

LEGEND

	GATE VALVE (GA)		INSULATION (H-HOT, C-COLD)
	BALL VALVE (BA)		INSULATION & HEAT TRACE
	PLUG VALVE (PL)		PROCESS PIPING
	NEEDLE VALVE (NE)		PNEUMATIC SIGNAL
	GLOBE VALVE (GL)		CAPILLARY TUBING
	CHECK VALVE (CH)		ELECTRICAL SIGNAL
	BUTTERFLY VALVE (BU)		HYDRAULIC SIGNAL
	SOCKET WELD VALVE		ELECTROMAGNETIC/SONIC SIGNAL (GUIDED)
	SCREWED VALVE		INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
	FLANGED VALVE		MODBUS LINK
	CONTROL VALVE WITH DIAPHRAGM ACTUATOR	A.C.	AIR TO CLOSE (FAIL TO OPEN)
	SPRING OPPOSED SINGLE ACTING PISTON ACTUATOR	A.O.	AIR TO OPEN (FAIL CLOSED)
	DOUBLE ACTING PISTON ACTUATOR	C.S.O.(C)	CAR SEAL OPEN (CLOSED)
	PRESSURE REGULATOR	E.S.D.	EMERGENCY SHUTDOWN
	3-WAY SOLENOID VALVE VENTING WITH POWER FAILURE	F.P.	FULL PORT
	ANGLE CHOKER	R.P.	REGULAR PORT
	INLINE CHOKER	N.C.	NORMALLY CLOSED
	DIAPHRAGM	N.O.	NORMALLY OPEN
	Y-STRAINER	S.R.	SPRING RETURN
	PRESSURE SAFETY VALVE		SPEC BREAK
	PRESSURE VACUUM RELIEF VALVE		SUPPLIED BY OTHERS
	RUPTURE DISC FOR PRESSURE RELIEF		TIE IN NUMBER
	ORIFICE METER RUN		TIE IN LOCATIONS
	ORIFICE PLATE		CORIOLIS FLOW ELEMENT
	RESTRICTING ORIFICE		MAGNETIC FLOW ELEMENT
	SPECTACLE BLIND, OPEN CLOSED		SONIC FLOW ELEMENT
	CHANGE IN PIPE SIZE		TURBINE FLOW ELEMENT
	INLINE STRAINER		POSITIVE DISPLACEMENT ELEMENT
	FLOW NOZZLE		VORTEX ELEMENT
	ROTAMETER		WEDGE FLOW ELEMENT
			STRESS RELIEVE

