

APSC MECHANICAL CATALOGS
P.O. # 9335035-001
TAG # 31-F-1 P.S.#1



QUALITY DOCUMENTATION

ALYESKA PIPELINE

P.O. 9335035

KALDAIR PROJECT P-380

P-42-E PIPE FLARE

A04

RECEIVED
9-13-90

KALDAIR, INC.
550 WESTLAKE PARK SUITE 1740
HOUSTON, TEXAS 77079

INSPECTION ACCEPTANCE/RELEASE

PROJECT P380 CUSTOMER ALYESKA PIPELINE
VENDOR LIDE VESSELS INC.
RT 2 BOX 158 D
MEXIA TEXAS 76667

VENDOR P.O. NO. P380-100970 SHOP ORDER NO. _____

PURCHASE ORDER ITEMS

DRAWING NO.	DESCRIPTION
<u>P380-101</u>	<u>Ø42" PIPE FLARE W/ 3 EA IGNITORS</u>

THE ABOVE ITEMS ARE IN CONFORMANCE WITH THE PURCHASE ORDER
AND SPECIFICATION REQUIREMENTS.

APPROVED BY *[Signature]* DATE 7-3-90

A05

ALYESKA P.O.: 9335035 INSPECTOR: HOWARD NESMITH
ALYESKA M.R.: 209501751 INSPECTOR/REPORT NO.: VI-151-004
SUPPLIER SHOP ORDER NO.: P-386 REPORT DATE: 6-28-90
ISSUED TO: KALDAIR INC. HOUSTON, TX INSPECTOR'S DISTRICT: HOUSTON, TX
SUPPLIER: LIDE TANK Co. SPOR NO.: _____
LOCATION: MEXIA, TX

DESCRIPTION OF WORK:

*1- TIP FLARE WITH PILOT ASSEMBLIES
TAG # 31-F-1*

THE ABOVE DESCRIBED EQUIPMENT HAS BEEN INSPECTED AND ACCEPTED IN ACCORDANCE WITH ALYESKA PURCHASE ORDER, DRAWINGS, SPECIFICATIONS, AND CODES.

COMMENTS:

This Equipment was found in compliance with purchase order No. 9335035 to Kaldair Inc. and Kaldair drawing # P-380-101-REV.2. Equipment was completely boxed (wooden box) for shipment.

DEVIATIONS TO THE ABOVE ORDER:

DEVIATIONS AUTHORIZED BY:

- NO REJECTIONS OUTSTANDING ON ITEM(S) ACCEPTED.
- ORDER PARTIALLY COMPLETE. OTHER REPORTS TO FOLLOW.
- ORDER COMPLETE. FILE CLOSED.

INSPECTOR'S SIGNATURE Howard Nesmith VI-151

AC6

KALDAIR IN

PIPE FLARE P-42-E

KALDAIR PROJECT P-380

(1990)

WAGNER

207

Top Quality Document

WELD JOINT
 350
 350

VE 9/1
 SURFACE
 BY PROCEDURE
 SCREENS
 FRONT
 BACK

FILM MFG. *Kodak-AA* CLASS 1 OR 2 EXP. *20* TECHNIQUE

REPT. PREP. *320* INCHES

EXPOSURE *320* SIZE OF FILM *35*

RADIOGRAPHER: *M. Wall* LEVEL: *3* DATE: *11/17/51*

INTERPRETOR: *M. Wall* LEVEL: *3* DATE: *11/17/51*

VIEW	DENSITY		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	REMARKS
	PEN	WELD																											
0-1			/																										
1-2			/																										
2-3			/																										
3-4			/																										
4-5			/																										
5-6			/																										
6-7			/																										
7-8			/																										
8-9			/																										
9-10			/																										

WE HEREBY CERTIFY THAT PARTS LISTED HAVE BEEN TESTED IN CONFORMANCE WITH THE SPECIFICATION NOTED AND THAT WE ARE IN COMPLIANCE WITH THE PROVISIONS OF THE MERCURY CONTAMINATION CLAUSE. PARTS AND MATERIALS HAVE NOT BEEN SUBJECT TO MERCURY OR MERCURY CONTAMINATES. THIS REPORT REPRESENTS LONGVIEW-IRVING, INC. INTERPRETATION OF THE RESULTS OBTAINED FROM THE TEST AND IS NOT TO BE CONSIDERED AS A GUARANTEE OR WARRANTY OF THE CONDITION OF THE MATERIALS TESTED. LONGVIEW-IRVING, INC. SHALL NOT BE RESPONSIBLE FOR MISINTERPRETATION OF CONDITIONS, LOSS, DAMAGE, INJURY OR DEATH (ARISING FROM OR ATTRIBUTED TO PERFORMANCE OF A TEST).

