

IPSCO
QUALITY CONTROL
INSPECTION TRAVELER

VENDOR PRINT FILE	37627 WN	DATE	3-9-87
SHEET	INSPECTION EQUIPMENT NOS. T-4070-2B		
PROJECT & ACCOUNT NOS.	27-0108 4031		
PURCHASE ORDER NO.	XXXXXX P-54897		
PLANT	CAPE INDUSTRIES		
REVIEWED - DRAFTING DESIGN	<i>R. Vincent Brown</i>		
APPROVED - ENGINEER			

JOB # 60-687

MAR 9 1987

FILE COPY
DO NOT REMOVE FROM
ENGR. DEPT.

SEE BACK SIDE FOR
ANY SPECIAL REQUIREMENTS

IPSCO JOB # 60-687CUSTOMER CAPE INDUSTRIES

NAT'L BD. # _____

Operation	Ht. Number	Forming	Lay-Out	Fit-Up	Welding	A.I. Hold	NDE	Final
Top Head	F60134		JK1-6	JK1-7	BM ² 1-29			
Bottom Head	F60134		JK1-6	JK1-7	BM ² 1-29			
Shell Cylinder #1	898590	BM ² 1-23	JK1-7	BM ² 2-6	BM ² 2-9			
Shell Cylinder #2								
Shell Cylinder #3								
Shell Cylinder #4								
Shell Cylinder #5								
Tray Rings								
Downcomer Bars								
Vacuum Rings								
Insul. Supt. (heads)								
Insul. Supt. (shell)								
Insul. Supt. (skirt)								
Top Cone								
Bottom Cone								
Saddle #1								
Saddle #2								
Support Lugs								
Skirt Cylinder #1								
Skirt Cylinder #2								
Comp. Ring								
Base Ring								
Anch. Bolt Holes								
Anch. Chairs								
Lift Lugs								
Internal Baffles								
Internal Coil Supt.								
Internal Coil								
Jacket (shell)								
Jacket (shell)								
Jacket (head)								
Bolts								
Gaskets								
Clean Vessel								
Hydro-test								
Sandblast								
Paint								

IPSCO Inspector: _____ Date _____ Customer Inspector _____

✓ Accept ✓ Reject

[illegible]

Date _____ Authorized Inspector _____ Date _____

[illegible]

PRESKO MFG. CO.

DIVISION OF DIXIE STEEL
P.O. DRAWER A
TUSCALOOSA, ALABAMA 35404

TELEPHONE (205) 556-4040
WATTS 800-633-5998

NOVEMBER 25, 1986

60-687

ATTENTION: IPSO FAB
DECATUR, AL

REFERENCE: CUSTOMER P/O 86-1176 ✓
PRESKO S/O 29201

RECEIVED
DEC 1 1986
FABRICATION DIV.

GENTLEMEN:

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

ITEM SIZE	HEAT NUMBER	QTY.
60" OD x 3/16" NOM. STANDARD HEADS (SA304)	F60134	(2)

ALL HEADS WERE COLD FORMED.

IF YOU HAVE ANY QUESTIONS, PLEASE CONTACT ME.

VERY TRULY YOURS,

PRESKO MFG. DIV. OF
DIXIE STEEL & SUPPLY COMPANY

Renee Averette

RENEE AVERETTE

TANK HEADS - HEAVY METAL FORMING

ITEM # T-4070-2B

JOB NO. 60-687

P.O. # P54-897

TYPE CENTRIFUGE WASHT
RECYCLE TANK

DWG. # 60-687 REV. 1

[illegible]

TEST REPORT



ARMCO STEEL CORPORATION

ADVANCED MATERIALS DIVISION

WILLOWOOD, FLORIDA 32735

OUR SHIPMENT NO. W33-7389-B

DATE SHIPPED

Metal Goods Div. of Alcan Aluminum Corp.
P. O. Box 346
St. Louis, Mo. 63166

YOUR ORDER NO.

