOL: 0205513 BUNDLE 2007892/1J 06/07/10

SHIP TO:
PENN STAINLESS PRODUCTS, INC
190 KELLY ROAD

QUAKERTOWN, 189510000.

NUCLEAR

NUC-UP map
90591002
7/8 Rd
heat

ASP/KMS	
HEAT CODE ASSIGNMENT	
ASP NO. 2010 REV 0	
HEAT CODE	XPG
CHECKED BY	DATE
Ch	10/7/10

149310. YOUR ORDER & DATE 6/07/10 CUST# 0719001 CUST TAG#PO# 149310

ITEM DESCRIPTION
GRADE: 304L/304 Ship Condition CONDA
Size: 304L RND CFA CONDA .8750 x 144.000 RL
Country of Melt: UNITED KINGDOM Country of Mfg.: UNITED STATES
NAFTA Country of Origin is Country of Melt
No weld repair
Free of mercury contamination, Free of radiation contamination
No WEEE relevant substances; Meets EU electrical ROHS

Total Bundles 1 Bundle Weight 2194

SPECIFICATIONS
MFG TO FINISHED BAR IN THE USA FROM BILLETS IMPORTED UNITED KINGDOM
AMS 5639H, 5647H ASME SA182 E07 A07, A08 & A09
ASME SA479: E07, A07, A08 & A09 ASTM A182 09
ASTM A262-02a Practice A/E ASTM A276 08a
ASTM A479/A479M 09 ASTM A484 09
DIN 5049/EN 10204 3.1B NACE MR0175-03, ISO 15156:03
Penn 304/304L Penn Met 2000
Federal Spec QQ-S-763F Prodec Quality
AMS QQ-S-763B EN 10204 Type 3.1 Document
DEARS 252.225.7014 6/05 NACE MR0175-03, ISO 15156:03
Sol Anneal @ 1900F min/WQ

BECHTEL
1133

ASP/KMS	
DATA ENTRY VERIFIED	
BY	DATE
Ch	6/6/10

MECHANICAL & OTHER TESTS
Hardness as-shipped 170 HB
Hardness as shipped (85 HRB)
Grain size 7.0
Micro 7.0
Intergranular corrosion OK
Tensile strength, KSI (MPa) 90.9 (627)
0.2% Yield Strength, KSI (MPa) 38.3 (264)
Elongation & in 4D 53.0
Reduction of area & 76.4

CHEMICAL COMPOSITION
Carbon (C) .021 Manganese (Mn) 1.730
Phosphorus (P) .034 Sulphur (S) .024
Silicon (Si) .275 Chromium (Cr) 18.160
Nickel (Ni) 8.070 Cobalt (Co) .127
Copper (Cu) .468 Moly (Mo) .360
Nitrogen (N) .089 Columbium (Cb) .009
Titanium (Ti) .002 Aluminum (Al) .005
Tin (Sn) .016 Boron (B) .000
Vanadium (V) .090
Tantalum (Cb+Ta) .005
Iron (Fe) Balance
Melt Practice EAF
Refining Practice AOD
De-long Ferrite

ASP/KMS	
CERTIFICATION REVIEW	
ASP NO. 2010 REV 0	
APPROVED	
BY	DATE
Ch	7/1/10

Knowingly & willfully falsifying or concealing a material act on this form, or making false, fictitious or fraudulent statements or representations herein could constitute a felony punishable under federal statutes.

We hereby certify that the test results shown in this report are correct and accurate as contained in the records of the company and are in compliance with the specifications, codes, and standards listed above.

Outokumpu Stainless Steel, Inc.
3043 Cornshaw Pkwy.
Richburg, SC 29729

M.F. Marciano, Quality Manager

JOSEPH OAT QUALITY CONTROL

APPROVED: M.F. Marciano 7/10/12

CODE YR. 1974 JADD

J-2692 J.T.H.
P.O. 65184



JOSEPH OAT CORP PO#0065184-00 LINE#11

Page 97 of 673

Outokumpu Stainless Ltd

Address
Sheffield Long Products
(SMACC)
P.O. Box 181
Europa Way
Sheffield
S9 1TZ

Telephone
+44 (114) 261 8000

Ref: 200900810
Page 1 of 1

OUTOKUMPU

Test Certificate

To OUTOKUMPU STAINLESS INC BAR PRODUCTS 3043 CRENSHAW PARKWAY RICHBURG SC 29728 USA	Code N/A Inv. No. 725521 Customer Order No 500451 SMACC Order No 253639/2	Cast No. E91316 Code 163925 Campaign 14702 Specification 904LG REV 2 - Chemical Analysis Only	Cert Date: 10 November 2009 Melt Date: 24 October 2009 Ordered Supply Condition FULLY BLACK
--	--	---	--