Harold Plummer
 CONTRACTOR REVIEW
 11-151

AI REVIEW

OWNER REVIEW

AD8

RADIOGRAPHIC REPORT



Willowbrook Avenue, Du. Ark, N.Y. 14048

316 CERTIFICATE OF TEST

PURCHASE ORDER NO. AND DATE	12/19/88	ACCEPTING MILL	WATERVLIET	MILL ORDER NO.	0-0-99672	DATE SHIPPED	05/24/89	INVOICE NO.	J-194128
VINSON SUPPLY CO P O BOX 3188		VINSON SUPPLY CO 2333 CLINTON DRIVE		VINSON SUPPLY CO 2333 CLINTON DRIVE		TEXAS 77547			
HOUSTON ATTN: LINDA ADAMS		TEXAS 77001		GALENA PARK		TEXAS 77547			

PRODUCT SPECIFICATIONS

AL TECH STAINLESS STEEL TYPES 316/316-L
COLD DRAWN ANNEALED AND PICKLED SEAMLESS PIPE TO ASTM A-312
AND ASME SA-312 NO SHORTS

ITEM	DESCRIPTION		QUANTITY	POUNDS	C/P	ADDITIONAL ELEMENTS			
T 1.3150	.1330 17-24								
CHEMICAL ANALYSIS									
HEAT NO	C	MN	P	S	SI	CR	NI	AL	MO
J9108	.017	1.76	.027	.014	.63	16.30	12.60	-	2.11
	.015	1.79	.027	.015	.65	16.34	12.60	-	2.13
J8786	.013	1.83	.028	.016	.46	16.50	12.61	-	2.17
	.017	1.81	.029	.012	.40	16.64	12.58	-	2.10

PHYSICAL PROPERTIES

HEAT NO	TENSILE KSI	.2% YIELD KSI	IN 2" OR 4D EQUIV.	% ELONG	TEST NO
J9108	89.1	45.5	52.0		1-1
J9108	86.7	41.8	51.0		1-2
J8766	86.4	45.2	45.0		1-3

MILL TEST REPORTS FURNISHED BY VINSON SUPPLY COMPANY

Customer: Slide Vessels

Cust. P.O. Humont

Vinson Ord. No. 06109038

Vinson Item No. 12

Transit by Q Date 11/1

LATTENING TEST: OK

HYDROSTATIC TEST: OK

HEAT TREATMENT: MATERIAL IS IN THE SOLUTION ANNEALED CONDITION AS A RESULT OF BEING HEATED TO 1900F. MINIMUM AND WATER QUENCHED TO LESS THAN 800F IN THREE MINUTES OR LESS.

14,
I few

W. B. A. W. B. ACKERMAN-TEST ENGINEER 05/24/89
TEST CERTIFIER
AL TECH SPECIALTY STEEL CORPORATION

A09

H I ICC 42 PG 1
 1 1/2 - Sch / 40 In carbony 800H
 Know how in metals VDM

Rohre / Tubes

VDM Nickel-Technologie AG

AID

Abnahmeprüfzeugnis / Inspection certificate / Certificate d'inspection No.: 27635/1+2

VDM Aufr.-Nr. / Order-No. / No de cde 52393
 Ihre Bestell-Nr. / Your Order No / Votre No de cde 3835
 Datum / Date 1989-11-09 NOV 2 / 1989
 VDM-T-NO: 24-00-5257
 TEST REPORT

J & J INC., HAMPTON
 U.S.A.
 J & J, Inc.

VDM Nickel-Technologie AG
 Qualitätssicherung / Quality Assurance Qualität
 T.R. FILE
 ALTOS
 P.O. FILE 3835
 CUS. FILE

No. 0900
 Posted: 12-6-89

WILCZEK
 Wöhrstraße 171, D-4100 Duisburg 1, Telefon (0203) 60003 0, Telex 855829 vdmde, Fax (0203) 60003 59

UBES # SEAMLESS, COLD FINISHED #
 TECHNICAL TERMS OF DELIVERY ASTM B 407 #
 08811 # ENDS PLAIN, SQUARED TO TUBE AXIS, BURRLISS #
 RANDOM MILL LENGTH 17 - 24 FT

