

Chart Heat Exchangers L.P.
Inspection & Test Report

Stacking & Brazing

Cell 4

Sales Order # 502. 8-9

Module # _____

Manufacturing # 15770 B-1

Operation

Instruction

Operator
Clock #

Date &
Inspector
Initials

W/H Points
Int & Date

1) TACKING ASSEMBLY

#1 Layer G - Stream	WI9-040-002	46442 75343	
#2 Layer H - Stream	WI10-02	46469 75845	Sony 2/18/05
#3 Layer F - Stream	WI10-02	46442 75845	SV 2/18/05
#5 Layer B+C Stream	WI10-02	75343 46469	SV 2/18/05
#6 Layer D - Stream	WI10-02	46442 46469	SV 2/18/05
#11 Layer E - Stream	WI10-02	46442 46469	SV 2/18/05
Layer	WI10-02	_____	_____
Layer	WI10-02	_____	_____
Layer	WI10-02	_____	_____
Layer	WI10-02	_____	_____

Half Primary Stacking & Squareness

WI10-02 46334 73433 46322 46463 2-18-05 REC

Primary Stacking & Squareness

WI10-02 46505, 46488, 75340 2-18-05 EJO 02-19-05

Compression & Dimensional Record

46505 / 46488

Braze Core / Module

Date 2-21-05 46356

Fixture Removal / Dimensional After Brazing

Date 02/22/05 46394

Header Inspection Log									
		Sales Order #				509.8-9			
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.I. Review Initials & Date
1302	A-IN	S408C	S504C	T106C		JL 3-1-05			HAL 3-1-05
1303	A-OUT	S472C	S477C	T051C	S446C	JL 3-1-05			AJH 3-1-05
1304	B-IN	S374C	S374C	T105C		JL 2-27-05			HAL 3-4-05
1305	B-OUT	S467C	S467C	T105C		JL 2-26-05			AJH 3-2-05
1306	C-IN	S467C	S467C	T119C		JL 2-26-05	DS3-2-05ME2	A921	AJH 3-2-05
1307	C-OUT	S408C	S446C	T109C		JL 3-1-05			HAL 3-1-05
1308	D-IN	S468C	S446C	T138C		JL 2-26-05			AJH 2-26-05
1309	D-OUT	S456C	S504C	T119C		JL 2-26-05			AJH 2-26-05
1310	E-IN	T007C	S468C	T156C		JL 2-28-05			HAL 2-28-05
1311	E-OUT	S416C	S504C	T109C		JL 3-1-05			HAL 3-1-05
1312	F-IN	S472C	S408C S468C	T096C		JL 2-28-05			HAL 2-28-05
1313	F-OUT	S472C	S468C S408C	T106C		JL 2-27-05			HAL 2-28-05
1314	G-IN	S472C	S468C	S472C		JL 3-2-05		A909	HAL 3-2-05
1315	G-OUT	S472C	S477C	S472C		JL 3-2-05		A916	HAL 3-2-05



Chart Heat Exchangers
Post Braze
Inspection and Test Report

National Board Number:

5126

Job Number/Serial Number 509.8-9

Drawing Number: 15770A

Mfg. Number: 15770B-1

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

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

General Documentation

Nameplate Verification

QC Inspection	Date	Authorized Inspector	Date
<u>766</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	2-23-05			
Weld and Inspect Port Posting	17	2-24-05			AK 2-24-05

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 ¹)				
		Visual Inspection before fit up	Black Light		LPT weld before fit-up			
A-In		33 3/2/05						
A-Out		3/2/05						
B-In		33 3/4/05			NA 2A			
B-Out		48-55 3-4-05						
C-In		59.102 3-2-05						
C-Out		55 94 3-2-04						
D-In		18 3/1/05 2A						
D-Out		33 3/1/05 2A						
E-In		55-94 3-2-04						
E-Out		55 94 3-2-05						
F-In		59 3-1-05						
F-Out		48 3-1-05						
G-In		31# 3-6-05						
G-Out		33 3/1/05						

n¹ 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	46503	3-7-05			
Support angle fit-up	46503	3-10-05			
Visual Inspection, final welds (Weld Check)			TC	3-11-05	AK 3-21-05
Dimension Check			TC	3-11-05	
LPT complete per drawing requirement			TC	3-12-05	
RT complete per drawing requirement			D.E.	3-30-05	

Thermocouple Layout for Vacuum Drying

Layer No: 15 Stream No: 9 TC Located 159 from top of core between port / cond 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 RB	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	46313	3-21-05	WIK	WIK	3-21-05
B	1005	914	46313 3-21-05	3-21-05	WIK	WIK	3-21-05
C	1005	914	46313	3-21-05	WIK	WIK	3-21-05
D	638	580	46313	3-21-05	WIK	WIK	3-21-05
E	479	435	46313	3-21-05	WIK	WIK	3-21-05
F	44	29	46313	3-21-05	WIK	WIK	3-21-05
G	44	29	46313	3-21-05	WIK	WIK	3-21-05
TUV							
A	164	109	46287	3-29-05	WIK	WIK	3-29-05
B	1005	914	46287	3-29-05	WIK	WIK	3-29-05
C	1005	914	46287	3-29-05	WIK	WIK	3-29-05
D	638	580	46287	3-29-05	WIK	WIK	3-29-05
E	479	435	46287	3-29-05	WIK	WIK	3-29-05
F	44	29	46287	3-29-05	WIK	WIK	3-29-05
G	44	29	46287	3-29-05	WIK	WIK	3-29-05

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
46287	3-25-05		
46287	3-25-05	REM	3/29/05
		WIK	3/31/05
75519	3-30-05		
46021	3-31-05		