98-15371

REFERENCE

ITEM	DESCRIPTION	SPECIFICATIONS
2 (10)	801' 2" 1" Sch 10 IPS x 21' 0" Cut Type 301 FF/A&P (1.315 x .133) Code: 31392-B	A-312, HG 2-4, SA11M UCC PFF 101 Monsanto P 3 STD 103 DTD 3/66
3 (25)	504' 2" Sch 10 IPS x 21' 0" Cut Type 316 FF/A&P (2.375 x .109) Code: 32869-0	A-312, HG 4-3, SA11M UCC PFF 101 Monsanto P 3 STD 103 DTD 3/66

ITEM	CHEMICAL ANALYSIS	HEAT NO.	CARBON	MANG.	PHOS.	SUL.	SIL.	CHROME	NICKEL	MOLY	CU	CO
2 (10)	231003		.062	1.36	.021	.017	.50	18.29	9.15			.13
3 (25)	231164		.06	1.86	.023	.014	.58	17.42	12.82	2.77		.16

60-687
Fab stock

ITEM	MECHANICAL TESTS	YIELD PSI	TENSILE	ELONGATION	REDUCTION	HARDNESS
2 (10)	231003	46,900	67,250	40		RB80
3 (25)	231164	40,900	79,900	48		RB79

FLATTENING & HYDRO TEST O.K.

WE CERTIFY THAT THE CHEMICAL ANALYSIS AND PHYSICAL TEST RESULTS APPLYING
ON THE ABOVE ORDER NUMBER ARE CORRECT AND TRUE TO THE BEST OF OUR KNOW-
LEDGE AND BELIEF.

SWORN AND SUBSCRIBED TO BEFORE ME

ARMCO STEEL CORP
J. J. Jundt
Supervisor Metallurgy

S
O
L
D
T
O
McJunkin Corporation
P. O. Box 513
Charleston, W. V. 25322

BUYER ORDER NO

02-47071

DATE SHIPPED

4-24-86

MILL ORDER NO

S61250

ITEM	QUANTITY	DESCRIPTION	SPECIFICATIONS & PROCEDURES
10	1581' 3"	1-1/2" Sch 10s NPS x 21' c/l Type 304 FF/A&P Part No. 6601 0465	ASTM A312-84C, ASME SA312 duPont SW41M, no end caps McJunkin-Std., welded
12	1054'	1-1/2" Sch 40s NPS x 21' c/l Type 316 FF/A&P Part No. 6623 0465	
21	442' 9"	1/4" Sch 40s NPS x 21' c/l Type 304 FF/A&P Part No. 6613 2218	

ITEM	HEAT NO.	PLATE HEAT ANAL	PLATE PROD ANAL	WELD ANAL	CHEMICAL ANALYSIS										
					C	Mn	P	S	Si	Cr	Ni	Mo	N ₂	Ti	Cb/Ta
10	251026				.058	1.40	.025	.014	.63	18.27	8.32				
12	350757				.016	1.52	.024	.016	.55	17.32	11.14	2.19			
21	260040				.018	1.37	.025	.016	.49	18.14	9.58				

MECHANICAL TESTS															
ITEM	HEAT NO.	PLATE	PIPE	YIELD PSI	TENSILE PSI	EL IN 2"	HARD	HYDRO T.P.	FLARE	FLNG	FLAT	REV FLAT	EDDY TEST	GUIDED BENDS FACE / ROOT / SIDE	
10	251026			51,653	96,860	45	RB84	1800	ok	ok	ok	ok	ok		
12	350757			55,266	86,866	55	RB87	2300	ok	ok	ok	ok	ok		
21	260040			34,149	85,309	67	RB80	1400	ok	ok	ok	ok	ok		

FAB STOCK

60-687

~~60-687~~

P.O. 86-754

CERTIFICATION/REMARKS

HEAT TREATMENT

WE CERTIFY THAT THE CHEMICAL ANALYSIS AND PHYSICAL TEST RESULTS APPLYING ON THE ABOVE
WILL BE ACCURATE AND CORRECT AND TRUE TO THE BEST OF OUR KNOWLEDGE AND BELIEF

V. Forrester
Q. A. Clerk

ARMCO INC.

