

List of Process Equipment

HOURS
 25857
 28896
 27439
 39288
 64421
 57538
 47274
 36409
 39153
 73692

ITEM	CATEGORY	DESCRIPTION	MANUFACTURER	MODEL NO.	TYPE	LOCATION	QTY
1	Compressor	Booster #1	Frick	RWBII-100B	Screw	Machine Room	1
2	Compressor	Booster #2	Frick	RWBII-134B	Screw	Machine Room	1
3	Compressor	Booster #3	Frick	RWBII-134B	Screw	Machine Room	1
4	Compressor	Booster #4	Frick	RWBII-134B	Screw	Machine Room	1
5	Compressor	Booster #5	Frick	RWBII-177B	Screw	Machine Room	1
6	Compressor	Booster #6	Frick	RWBII-222B	Screw	Machine Room	1
7	Compressor	Booster #7	Frick	RWBII-222B	Screw	Machine Room	1
8	Compressor	High Stage #8	Frick	RWBII-177H	Screw	Machine Room	1
9	Compressor	High Stage #9	Frick	RWBII-222H	Screw	Machine Room	1
10	Compressor	High Stage #10	Frick	RWBII-222H	Screw	Machine Room	1
11	Pressure Vessel	High Pressure Receiver	Frick	NB: 122129	Vertical	Machine Room	1
12	Pressure Vessel	Thermosyphon Receiver	Frick	NB: 122095	Horizontal	Machine Room	1
13	Pressure Vessel	Blast Recirculator	Frick	NB: 122163	Horizontal	Machine Room	1
14	Pressure Vessel	Blast Recirculator Oil Trap	Frick	SN: 94895	Vertical	Machine Room	1
15	Pressure Vessel	-20° F Recirculator	Frick	NB: 122144	Horizontal	Machine Room	1
16	Pressure Vessel	-20° F Recirculator Oil Trap	Frick	SN: 94894	Vertical	Machine Room	1
17	Pressure Vessel	-10° F Recirculator	Frick	NB: 122164	Horizontal	Machine Room	1
18	Pressure Vessel	-10° F Recirculator Oil Trap	Frick	SN: 94896	Vertical	Machine Room	1
19	Pressure Vessel	Intercooler	Frick	NB: 122217	Vertical	Machine Room	1
20	Pressure Vessel	Intercooler Oil Pot	Frick	SN: N-1589	Horizontal	Machine Room	1
21	Pressure Vessel	Compressor #1 Oil Separator	Frick	NB: 122138	Horizontal	Machine Room	1
22	Pressure Vessel	Compressor #2 Oil Separator	Frick	NB: 122139	Horizontal	Machine Room	1
22	Pressure Vessel	Compressor #3 Oil Separator	Frick	NB: 122136	Horizontal	Machine Room	1

LIST OF PROCESS EQUIPMENT

ITEM	CATEGORY	DESCRIPTION	MANUFACTURER	MODEL NO.	TYPE	LOCATION	QTY
23	Pressure Vessel	Compressor #4 Oil Separator	Frick	NB: 122137	Horizontal	Machine Room	1
24	Pressure Vessel	Compressor #5 Oil Separator	Frick	NB: 122148	Horizontal	Machine Room	1
25	Pressure Vessel	Compressor #6 Oil Separator	Frick	NB: 122146	Horizontal	Machine Room	1
26	Pressure Vessel	Compressor #7 Oil Separator	Frick	NB: 122147	Horizontal	Machine Room	1
27	Pressure Vessel	Compressor #8 Oil Separator	Frick	NB: 122109	Horizontal	Machine Room	1
28	Pressure Vessel	Compressor #9 Oil Separator	Frick	NB: 122110	Horizontal	Machine Room	1
29	Pressure Vessel	Compressor #10 Oil Separator	Frick	NB: 121624	Horizontal	Machine Room	1
30	Pressure Vessel	Compressor #1 Oil Cooler	Frick	NB: 121054	Horizontal	Machine Room	1
31	Pressure Vessel	Compressor #2 Oil Cooler	Frick	NB: 121059	Horizontal	Machine Room	1
32	Pressure Vessel	Compressor #3 Oil Cooler	Frick	NB: 121056	Horizontal	Machine Room	1
33	Pressure Vessel	Compressor #4 Oil Cooler	Frick	NB: 121053	Horizontal	Machine Room	1
34	Pressure Vessel	Compressor #5 Oil Cooler	Frick	NB: 120682	Horizontal	Machine Room	1
35	Pressure Vessel	Compressor #6 Oil Cooler	Frick	NB: 120796	Horizontal	Machine Room	1
36	Pressure Vessel	Compressor #7 Oil Cooler	Frick	NB: 120793	Horizontal	Machine Room	1
37	Pressure Vessel	Compressor #8 Oil Cooler	Frick	NB: 121651	Horizontal	Machine Room	1
38	Pressure Vessel	Compressor #9 Oil Cooler	Frick	NB: 121645	Horizontal	Machine Room	1
39	Pressure Vessel	Compressor #10 Oil Cooler	Frick	NB: 121647	Horizontal	Machine Room	1
40	Pressure Vessel	West Underfloor Warming Heat Exchanger	Frick	NB: 123359	Horizontal	Machine Room	1
41	Pressure Vessel	East Underfloor Warming Heat Exchanger	Frick	NB: 123370	Horizontal	Machine Room	1

42	Pressure Vessel	Water Chiller	Frick	NB: 1223335	Horizontal	Machine Room	1
43	Condenser	Draw Through	Evapco	ATC-970	Evaporative	Roof	1
44	Condenser	Draw Through	Evapco	ATC-970	Evaporative	Roof	1
45	Air Unit	Draw Through	Imeco	ICB-2C-5210-3-7.5	Recirculated	Blast Freezer #1	1
46	Air Unit	Draw Through	Imeco	ICB-2C-5210-3-7.5	Recirculated	Blast Freezer #2	1
47	Air Unit	Draw Through	Imeco	ICB-2C-5210-3-7.5	Recirculated	Blast Freezer #3	1
48	Air Unit	Draw Through	Imeco	ICB-2C-5210-3-7.5	Recirculated	Blast Freezer #4	1
49	Air Unit	Draw Through	Imeco	ICB-2C-5210-3-7.5	Recirculated	Blast Freezer #5	1
50	Air Unit	Draw Through	Imeco	ICB-2C-5210-3-7.5	Recirculated	Blast Freezer #6	1
51	Air Unit	Draw Through	Imeco	CF3S-6810-3-25	Recirculated	Freezer #1	2
52	Air Unit	Draw Through	Imeco	CF4S6810-4-20	Recirculated	Freezer #2	4
53	Air Unit	Draw Through	Niagara	A-3809	Recirculated	Freezer #50	4
54	Air Unit	Draw Through	Imeco	CF4S-9010-4-25	Recirculated	Freezer #60 North	2
55	Air Unit	Draw Through	Niagara	A-3810	Recirculated	Freezer #60 South	1
56	Air Unit	Draw Through	Niagara	A-3811	Recirculated	Freezer #60 South	1
57	Air Unit	Draw Through	Imeco	CF2S-3410-4-7.5	Direct Expansion	Dock #50	1
58	Air Unit	Draw Through	Frigid Coil	LTS/T-364- ½-DX-HGC- IP-PWJB	Direct Expansion	Dock #60	3
59	Air Unit	Draw Through	Frigid Coil	LTS/T-664- - DX-HGC-IP- PWJB	Direct Expansion	Cooler #1	1
60	Air Unit	Draw Through	Frigid Coil	LTS-764- - DX-HGC-IP- PWJB	Direct Expansion	Cooler #2	1
61	Air Unit	Draw Through	Frigid Coil	LTS-764- - DX-HGC-IP- PWJB	Direct Expansion	Cooler #3	1
62	Air Unit	Draw Through	Frigid Coil	HTS/T-364- -DX-HGC- IP-PWJB	Direct Expansion	Cooler #5	1