	CURRENT TO PNEUMATIC	LA	LEVEL ALARM (H-HIGH, L-LOW)	VI	VIBRATION INDICATOR
	PNEUMATIC TO CURRENT	LC	LEVEL CONTROLLER	VR	VIBRATION RECORDER
	ELECTROMAGNETIC TO PNEUMATIC	LCV	LEVEL CONTROL VALVE	VS	VIBRATION SWITCH
	STEAM TRAP	LEL	COMBUSTIBLE GAS DETECTION	VSD	VIBRATION SHUTDOWN
	INSTRUMENT OR DEVICE	LELT	COMBUSTIBLE GAS DETECTION TRANSMITTER	VSDH	VIBRATION SHUTDOWN HIGH
	PLANT CONTROLLER (PLC, RTU, DCS)	LG	LEVEL GAUGE	VT	VIBRATION TRANSMITTER
	UNIT CONTROLLER (STANDALONE & VENDOR PLC)	LI	LEVEL INDICATOR	XA	UNDEFINED ALARM
ACV	ANALYTIC CONTROL VALVE	LR	LEVEL RECORDER	XVPI	VALVE POSITION INDICATOR
AE	ANALYTIC ELEMENT	LS	LEVEL SWITCH (H-HIGH, L-LOW)	XVPS	VALVE POSITION SWITCH
AC	ANALYTIC CONTROLLER	LSD	LEVEL SHUTDOWN (H-HIGH, L-LOW)	XS	SAFETY SWITCH
ASD	ANALYTIC SHUTDOWN	LT	LEVEL TRANSMITTER	ZC	POSITION CONTROL
AT	ANALYTIC TRANSMITTER	LY	LEVEL TRANSDUCER	ZS	LIMIT SWITCH (O-OPEN; C-CLOSED)
BA	BURNER ALARM	MA	MOTOR ALARM		
BDV	BLOWDOWN VALVE	MR	MOTOR RUNNING (R-REVERSE, F-FORWARD)		
BC	BURNER FLAME SAFETY RELAY MODULE	MSS	MOTOR STOP/START		
BCS	BURNER CONTROL STATUS	MSF	MOTOR START/STOP FORWARD		
BE	BURNER ELEMENT	MSR	MOTOR START/STOP REVERSE		
BMS	BURNER MANAGEMENT SYSTEM	ME	MOISTURE ELEMENT		
BRS	BURNER FLAME SAFETY RELAY MODULE RESET	MI	MOISTURE INDICATOR		
BSS	BURNER START/STOP	PA	PRESSURE ALARM (H-HIGH, L-LOW)		
BZ	BURNER IGNITOR	PC	PRESSURE CONTROLLER		
CE	CONCENTRATION ELEMENT	PCV	PRESSURE CONTROL VALVE		
CA	CONCENTRATION ALARM	PDM	POSITIVE DISPLACEMENT METER		
CC	CONCENTRATION CONTROL	PI	PRESSURE INDICATOR		
CV	CONTROL VALVE	PR	PRESSURE RECORDER		
dPA	DIFFERENTIAL PRESSURE ALARM	PRV	PRESSURE REGULATING VALVE		
dPI	DIFFERENTIAL PRESSURE INDICATOR	PS	PRESSURE SWITCH (H-HIGH, L-LOW)		
dPS	DIFFERENTIAL PRESSURE SWITCH (H-HIGH, L-LOW)	PSD	PRESSURE SHUTDOWN (H-HIGH, L-LOW)		
dPT	DIFFERENTIAL PRESSURE TRANSMITTER	PSV	PRESSURE SAFETY VALVE		
ESDV	EMERGENCY SHUTDOWN VALVE	PT	PRESSURE TRANSMITTER		
EA	FLOW ALARM (H-HIGH, L-LOW)	PVB	PRESSURE VACUUM BREATHER		
FC	FLOW CONTROLLER	PVRV	PRESSURE VACUUM RELIEF VALVE		
FCV	FLOW CONTROL VALVE	PY	PRESSURE TRANSDUCER		
FDS	FIRE DETECTION SHUTDOWN	RO	RESTRICTING ORIFICE		
FE	FLOW ELEMENT	SAL	SPEED ALARM LOW		
FFSD	FLAME FAILURE SHUTDOWN	SAV	SOLENOID ACTUATED VALVE		
FI	FLOW INDICATOR	SC	SURGE/SPEED CONTROLLER		
FR	FLOW RECORDER	SCV	SURGE CONTROL VALVE		
ES	FLOW SWITCH (H-HIGH, L-LOW)	SDV	SHUTDOWN VALVE		
FQI	FLOW QUANTITY INDICATOR	SE	SPEED ELEMENT		
FT	FLOW TRANSMITTER	SI	SPEED INDICATOR		
FY	FLOW TRANSDUCER	SS	SPEED SWITCH (H-HIGH, L-LOW)		
HC	HAND CONTROLLER	IA	TEMPERATURE ALARM (H-HIGH, L-LOW)		
HR	HAND RECORDER	TC	TEMPERATURE CONTROLLER		
HS	HAND SWITCH	TCV	TEMPERATURE CONTROL VALVE		
HY	HAND TRANSDUCER	TE	TEMPERATURE ELEMENT		
H2S	H2S GAS DETECTION	TI	TEMPERATURE INDICATOR		
H2ST	H2S GAS DETECTION TRANSMITTER	TR	TEMPERATURE RECORDER		
.	.	TT	TEMPERATURE TRANSMITTER		
.	.	TW	THERMO WELL		
.	.	IS	TEMPERATURE SWITCH (H-HIGH, L-LOW)		
.	.	ISD	TEMPERATURE SHUTDOWN (H-HIGH, L-LOW)		
.	.	TZ	TEMPERATURE TRANSDUCER		
.	.	TY	TEMPERATURE CONTROL VALVE ACTUATOR		
.	.	UA	UNIT ALARM		
.	.	UC	UNIT CONTROL (FIRING RATE, SPEED RATE)		
.	.	US	UNIT STATUS		
.	.	USD	UNIT SHUT DOWN		

VALVE DESIGNATIONS

VALVE SIZE	114	BA	1	0	1	S	X
VALVE TYPE	BA-BALL BS-BASKET STRAINER BU-BUTTERFLY CH-CHECK GA-GATE GL-GLOBE NE-NEEDLE PL-PLUG YS-Y STRAINER						
RATING	1-150# ANSI 3-300# ANSI 6-600# ANSI 9-900# ANSI 15-1500# ANSI 25-2500# ANSI						
TEMPERATURE SERVICE	V - BELOW -45°C W - -45°C TO -29°C X - -29°C TO 121°C Y - 121°C TO 200°C Z - ABOVE 200°C						
SOUR	END CONNECTIONS 1-RF FLANGED 2-RTJ FLANGED 3-THREADED 4-WELDED (SOCKET) 5-WELDED (BUTT) 6-MxM (GAUGE VALVES)						
BODY STYLE MODIFIER	7-FLAT FACE FLANGED 8-CLAMP 9-WELDED (SOCKET) x THREADED						

BODY STYLE MODIFIER

	0	1	2	3	4	5
BALL	R.P. FLOATING	F.P. FLOATING	R.P. TRUNNION	F.P. TRUNNION		
BUTTERFLY	RUBBER LINED NON-LUGGED	RUBBER LINED LUGGED	TFE SEATED NON-LUGGED	TFE SEATED LUGGED	METAL SEATED NON-LUGGED	METAL SEATED LUGGED
CHECK	F.P. SWING	R.P. SWING	WAFER TYPE SWING	PISTON TYPE	PISTON TYPE WAFER	
GATE	R.P. WEDGE	FLEX WEDGE	F.P. SLAB	R.P. SLAB	F.P. WEDGE	
GLOBE	STD. BODY	ANGLE BODY	"Y" BODY			
NEEDLE	THREADED BONNET METAL SEAT	THREADED BONNET SOFT SEAT	OS&Y BONNET METAL SEAT	OS&Y BONNET SOFT SEAT	GAUGE VALVE THREADED BONNET METAL SEAT	GAUGE VALVE THREADED BONNET SOFT SEAT
PLUG	REGULAR PATTERN	SHORT PATTERN	JACKET			
BASKET STRAINER	ALTA					
"Y" STRAINER	ALTA					