V. Forrester
QUALITY CONTROL DEPARTMENT

N-1176/900V05667 REQ 096Q07228

REYNOLDS ALUMINUM SUPPLY CO
4500 FIFTH AVENUE SOUTH
BIRMINGHAM AL 35202

J. GERBER & CO. INC

855 AVENUE OF THE AMERICAS
NEW YORK, N.Y. 10001
TELEPHONE: (212) 613-1100
DOMESTIC TELEX: WU 125612

TEST CERTIFICATE

page 1 of 6

PH A6143-A

P.O. 86-515

60-687 (MANWAY NECK)

FAB STOCK

Gegenstand/Qualität
Product/Quality
Produit/Nuance

Sheet
Type 304
finish I
ASME Sa 240

Herstellerzeichen
Mark of the manufacturer
Sigle du producteur

Prüfstempel
Inspector's stamp
Poignon de l'expert



Pos. Item Poste	Anzahl Quantity Nombre	Abmessungen - Dimension in mm	Gewicht - Weight - Masse in kg		Schmelzen Nr. Cast-No. No de coulée	Probe-/Bund Nr. Test-/Coil-No. No d'éprouv /Coil
			Netto	Netto lbs		
01	7	4,76 x 2438 x 6096 3/16" x 96" x 240"	4 132	9109	625580	34851
02	1	6,35 x 2438 x 6096 1/4" x 96" x 240"	779	1717	624600	34885
03	3	9,53 x 2438 x 6096 3/8" x 96" x 240"	3 520	6878	623990	34888
04	1	9,53 x 2438 x 6096 3/8" x 96" x 240"	1 156	2549	621500	33088

CUSTOMER ORDER #

86-515

CUSTOMER JOB #

TYPE & THICKNESS

T 304, 3/16"

SIZE & QUANTITY

96" x 240" 2.1 pc

SOLD TO
 [**McJunkin Corporation**
P. O. Box 513
Charleston, W. V. 25322]

BUYER ORDER NO
02-47071

MILL ORDER NO
S61250

DATE SHIPPED
4-24-86

ITEM	QUANTITY	DESCRIPTION	SPECIFICATIONS & PROCEDURES
10	1581' 3"	1-1/2" Sch 10s NPS x 21' c/l Type 304 FF/A&P Part No. 6601 0465	ASTM A312-84C, ASME SA312 duPont SW41M, no end caps McJunkin-Std., welded
12	1054'	1-1/2" Sch 40s NPS x 21' c/l Type 316 FF/A&P Part No. 6623 0465	
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ITEM	HEAT NO.	PLATE HEAT ANAL	PLATE PROD ANAL	WELD ANAL	CHEMICAL ANALYSIS										
					C	Mn	P	S	Si	Cr	Ni	Mo	N ₂	Ti	Cb/Ta
10	251026				.058	1.40	.025	.014	.63	18.27	8.32				
12	350757				.016	1.52	.024	.016	.55	17.32	11.14	2.19			
21	260040				.018	1.37	.025	.016	.49	18.14	9.58				

MECHANICAL TESTS														
ITEM	HEAT NO.	PLATE	PIPE	YIELD PSI	TENSILE PSI	EL IN 2"	HARD	HYDRO T.P.	FLARE	FLNG	FLAT	REV FLAT	EDDY TEST	GUIDED BENDS FACE / ROOT / SIDE
10	251026			51,653	96,860	45	RB84	1800	ok	ok	ok	ok	ok	
12	350757			55,266	86,866	55	RB87	2300	ok	ok	ok	ok	ok	
21	260040			34,149	85,309	67	RB80	1400	ok	ok	ok	ok	ok	

FAB STOCK

60-687

~~60-687~~

P.O. 86-754

CERTIFICATION/REMARKS

HEAT TREATMENT

WE CERTIFY THAT THE CHEMICAL ANALYSIS AND PHYSICAL TEST RESULTS APPLYING ON THE ABOVE
 WERE RUN AND WERE CORRECT AND TRUE TO THE BEST OF OUR KNOWLEDGE AND BELIEF

V. Forrester
O. A. Clerk

ARMCO INC.