63	Air Unit	Draw Through	Frigid Coil	HTS/T-364- -DX-HGC- IP-PWJB	Direct Expansion	Cooler #6	1
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LIST OF PROCESS EQUIPMENT							
ITEM	CATEGORY	DESCRIPTION	MANUFACTURER	MODEL NO.	TYPE	LOCATION	QTY
66	Air Unit	Draw Through	Frigid Coil	HTS/T-364- -DX-HGC- IP-PWJB	Direct Expansion	Cooler #11	1
67	Air Unit	Draw Through	Frigid Coil	HTS/T-364- -DX-HGC- IP-PWJB	Direct Expansion	Cooler #12	1
68	Air Unit	Draw Through	Frigid Coil	CF2S-4510- 3-15	Direct Expansion	Convertible #3	2
69	Air Unit	Draw Through	Imeco	CF2S-4510- 3-15	Direct Expansion	Convertible #4	2
70	Air Unit	Draw Through	Imeco	USB-35L- 283L	Direct Expansion/ Recirculated	Convertible #7	1
71	Air Unit	Draw Through	Imeco	USB-35L- 283L	Direct Expansion/ Recirculated	Convertible #8	1
72	Miscellaneous	Blast Recirculator NH ₃ Pumps	Hansen	CNF 32/160	Hermetic	Machine Room	2
73	Miscellaneous	-20° F Recirculator NH ₃ Pumps	Hansen	CAM 2/3	Hermetic	Machine Room	2
74	Miscellaneous	-10° F Recirculator NH ₃ Pumps	Hansen	CNF 50/160	Hermetic	Machine Room	2
75	Miscellaneous	Non- condensable Purser	Hansen	AP-16	Auto	Machine Room	1

Compressor Information

LIST OF COMPRESSORS						
UNIT NO.	MANUFACTURER	DUTIES	TYPE	OIL COOLING METHOD	CONTROL METHOD	DWG NO.
1	Frick RWBII-100	Booster	Screw	Refrigerant	Micro-Processor	R-2
2	Frick RWBII-134	Booster	Screw	Refrigerant	Micro-Processor	R-2
3	Frick RWBII-134B	Booster	Screw	Refrigerant	Micro-Processor	R-2
4	Frick RWBII-134	Booster	Screw	Refrigerant	Micro-Processor	R-2
5	Frick RWBII-177B	Booster	Screw	Refrigerant	Micro-Processor	R-2
6	Frick RWBII-222B	Booster	Screw	Refrigerant	Micro-Processor	R-2
7	Frick RWBII-222B	Booster	Screw	Refrigerant	Micro-Processor	R-2
8	Frick RWBII-177	High Stage	Screw	Refrigerant	Micro-Processor	R-2
9	Frick RWB-222H	High Stage	Screw	Refrigerant	Micro-Processor	R-2
10	Frick RWBII-222H	High Stage	Screw	Refrigerant	Micro-Processor	R-2

Safeties on Screw Compressors

300 psi external relief valves in oil separator/reservoir vessel

Low Oil Pressure Cutout (LOPCO)

Low Suction Pressure Cutout (LSPCO)

High Discharge Pressure Cutout (HDPCO)

High Discharge Temperature Cutout (HDTCO)

Low Inlet Oil Temperature Cutout

High Inlet Oil Temperature Cutout

Oil Filter Pressure Differential Cutout

High Oil Pressure Differential

High Oil Separator Temperature Cutout

Anti-cycle timer prevents motor fan from overheating by limiting the number of motor starts in a given period.

Compressor Information (cont)

*** Indicates an adjustable setpoint which is determined by the system on which the compressor is operating and is so on all six (6) compressors.**

Frick RWB II-100 Booster Compressor (#1)

Serial Number:TDSH193S2037C

Design Suction Pressure: 3.1 psig (-21°F)/3.2"Hg(-32°F)/11.7"Hg(-45°F)

Design Discharge Pressure: 31.4 psig (+18°F)

Discharge Pressure Range: 30 - 40 psig

Capacity:98.7 TR/ 75.1/149.7 TR

Low Suction Pressure Alarm: 20.0"Hg *

High Discharge Pressure Alarm:45.0 psig *

Low Suction Pressure Cutout: 28.0" Hg *

High Discharge Pressure Cutout: 55.0 psig *

Oil Pressure Cutout: 5.0 psig

Oil Pressure Alarm: 10.0 psig

High Oil Temperature Cutout: 167° F

High Oil Temperature Alarm: 158° F

Low Oil Temperature Cutout: 49° F

Low Oil Temperature Alarm: 58° F

High Discharge Temperature Cutout: 212° F

High Discharge Temperature Alarm: 194° F

Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F

Normal Oil Temperature Range: 110° F to 150° F

Normal Oil Pressure: 45 - 50 psig

Motor Horsepower: 75 HP

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Compressor Information (cont)

Frick RWBII-134 Booster Compressor (#2)

Serial Number:TDSH193L2089D

Design Suction Pressure: 3.1psig (-21° F)/3.2"Hg(-32°F)/11.7"Hg(-45°F)

Design Discharge Pressure: 31.4 psig (+18° F)

Discharge Pressure Range: 30 - 40 psig

Capacity:131.5 TR / 97.4TR / 66.2 TR

Low Suction Pressure Alarm: 20.0" Hg

High Discharge Pressure Alarm: 45.0 psig

Low Suction Pressure Cutout: 28.0" Hg

High Discharge Pressure Cutout:55.0 psig

Oil Pressure Cutout: 5.0 psig

Oil Pressure Alarm: 10.0 psig

High Oil Temperature Cutout: 167° F

High Oil Temperature Alarm: 158° F

Low Oil Temperature Cutout: 49° F

Low Oil Temperature Alarm: 58° F

High Discharge Temperature Cutout: 212° F

High Discharge Temperature Alarm: 194° F

Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F

Normal Oil Temperature Range: 110° F to 150° F

Normal Oil Pressure: 45 - 50 psig

Motor Horsepower: 100 HP

Frick RWB II-134B Booster Compressor (#3)