LINE NUMBERING SYSTEM

114 -	150	C	PS	X	- 121
LINE SIZE (mm OD)	PRIMARY PRESSURE RATING	LINE MATERIAL CODE	PIPING SYSTEM CODE	TEMP. INDEX	LINE NUMBER

PRIMARY PRESSURE RATING

CLASS	RATING
150	ANSI 150#
300	ANSI 300#
600	ANSI 600#
900	ANSI 900#
1500	ANSI 1500#
2500	ANSI 2500#

LINE MATERIAL CODE

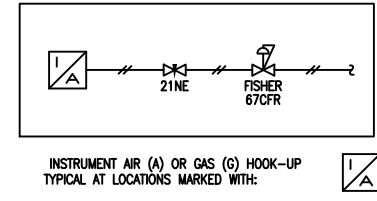
COATED PIPING	C
FIBRE GLASS	F
STAINLESS STEEL	S
POLY	P

PIPING SYSTEM CODE

SERVICE	SYMBOL
INSTRUMENT AIR	IA
PROCESS PIPING (ANIS B31.3 CODE)	
- SWEET PROCESS HYDROCARBONS, CAUSTIC, PROCESS DRAINS, AND VENT SYSTEMS	P
- SOUR PROCESS HYDROCARBONS, CAUSTIC, SOUR LIQUIDS, HYDROCARBONS, AND WATER, PROCESS DRAINS, AND VENT SYSTEMS	PS

TEMPERATURE INDEX

SERVICE	SYMBOL
BELOW -45°C	V
-45°C TO -29°C	W
-29°C TO 121°C	X
121°C TO 200°C	Y
ABOVE 200°C	Z



NO.	REVISION	PROJ. No.	BY	DATE	CHK.	DATE
10	POST CONSTRUCTION ISSUE	23212	GJC	09.01.22		
9	GENERAL REVISIONS	43884	AV	07.09.10		
8	POST CONSTRUCTION	43884	CT	07.03.16		
7	2005 PLANT EXPANSION	43884	JB	05.08.04		
6	POST CONSTRUCTION ISSUE	23212	CR	05.03.16		
5	ISSUED FOR CONSTRUCTION	43733	AO	04.11.15	JR	04.11.15
4	ISSUED FOR APPROVAL	43733	AO	04.09.		
3	ISSUED FOR HAZOP	43733	AO	04.09.13		
11	AS BUILT	23212	SBM	14.05.22		

GENERAL NOTES:
1. "POST CONSTRUCTION DRAWINGS" ARE GENERATED FROM CONSTRUCTION CHANGE INFORMATION PROVIDED TO BOWER DAMBERGER ROLSETH ENGINEERING LTD. BY THE CLIENT. THE CLIENT IS RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED AND FOR THE STATUS OF ANY PERMITS, ELECTIONS, EQUIPMENT OR BUILDINGS.
2. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND/OR INSTALLATION IT SHALL BE THE RESPONSIBILITY OF THE CLIENT REPRESENTATIVE TO VERIFY THE LOCATION AND STATUS OF ANY PERMITS, ELECTIONS, EQUIPMENT OR BUILDINGS.
3. ANY REVISIONS MADE TO EXISTING EQUIPMENT, PIPING OR ELECTRICAL ON A FACILITY NOT OWNED BY BDR ENGINEERING LTD IS ONLY SHOWN AS A REPRESENTATION OF HOW IT EXISTS AND MUST BE VERIFIED BY THE OWNER.