J & J INC.
 ABOUT
 ITEM # 13

Item	Deliv.	Dimension / Item text	Quantity	kg/lbs	Total length m/ft							
2		NH SCHEDULE 1 1/2 X 40,000	36	1.010 2.227	244,14 800,98							
P.O.-NO. 3835 PACKED IN CASES OF MAX. 907 KG GROSS WEIGHT												
Results of ladle analysis (SI) Z												
AT NO	STEELMAK. PROCESS	C	SI	MN	P	S	CU	CR	NI	FE	AL	TI
NIMUM		0,060						19,000	30,060	39,500		
XIMUM		0,100	1,000	1,50	0,0150	0,750	23,000	35,000				
76092	S E	0,088	0,460	0,71	0,0030	0,140	23,250	30,650	46,580	C,50	0,54	
Heat no + TI : 0,85 - 1,20X + TI = 1,04X												
Tensile test results												
Heat no 76092												
Yield/proof strength												
Rp0,2 25000												
Rm 35534												
Tensile strength												
Rm 65000												
Elongation (Z) Rp/ Rm												
AL 2" 30,0												
48,0L												

01 FLAT TEST SPECIMEN

TEST PIECE

SEE TO THE TENSILE TEST

TEST PIECE

HT 76092 PGZ

19

MANNESMANN EDELSTAHLROHR

Mannesmann Edelmetalle GmbH · Postfach 22 63 · D-4018 Langenfeld 2

VDM NICKEL/DU

A11

INSPECTION CERTIFICATE ACC. TO DIN 50049-3.1B		No. des 27635	Blatt/Seit 2 / 2
Der Lieferant Lieferant Lieferant		Lieferdatum 61/0007/66	
		Lieferdatum 89.11.06	

MER-Auftrags-Nr.
MER-order no
No. de commande MER
861/5941 4

Kunden-Bestell-Nr.
Purchaser order no
No. de commande client
52.393

Besch.-Datum
Date of order
Date de commande
89.03.10

Versender
User
Utilisateur

Bestimmungsländ
Destination
Pays de destination
USA

MILL TEST REPORTS FURNISHED BY
J & J MACHINE SHOP, INC.

DATE 5/9/90 OUR INVOICE NO. 30691

CUSTOMER Wason Supply
YOUR P. O. 02113574

ITEM NO. 1/2 740 A800HT CDA
5mls pipe

Value 1	Value 2	Value 3
73,0	95,0	95,0
73,0	73,0	73,0

AT TREATMENT AS PER SPECIFICATION
SIDE HYDROSTATIC TEST WITH WATER: 1000 PSI,
THOUT OBJECTION
SUAL AND DIMENSIONAL INSPECTION SATISFACTORY
TERIAL IDENTIFICATION TEST OF ALL TUBES
SPECTROGRAPHIC ANALYSIS PASSED

IN SIZE ACC. TO ASTM E 112 = 5 - 6

PRODUCTS HAVE BEEN TESTED IN ACCORDANCE WITH THE PURCHASE SPECIFICATION AND ARE FOUND TO BE SATISFACTORY.

MANNESMANN EDELSTAHLROHR GfBH, ABNAHME
VED. GRAF, THE INSPECTOR
ENFELD, THE 89.11.07, TELEPHONE: (02173) 106-422

Marking of the products
MANUFACTURER'S BRAND: MER
INSPECTOR'S STAMP: WA
N 08811

This testimonial and certification respectively is recorded by computer-system, and is valid without signature. Alteration or use for other products are regarded as falsification of documents and will be subject to criminal jurisdiction.

Handwritten signature
11-11-15
5-2-1-2-5

CONTRACT NO.

P.O. DATE
08 24 89

PURCHASE ORDER NO.
4618

PAGE
1 of 3

QMS RATING RENEEO

INVOICE DATE

INVOICE NO. PL.