[Signature]

QUALITY CONTROL DEPARTMENT

Specimen submitted to before this _____ day of _____ 19 _____

TEST CERTIFICATE

page 2 of 6

Schmelzen-Nr Cast No. No de coulée		Beschriftung des Stempelprozesses Procédé d'Élaboration M - SM SMN Open-Heart Steel Acid Martin E - Elektrolyt Electric Steel Acid Electric O - Oxygensäure Oxygen Steel Acid Oxygen A - AOD Verfahren AOD Process AOD-Process											
		% C	% Si	% Mn	% P	% S	% Cr	% Mo	% Ni	% N			
625580	A	0.034	0.38	1.38	0.024	0.003	18.25		8.79	0.050			
624600	A	0.037	0.38	1.52	0.023	0.003	18.33		8.67	0.062			
623990	A	0.030	0.39	1.43	0.021	0.005	18.14		8.76	0.063			
621500	A	0.033	0.33	1.47	0.020	0.003	18.17		8.71	0.057			

Probe-Bund-Nr. Test-coil-No. No. d'éprouv./coil	Prob.-Lage Pos. of Test Position	Pr.-Temp. T.-Temp. Températ°C	ReHRp [N/mm ²]		RM [N/mm ²]	XX2 ^m [%]	Z [%]	Av [J]	ak [J/cm ²]	Pr.-Form Type of Sp. Type	HB	Harte Hardness Dureté	30
			0.2 %	1 %									
	T	+20	205		≥ 515	40					HB	≈ 183	
34851	"	"	265		588	67						168	
34885	"	"	296		616	65						177	
34888	"	"	278		600	62						169	
33088	"	"	270		597	68						170	
FAB STOCK													

The material has been checked for identity and was released

The material has been visually inspected,

controlled for dimensional accuracy and was released

831279-85

NIPPON STAINLESS STEEL CO., LTD.

HEAD OFFICE: NO. 8-2, HONSHIO-CHO, SHINJUKU
CABLE ADDRESS: "STAINLESS TOKYO"

687 60-687
BAFFLES

INSPECTION CERTIFICATE

MESSRS. Nissho Iwai Co., Ltd.

DATE Jan. 18, 1986.

ASTM, A240 Type 304

SPECIFICATION (ASME, SA-240, AMS 5513C, QQ-S-766c)

CERTIFICATE NO. 85 AABS-1564

FINISH No. 1

P. O. NO. MVH-7491

Size	Identification No.	Quantity		Chemical Composition in %										Mechanical Properties					Hardness Test
		Piece	Weight in (Kgs)	C	Si x100	Mn x100	P x1000	S x1000	Cr	Ni	Max N	Direction	Yield Strength 0.2%offset	Tensile Strength	Elongation	Reduction of Area			
1/4"x72"x240"	25NH360A	1	2676 (1214)	5	44	86	30	2	18.02	8.31	0.04	(T)	38970	90890	59		HB		
	25YH435A	1		7	32	88	36	4	18.26	8.42	0.04	(L)	42390	91030	59				
1/4"x96"x240"	25NH362A	1	8928 (4050)	6	58	90	32	2	18.12	8.34	0.04	(T)	40960	89750	59		Max 202		
"	25NH361A-D CUSTOMER JOB	4		5	44	86	30	2	18.02	8.31	0.04	(L)	42950	90460	58				
	CUSTOMER JOB			86-515										45230	92880	57		167	
	TYPE & THICKNESS			T 304										42810	92170	57			
	SIZE & QUANTITY			1/4" x 72" x 240" 1 pc.															