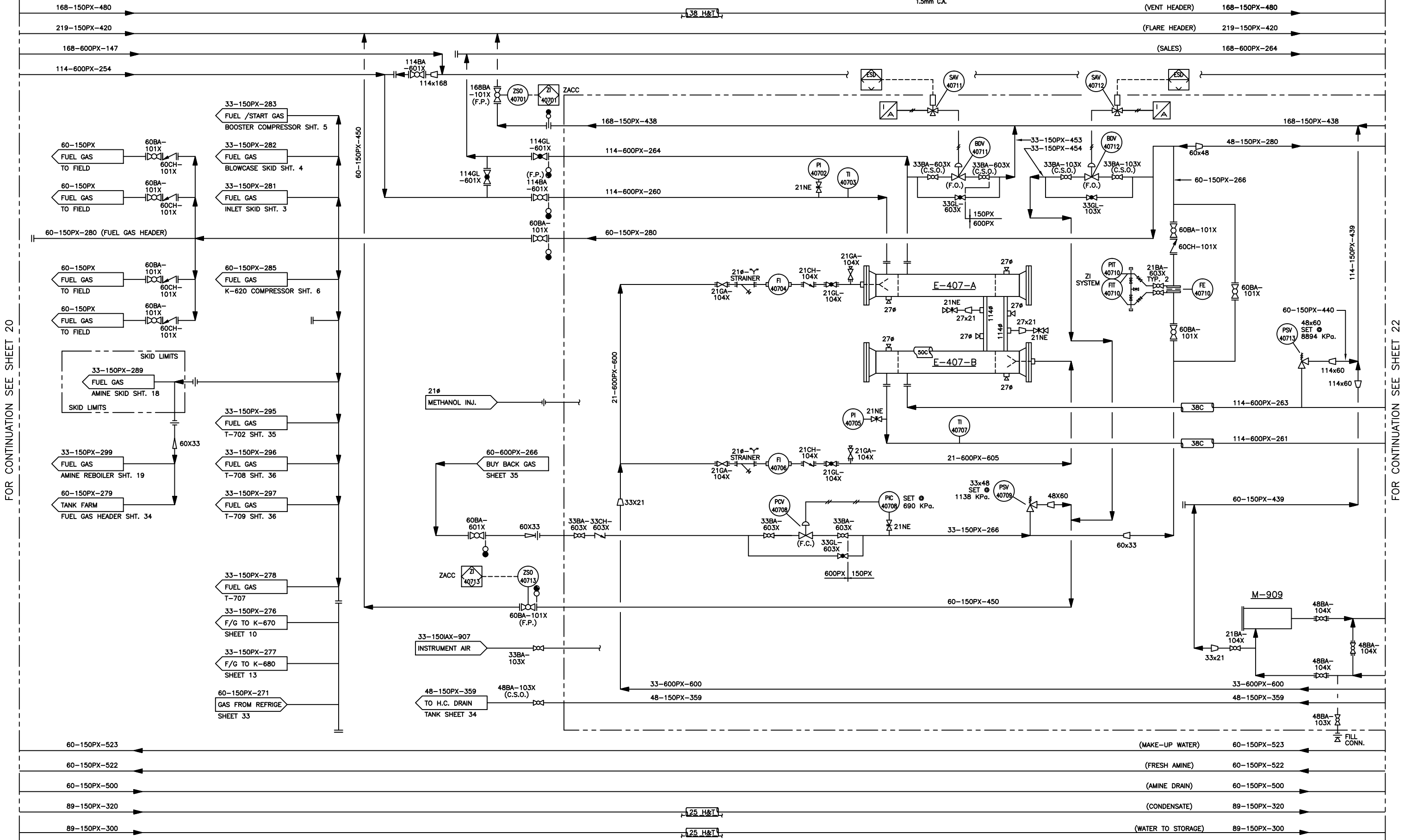
DRN.	BY	DATE
ASA	ASA	02.12.03
CHK.		
APP'D.		
L.S.D.	15-10-62-6 W5M	



FORT ENERGY CORPORATION		
CORBETT GAS PLANT MECHANICAL FLOWSHEET		
SCALE	DRAWING NUMBER	REV
1 OF 36	15-10-62-06-W5-3001	11

E-407-A/B
 GAS/GAS EXCHANGER
 273 O.D. x 12186 T/T (2 PASS)
 TS : 8894 kPa. @ -28.8°C/65°C
 SS : 8894 kPa. @ -28.8°C/65°C
 1.5mm C.A.