Serial Number:TDSH193L2094D

Design Suction Pressure: 3.1 psig(-21°F)/(3.2"Hg (-32° F)/11.7"Hg (-45°)

Design Discharge Pressure: 33.4 psig (+18° F)

Discharge Pressure Range: 30 -40 psig

Capacity:131.5TR / 97.4 TR / 66.2 TR

Low Suction Pressure Alarm: 20.0 "Hg

High Discharge Pressure Alarm: 45.0 psig

Low Suction Pressure Cutout: 28.0 "Hg

High Discharge Pressure Cutout: 55.0 psig

Oil Pressure Cutout: 5.0 psig

Oil Pressure Alarm: 10.0 psig

High Oil Temperature Cutout: 167° F

High Oil Temperature Alarm: 158° F

Low Oil Temperature Cutout: 49° F

Low Oil Temperature Alarm: 58° F

High Discharge Temperature Cutout: 212° F

High Discharge Temperature Alarm: 194° F

Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F

Normal Oil Temperature Range: 110° F to 150° F

Normal Oil Pressure: 45 - 50 psig

Motor Horsepower: 100 HP

Compressor Information (cont)

Frick RWB II-134 B Booster Compressor (#4)

Serial Number:TDSH193L2090D

Design Suction Pressure: 3.1 psig (-21° F)/3.2"Hg(-32°F)/11.7"Hg(-45°F)

Design Discharge Pressure: 31.4 psig (+18° F)

Discharge Pressure Range: 30 - 40 psig

Capacity: 131.5 TR / 97.4 TR / 66.2 TR

Low Suction Pressure Alarm: 20.0" Hg

High Discharge Pressure Alarm: 45.0 psig

Low Suction Pressure Cutout: 28.0" Hg

High Discharge Pressure Cutout: 55.0 psig

Oil Pressure Cutout: 5.0 psig

Oil Pressure Alarm: 10.0 psig

High Oil Temperature Cutout: 167° F

High Oil Temperature Alarm: 158° F

Low Oil Temperature Cutout: 49° F

Low Oil Temperature Alarm: 58° F

High Discharge Temperature Cutout: 212° F

High Discharge Temperature Alarm: 194° F

Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F

Normal Oil Temperature Range: 110° F to 150° F

Normal Oil Pressure: 45 - 50 psig

Motor Horsepower: 100 HP

Frick RWBII-177B Booster Compressor (#5)

Serial Number:TDSH233S1936E3

Design Suction Pressure: 3.1 psig (-21 F)/3.2"Hg(-32°F)/11.7"Hg(-45°F)

Design Discharge Pressure: 31.4 psig (+18° F)

Discharge Pressure Range: 30 - 40 psig

Capacity: 175.5 TR / 130.0 TR / 88.3 TR

Low Suction Pressure Alarm: 20.0"Hg

High Discharge Pressure Alarm: 45.0 psig

Low Suction Pressure Cutout: 28.0" Hg

High Discharge Pressure Cutout: 55.0 psig

Oil Pressure Cutout: 5.0 psig

Oil Pressure Alarm: 10.0 psig

High Oil Temperature Cutout: 167° F

High Oil Temperature Alarm: 158° F

Low Oil Temperature Cutout: 49° F

Low Oil Temperature Alarm: 58° F

High Discharge Temperature Cutout: 212° F

High Discharge Temperature Alarm: 194° F

Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F

Normal Oil Temperature Range: 110° F to 150° F

Normal Oil Pressure: 45 - 50 psig

Motor Horsepower: 125 HP

Compressor Information (cont)

Frick RWBII-222B Booster Compressor (#6)

Serial Number: TDSH233L1714F
Design Suction Pressure: 3.1 psig (-21° F) / 3.2"Hg (-32°F) / 11.7"Hg(-45°F)
Design Discharge Pressure: 31.4 psig (+18° F)
Discharge Pressure Range: 30 - 40 psig
Capacity: 221.0 TR / 163.6 TR / 111.2 TR
Low Suction Pressure Alarm: 20.0"Hg
High Discharge Pressure Alarm: 45.0 psig
Low Suction Pressure Cutout: 28.0"Hg
High Discharge Pressure Cutout: 55.0 psig
Oil Pressure Cutout: 5.0 psig
Oil Pressure Alarm: 10.0 psig
High Oil Temperature Cutout: 167° F
High Oil Temperature Alarm: 158° F
Low Oil Temperature Cutout: 49° F
Low Oil Temperature Alarm: 58° F
High Discharge Temperature Cutout: 212° F
High Discharge Temperature Alarm: 194° F
Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F
Normal Oil Temperature Range: 110° F to 150° F
Normal Oil Pressure: 45 - 50 psig
Motor Horsepower: 150 HP

Frick RWBII-222B Booster Compressor (#7)

Serial Number: TDSH233L1716F
Design Suction Pressure: 3.1psig(-21°F)/3.2"Hg(-32°F)/11.7"Hg(-45°F)
Design Discharge Pressure: 31.4 psig (+18° F)
Discharge Pressure Range: 30 - 40 psig
Capacity: 221.0TR/163.6 TR / 111.2 TR
Low Suction Pressure Alarm: 20.0 "Hg
High Discharge Pressure Alarm: 45.0 psig
Low Suction Pressure Cutout: 28.0"Hg
High Discharge Pressure Cutout: 55.0 psig
Oil Pressure Cutout: 5.0 psig
Oil Pressure Alarm: 10.0 psig
High Oil Temperature Cutout: 167° F
High Oil Temperature Alarm: 158° F
Low Oil Temperature Cutout: 49° F
Low Oil Temperature Alarm: 58° F
High Discharge Temperature Cutout: 212° F
High Discharge Temperature Alarm: 194° F
Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F
Normal Oil Temperature Range: 110° F to 150° F
Normal Oil Pressure: 45 - 50 psig
Motor Horsepower: 150 HP

Compressor Information (cont)

Frick RWBII-177 High-Stage Compressor (#8)

Serial Number: TDSH233S1920E
Design Suction Pressure: 31.4psig (+18° F)
Design Discharge Pressure: 181.1 psig (+95° F)
Discharge Pressure Range: 150 - 185 psig
Capacity: 367.9 TR
Low Suction Pressure Alarm: 5.0 psig
High Discharge Pressure Alarm: 190.0 psig
Low Suction Pressure Cutout: 0.0 psig
High Discharge Pressure Cutout: 200.0 psig
Oil Pressure Cutout: 69 psig
Oil Pressure Alarm: 79 psig
High Oil Temperature Cutout: 167° F
High Oil Temperature Alarm: 158° F
Low Oil Temperature Cutout: 49° F
Low Oil Temperature Alarm: 58° F
High Discharge Temperature Cutout: 212° F
High Discharge Temperature Alarm: 194° F
Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F
Normal Oil Temperature Range: 110° F to 150° F
Normal Oil Pressure: 45 - 50 psig
Motor Horsepower: 400 HP

Frick RWBII-222 H High-Stage Compressor (#9)

