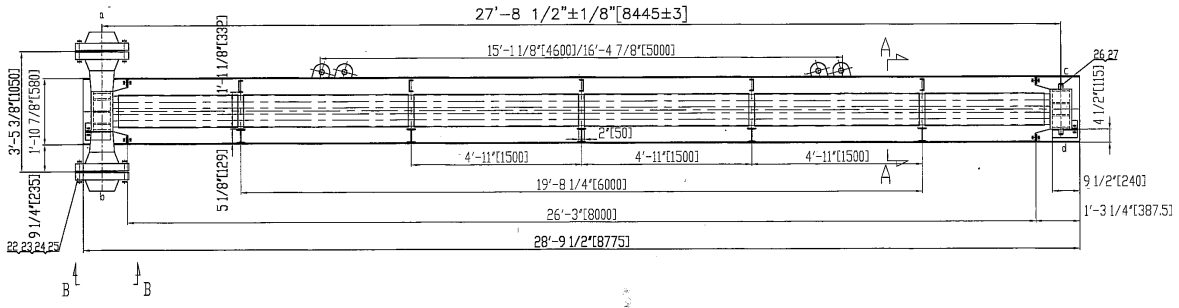

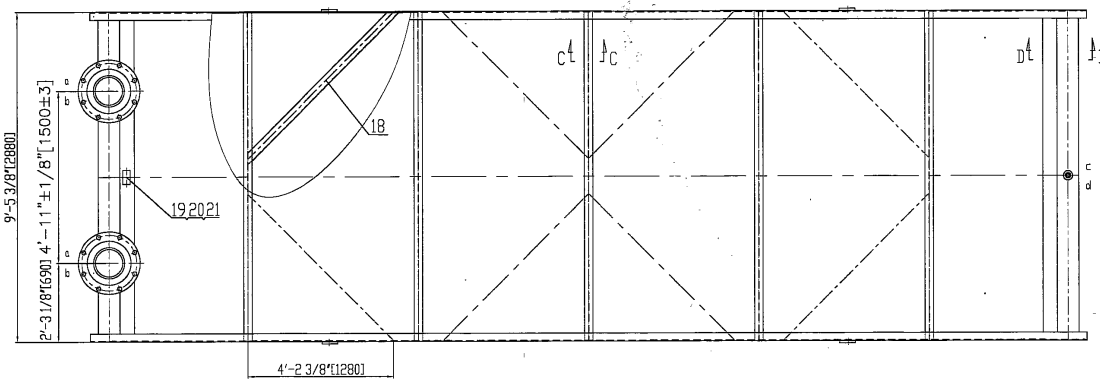

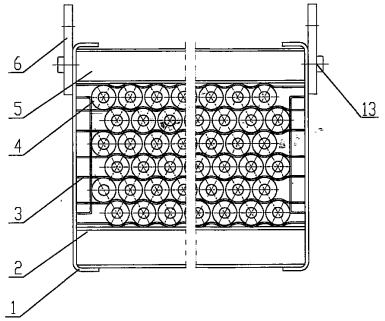

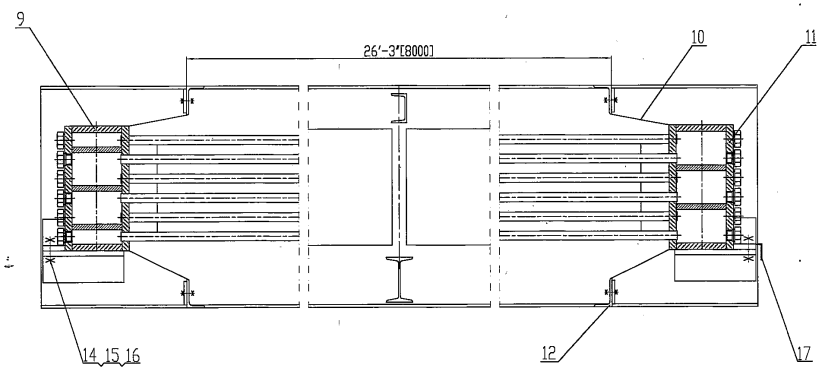

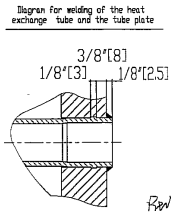

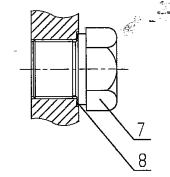

Reviewed by A/I
Oct.10.20 14

Building standards and specifications		ASME VIII-1 2013 + API 661 06 ed.			
medium		Lean Amine	Special Environment		Corrosion,nonlethal
Operating Pressure	psi	50	design pressure	psi	75
Operating Temperature	F	174.6/130	design temperature	F	200
Maximun Operating Pressure	psi	75 psi @ 200 F	MDMT	psi	32 F @ 75 psi
joint efficiency(Lg/St)		em0.507;jeb0.72/1.0	Corrosion allowance	in	0.1181DC(base tube & nozzles)
tube rows		6	surface/base tube	ft²	1991
tube passess		VI	surface/Fining	ft²	46597
hydrostatic test MT	F	39.2-122	hydrostatic test pressure	psi	97.5
NDE REQ.		SEE TECHNICAL REQ	Impact test requirements		not need
heat treatment regine		need	Surface treatment requirement		Acc. customer specification
NB register		not need	volun	ft³	32.5
ASME stamp		need	weight	lb	20571