M-909
 REFRIGERANT FILTER/DRYER
 SPORLAN MODEL C-19212P
 c/w FOUR (4) RCW-48 CORES



FOR CONTINUATION SEE SHEET 20

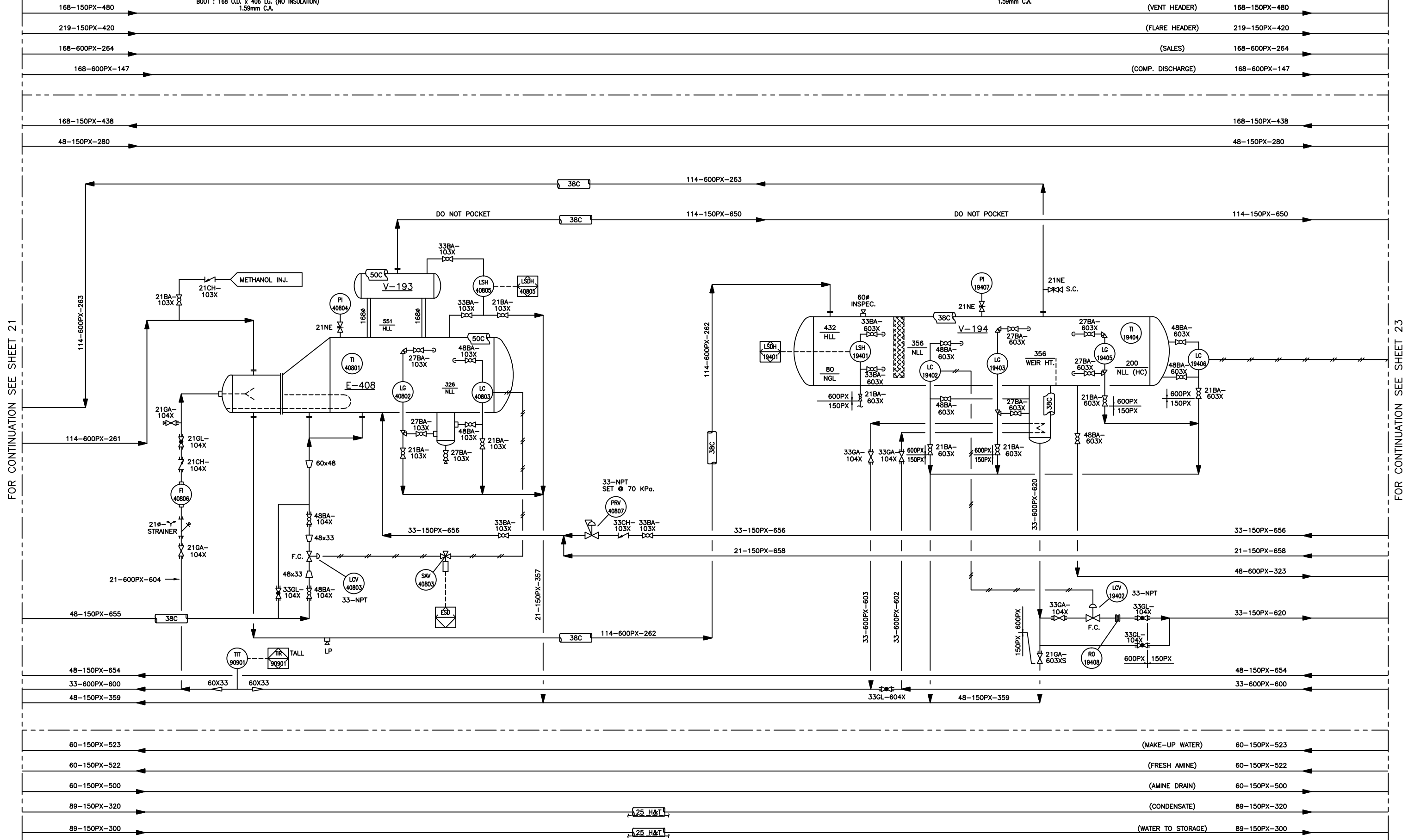
FOR CONTINUATION SEE SHEET 22

SHEET NUMBER	DRAWING NUMBER	REV
21 OF 36	15-10-62-06-W5-3021	11

E-408
GAS CHILLER
 324 O.D. x 508 O.D. x 5255 FF/S
 TS : 8894 kPa. @ -28.8°C/65°C
 SS : 1792 kPa. @ -28.8°C/65°C
 BOOT : 168 O.D. x 406 LG. (NO INSULATION)
 1.59mm C.A.

V-193
PROPANE SUCTION SCRUBBER
 610 O.D. x 3048 S/S
 1792 kPa. @ -28.8°C/66°C
 1.59mm C.A.

V-194
LOW TEMP. SEPARATOR
 762 O.D. x 3048 S/S
 8894 kPa. @ -28.8°C/65°C
 800T : 219 O.D. x 610 LG.
 1.59mm C.A.