Serial Number: TDSH233L1710F
Design Suction Pressure: 31.4psig (+18° F)
Design Discharge Pressure: 181.1 psig (+95° F)
Discharge Pressure Range: 150 - 185 psig
Capacity: 463.3 TR
Low Suction Pressure Alarm: 5.0 psig
High Discharge Pressure Alarm: 190.0 psig
Low Suction Pressure Cutout: 0.0 psig
High Discharge Pressure Cutout: 200.0 psig
Oil Pressure Cutout: 69 psig
Oil Pressure Alarm: 79 psig
High Oil Temperature Cutout: 167° F
High Oil Temperature Alarm: 158° F
Low Oil Temperature Cutout: 49° F
Low Oil Temperature Alarm: 58° F
High Discharge Temperature Cutout: 212° F
High Discharge Temperature Alarm: 194° F
Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F
Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F
Normal Oil Temperature Range: 110° F to 150° F
Normal Oil Pressure: 45 - 50 psig
Motor Horsepower: 500 HP

Compressor Information (cont)

Frick RWBII-222B High-Stage Compressor (#10)

Serial Number: TDSH233L1707F

Design Suction Pressure: 31.4psig (+18° F)

Design Discharge Pressure: 181.1 psig (+95° F)

Discharge Pressure Range: 150 - 185 psig

Capacity: 463.3 TR

Low Suction Pressure Alarm: 5.0 psig

High Discharge Pressure Alarm: 190.0 psig

Low Suction Pressure Cutout: 0.0 psig

High Discharge Pressure Cutout: 200.0 psig

Oil Pressure Cutout: 69 psig

Oil Pressure Alarm: 79 psig

High Oil Temperature Cutout: 167° F

High Oil Temperature Alarm: 158° F

Low Oil Temperature Cutout: 49° F

Low Oil Temperature Alarm: 58° F

High Discharge Temperature Cutout: 212° F

High Discharge Temperature Alarm: 194° F

Maximum Allowable Working Pressure (Oil Separator): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, shell side): 300 psig @ 200° F

Maximum Allowable Working Pressure (TSOC, tube side): 300 psig @ 200° F

Normal Oil Temperature Range: 110° F to 150° F

Normal Oil Pressure: 45 - 50 psig

Motor Horsepower: 500 HP

Pressure Vessels Information

LIST OF PRESSURE VESSELS						
DESCRIPTION	SIZE	TYPE	DUTIES	OPERATING PRESSURE RANGE	LOCATION	DWG NO.
High Pressure Receiver	84"Ø x 20'-0"	Vertical	Storage of high pressure liquid and supplies liquid to intercooler, convertible rooms, coolers and the truck dock.	150.0 to 185.0 psig	Machine Room	R-2
Thermosyphon Receiver	36"Ø x 5'-0"	Horizontal	Supplies high pressure liquid to the compressor oil coolers	150.0 to 185.0 psig	Machine Room	R-2
Blast Recirculator	48"Ø x 12'-0"	Horizontal	Traps liquid returning from the blast freezer evaporators. Provides positive suction head for pumps.	15" to 10" Hg	Machine Room	R-2
Blast Recirculator Oil Pot	4"Ø x 4' -0"	Vertical	Oil draining point for system	15" to 10" Hg	Machine Room	R-2
-10°F Recirculator	60"Ø x 12'-0"	Horizontal	Traps liquid returning from freezer evaporators. Provides positive suction head for pumps.	0 to 5 psig	Machine Room	R-2
-10°F Recirculator Oil Pot	4"Ø x 4' -0"	Horizontal	Oil draining point for system.	0 to 5 psig	Machine Room	R-2
-20°F Recirculator	36"Ø x 12'-0"	Horizontal	Traps liquid returning from the North #60 freezer when used as -20°F storage. Provides positive suction head for pumps.	0psig to 4"Hg	Machine Room	R-2
-20°F Recirculator Oil Pot	4"Ø x 4' -0"	Vertical	Oil draining point for system	0psig to 4"Hg	Machine Room	R-2
Intercooler	72"Ø x 12' -0"	Vertical	Desuperheats booster compressor discharge gas. Subcools high pressure liquid.	30 to 40 psig	Machine Room	R-2

Pressure Vessels Information (cont)

LIST OF PRESSURE VESSELS						
DESCRIPTION	SIZE	TYPE	DUTIES	OPERATING PRESSURE RANGE	LOCATION	DWG NO.
Compressor #1 Oil Separator	24"Ø x 11'-5 11/16"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #2 Oil Separator	24"Ø x 11'-5 11/16"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #3 Oil Separator	24"Ø x 11'-5 11/16"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #4 Oil Separator	24"Ø x 11'-5 11/16"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #5 Oil Separator	30"Ø x 14'-1 3/8"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #6 Oil Separator	30"Ø x 14'-1 3/8"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #7 Oil Separator	30"Ø x 14'-1 3/8"	Horizontal	Removes oil from compressor discharge gas.	30 to 40 psig	Machine Room	R-2
Compressor #8 Oil Separator	30"Ø x 14'-1 3/8"	Horizontal	Removes oil from compressor discharge gas.	150 to 185.0 psig	Machine Room	R-2
Compressor #9 Oil Separator	30"Ø x 14'-1 3/8"	Horizontal	Removes oil from compressor discharge gas.	150 to 185.0 psig	Machine Room	R-21
Compressor #10 Oil Separator	30"Ø x 14'-1 3/8"	Horizontal	Removes oil from compressor discharge gas.	150 to 185.0 psig	Machine Room	R-2
Compressor #1 Oil Cooler	6 _"Ø x 5'-0 "	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #2 Oil Cooler	6 _"Ø x 5'-0 "	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #3 Oil Cooler	6 _"Ø x 5'-0 "	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #4 Oil Cooler	6 _"Ø x 5'-0 "	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #5 Oil Cooler	6 _" x 10'-0"	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #6 Oil Cooler	6 _" x 10'-0"	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2

Pressure Vessels Information (cont)

LIST OF PRESSURE VESSELS						
DESCRIPTION	SIZE	TYPE	DUTIES	OPERATING PRESSURE RANGE	LOCATION	DWG NO.
Compressor #7 Oil Cooler	6" x 10'-0"	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #8 Oil Cooler	10 3/4" x 10'-0"	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #9 Oil Cooler	10 3/4" x 10'-0"	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Compressor #10 Oil Cooler	10 3/4" x 10'-0"	Horizontal	Cools compressor oil.	150.0 to 185.0 psig	Machine Room	R-2
Rel. Oil Heat Exchanger	8" Ø x 8'-0"	Horizontal	Heats fuel oil for underfloor warming.	150.0 to 185.0 psig		R-3
Glycol Heat Exchanger	10 1/2" Ø x 10'-0"	Horizontal	Heats glycol for underfloor warming.	150.0 to 185.0 psig	Machine Room	R-3

High Pressure Receiver:

Size: 84"Ø X 20'-0"
 Manufacturer: Frick
 National Board No.: 122129
 Serial No.: 122129
 Year Built: 1994
 Maximum Allowable Working Pressure: 250 psig @ 200°F
 Minimum Metal Temperature: -20°F @ 250 psig
 Shell Test Pressure: 375 psig
 Design Operating Pressure: 181.1 psig
 Design Operating Temperature: + 95°F
 Normal Liquid Level: 50%
 Normal Ammonia Inventory: 14,106.9 lbs.