list of nozzles

Symbol	Name	nominal diameter	pressure rating	standard For connection	Sealing face	REMARKS
a	medium inlet	8"	class150	ASME B16.5-2009	WN/RF	
b	medium outlet	8"	class150	ASME B16.5-2009	WN/RF	
c	vent	RC3/4"	class150		thread	plug
d	drain point	RC3/4"	class150		thread	plug

Technical Requirements

1.The ASME SA516 Gr 70 materials for fabrication of channels shall comply with the provisions stated in ASME SA516 and shall be used in the as-rolled condition.,
2.Forgings shall comply with the provisions stated in ASME SA105 and shall be used in the as-rolled condition;
3.No cracking, bumping or collapse is allowed for fins; the bolt holes of flanges shall be evenly distributed along the centerline of channel;
4.In winter, when a bundle is not used, the standing liquid inside must be removed to prevent finned tubes from cracking due to freezing;
5.For field installation, the lifting shall be operated slowly, avoiding an abrupt rise and fall .
6.Pipe plugs shall be lubricated with molybdenum disulfide before installed; after completion of hydrostatic test, the liquid inside them shall be thoroughly removed and dried with compressed air;
7.After completion of field installation of bundles and before commissioning, the connecting bolts shall be removed from mobile channels according to the requirements stated on the signboard .;
8.The seal surfaces of flanges shall conform to the provisions stated in ASME B16.5-2009.
9.The tolerances not marked in all drawings and those not specifically required by applicable standards and specifications shall comply with class IE of ISO 13920;
10.The lifting eye shall be located equally as per the internal and external dimensions in bracket as stated in drawings and the remaining dimensions of them shall not be altered;
11.Strength calculation according to ASME VIII-1 2013.

REV.	CODE NO.	DENOMINATION	QUT.	MATERIAL	UNIT WEIGHT	TOTAL WEIGHT	REMARKS
27		tube plug RC3/4"	2	SA105	2.2	4.4	
26		tube noz RC3/4"	2	SA105	2.2	4.4	L=2"
25	ASME B16.20-2007	spiral wound gasket NPS 8 class 150 RF	4	SS316L-F.G			
24	ASME B18.2.2-2010	nut 3/4" UNC	64	SA194 Gr.7		39.5	
23	ASME B18.2.1-2010	all threaded stud bolt 3/4" UNC,L=110	32	SA193-B7		67	
22	ASME B16.5-2009	flange WN 8"-150 RF	8	SA105	42.1	336.8	
21		rivet Ø2X5	4	AL	0.022	0.088	
20		name plate support	1	Q235-B		0.44	
19	JKL-DGDCL01-10-07	name plate	1	S31608		0.35	
18		inclined strctL75x75x7	8	Q235-B	28.7	229.6	L=6'-2"
17	JKL-TLMH6-10-07	sign plate	2	AL			borrow
16		Gasket d5/8"[16]	20	65Mn		0.07	
15		nut d5/8"[16]	20	SA194 Gr.7		0.022	
14		bolt M5/8"X1.5/8"[16x40]	20	SA193-B7		3.1	
13		bolt M3/4"X2"[20X50]	16	SA193-B7	0.44	7.04	
12	JKL-DGDCL01-10-06	Ring beam	4	unit	43	172	
11	JKL-DGDCL01-10-05	float header	1	unit		1127	
10	JKL-DGDCL01-10-04	wind screen	4	Q235-B	31	124	
9	JKL-DGDCL01-10-03	Regular header	1	unit		1314	
8	SKL.JB.1-02	gasket	552	copper	0.011	6.073	
7	SKL.JB.1-01	hex head plug M30X2	552	SA105	0.3	165.6	L=3/4"
6	JKL-SNL09-10-03	lifting eye	4	Q235-B	11	44	borrow
5		upper beam I-10	5	Q235-B	64	320	L=9'-4 3/4"
4	JKL-DGDCL01-10-02	fining tube	276	unit	50	13800	
3		Batten	35	Q235-B	9.7	339.5	L=9'-4 3/4"
2		support beam 12#	5	Q235-B	90.4	452	L=9'-4 3/4"
1	JKL-DGDCL01-10-01	side beam	2	UNIT	1007.5	2015	

MARK	LTR/A	DESIGNATION	SIGNATURE	DATE
[redacted]				

Lean Amine Air Cooler
Items EA-4401/EA-5401
Bundle ports assembly drawing

DRAWING	MARK	SHEET	WEIGHT	SCALE
S	4	1	20571	1:22
TOTAL		SHEET		OF

[redacted]