Dimensional & Visual Examination

Satisfactory

Remarks: Bending Test: 180° D=1T

Material free from mercury contamination
Intergranular Corrosion Test: Good
(ASTM, A262 Practice A & QQ-S-766c)

Min. Solution Annealing Temperature 1900°F

We hereby certify that the above results are true and correct in every detail.

NIPPON STAINLESS STEEL CO. LTD.

S. Kusano
Manager of Quality Assurance Section

Inspection Agency

Witnessed by

86-515

TYPE & THICKNESS	SIZE & QUANTITY
7304, 3/8"	22" x 24" +



BSC STAINLESS

Shepcote Lane, P.O. Box 161, Sheffield S9 1TR
Telephone: 0742 443311 Telex: 547025

BBC stainless

TEST CERTIFICATE
Cert. No. 67223
DIN50049 3.1B

Cons./Inv. No.

180/55604/12

21/03/86

KASCO
MOBILE
USA.

Customer Order No.

Specification
ASTM A240-85 304

Supply Condition

900-U-10217 RASCO

Hot Rolled Softened and Descalced

Folio	Cast. No.	Material Description	Case No.	Coil No./ Plate No.	Proof Stress			Tensile Strength	El %	HV/HB	Bend Test	I/C Test	Impact Izod Charpy	ft. lbs. J
					0.2%	1.0%	M Pa(N/mm ²)							
U4986	M3921	1 Plate 240 x 72 x 0.25 ins.	853	M4813	PSI			PSI	52	164				
U4986	M3921	1 Plate 240 x 72 x 0.25 ins.	853	M4812	40455			90770	52	164				
U4986	M3921	1 Plate 240 x 72 x 0.25 ins.	852	M4808	40455			90770	52	164				
U4986	M3921	1 Plate 240 x 72 x 0.25 ins.	852	M4809	40455			90770	52	164				
U4986	M3921	1 Plate 240 x 72 x 0.25 ins.	852	M4810	40455			90770	52	164				
U4986	M3921	1 Plate 240 x 72 x 0.25 ins.	852	M4811	40455			90770	52	164				
U4987	M3921	1 Plate 240 x 72 x 0.37 ins.	854	M4896	41615			90190	56	168				
U4987	M3921	1 Plate 240 x 72 x 0.37 ins.	854	M4895	41615			90190	56	168				
U4989	M3921	2 Plates 144 x 72 x 0.37 ins.	855	M4887	37700			88740	58	158				

Material inspected and tested to ASTM A240 also conforms to latest revisions of ASTM A480 and ASME SA240/SA480(1985) (1N/mm 50. = 145.04PSI)

All Test Certificates issued by the BSC will contain this embossed seal. Any recipient of a copy of a BSC Test Certificate without the seal should ensure from the supplier that it is a true and accurate reproduction of the original.

Cast No.	C	Si	Mn	P	S	Cr	Mo	Ni	Ti	Nb	Co	N
H3921	.028	.40	1.46	.026	.004	18.29		8.69				.046

Cu .27
Recl. .20
AUG 8 1956

Witnessed

Inspecting Authority

Signed for British Steel Corporation, CANTON, OHIO

6 a Backhouse

232474

Ingersoll Steel

Division of Avesta Inc.