Themosyphon Receiver

Size: 36" Ø x 5'-0"
 Manufacturer: Frick
 National Board No.: 122095
 Serial No.: 122095
 Year Built: 1994
 Maximum Allowable Working Pressure: 250 psig @ 200°F
 Minimum Metal Temperature: -20°F @ 250 psig
 Shell Test Pressure: 375 psig
 Design Operating Pressure: 181.1 psig
 Design Operating Temperature: +95°F
 Normal Liquid Level: 50%
 Normal Ammonia Inventory: 649.1

Pressure Vessels Information (cont)

Blast Recirculator:

Size: 48"Ø X 12'- 0"
Manufacturer: Frick
National Board No.: 122163
Serial No.: 122163
Year Built: 1994
Maximum Allowable Working Pressure: 150 psig @ 200°F
Minimum Metal Temperature: -45°F @ 113 psig
Shell Test Pressure: 225 psig
Design Operating Pressure: 11.7"Hg
Design Operating Temperature: -45°F
Normal Liquid Level: 37%
Normal Ammonia Inventory: 2,415.0
Pump Manufacturer: Hansen (2)
Pump Model No.:CNF 32/160
Pump Capacity:50 GPM @ 25 psig
Pump Horsepower: 3HP

Oil Pot (Blast Recirculator)

Size: 4 1/2" Ø x 4'-0"
Manufacturer: Frick
Serial No.: 94895
Year Built: 1994
Maximum Allowable Working Pressure: 150 psig @ 200°F
Minimum Metal Temperature: -45°F @ 11.7"Hg
Shell Test Pressure: 225 psig
Design Operating Pressure: 11.7"Hg
Design Operating Temperature: -45°F
Normal Liquid Level: full
Normal Ammonia Inventory: 21.6 lbs.

-10°F Recirculator

Size: 60"Ø X 12'- 0"
Manufacturer: Frick
National Board No.: 122164
Serial No.: 122164
Year Built: 1994
Maximum Allowable Working Pressure: 150 psig @ 200°F
Minimum Metal Temperature: -45°F @ 113 psig
Shell Test Pressure: 225 psig
Design Operating Pressure: 3.1 psig
Design Operating Temperature: -21°F
Normal Liquid Level: 36%
Normal Ammonia Inventory: 3,598.9 lbs.
Pump Manufacturer: Hansen (2)
Pump Model No.:CNF 50/160
Pump Capacity:185 GPM @ 40 psig
Pump Horsepower: 7.5HP

Pressure Vessels Information (cont)

Oil Pot -10°F

Size: 4" \emptyset x 4'-0"
Manufacturer: Frick
Serial No.: 94896
Year Built: 1994
Maximum Allowable Working Pressure: 150psig@200F
Minimum Metal Temperature: -45°F@11.7"Hg
Shell Test Pressure: 225psig
Design Operating Pressure: 3.1 psig
Design Operating Temperature: -21°F
Normal Liquid Level: full
Normal Ammonia Inventory: 21.2 lbs.

-20°F Recirculator

Size: 30" \emptyset X 10'- 0"
Manufacturer: Frick
National Board No.: 122144
Serial No.: 122144
Year Built: 1994
Maximum Allowable Working Pressure: 150 psig @ 200°F
Minimum Metal Temperature: -45°F @ 113 psig
Shell Test Pressure: 225 psig
Design Operating Pressure: 3.2"Hg
Design Operating Temperature: -32°F
Normal Liquid Level: 22 %
Normal Ammonia Inventory: 801.5 lbs.
Pump Manufactor: Hansen
Pump Model No.:CAM 2/3
Pump Capacity:20 GPM @ 30 psig
Pump Horsepower: 3HP

Oil Pot (-20°F Recirculator)

Size: 4 1/2" \emptyset x 4'-0"
Manufacturer: Frick
Serial No.: 942894
Year Built: 1994
Maximum Allowable Working Pressure: 150 psig @ 200°F
Minimum Metal Temperature: -45°F @ 11.7"Hg
Shell Test Pressure: 225 psig
Design Operating Pressure: 3.2"Hg
Design Operating Temperature: -32°F
Normal Liquid Level: full
Normal Ammonia Inventory: 21.4 lbs.

Pressure Vessels Information (cont)

Intercooler #1

Size: 72" \emptyset x 12'-0"
Manufacturer: Frick
National Board No.: 122217
Serial No.: 122217
Year Built: 1994
Maximum Allowable Working Pressure: 150 psig @ 200°F
Minimum Metal Temperature: -20°F @ 150 psig
Shell Test Pressure: 188 psig
Design Operating Pressure: 31.4 psig
Design Operating Temperature: +18°F
Normal Liquid Level: 30%
Normal Ammonia Inventory: 4,135.1 lbs.

Oil Pot (Intercooler #1):

Size: 8 " \emptyset x 3'-2"
Manufacturer: Frick
Serial No.: N-1589
Year Built: 1994
Maximum Allowable Working Pressure: 400 psig @ 650°F
Minimum Metal Temperature: -20°F @ 400 psig
Shell Test Pressure:
Design Operating Pressure: 31.4 psig
Design Operating Temperature: +18°F
Normal Liquid Level: full
Normal Ammonia Inventory: 77.3 lbs.

Oil Separator (Compressor #1)

Size: 24" \emptyset x 11'-5 11/16"
Manufacturer: Frick Company
National Board No.: 122138
Serial No.: 122138
Year Built: 1994
Maximum Allowable Working Pressure: 300 psig @ 200°F
Minimum Metal Temperature: -20°F @ 300 psig
Shell Test Pressure: 375 psig
Design Operating Pressure: 31.4 psig
Design Operating Temperature: +18°F
Normal Liquid Level: empty

Oil Separator (Compressor #2)

Size: 24" \emptyset x 11' - 5 11/16"
Manufacturer: Frick Company
National Board No.: 122139
Serial No. 122139
Year Built: 1994
Maximum Allowable Working Pressure: 300 psig @ 200°F
Minimum Metal Temperature: -20°F @ 300 psig
Shell Test Pressure: 375 psig
Design Operating Pressure: 31.4 psig
Design Operating Temperature: +18°F
Normal Liquid Level: empty

Pressure Vessels Information (cont)

Oil Separator (Compressor #3)

Size: 24" \emptyset x 11'-5 11/16"

Manufacturer: Frick Company

National Board No.:122136

Serial No. 122136

Year Built: 1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300 psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 31.4 psig

Design Operating Temperature: +18°F

Normal Liquid Level: empty

Oil Separator (Compressor #4)

Size: 24" \emptyset x 11'-5 11/16"

Manufacturer: Frick Company

National Board No.: 122137

Serial No.122137

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300 psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 31.4 psig