VENDOR
BABCOCK & WILCOX
TUBULAR PRODUCTS DIVISION
P.O. BOX 'S'
KOPPEL, PA 16136

TEST REPORT

B & W ORDER NO.
024371

SOLD TO
J & J, INC
30 OAK STREET
HAMPTON, GA 30228

J & J, INC.
28 CENTRAL AVENUE
HAMPTON, GA 30228

SHIP TO

DATE SHIPPED
01/08/90

Item #7
1" S/40

B/L NO.
012001

ITEM	DESCRIPTION	PIECES	QUANTITY SHIPPED	TESTS MADE
001	<p>END USE: CONVERSION-SPECIAL PROCESSING SPECS:</p> <p>SMLS, ALLOY 800H, UNS N08810, AW, CD, ANNEALED TO ASTM B 407 AND ASME SB 407. ALLOY 800 H TUBULARS 3.500" OD X .280" WALL VARIOUS LENGTHS FURNISHED BY J & J, INC. FOR B & W TO CONVERT TUBULARS AS STATED HEREIN.</p> <p>WT/FOOT: 1.70100 SIZE: 1.315" OD x 0.133" WALL</p> <p>17' 24'</p> <p>RANDOM LENGTH MIN/MAX CUSTOMER WILL ACCEPT LENGTHS "AS COMES"</p> <p>J & J, Inc. No. 0960 Posted: -----</p>	16	664.06'	<p>HYDROSTATIC TEST 1000 psi 5 second hold - 100% OK</p> <p>VISUAL & DIMENSIONAL OK</p> <p>TEST REPORT</p> <p>T.R. FILE <u> </u> ALTOS <u> </u> P.O. FILE <u>4618</u> CUS. FILE <u> </u></p> <p>GRAIN SIZE: PAGE 3</p> <p>J & J INC.</p>

Howard Smith
01-15T
5-24-90

QA

INSPECTION										
ITEM	HEAT NO	CARB	MANG	SUL	PHOS	STL	CHROM	NI	NO	CUI
CHEMISTRY: PAGE 2										
DATE BY: <u> </u> <u> </u>										
ITEM	HEAT NO	ULT STRENGTH	YIELD	% ELONG IN 2"	REDUCT IN AREA	HARDNESS	STRIP <input type="checkbox"/> STD RD <input type="checkbox"/> FULL SECTION <input checked="" type="checkbox"/>			
TENSILES: PAGE 3							SWORN TO AND SUBSCRIBED BEFORE ME <u>1/8/90</u>			

Norma Jean Casciato
NOTARY PUBLIC
Norma Jean Casciato, Notary Public
Shaver Fork, Beaver County, Pa.
My Commission Expires Jan. 2, 1991
COMMISSION EXPIRES

THIS IS TO CERTIFY THAT THE ABOVE PRODUCTS HAVE BEEN MADE IN THE U.S.A FROM STEEL MELTED IN THE U.S.A AND HAVE BEEN INSPECTED AND TESTED IN ACCORDANCE WITH AND HAVE MET ALL REQUIREMENTS OF THE SPECIFICATION.
THE BABCOCK & WILCOX COMPANY BY
PETER P. KUCAN, JR. *Peter P. Kucan Jr.*

A12

CERTIFICATE OF TESTS

B&W ORDER NO:
024371

CUSTOMER ORDER NO:
'618

SPECIFICATION:
ASTM B-407 & ASME SB-407

HEAT NO.	C	MN	S	SI	CR	NI	FE	CU	TI	AL
HH-8022 Tube Ck.	.070 .072	.77 .76	.002 .001	.52 .49	19.63 20.21	31.68 31.89	45.69 44.67	.65 .69	.51 .49	.48 .45
HH-8026 Tube Ck.	.050 .053	.92 .90	.002 .001	.48 .47	20.16 20.74	31.12 31.27	45.76 44.88	.58 .62	.53 .55	.40 .32
HH-8280 Tube Ck.	.060 .065	.85 .87	.002 .001	.24 .28	20.13 20.70	31.57 31.57	45.83 44.88	.61 .64	.38 .42	.38 .32
HH-8301 Tube Ck.	.080 .080	.84 .82	.002 .001	.25 .28	19.60 19.97	31.61 31.58	45.23 45.78	.52 .54	.42 .34	.45 .34
HH-8442 Tube Ck.	.070 .066	.88 .90	.003 .001	.08 .11	20.11 20.38	32.20 32.00	45.21 44.81	.70 .68	.36 .38	.39 .33
HH-8514 Tube Ck.	.070 .071	.97 .99	.003 .001	.17 .23	20.63 21.15	30.34 30.47	46.40 45.45	.60 .57	.41 .45	.41 .36
HH-8560 Tube Ck.	.070 .066	.90 .91	.003 .001	.16 .15	21.36 21.77	31.48 31.12	44.57 44.42	.57 .56	.41 .41	.48 .34

A13

→ HH-8514 Tube Ck.

"The recording of false, fictitious, or fraudulent statements or entries on this document may be punished as a felony under Federal statutes, including Federal Law, Title 18, Chapter 47."

