

Chart Heat Exchangers L.P.  
Inspection & Test Report

Stacking & Brazing

Cell 4

Sales Order # 509.8-11

Module # \_\_\_\_\_

Manufacturing # 15770 B-3

Operation

Instruction

Operator  
Clock #

Date &  
Inspector  
Initials

W/H Points  
Int & Date

1 STACKING ASSEMBLY

WI9-040-002

1 Layer G

WI10-02

75345 75343 75343  
46442 721081 EJO 02-22-05

2 Layer A

WI10-02

75345 75343 75343  
46442 721081 EJO 02-22-05

3 Layer F

WI10-02

75345 75343 75343  
46442 721081 EJO 02-22-05

5 Layer B/C

WI10-02

75345 75343 75343  
46442 721081 SV 2/22/05

6 Layer D

WI10-02

75345 75343 75343  
46442 721081 SV 2/22/05

11 Layer E

WI10-02

75345 75343 75343  
46442 721081 EJO 02-22-05

Layer

WI10-02

Layer

WI10-02

Layer

WI10-02

Layer

WI10-02

Half Primary Stacking & Squareness

WI10-02

46334 73433  
46463 77544  
46442 RL 2-22-05

Primary Stacking & Squareness

WI10-02

75845 75340  
46445 46489 REM 2/22/05

Compression & Dimensional Record

75845  
46445 46489

Braze Core / Module

Date 02/24/05

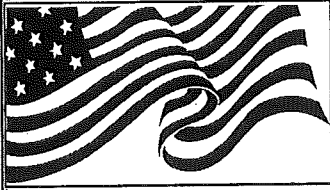
46394

Fixture Removal / Dimensional After Brazing

Date 2-22-05

75343 75343

Header Inspection Log									
		Sales Order #				509.8-11			
Header Assy. Item #	Stream Identification	Header Body Trace	End Piece Trace	Nozzle Trace	Misc. Material Trace	Final Insp. Initials & Date	X-Ray Initials & Date	X-Ray #	A.J. Review Initials & Date
1302	A-IN	S-408-C	S504C	T-151-C	N/A	WOODY 3/3/2005			HAL 3-3-05
1303	A-OUT	S472C	S477C	T113C	S422C	JL 3-10-05			HAL 3-10-05
1304	B-IN	S504C	S504C S374C	T139C		JL 3-2-05			HAL 3-2-05
1305	B-OUT	S409C	S409C	T105C		TL 3/7/2005	JC3-8-05	A288	HAL 3-8-05
1306	C-IN	S-409-C	S409C	T-119-C	N/A	WOODY 3/3/2005	DS3-3-05ME	A922	HAL 3-2-05
1307	C-OUT	S-407-C	S422C	T-109-C	N/A	JL 3-3-05			HAL 3-2-05
1308	D-IN	S-407-C	S422C	T-138-C	N/A	JL 3-3-05			HAL 3-2-05
1309	D-OUT	S483C	S460C	T119C		JL 3-2-05			HAL 3-2-05
1310	E-IN	T007C	S408C	T156C		JL 3-4-05			HAL 3-4-05
1311	E-OUT	S408C	S504C	T109C		JL 3-2-05			HAL 3-2-05
1312	F-IN	S-472-C	S408C	T-175-C	N/A	WOODY 3/4/2005			AJH 3-4-05
1313	F-OUT	S-472-C	S408C	T-151-C	N/A	WOODY 3/4/2005			AJH 3-4-05
1314	G-IN	S472C	S408C	S-472-C		TL 3/7/2005			HAL 3-7-05
1315	G-OUT	S-472-C	S477C	S-472-C	N/A	WOODY 3/4/2005		A910	HAL 3-4-05



# Chart Heat Exchangers

## Post Braze Inspection and Test Report

National Board Number:

5128

Job Number/Serial Number 509.8-11

Drawing Number: 15770A

Mfg. Number: 15770B-3

Review of Design Calculations, Assembly Drawings and I&amp;T Report

QC Review and approval of ITR: 2/2/05Date: KIKAI Review and acceptance of ITR: [Signature]Date: 2-4-05

## General Documentation

Nameplate Verification

QC Inspection	Date	Authorized Inspector	Date
<u>Eids</u>	<u>3-31-05</u>	<u>[Signature]</u>	<u>3-31-05</u>