Design Operating Temperature: +18°F

Normal Liquid Level: empty

Oil Separator (Compressor #5)

Size: 30" \emptyset x 14'-1 3/8"

Manufacturer: Frick Company

National Board No.:122148

Serial No.122148

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300 psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 31.4 psig

Design Operating Temperature: +18°F

Normal Liquid Level: empty

Oil Separator (Compressor #6)

Size: 30" \emptyset x 14'-1 3/8"

Manufacturer: Frick Company

National Board No.:122146

Serial No.122146

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300 psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 31.4 psig

Design Operating Temperature: +18°F

Normal Liquid Level: empty

Pressure Vessels Information (cont)

Oil Separator (Compressor #7)

Size: 30"Ø x 14'-1 3/8"

Manufacturer: Frick Company

National Board No.:122147

Serial No. 122147

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 31.4 psig

Design Operating Temperature: +18°F

Normal Liquid Level: empty

Oil Separator (Compressor #8)

Size: 30"Ø x 14'-1 3/8"

Manufacturer: Frick Company

National Board No.:122109

Serial No. 122109

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300 psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: empty

Oil Separator (Compressor #9)

Size: 30"Ø x 14'-1 3/8"

Manufacturer: Frick Company

National Board No.:122110

Serial No.122110

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: empty

Oil Separator (Compressor #10)

Size: 30"Ø x 14'-1 3/8"

Manufacturer: Frick Company

National Board No.:121624

Serial No. 121624

Year Built:1994

Maximum Allowable Working Pressure: 300 psig @ 200°F

Minimum Metal Temperature: -20°F @ 300psig

Shell Test Pressure: 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: empty

Pressure Vessels Information (cont)

Oil Cooler (Compressor #1)

Size: 6 5/8" \varnothing x 5'-0"

Manufacturer: Frick Company

National Board No.: 121054

Serial No.: 121054

Year Built:1994

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Minimum Metal Temperature(shell): -20°F @ 300 psig

Minimum Metal Temperature(tube): -20°F @ 300 psig

Test Pressure(shell): 375 psig

Test Pressure(tube): 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 22.0 lbs.

Oil Cooler (Compressor #2)

Size: 6 5/8" \varnothing x 5'-0"

Manufacturer: Frick Company

National Board No.121059

Serial No.:121059

Year Built:1994

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 300 psig

Minimum Metal Temperature(shell): -20°F @ 300 psig

Test Pressure(tube): 375 psig

Test Pressure(shell):375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 22.0 lbs.

Oil Cooler (Compressor #3)

Size: 6 5/8" \varnothing x 5'-0"

Manufacturer: Frick Company

National Board No.: 121056

Serial No.: 121056

Year Built:1994

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 300 psig

Minimum Metal Temperature(shell): -20°F @ 300 psig

Test Pressure(tube): 375 psig

Test Pressure(shell): 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 22.2 lbs.

Pressure Vessels Information (cont)

Oil Cooler (Compressor #4)

Size: 6 5/8"Ø x 5'-0"

Manufacturer: Frick Company

National Board No.:121053

Serial No.: 121053

Year Built: 1994

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 300 psig

Minimum Metal Temperature(shell): -20°F @ 300 psig

Test Pressure(tube): 375 psig

Test Pressure(shell): 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 22.2 lbs.

Oil Cooler (Compressor #5)

Size: 6 5/8"Ø x 10'-0"

Manufacturer: Frick

National Board no.: 120682

Serial No.: 120682

Year Built: 1994

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 300 psig

Minimum Metal Temperature(shell): -20°F @ 30 psig

Test Pressure(tube): 375 psig

Test Pressure(shell): 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 44.0 lbs.

Oil Cooler (Compressor #6)

Size: 6 5/8"Ø x 10'-0"

Manufacturer: Frick Company

National Board No.: 120796

Serial No.:120796

Year Built: 1994

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 300 psig

Minimum Metal Temperature(shell): -20°F @ 300 psig

Test Pressure(tube): 375 psig

Test Pressure(shell): 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 44.0 lbs.

Pressure Vessels Information (cont)

Oil Cooler (Compressor #7)

Size: 6 5/8"Ø x 10'-0"
Manufacturer: Frick Company
National Board No.: 120793
Serial No.: 120793
Year Built: 1994
Maximum Allowable Working Pressure(tube): 300 psig @ 200°F
Maximum Allowable Working Pressure(shell): 300 psig @ 200°F
Minimum Metal Temperature(tube): -20°F @ 300 psig
Minimum Metal Temperature(shell): -20°F @ 300 psig
Test Pressure(tube): 375 psig
Test Pressure(shell): 375 psig
Design Operating Pressure: 181.1 psig
Design Operating Temperature: +95°F
Normal Liquid Level: 75%
Normal Ammonia Inventory: 44.0 lbs.

Oil Cooler (Compressor #8)

Size: 10 3/4"Ø x 10'-0"
Manufacturer: Frick Company
National Board No.: 121651
Serial No.: 121651
Year Built: 1994
Maximum Allowable Working Pressure(tube): 300 psig @ 200°F
Maximum Allowable Working Pressure(shell): 300 psig @ 200°F
Minimum Metal Temperature(tube): -20°F @ 300 psig
Minimum Metal Temperature(shell): -20°F @ 300 psig
Test Pressure(tube): 375 psig
Test Pressure(shell): 375 psig
Design Operating Pressure: 181.1 psig
Design Operating Temperature: +95°F
Normal Liquid Level: 75%
Normal Ammonia Inventory: 104.5 lbs.

Oil Cooler (Compressor #9)

Size: 10 3/4"Ø x 10'-0"
Manufacturer: Frick Company
National Board No.: 121645
Serial No.: 121645
Year Built: 1994
Maximum Allowable Working Pressure(tube): 300 psig @ 200°F
Maximum Allowable Working Pressure(shell): 300 psig @ 200°F
Minimum Metal Temperature(tube): -20°F @ 300 psig
Minimum Metal Temperature(shell): -20°F @ 300 psig
Test Pressure(tube): 375 psig
Test Pressure(shell): 375 psig
Design Operating Pressure: 181.1 psig
Design Operating Temperature: +95°F
Normal Liquid Level: 75%
Normal Ammonia Inventory: 104.5 lbs.

Pressure Vessels Information (cont)

Oil Cooler (Compressor #10)

Size: 10 3/4"Ø x 10'-0"

Manufacturer: Frick Company

National Board No.:121647

Serial No.:121647

Year Built: 1994

Maximum Allowable Working Pressure(tube): 300 psig @ 200°F

Maximum Allowable Working Pressure(shell): 300 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 300 psig

Minimum Metal Temperature(shell): -20°F @ 300 psig

Test Pressure(tube): 375 psig

Test Pressure(shell): 375 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 104.5 lbs.