FOR CONTINUATION SEE SHEET 21

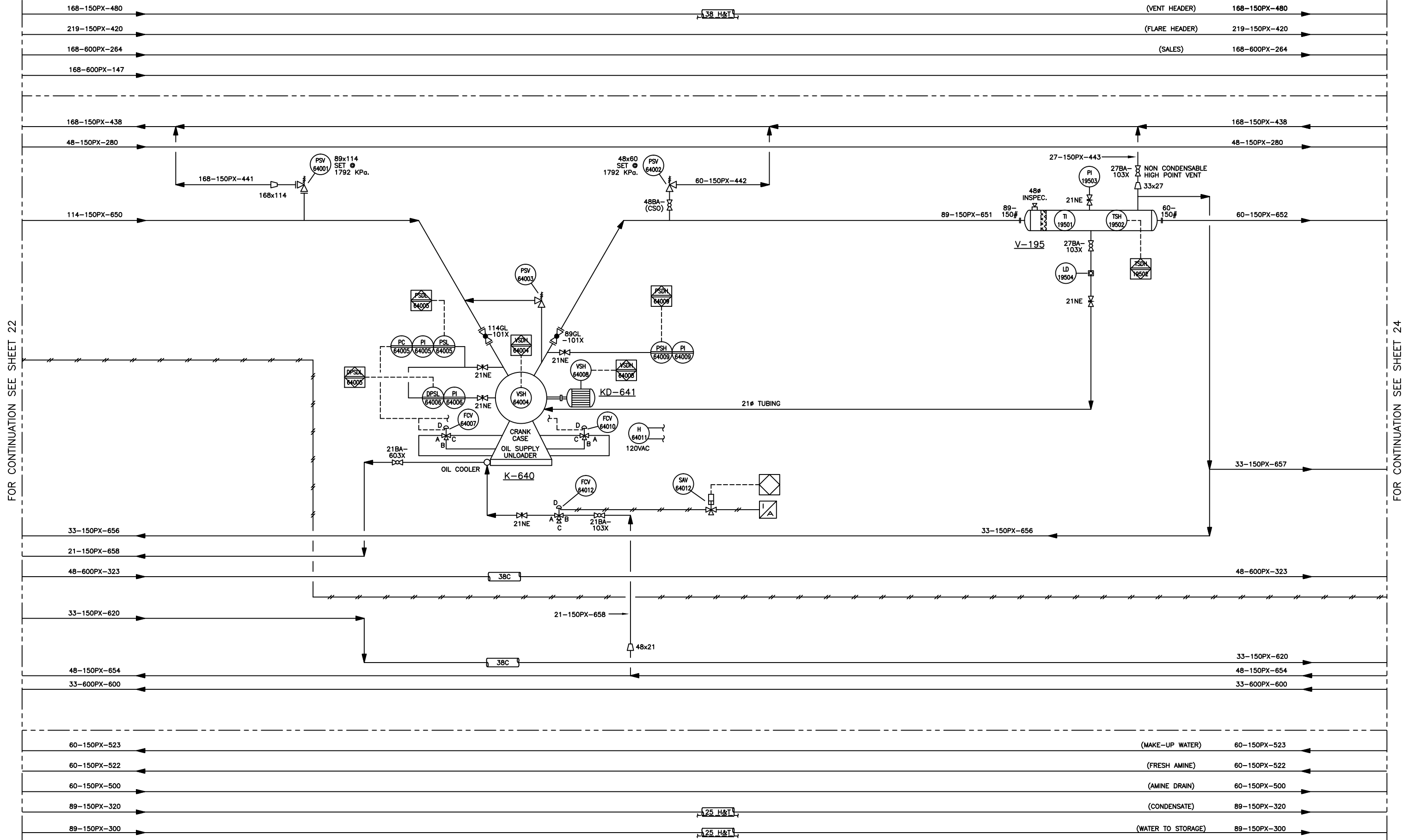
FOR CONTINUATION SEE SHEET 23

SHEET NUMBER	DRAWING NUMBER	REV
22 OF 36	15-10-62-06-W5-3022	11

K-640
 REFRIGERANT COMPRESSOR
 MYCOM MODEL P6WB
 43 USTR @ 70 KW, 1200 RPM

KD-641
 COMPRESSOR DRIVER
 ELECTRIC MOTOR
 75 KW. x P 480/3/60
 1.15 SF

V-195
 DISCHARGE OIL SCRUBBER
 324 O.D. x 610 S/S
 1792 KPa. @ -28.8°C/93°C
 1.59mm C.A.



FOR CONTINUATION SEE SHEET 22

FOR CONTINUATION SEE SHEET 24

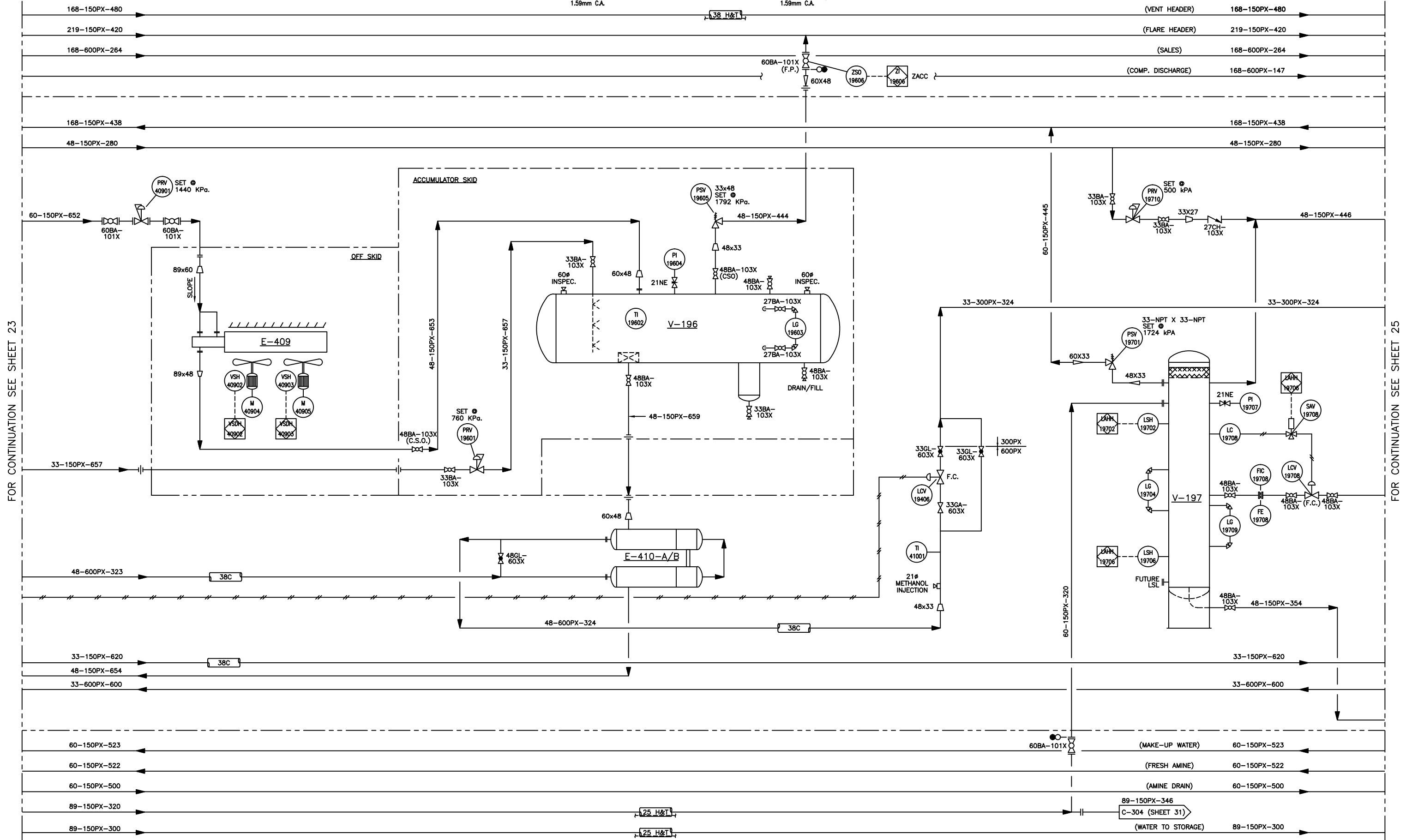
SHEET NUMBER	DRAWING NUMBER	REV
23 OF 36	15-10-62-06-W5-3023	11

E-409
REFRIGERANT CONDENSER
FAN DRIVER : (2) 5.5 KW. xP
1800 RPM. 460/3/60

V-196
REFRIGERANT ACCUMULATOR
610 O.D. x 2438 S/S
1792 KPa. @ -28.8/65°C
800T : 114 O.D. x 295 LG.
1.59mm C.A.