## General Operations

	Emp #	Date	QC Insp	Date	AI Init & Date
Centerline Layout	75519	2-28-05			
Weld and Inspect Port Posting	73927	3-9-05			H. 3/9/05

## Header Fit-up and Inspection

Header	AI Hold (H)	Clean Check / Header Fit-up (Stamp # & Date)	Oxygen Service (QC Inspection)	Inactive Vent or Pan header (n')
		Visual Inspection before fit up	Black Light	LPT weld before fit-up
A-In		52/58 3-10-05		
A-Out		52/58 3-10-05		
B-In		52/58 3-10-05		NA BX
B-Out		52/58 3-9-05		
C-In		33 3/10/05		
C-Out		33 3/10/05		
D-In		76 3/10/05		
D-Out		33 3/10/05		
E-In		33 3/10/05		
E-Out		76 3/10/05		
F-In		46 3-10-05		
F-Out		76 3-10-05		
G-In		52/58 3-9-05		
G-Out		52/58 3-9-05		

n' AI to review header welds prior to fit-up of inactive vent or pan headers. LPT header welds if specified on assembly drawings

## Pre-hydro Inspection and Tests

	Emp #	Date	QC Insp	Date	AI Init & Date
1st Air Test	46298	3-13-05			
Support angle fit-up	46332	3-13-05			
Visual Inspection, final welds (Weld Check)			SV	3-14-05	H. 3/16/05
Dimension Check			SV	3-14-05	
LPT complete per drawing requirement			TZ	3-16-05	
RT complete per drawing requirement			D.E.	4-4-05	

## Thermocouple Layout for Vacuum Drying

Layer No: 65 Stream No: G TC Located 159" from top of core between Bont Kent header

## Pretest with Water

Stream Identification	Stream Test Pressure (PSIG)	Supervisor Initial and Date	Testor Employee # & Date	Inspector or 2nd Testor Employee # and Date	AI Hold Point Init & Date
B	1371	3-16-05 RP	46424 3-16-05	REO 3-16-05	3/16/05
C	1371		46424 3-16-05	REO 3-16-05	3/16/05
D	870		46424 3-16-05	REO 3-16-05	3/16/05
E	653		46424 3-16-05	REO 3-16-05	3/16/05

## Core Drain and Dry

Drying Procedure: Manual (M) or Automatic (A)

A

Emp #

Date

Verification of core dryness.

46483

3-17-05

## Pneumatic and Leak Test

Stream Identification	Pneumatic Test Pressure (PSIG)	Leak Test Pressure (PSIG)	Testor Emp # and Date	Inspector or 2nd Testor Emp # and Date	Internal Leak Test Emp # and Date	External Leak Test Emp # and Date	AI Hold Point Init & Date
A	164	109	46353	4632305	OK	OK	3-23-05
B	1005	914	46483 3/22/05	REM 3/22/05	OK	OK	3/22/05
C	1005	914	46483 3/22/05	REM 3/22/05	OK	OK	3/22/05
D	638	580	46483 3/22/05	REM 3/22/05	OK	OK	3/22/05
E	479	435	46353	4632305	OK	OK	3-23-05
F	44	29	46353	4632305	OK	OK	3-23-05
G	44	29	46353	4632305	OK	OK	3-23-05
TUV							
A	164	109	46424	Stacy 3-29-05	OK	OK	TR03/29/05
B	1005	914	46287	TR 3-29-05	OK	OK	TR03/29/05
C	1005	914	46287	TR 3-29-05	OK	OK	TR03/29/05
D	638	580	46287	TR 3-29-05	OK	OK	TR03/29/05
E	479	435	46424	Stacy 3-29-05	OK	OK	TR03/29/05
F	44	29	46424	Stacy 3-29-05	OK	OK	TR03/29/05
G	44	29	46424	Stacy 3-29-05	OK	OK	TR03/29/05

## Final Inspection

Helium leak test

Header clean check inspection

Final inspection

Crate check(Tester)

Loose parts verification

ITR review and return to QC Office

Emp #	Date	QC Insp	Date
46369	3-25-05		
46353	3-31	EA	3-31-05
		Tracy	4-1-05
75519	4-1-05		
46021	4-4-05		