East Under Floor Warming Heat Exchanger

Size: 10 3/4"Ø x 10'-0"

Manufacturer: Frick Company

National Board No.:123370

Serial No.:123370

Year Built: 1995

Maximum Allowable Working Pressure(tube): 100 psig @ 200°F

Maximum Allowable Working Pressure(shell): 250 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 100 psig

Minimum Metal Temperature(shell): -20°F @ 250 psig

Test Pressure(tube): 125 psig

Test Pressure(shell): 313 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: empty

West Underfloor Warming Heat Exchanger

Size: 8 5/8"Ø x 8'-0"

Manufacturer: Frick Company

National Board No.:123359

Serial No.:123359

Year Built: 1995

Maximum Allowable Working Pressure(tube): 100 psig @ 200°F

Maximum Allowable Working Pressure(shell): 250 psig @ 200°F

Minimum Metal Temperature(tube): -20°F @ 100 psig

Minimum Metal Temperature(shell): -20°F @ 250 psig

Test Pressure(tube): 125 psig

Test Pressure(shell): 313 psig

Design Operating Pressure: 181.1 psig

Design Operating Temperature: +95°F

Normal Liquid Level: Empty

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Condenser Information

MANUFACTURER/ MODEL NO.	CAPACITY	TYPE	FAN HP	PUMP HP	LOCATION
Evapco ATC-970	14,259 MBH	Propeller fans	(2) 20 HP	N/A	Roof
Evapco ATC-970	14,259 MBH	Propeller fans	(2) 20 HP	N/A	Roof

Evapco Evaporative Condenser #1

Model No: ATC-970

Serial No: 941659

Design Condensing Pressure: 181.1 psig

Maximum Operating Pressure: 250 psig

Test Pressure: 350 psig

Capacity: 14,259 MBH

CFM: 150,600

Fan Motor: (2) 20 HP

Pump Motor: N/A

Refrigerant Charge: 1,340 lbs.

Operating Weight: 51,080 lbs.

Evapco Evaporative Condenser #2

Model No: ATC-970

Serial No: 941658

Design Condensing Pressure: 181.1 psig

Maximum Operating Pressure: 250 psig

Test Pressure: 350 psig

Capacity: 14,259 MBH

CFM: 150,600

Fan Motor: (2) 20 HP

Pump Motor: N/A

Refrigerant Charge: 1,340 lbs.

Operating Weight: 51,080 lbs.

Water Chiller Information

Water Chiller

Size: 20" Ø x 12'-0 1/2"

Manufacturer: Frick

National Board No.: 123335

Serial No.: 123335

Year Built: 1994

Shell Side MAWP: 150 psig @ 200°F

Tube Side MAWP: 100 psig @ 200°F

Shell Side Minimum Metal Temperature: -20°F @ 150 psig

Tube Side Minimum Metal Temperature: -20°F @ 100 psig

Shell Test Pressure: 188 psig

Tube Test Pressure: 125 psig

Design Operating Pressure: 31.4 psig

Design Operating Temperature: +18°F

Normal Liquid Level: 75%

Normal Ammonia Inventory: 561.1 lbs.

Purger Information

Hansen Auto-Purger

Model No: AP--16

Serial No: M2200

Design Suction Pressure: 11.7" Hg

Design Working Pressure: 181.1 psig

Maximum Allowable Working Pressure: 250 psig

Air Units Information

ROOM NAME	MANUFACTURER/ MODEL NO.	FEED TYPE	DEFROST TYPE	FANS	QTY.	DWG. NO.
Blast Freezer #1	Imeco ICB-2C-5210-3-7.5	Recirculated	Hot Gas	2	1	R3
Blast Freezer #2	Imeco ICB-2C-5210-3-7.5	Recirculated	Hot Gas	2	1	R3
Blast Freezer #3	Imeco ICB-2C-5210-3-7.5	Recirculated	Hot Gas	2	1	R3
Blast Freezer #4	Imeco ICB-2C-5210-3-7.5	Recirculated	Hot Gas	2	1	R3
Blast Freezer #5	Imeco ICB-2C-5210-3-7.5	Recirculated	Hot Gas	2	1	R3
Blast Freezer #6	Imeco ICB-2C-5210-3-7.5	Recirculated	Hot Gas	2	1	R3
Freezer #1	Imeco CF3S-6810-3-25	Recirculated	Hot Gas	3	2	R4
Freezer #2	Imeco CF4S-6810-4-20	Recirculated	Hot Gas	4	4	R4
Freezer #50	Niagara A-3809	Recirculated	Spray Glycol	3	4	R4
Freezer #60 North	Imeco CF4S-9010-4-25	Recirculated	Hot Gas	4	2	R4
Freezer #60 South	Niagara A-3810	Recirculated	Spray Glycol	3	1	R4
Freezer #60 South	Niagara A-3811	Recirculated	Spray Glycol	3	1	R4
Dock #50	Imeco CF2S-3410-4-7.5	Direct Expansion	Hot Gas	2	1	R5
Dock #60	Frigid Coil LTS/T-364-½-DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	3	R5
Cooler #1	Frigid Coil LTS-664_-DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	6	1	R6
Cooler #2	Frigid Coil LTS-764_-DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	7	1	R6

Air Units Information (cont)

LIST OF AIR UNITS						
ROOM NAME	MANUFACTURER/ MODEL NO.	FEED TYPE	DEFROST TYPE	FANS	QTY.	DWG. NO.
Cooler # 3	Frigid Coil LTS-764_- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	7	1	R6
Cooler # 5	Frigid Coil HTS/T-364- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	1	R5
Cooler # 6	Frigid Coil HTS/T-364- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	1	R5
Cooler # 9	Frigid Coil HTS/T-364- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	1	R5
Cooler # 10	Frigid Coil HTS/T-364- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	1	R5
Cooler # 11	Frigid Coil HTS/T-364- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	1	R5
Cooler # 12	Frigid Coil HTS/T-364- _DX-HGC-IP-PWJB	Direct Expansion	Hot Gas	3	1	R5
Convertible Room # 3	Imeco CF2S-4510-3- 15	Direct Expansion/ Recirculated	Hot Gas	2	2	R6
Convertible Room # 4	Imeco CF2S-4510-3- 15	Direct Expansion/ Recirculated	Hot Gas	2	2	R6
Convertible Room # 7	Imeco USB-35L-283L	Direct Expansion/ Recirculated	Hot Gas	2	1	R5
Convertible Room # 8	Imeco USB-35L-283L	Direct Expansion/ Recirculated	Hot Gas	2	1	R5

Air Units Information (cont)

Blast Freezers-(6) Imeco ICB-2C-5210-3-7.5

Room Temperature: -35°F
Capacity: 28.5 TR @ 10°F TD
Evaporator Pressure: 11.7"Hg (-45°F)
CFM: 49,875
Fans: (2) 42" dia. propeller
Motors: (2) 7.5 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated (3:1)
Type Defrost: Hot Gas
Normal Ammonia Inventory: 183.3 lbs. each

Freezer #1- (2) Imeco CF3S- 6810-3-25

Room Temperature: -10°F
Capacity: 30.8 TR @10°F TD
Evaporator Pressure: 3.6 psig (-20°F)
CFM: 54,000
Fans: (3) centrifugal
Motors: (1)25 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated (3:1)
Type Defrost: Hot Gas
Normal Ammonia Inventory: 253.3 lbs. each

Freezer #2- (4) Imeco CF4S-6810-4-20

Room Temperature: -10°F
Capacity: 31.53 TR @ 10°F TD
Evaporator Pressure: 3.6psig (-20°F)
CFM: 47,886
Fans: (4) centrifugal
Motors:(1) 20 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated (3:1)
Type Defrost: Hot Gas
Normal Ammonia Inventory: 253.3 lbs.