E-410-A/B
REFRIGERANT SUBCOOLER
48 O.D. x 6096 O/A (2-PASS)
TS : 8894 KPa. @ -28.8/66°C
SS : 1792 KPa. @ -28.8/66°C
1.59mm C.A.

V-197
CONDENSATE FLASH SEPARATOR
406 O.D. x 2743 S/S
1724 KPa. @ 66°C



FOR CONTINUATION SEE SHEET 23

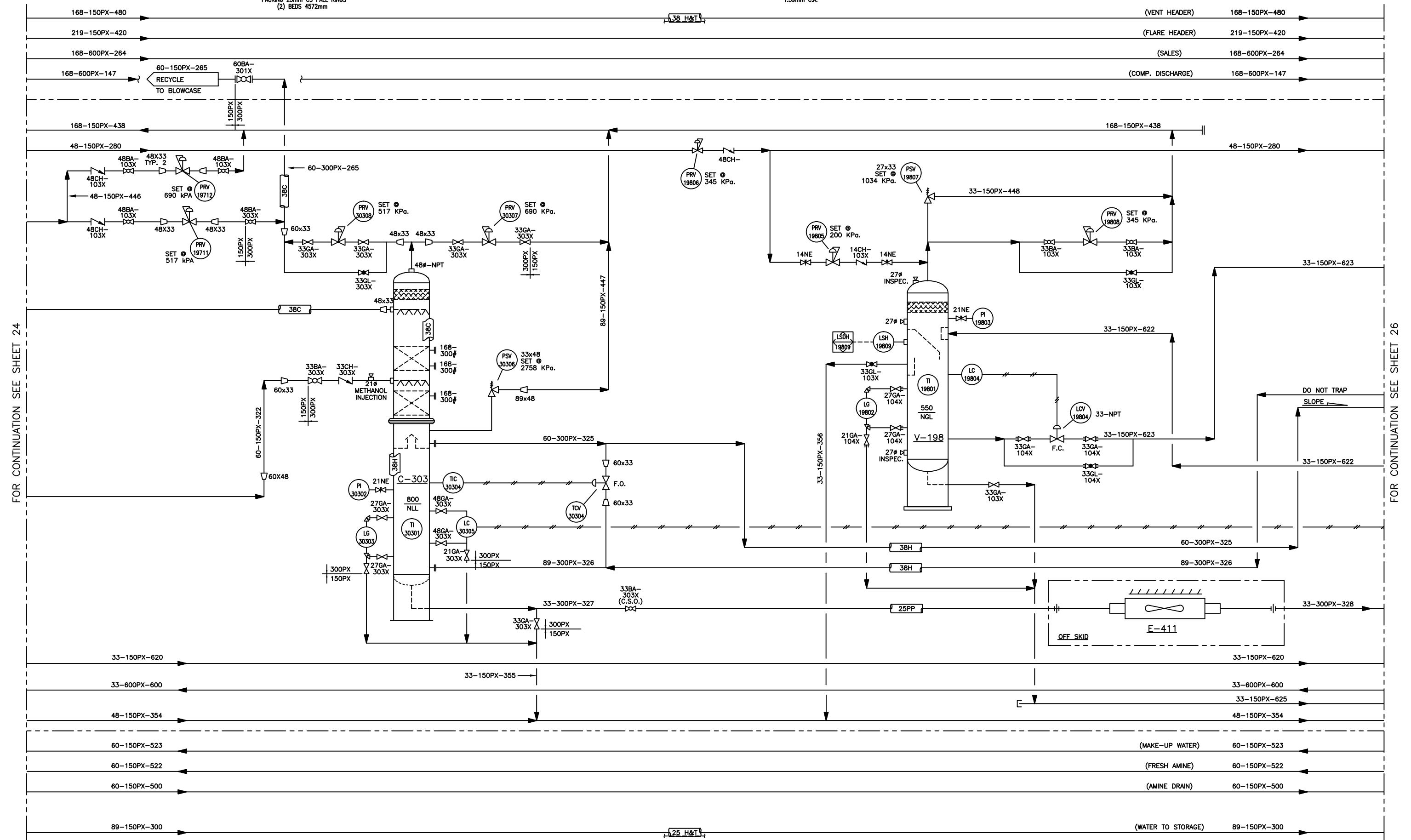
FOR CONTINUATION SEE SHEET 25

SHEET NUMBER	DRAWING NUMBER	REV
24 OF 36	15-10-62-06-W5-3024	11

C-303
STABILIZER
 324 O.D. x 14655 S/S
 2758 KPa. @ -28.8°/204°C 1.59mm C.A.
 PACKING 25mm CS PALL RINGS
 (2) BEDS 4572mm

V-198
GLYCOL FLASH TANK
 324 O.D. x 1524 S/S
 1034 KPa. @ -28.8°/93°C
 1.59mm C.A.