Certificate of Analysis and Tests

SOLD TO

AVESTA STAINLESS INC.
721 UNION BLVD.
P. O. BOX 269
TOTOVA NJ 07511

SHIP TO — SAME UNLESS NOTED OTHERWISE

REYNOLDS ALUMINUM SUPPLY CO.
3900 PINSON VALLEY PARKWAY
P. O. BOX 9986 (ZIP 35220)
BIRMINGHAM, AL

ORDER NUMBER
23483

CUSTOMER
CODE
6660004

35217

DATE
11/26/86

60687
BLD, FLG.

CUSTOMER ORDER NO. & DATE V-12616 11/21/86		ROUTING		TERMS	
ITEM NO.	MFG. CLASS	TYPE	FIN	DESCRIPTION	
304			1	1.250 X 60.000 X 239.000 EXACT ASTM A-240-84A SUS-766C ASME SA-240-80 83ED, S84 CUSTOMER ORDER #	
				QUANTITY ORDERED	QUANTITY SHIPPED
				WEIGHT	WEIGHT
				PIECES	PIECES
				DATE	DATE

PLATES & TEST PCS SOLUTION ANNEALED @ 1950 DEGREES FARENHEIT MINIMUM TYPE & THICKNESS 304, 1 1/4"
THEN WATER COOLED OR RAPIDLY COOLED BY AIR
HOT ROLLED, ANNEALED & PICKLED (HRAP)
CUSTOMER JOB #
SIZE & QUANTITY 24 3/4" C.P.D. - pc

MECHANICAL AND OTHER TESTS

HEAT NUMBER	HARDNESS RB	PIECES	YIELD STRENGTH LBS. PER SQ. IN.	TENSILE STRENGTH LBS. PER SQ. IN.	ELONG % IN 2"	BEND	RED AREA %	INTERGRANULAR CORROSION	GRAIN SIZE	REMARKS:
36010	88	1	37342	80189	67.0	OK	70.8	OK	2A	

CHEMICAL COMPOSITION

HEAT NO.	C	Mn	P	S	Si	Cr	Ni	Co	Cu	Mo	N	Cb/Ta	Ti	AL	W	SN	Co	FE
36010	.050	1.500	.024	.009	.440	18.340	8.140	.080	.240	.370	.062							