Harold Caswell

VI-157

5-24-80

BRISTOL METALS INC.
MILL TEST REPORT

113

VINSON SUPPLY
BOX 3188
HOUSTON, TEXAS

77253

CUST NO: 75400051
JOB NO: 7124H
PO NO: 061585
DATE: 01/13/89

HEAT NO. ITEM DESCRIPTION
77514 3/4" PIPE SCH 40S 316L ASTM A312SW41M AND ASME SA312

HEAT NO.	C	MN	P	S	SI	NI	CR
77514	.026	01.740	.025	.009	.51	10.150	16.660

HEAT NO.	MO	CU	CO	NI	TENSILE	YIELD
77514	2.16	.25	.09	.027	87,985	37,924

HEAT NO.	HARDNESS	ELONGATION	BEND	FLATTENING	TENSION
77514	RB78	46.00 %	NA	OK	OK
	FLANGE	FLARE	UT	HYDRO	
	OK	OK	OK	2500 PSI	

Item 18

ANNEALED AT
1950 DEG. F.
AND WATER
QUENCHED

RADIOGRAPHIC
EXAMINATION
COMPLETED

MILL TEST REPORTS FURNISHED
BY VINSON SUPPLY COMPANY

HEAT NO.
77514

YES

NA

Customer Liate Vessels
Cust. P.O. Himent
Vinson Ord. No. 02109038
Vinson Item No. #14
Prepared By D Date 1/19

WE CERTIFY THIS REPORT TO BE
TRUE AND ACCURATE, TO THE BEST
OF OUR KNOWLEDGE AND BELIEF.

BRISTOL METALS INC.

John Eaton
REPRESENTATIVE

A14



MATERIAL CERTIFICATION

2306 Rayburn Drive

Nacogdoches, Texas 75961

(409) 569-9218

SOLD TO

Lide Tank
Rt. 2 P.O. Box 1580
Mexia, Tx. 76667

Date 6-11-90	Customer Order No. P380
CMI Order No. 7062-1	Invoice No.

ITEM #	QUANTITY	HEAT #	DESCRIPTION
1	1	2693-A	SA182F316SS 48" 150# RF SO

Item #

CHEMICAL ANALYSIS

HEAT NO.	MILL	C	MIN	PHOS	SUL	SIL	NI	CR	MO	CU
1 2693-A		.026	1.54	.023	.006	.50	10.60	16.56	2.70	
2										
3										
4										
5										

PHYSICAL PROPERTIES

	YIELD STRENGTH LBS./SQ. IN.	TENSILE STRENGTH LBS./SQ. IN.	ELONG. %		RED. OF AREA %	CHARPY V	
			2 in.	8 in.		AVG. (FT.-LBS.) AT DEG. F	VAL. (FT.-LBS.) AT DEG. F
1	46,000	85,900	53		80		
2							
3							
4							
5							

HEAT TREATMENT

	HEAT TREAT	TEMP F	TIME AT TEMP	COOLING MEDIA	BRN
1					
2					
3					
4					
5					

SUBSCRIBED AND SWORN TO BEFORE ME

I certify that this is a true copy of original test sheet now on file at the office of Continental Manufacturing, Inc.

THIS 11 th DAY OF June 19 90

Boi

John J. ...

BRISTOL METALS INC.
MILL TEST REPORT

TO: VINSON SUPPLY
BOX 3188
HOUSTON, TEXAS

CUST. NO. 75400051
JOB NO. 2484H
PO NO. 06-0977
DATE: 10/28/87

77253

Item # 14

HEAT NO. 95848 ITEM DESCRIPTION 1" PIPE SCH 40S 316L ASTM A312SW41M AND ASME SA312

HEAT NO.	C	MN	P	S	SI	NI	CR
95848	.022	01.730	.026	.020	.59	11.110	16.530

HEAT NO.	MO	CU	CO	N2	TENSILE	YIELD
95848	2.14	.51	.15	.027	77,200	37,500

HEAT NO.	HARDNESS	ELONGATION	BEND	FLATTENING	TENSION
95848	RB76	57.00 %	NA	OK	OK
	FLANGE	FLARE	UT	HYDRO	
	OK	OK	OK	2500 PSI	

ANNEALED AT
1950 DEG. F.
AND WATER
QUENCHED

RADIOGRAPHIC
EXAMINATION
COMPLETED

MILL TEST REPORTS FURNISHED
BY VINSON SUPPLY COMPANY

Customer Lide Vessels
Cust. P.O. P 580
Vinson Ord. No. 0211905
Vinson Item No. 57
Prepared By [Signature] Date 11/25

HEAT NO.	ANNEALING	RADIOGRAPHIC
95848	YES	NA

WE CERTIFY THIS REPORT TO BE
TRUE AND ACCURATE, TO THE BEST
OF OUR KNOWLEDGE AND BELIEF.

BRISTOL METALS INC.