CONTINUOUSLY CAST STAINLESS BILLETS NOT HEAT TREATED

Analysis	C	Si	Mn	P	S	Cr	Mo	Ni	Al	Cu	Sn	Nb	W	V	Co	Ti	As	B	N	Pb	Ca	Ta	O
	0.021	0.275	1.73	0.034	0.024	18.16	0.36	8.87	0.005	0.488	0.018	0.009	0.05	0.09	0.127	0.002	0.008	0.0004	0.088	0.0003	0.0022	0.001	0.0074

Cast No	No of Items	No of Pack	Product	Dimensions (mm)	Weight (kg)	Certification Text
E91316	83	16	BILLET	150*150*11150	122495	Test certificate according to EN10204:2004 3.1

FREE FROM KNOWN CONTAMINATION BY METALLIC MERCURY OR MERCURY COMPOUNDS.
MELTING PROCESS: EAF MELTING, AOD REFINING.
Material processed in accord with SMACC Business Manual, SCM 0008 Rev 1 dated 11/5/2007.
NO WELD REPAIRS.

All test certificates issued by Outokumpu Stainless Ltd will contain either an embossed seal or be impregnated with an Outokumpu logo, or a combination of both. Any recipient of a copy of an Outokumpu Stainless Ltd Test Certificate without either the seal or watermarking should ensure from the supplier that it is a true reproduction of the original.

We certify that the above material has been tested in accordance with the order specification and that the results comply with the order and specification (note that where more than one specification is involved, only the mechanical properties and cast chemical composition are certified to the requirements of each individual specification).

OUTOKUMPU STAINLESS
LRQA APPROVAL NUMBER



0880772

Witnessed

Inspection Authority

Signed for Outokumpu Stainless Ltd

D. Brooks

D. Brooks, Technical Manager SMACC.

7/8 Rd

ASP/MS	
HEAT CODE ASSIGNMENT	
ASP NO. 201C REV D	
HEAT CODE	XPG
CHECKED BY	DATE
UL	10/7/10

JOSEPH OAT QUALITY CONTROL

APP'D *Diana Martin* 7/10/12

CODE YR. 1974 / ADD -

J-2692 I-14

P.O. 65184

ASP/MS	
CERTIFICATION REVIEW	
ASP NO. 201D REV D	
APPROVED	
BY	DATE
UL	10/7/10



1-19-11

BECHTEL
1133

JOSEPH OAT CORP PO#0065184-00 LINE#11

Page 98 of 673



LABORATORY TESTING INC.

2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9095 • FAX: 800-219-9096

Certified Test Report
ASP001-10-07-22240-4



Accredited

Materials Testing Laboratory
Nondestructive Testing

SOLD TO

Alloy Stainless Products Co.
611 Union Boulevard
Totowa, NJ 07512

SHIP TO

Alloy Stainless Products Co.
87 Fairfield Road
Fairfield, NJ 07004
ATTN: William Rodriguez

CUSTOMER P.O.
K-40793

CERTIFICATION DATE
9/22/2010

SHIP VIA
EMAIL AND MAIL

ASP/KMS HEAT CODE ASSIGNMENT ASP NO. 2010 REV 0	
HEAT CODE	XPG
CHECKED BY	DATE
uk	10/7/10

DESCRIPTION

Quantity: 1
Size: 7/8" Dia. x 6" Long
Description: Round Bar
Material: ASME Section III, NCA-3800, 2007 Edition, 2009 Addenda, ASTM A182-07 and ASTM A479-04, Grades 304/304L
Heat Code: M9P
Heat No.: E91316
Tag: A111861
ASP Upgrade: 103A
Upgrade Heat Code: XPG

The referenced sample was submitted to chemical content evaluation and it was found to be in conformance to ASTM A182-07 and ASTM A479-04, ID Symbols F 304 and F 304L with the following results:

ELEMENT	ASTM A182 304				ASTM A479 304L				ACTUAL
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	
Al									0.002%
As									0.040%
B									0.0022%
C		0.08		0.030		0.08		0.030	0.020%
Co									0.11%
Cr	18.0	20.0	18.0	20.0	18.0	20.0	18.0	20.0	18.4%
Cu									0.46%
Mn		2.00		2.00		2.00		2.00	1.73%
Mo									0.37%
N		0.10		0.10					0.06%
Nb									0.016%
Ni	8.0	11.0	8.0	13.0	8.0	10.5	8.0	12.0	8.2%
P		0.045		0.045		0.045		0.045	0.033%
S		0.030		0.030		0.030		0.030	0.025%
Si		1.00		1.00		1.00		1.00	0.27%
Sn									0.008%
Ti									0.002%
V									0.097%
W									0.030%

Procedures/Methods: 86-SCA-0, Rev: 11, Direct Reading Atom Emissions Spectroscopy

Page 1 of 3



JOSEPH OAT QUALITY CONTROL

APPD Discont. Material 12/10/10

CODE YR. 1974 JADO

J-2692 IR-14

P0.65184

BECHTEL
1133

ASP/KMS CERTIFICATION REVIEW ASP NO. 2010 REV 0	
APPROVED	
BY	DATE
UR	9/22/10

JOSEPH OAT CORP PO#0065184-00 LINE#11

Page 99 of 673



2331 Topaz Drive, Hatfield, PA 19440
TEL: 800-219-9055 • FAX: 800-219-9096

Certified Test Report
ASP001-10-07-22240-4



TENSILE TEST:

APPLICABLE SPECIFICATIONS: ASTM A370-03a; ASTM A182-07 and ASTM A479-04, 304/304L
KEY: C - Conforms NC - Non-Conformance R - Report for Information

	(KSI) TENSILE STRENGTH	(KSI) YIELD (2%) STRENGTH	(%) ELONGATION (IN 4D)	(%) REDUCTION OF AREA	KEY C/CNC/R
REQUIRED	Min	Min	Min	Min	
ASTM A182-07; F304	75	30	30	50	
ASTM A182-07; F304L	70	25	30	50	
ASTM A479-04; 304	75	30	30	40	
ASTM A479-04; 304L	70	25	30	40	
ACTUAL	96.0	63.0	45	75	C

ASP/KMS HEAT CODE ASSIGNMENT ASP NO. 201C REV 0	
HEAT CODE	X PG
CHECKED BY	DATE
UL	10/1/11

OXALIC ACID ETCH TEST

APPLICABLE SPECIFICATIONS: ASTM A262-02a; Practice A
KEY: C - Conform NC - Non-conformance R - Report for Information

ACTUAL	RESULTS	FIGURE	KEY
	End Grain Pitting II	4	C/CNC/R
			C

GRAIN SIZE EXAMINATION

APPLICABLE SPECIFICATIONS: ASTM E112-96(2004)⁰² and Customer's Instructions
KEY: C - Conform NC - Non-conformance R - Report for Information

ACTUAL	(ASTM No.) GRAIN SIZE	KEY
	8.5	C/CNC/R
		R

ASP/KMS CERTIFICATION REVIEW ASP NO. 201D REV 0	
APPROVED	
BY	DATE
UL	9/23/10

The provisions of 10CFR21; 10CFR50; Appendix B and ASME Section III, NCA-3800, 2007 Edition; 2009 Addenda apply to this order.

All testing was performed in accordance with L.T.I. Quality System Program Manual, Rev. 18 dated 7/27/07 as audited and approved by Alloy Stainless Products Co., Inc.

The services performed above were done in accordance with LTI's Quality System Program Manual Revision 18 dated 7/27/07 and ISO/IEC 17025. These results relate only to the items tested and this report shall not be reproduced, except in full, without the written approval of Laboratory Testing, Inc. L.T.I. is accredited by PRI to ISO17025 and by Nadcap for NDT and Materials Testing for the test methods and specific services as listed in the Scopes of Accreditation available at www.labtesting.com and www.eAuditNet.com. The results reported on this test report represent the actual attributes of the material tested and indicate full compliance with all applicable specification and contract requirements.

MERCURY CONTAMINATION: During the testing and inspection, the product did not come in direct contact with mercury or any of its compounds nor with any mercury containing devices employing a single boundary of containment.

NOTE: This recording of false, fictitious or fraudulent statements or entries on this document may be punishable as a felony under Federal Statutes.

Sherril L. Scheffels
QA Specialist

Sherril L. Scheffels
Authorized Signature (ES)

Page 2 of 3



BECHTEL
1133

JOSEPH OAT CORP PO#0065184-00 LINE#11

Page 100 of 673