Ingersoll Steel

Division of Avesta Inc.
P. O. Box 370
New Castle, Indiana 47362

STATE OF INDIANA
COUNTY OF HENRY

By Donald Elliott

Subscribed And Sworn To Before Me This 26 Day Of NOVEMBER, 1986

Myra Ann Wilson
Notary Public

AST

AVESTA SANDVIK TUBE BV VOSSENREEMD 111 POSTBUS 500 5700 AM HELMOND - HOLLAND

INSPECTION CERTIFICATE DIN 50049 - 21 B ABNAHMEPRÜFZEUGNIS DIN 50049 - 21 B CERTIFICAT NFA 49007 Pw. 5221 (CCPU) PROVINGNSINTYGS 53 110001 - 28		Date / Datum 22-8-1986	Cont. No / Zeugnisnr 42787									
Customer / Besteller / Client Avesta Stainless Inc, TOTOWA		Order No 86266/ 501276 Rev.3	Customer's order no / besteller: 638-0613 Philadelphia									
Product / Produkt / Fourniture LONGITUDINALLY WELDED TUBES LANGSNAHTGESCHWEISSTE ROHRE TUBES SOUDÉS LONGITUDINALEMENT		AQUAP NO Soudureurs / ooperateurs art 17 bis	Welding factor 1,0									
Requirements / Anforderungen / Conditions imposées A312 SA312		Heat treatment / Wärmebehandlung / Traitement thermique 1060°C										
Condition / Lieferzustand / Condition de livraison Full finished annealed and pickled		Issue / Ausgabe / Année de référence 1984-C										
Grade / Werkstoff / Nuance 304 60-687		Brand of supplier / Zeichen des Lieferanten / Marque de fabrication: AST/H CWA										
EXTENT OF DELIVERY / UMFANG DER LIEFERUNG / VOLUME DE LIVRAISON												
Item / Pos. Nr 181	Quantity / Stückzahl / Quantité 140	Dimension / Abmessung / Dimension 3" NB x SCH 40S x 20 Fb	Heat / Schmelze / Coulee K62032									
TEST no / Probe Nr. No. Enchantillon 1 - 2												
ANALYSIS / CHEMISCHE ZUSAMMENSETZUNG / ANALYSE DE COULEE												
Heat / Schmelze / Coulee K62032	C	Si	Mn	P	S	Cr	Ni	Mo	Ti	Co	Cu	N
	.037	.58	1.43	.026	.010	18.06	8.79			.14		
TEST RESULTS / ERGEBNISSE DER PRÜFUNGEN / RESULTATS D'ESSAIS												
Test No Probe Nr. No. Echantillon	L	Rd 0.2 N/mm ²	Rd 1.0 N/mm ²	Rm N/mm ²	A ₅ Lo = 50 mm	A ₅ S ₅	Hardness Dureté HB	Requirements / Anforderungen / Conditions				
1.	43 107	311	570.23	600	55		84	Flattening tested: OK				
2.	43 801	302	583.28	609	54			Hydro tested: 12.6 N/mm ²				
100% E.C.T. tested : OK												
THESE MILL TEST REPORTS APPLY TO: YOUR P. O. # D.34115 TIIGA PIPE SAFETY CO. INC.												
TIIGA PIPE QA ACCEPTANCE BY:  DATE: 10-1-86												
Material test check performed / Werkstoffprüfungsprüfung durchgeführt / Recherche d'un élément OK												
Intergranular Corrosion test according to / Bestandenheit gegen interkristalline Korrosion geprüft / Essai de Corrosion selon:												
Visual inspection and dimensional control / Beschichtigung und Ausmessung / Inspection visuelle et contrôle de dimension												
A312 OK SA312:OK												
MANUFACTURING REQUIREMENTS ARE SATISFACTORY / DIE GESTELLTEN ANFORDERUNGEN SIND ERFÜLLT / CONFORME AUX STIPULATIONS DE LA COMMANDE												
LA SOCIÉTÉ AVESTA SANDVIK TUBE BV garantit, que les produits, objet du présent certificat respectent en leur totalité, les exigences suivantes. Pm intérieur ou égal à 780 N/mm ² Rm (A 2) > 10500 A ₅ R _{0.2} = 585 S ₅ > 14%												
Place / Ort / Lieu Helmond	Date / Datum 22-8-1986	Department / Abteilung / Service Quality-control	Inspector's stamp Stempel des Verlässachverständigen Tombé d'inspecteur 	Name / Name / Nom A.H.L. Weemers								



RAM FORGE & STEEL, INC.

P. O. BOX 592 • NAVASOTA, TEXAS 77868

Purchaser: SYNALLOY Date: 1-23-87

Order No: 87-D13 Our Delivery Receipt No: 8702

This is to certify that the material called for on the above order and delivered to you on the above delivery receipt, consisting of:

ITEM 2. 1 4" 150# RF (125 AARH) STUDDING OUTLET (MT=
1 1/4") TO CURVED FOR 30" CYL. BACKING RADIUS
3. 1 2" 150# RF (125 AARH) STUDDING OUTLET (MT=
1 1/4") TO CURVED FOR 30" CYL. BACKING RADIUS
4. 1 2" 150# RF (125 AARH) STUDDING OUTLET (MT=
1 1/4") TO MATCH 60" SPHERICAL BACKING RADIUS

TAG: 60-687

complies in all respects with the following Specification:

A182 F304

We further certify that the chemical and physical properties are as follows:

Carbon	.046	Cr.	18.22	Heat No.	83469 (NZI)
Mang.	1.53	Mo.	.25	Grain Size	
Phos.	.027	Ti.		Manufacturer	
Sul.	.002	Cb.		Ult. Strength in #psi	80,600
Sil.	.43	Cu.	.59	Yield Point in #psi	41,600
Ni.	9.14			% Elongation in 2"	31
Tests Satisfactory:				% Red. of Area	76

SOLUTION ANNEALED. HEATED TO 1900-2000 DEG. F.
AND HELD AT TEMPERATURE FOR 1/2 HOURS PER INCH
OF MAXIMUM SECTION THICKNESS THEN QUENCHED IN
WATER UNTIL COLD.