E-411
PRODUCTION COOLER
 2758 KPa. @ 204°C 1.59mm C.A.
 COMMON FRAME w/ E-409



FOR CONTINUATION SEE SHEET 24

FOR CONTINUATION SEE SHEET 26

SHEET NUMBER	DRAWING NUMBER	REV
25 OF 36	15-10-62-06-W5-3025	11

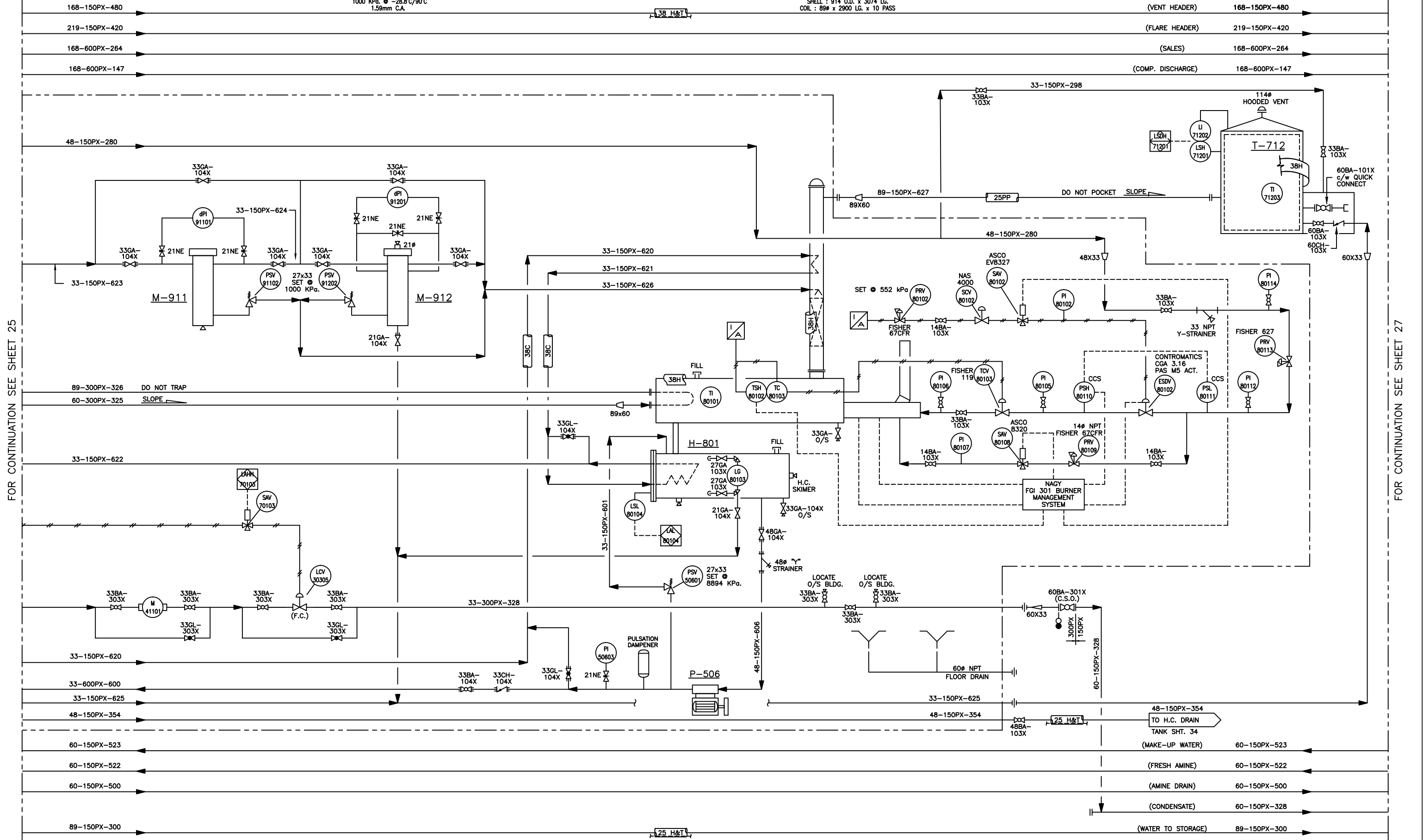
M-911
GLYCOL FILTER
CUNO MODEL 1B1

M-912
CARBON ABSORBER
PSL STD.
324 O.D. x 780 O/A
1 ELEMENT HOUSING
1000 KPa. @ -28.8°C/90°C
1.59mm C.A.

P-506
GLYCOL INJECTION PUMP
UNION SX3
3.0 L/MIN. @ 8960 KPa. c/w
1.5 KW. 460/3/60 xP MOTOR

H-801
GLYCOL REGENERATOR
PSL STANDARD 150 KW UNIT (MODIFIED)
c/w WEIGHTED PRESSURE RELIEF OPENING
AND STACK DOWNDRAFT DIVERTER (NON-CODE)
SHELL : 914 O.D. x 3074 LG.
COIL : 89# x 2900 LG. x 10 PASS

T-712
GLYCOL DRAIN TANK
50 BBL/ DOUBLE WALLED
INTERNALLY COATED



FOR CONTINUATION SEE SHEET 25

FOR CONTINUATION SEE SHEET 27

SHEET NUMBER	DRAWING NUMBER	REV
26 OF 36	15-10-62-06-W5-3026	11