John Eaton
REPRESENTATIVE

BOZ

Item (9) M/T

INCO ALLOYS INTERNATIONAL

INCO ALLOY'S INTERNATIONAL
INSTRUMENTAL

THIS IS TO CERTIFY THAT THE ABOVE SPECIFICATION REQUIREMENTS HAVE BEEN PERFORMED BY AN INDEPENDENT QUALITY ASSURANCE REPRESENTATIVE AND THE TEST RESULTS SHOWN ARE CORRECT AND THE CERTIFICATE IS IN FULL COMPLIANCE WITH THE PRODUCTION REQUIREMENTS AS SPECIFIED IN THE DRAWINGS AND REQUIREMENTS.

D W Allen
QUALITY ASSURANCE REPRESENTATIVE

CERTIFIED MATERIAL TEST REPORT No. 48756

TAX ORDER NO. ITEM 557547 DATE 09/29/89

QUANTITY 1 INSPECTED BY IAI

9040 LBS. MARK ORN. (100)

CHANGE ORDER NO. 27-72126 A/C09753 27-72126 A/C09753

DESCRIPTION OF MATERIAL SUPPLIED INCOLOY ALLOY 800H/800HT HR PLATE DESCALE ANN .5000 92-98 144 240 IN NOM

A M CASTLE & CO
2702 PINNACLED DRIVE
Grand Prairie TEXAS 75051

A M CASTLE & CO
BOX 1017
Grand Prairie TEXAS 75053-1017

* KNOWINGLY AND WILLFULLY FALSIFYING OR CONCEALING A MATERIAL FACT ON THIS FORM, *
* OR MAKING FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR REPRESENTATIONS *
* HEREIN COULD CONSTITUTE A FELONY PUNISHABLE UNDER FEDERAL STATUTES.

REFERENCES: HAI J28 REV F/ASTM B 409-87/
ASME CODE CASE 1987-1(SB 409).

UNS: NOBB11

B03

HEAT/LCT	C	MN	FE	S	SI	CU	NI	CP	AI
H4899AG	0.07 - 0.49	0.84	47.10	<0.001	0.12	0.05	30.66	19.87	0.50
H50207C	0.08 - 0.53	0.77	46.69	<0.001	0.15	0.01	31.05	19.79	0.50

*Real Quality
Don't Wait*

MECHANICAL PROPERTIES

HEAT/LCT	QUANTITY	HARDNESS	GRAIN SIZE	YIELD TENSILE	ELG	R/A	DEG
H4899AG	1 PC		00.0	0283	0795	52	67
H50207C	1 PC		00.0	0301	0812	51	69

ROOM TEMP-AS SHIPPED *
GRAIN SIZE-AS SHIPPED

ROOM TEMP-AS SHIPPED *
GRAIN SIZE-AS SHIPPED

DATE RECD 10-3-89
REQD FROM 31150-3517
CHECKED BY

H50207C 121 1 PC
ROOM TEMP-AS SHIPPED

0324 0790 50



INCO ALLOYS INTERNATIONAL
WASHINGTON, WEST VIRGINIA

THIS IS TO CERTIFY THAT ALL REQUIRED INSPECTIONS AND TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE ORDER AND SPECIFICATION REQUIREMENTS. THIS TEST REPORT REPRESENTS THE ACTUAL ATTAINMENT OF THE MATERIAL PERFORMANCE AND THE VALUES SHOWN ARE CORRECT AND TRUE. THE MATERIAL RECEIVED BY THE CERTIFICATEE IS IN FULL COMPLIANCE WITH ALL ORDER AND INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE BELOW FIGURES ARE IN ACCORDANCE WITH THE SPECIFICATION REQUIREMENTS.

D.W. Adams
QUALITY ASSURANCE REPRESENTATIVE

CERTIFIED MATERIAL TEST REPORT No. 48756	
IN ORDER NO./ITEM	PAGE OF
557547 1	2 2
DATE	INSPECTED BY
09/29/89	IAII
QUANTITY	MARK ORDER NO.
9040 LBS	27-72126 A/C09753
CHARGE ORDER NO.	HR PLATE DESCALE ANN
27-72126 A/C09753	144-240 IN NOM
DESCRIPTION OF MATERIAL SHIPPED	
INCLOY ALLOY 800H/800HT	
.5000	

A M CASTLE & CO
2602 PINEWOOD DRIVE
GRAND PRAIRIE TEXAS 75051

A M CASTLE & CO
BOX 531017
GRAND PRAIRIE TEXAS 75053-1017

* KNOWINGLY AND WILLFULLY FALSIFYING OR CONCEALING A MATERIAL FACT ON THIS FORM, *
 * OR MAKING FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR REPRESENTATIONS *
 * HEREIN COULD CONSTITUTE A FELONY PUNISHABLE UNDER FEDERAL STATUTES. *