Freezer #50-(4) Niagara A-3809

Room Temperature: -10°F
Capacity: 25-30 TR @ 10° F TD
Evaporator Pressure: 3.6 psig (-20°F)
CFM: 28,800
Fans: (1) centrifugal
Motors: (1) 15 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated (3:1)
Type Defrost: Glycol
Normal Ammonia Inventory: 92.7 lbs. each

Freezer #60 North-(2) Imeco CF4S-9010-4-25

Room Temperature: -20°F
Capacity: 41.37 TR @ 10° F TD
Evaporator Pressure: 1.6"Hg (-30°F)
CFM: 62,200
Fans: (4) centrifugal
Motors: (1) 25 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated (3:1)
Type Defrost: Hot Gas
Normal Ammonia Inventory: 337.8 lbs. each

Freezer #60 South-(1) Niagara A-3810

Room Temperature: -10°F
Capacity: 30-35 TR @ 10° F TD
Evaporator Pressure: 3.6 psig (-20°F)
CFM: 30,000
Fans: (2) centrifugal
Motors: (1) 15 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated (3:1)
Type Defrost: Glycol
Normal Ammonia Inventory: 104.7 lbs. each

Freezer #60 South-(1) Niagara A-3811

Room Temperature: -10°F
Capacity: 32-37 TR @ 10° F TD
Evaporator Pressure:3.6 psig (-20°F)
CFM: 33,840
Fans: (2) centrifugal
Motors: (1) 15 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated
Type Defrost: Glycol
Normal Ammonia Inventory: 125.0 lbs. each

Dock #50-(1) Imeco CF2S-3410-4-7.5

Room Temperature: +35°F
Capacity: 18.6 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 21,325
Fans:(2) Centrifugal
Motors: (1) 7.5HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 60.6 lbs. each

Air Units Information (cont)

Dock #60-(3) Frigid Coil LTS/T-364-1/2-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 9.0 TR @ 15° F TD
Evaporator Pressure: 33.5 psig (+20°F)
CFM: 15,855
Fans: (3) Propeller
Motors: (3) 1/2HP
Refrigerant: ammonia (R717)
Refrigerant Feed: (3:1) Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Cooler #1-(1) Frigid Coil LTS/T-664-1/3-DX-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 13.0TR @ 15° F TD
Evaporator Pressure: 33.5 psig (+20°F)
CFM: 21,900
Fans: (6) Propeller
Motors: (6) 1/3HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 23.9 lbs. each

Cooler #2-(1) Frigid Coil LTS/T-764-1/3-DX-HGC-IP-DWJB

Room Temperature: +35°F
Capacity: 14.9 TR @ 15°F TD
Evaporator Pressure: 33.5 psig (+20°F)
CFM: 25,550
Fans: (7) Propeller
Motors: (7) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 27.2 lbs. each

Cooler #3-(1) Frigid Coil LTS/T-764-1/3-DX-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 14.9TR @ 15° F TD
Evaporator Pressure: 33.5 psig (+20°F)
CFM: 25,500
Fans: (7) Propeller
Motors: (7) 1/3HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 27.2 lbs. each

Air Units Information (cont)

Cooler #5-(1) Frigid Coil HTS-364-1/3-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 8.2 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 13,380
Fans: (3) Propeller
Motors: (3) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed:Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Cooler #6-(1) Frigid Coil HTS-364-1/3-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 8.2 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 13,380
Fans: (3) Propeller
Motors: (3) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed:Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Cooler #9-(1) Frigid Coil HTS-364-1/3-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 8.2 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 13,380
Fans: (3) Propeller
Motors: (3) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed:Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Cooler #10- (1) Frigid Coil HTS/T-364-1/3-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 8.2 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 13,380
Fans: (3) Propeller
Motors: (3) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed:Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Air Units Information (cont)

Cooler #11-(1) Frigid Coil HTS-364-1/3-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 8.2 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 13,380
Fans: (3) Propeller
Motors: (3) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed:Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Cooler #12-(1) Frigid Coil HTS-364-1/3-DXA-HGC-IP-PWJB

Room Temperature: +35°F
Capacity: 8.2 TR @ 15° F TD
Evaporator Pressure:33.5 psig (+20°F)
CFM: 13,380
Fans: (3) Propeller
Motors: (3) 1/3 HP
Refrigerant: ammonia (R717)
Refrigerant Feed:Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 11.8 lbs. each

Convertible Room #3-(2) Imeco CF2S-4510-3-15

Room Temperature: -10°F/+35°F
Capacity: 20.6 TR @ 10° F TD /17.5 TR @ 15°F TD
Evaporator Pressure:3.6 psig (-20°F)/33.5 psig (+20°F)
CFM: 36,266
Fans: (2) Centrifugal
Motors: (1) 15 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated / Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 168.9 lbs. each

Convertible Room #4-(2) Imeco CF2S-4510-3-15

Room Temperature: -10°F/+35°F
Capacity: 20.6 TR @ 10° F TD /17.5 TR @ 15°F TD
Evaporator Pressure:3.6 psig (-20°F)/33.5 psig (+20°F)
CFM: 36,266
Fans: (2) Centrifugal
Motors: (1) 15 HP
Refrigerant: ammonia (R717)
Refrigerant Feed: Recirculated / Direct Expansion
Type Defrost: Hot Gas
Normal Ammonia Inventory: 168.9 lbs. each

Air Units Information (cont)

Convertible Room #7-(1) Imeco USB-35L-283L

Room Temperature: -10°F/+35°F

Capacity: 7.38 TR @ 10° F TD /8.84 TR @ 15°F TD

Evaporator Pressure:3.6 psig (-20°F)/33.5 psig (+20°F)

CFM: 13,795

Fans: (2) Propeller

Motors: (2) 3/4 HP

Refrigerant: ammonia (R717)

Refrigerant Feed: Recirculated / Direct Expansion

Type Defrost: Hot Gas

Normal Ammonia Inventory: 25.3 lbs. each

Convertible Room #8-(1) Imeco USB-35L-283L

Room Temperature: -10°F/+35°F

Capacity: 7.39 TR @ 10° F TD /8.84 TR @ 15°F TD

Evaporator Pressure:3.6 psig (-20°F)/33.5 psig (+20°F)

CFM: 13,795

Fans: (2) Propeller

Motors: (2) 3/4 HP

Refrigerant: ammonia (R717)

Refrigerant Feed: Recirculated / Direct Expansion

Type Defrost: Hot Gas

Normal Ammonia Inventory: 25.3 lbs. each