RAM FORGE AND STEEL, INC.

By B. J. Gruner

Subscribed and sworn to before me this

23 day of JAN, 19 87

Notary Public in and for the County of
Grimes, State of Texas

Carolyn Craddock
CAROLYN CRADDOCK

B J GRUNER

JAN 28 1987

NAVASOTA, TEXAS



RAM FORGE & STEEL, INC.

P. O. BOX 592 • NAVASOTA, TEXAS 77868

Purchaser: SYNALLOY

Date: 1-28-87

Order No: 87-D13

Our Delivery Receipt No: 8711

This is to certify that the material called for on the above order and delivered to you on the above delivery receipt, consisting of:

ITEM 1. 1 10" 150# RF (125 AARH) STUDDING OUTLETS
(MT=1 5/8") TO CORVED FOR 60" SPHERICAL
BAKING RADIUS

TAG: 60-687

complies in all respects with the following Specification:

A182 F304

We further certify that the chemical and physical properties are as follows:

Carbon	.046	Cr.	18.22	Heat No.	83469 (NZ1) ✓
Mang.	1.53	Mo.	.25	Grain Size	
Phos.	.027	Ti.		Manufacturer	
Sul.	.002	Cb.		Ult. Strength in #psi	80,600
Sil.	.43	Cu.	.59	Yield Point in #psi	41,600
Ni.	9.14			% Elongation in 2"	31
				% Red. of Area	76

Tests Satisfactory:

SOLUTION ANNEALED. HEATED TO 1900-2000 DEG. F.
AND HELD AT TEMPERATURE FOR 1/2 HOUR PER INCH
OF MAXIMUM SECTION THICKNESS THEN QUENCHED IN
WATER UNTIL COLD.

RAM FORGE AND STEEL, INC.

By B. J. Gruner

Subscribed and sworn to before me this

28 day of MAY, 19 87

B J GRUNER

Notary Public in and for the County of
Grimes, State of Texas

Carolyn Craddock
CAROLYN CRADDOCK

2- 0Z VAC

250

60-687

1987

CENTRIFUGE WASH. RECYCLE TANK

T-4070-2B

P54-897

SA-240 T-304

Form 17955
Rev. A.

RADIOGRAPHY REPORT



CONTRACT <u>TP540</u>		DWG. <u>60687</u>		ASSEMBLY <u> </u>		FILM <u> </u>	
TYPE OF MATERIAL <u>SS</u>		SPECIFICATION <u>ASME D</u>		THICKNESS RANGE <u>1/4" TO 3/16"</u>		CALCULATED THICKNESS <u>3/16"</u>	
TYPE OF ISOTOPE <u>IR 192</u>		CURIE <u>80</u>		ISOTOPE SIZE DIA. X LENGTH <u>100 X 80</u>		SFD FFD <u>10</u>	
TYPE AND MANUF. OF X-RAY MACHINE		KV		FOCAL SPOT		TIME <u>30 sec.</u>	
LEAD SCREEN THICKNESS FRONT <u>0.010</u> BACK <u>0.010</u>		CASSETTES		DOUBLE LOADED SINGLE LOADED		FILM VIEWING SINGLE DOUBLE	
M & D DENSITY RANGE <u>2.0</u> TO <u>4.0</u>		DEVELOPING PROCESS		PRE-PMWT ☐ PMWT ☐		MINUTES <u>20</u> ° F.	

Page 1 of 1

Film Used

Travel from _____ to _____

to miles unit no

Technician L. Chambliss

Assistant B. Carle

Assistant

Report no.

HOURS

Travel hours

Hours worked

Standby hours

Total hours

Film shot 1/20/87

[illegible]

Q. A. SUPPL.

CODE INSP.

Q51. 28.