HH5026AG 122 1 PC -
 ROOM TEMP-AS SHIPPED ** 0270 0774 52 67
 GRAIN SIZE-AS SHIPPED 0.0
 * TENSILE SPECIMEN GAUGE LENGTH - 2"
 ** TENSILE SPECIMEN GAUGE LENGTH - 4 X DIAMETER

YIELD STRENGTH WAS DETERMINED USING A STRESS-STRAIN CURVE

HEAT/LOT HH4899AG132 - 73.312" WIDTH - 0.K. PER WAIVER
 VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.
 MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE,
 AND LOW MELTING ELEMENTS.
 AUTHORIZED QUALITY CERTIFICATION REPRESENTATIVES - D.B. WATSON, G.W. ADAMS, W.E. BOLEN, R.A. CRAZE

B04

DATE REC'D 10-3-89
 REC'D FROM 31150-3517
 CHECKED BY *[Signature]*

INTERNATIONAL HH4495A

ALLOYS THEIR
SERIATION WEST

THIS IS TO CERTIFY THAT ALL REQUIRED INSPECTIONS AND
TESTS HAVE BEEN PERFORMED IN ACCORDANCE WITH THE
SPECIFICATION REQUIREMENTS. THE TEST REPORT REFLECTS
ACTUAL ATTRIBUTES OF THE MATERIAL. PASSAGES AND THE
SHOWN ARE CORRECT AND TRUE. THE MATERIAL DETACHES
CERTIFICATE IS IN FULL COMPLIANCE WITH ALL
INSPECTION REQUIREMENTS. WE HEREBY CERTIFY THAT THE
REQUIREMENTS.

QUALITY ASSURANCE REPRESENTATIVE
W. J. Bolten

CERTIFIED MATERIAL TEST REPORT NO. 21351

INV ORDER NO. 551164 QUANTITY 2 DATE 12/27/88 INSPECTED BY IAI

MARK ORDER NO. 01-81989 AC13054

DESCRIPTION OF MATERIAL SHIPPED INCOLOY ALLOY 800H/BOOHT HR PLATE DESCALE ANN .2500 90-96 144-288 IN NOM

A M CASTLE & CO
3400 NORTH WOLF ROAD
FRANKLIN PARK ILL 60131

A M CASTLE & CO
3400 NORTH WOLF ROAD
FRANKLIN PARK ILL 60131

* KNOWINGLY AND WILLFULLY FALSIFYING OR CONCEALING A MATERIAL FACT ON THIS FORM,
* OR MAKING FALSE, FICTITIOUS OR FRAUDULENT STATEMENTS OR REPRESENTATIONS
* HEREIN COULD CONSTITUTE A FELONY PUNISHABLE UNDER FEDERAL STATUTES.

SPECIFICATIONS: HA 328 REV F/ASTM B 409-87/
ASME CODE CASE 1987-1 (SB 409).

UNS: NO8811

HEAT# C MN FE S SI CU NI CR AL

HH4495A 0.08 0.64 44.99 0.001 0.30 0.42 31.95 20.51 0.60

0.51

B05

MECHANICAL PROPERTIES

HEAT/LOT QUANTITY HARDNESS GRAIN SIZE .2XPSI X 100 X 100 YIELD TENSILE ELG R/A DEG

HH4495A 33 1 PC 1.0 0286 0793 54 01.5 .0305 .0807 53

ROOM TEMP-AS SHIPPED

GRAIN SIZE-AS SHIPPED

YIELD STRENGTH WAS DETERMINED USING A STRESS-STRAIN CURVE

DATE REC'D. 1/25/89
REC'D. FROM Chicago, Steels
CHECKED BY Jean

VISUAL AND DIMENSIONAL EXAMINATION SATISFACTORY.
MATERIAL, WHEN SHIPPED, IS FREE FROM CONTAMINATION BY MERCURY, RADIUM, ALPHA SOURCE,
AND LOW MELTING ELEMENTS.
AUTHORIZED QUALITY ASSURANCE REPRESENTATIVES - D. B. WATSON, G. W. ADAMS, W. E. BOLEN, R. A. CRAZE

Items, 3/19/89

JESSOP STEEL COMPANY

500 Green St.
Washington, Pennsylvania 15301

Ship to:
LIDE TANK CO
HWY 84 EAST
MAXIA TX

Bill to:
ALLIED METALS, INC.
P O BOX 230829
HOUSTON TX

CERTIFIED MATERIAL
TEST REPORT

OUR ORDER NO.
YOUR ORDER NO.
MEMO NO.
DATE
SALESMAN NO.

Richard Wood
AUTHORIZED SIGNATURE

76667

77223

JESSOP UNS NO8810 (800H) HRAP
ASTM B409-87 ASME SR-409-89

Heat	Slip	Size	Pcs	Weight	JOB#	F280-100928						
18406	19001	.3750 x 60.0000 x 156.0000	2	2144	IAG:							
Heat	C	MN	P	S	SI	NI	CR	CO	CU	TI	AL	FE
18406	.060	1.23	.022	.001	.40	30.65	19.65	.13	.13	.56	.49	46.48

Heat	Gauge	Yield Strength	Tensile Strength	Elong	Red. of Area	Hardness	Bend	Corrosion	Grain Size
18406	.3750	38.1 KSI	80.7 KSI	48.4	67.1	R72-74			

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) AT 2050F MINIMUM

B06

Mark V. Smith

Items: # 2,3,4,5

Richard Wood

EXCEPT AS OTHERWISE NOTED, THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATION AND RESULTS CONFORM TO THE SPECIFICATION AND ORDER REQUIREMENT.

ESSOP STEEL COMPANY

600 Green St.
Washington, Pennsylvania 15301

Ship to:
LIDE TANK CO
HWY 84 EAST
MAXIA TX

Bill to:
ALLIED METALS INC.
P O BOX 230839
HOUSTON TX

CERTIFIED MATERIAL
TEST REPORT

OUR ORDER NO.
YOUR ORDER NO.
MEMO NO.
DATE
SALESMAN NO.

051013
04-10-80
145

Allen M. McDonald
AUTHORIZED SIGNATURE

76667

77223

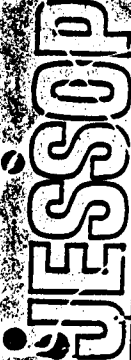
JESSOP, UNS NO8810 (BOOH) JIRAP
ASTM B409-87 ASME SB-409-89

Heat	Slip	Size	Pcs	Weight	Job#	Job#	Job#	Job#	Job#	Job#		
18406	19001	.3750 x 60.0000 x 156.0000	2	2144	1601	1601	1601	1601	1601	1601		
Heat	C	MN	P	S	SI	NI	CR	CO	CU	TI	AL	FE
18406	.060	1.23	.022	.001	.40	30.65	19.65	.13	.13	.56	.49	46.48
Heat	Gauge	Yield Strength	Tensile Strength	Flong	Red. of Area	Hardness	Temp	Corrosion	Size			
18406	.3750	38.1 KSI	80.7 KSI	48.4	67.4	R72-74			4			

MATERIAL WAS SOLUTION ANNEALED (HEAT TREATED) AT 2050F HHHHHH

B07

EXCEPT AS OTHERWISE NOTED, THIS MATERIAL HAS BEEN MANUFACTURED AND TESTED IN ACCORDANCE WITH THE LISTED SPECIFICATIONS AND RESULTS CONFORM TO THE SPECIFICATION AND ORDER REQUIREMENTS.



STEEL COMPANY
WASHINGTON, PA. 15301
Phone: 222-4000

CUSTOMER PACKING LIST

ALLIED METALS INC
P O BOX 230829
HOUSTON TX

CONSIGN TO
LIDE TANK CO
HWY 34 EAST
MAXIA TX

PACKING SLIP
SHIPPER'S NO.

091013

77223 TEXAS 76667

DATE SHIPPED 00/00/00
SHIPPER'S INITIALS

MILL NO.	90329 00 066	GOVERNMENT CONTRACT NO.	CAR NO.
STY.	2100	CUSTOMER ORDER NO.	4020
WEIGHT	NICKEL CHROME PLATE NOT PERFORMED	DESCRIPTION	
QTY.	2	RATE	03 00 01
		QTY.	
		WEIGHT	
		TEST REPORTS	

SPECIAL PACKING LIST

TRUCK MUST BE TARPED IF
BAD WEATHER CONDITIONS
PREVAIL

USE CORNER PROTECTORS &
COVER WITH WATERPROOF
PAPER.

TAG: JOB# F380-100928

87

on Pat

STL ITEM	SLIP NO.	C/P	HEAT	SIZE	QTY.	BILL WEIGHT	SCALE WEIGHT	TAG NO.
10 001	JESSOP UNS 8810 (800H) HRAP ASTM B409-87 ASME		SB-469-89 18406	.3750 X 60.0000 X 156.0000 *ORDER COMPLETE	2	2144	2100	5946
TOTAL					2	2144	2100	

B08

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Lynda Richards
Micrographics Supervisor
Microfilm Management Systems, Inc.
Wasilla, Alaska