V-48
SWEETENING TOWER
SIZE: ø48" x 9'-8" S/S
MAWP: 1440 psig @ 130°F
MDMT: -20°F @ 1440 psig
C.A.: 1/8"
SOUR SERVICE
PWHT: YES
X-RAY: RT-1

V-36
VERTICAL SEPARATOR
SIZE: ø36" x 7'-6" S/S
MAWP: 1440 psig @ 130°F
MDMT: -20°F @ 1430 psig
C.A.: 1/8"
SOUR SERVICE
PWHT: YES
X-RAY: RT-1

TK-100
FRESH CHEMICAL
STORAGE TANK
200 BBL CAPACITY

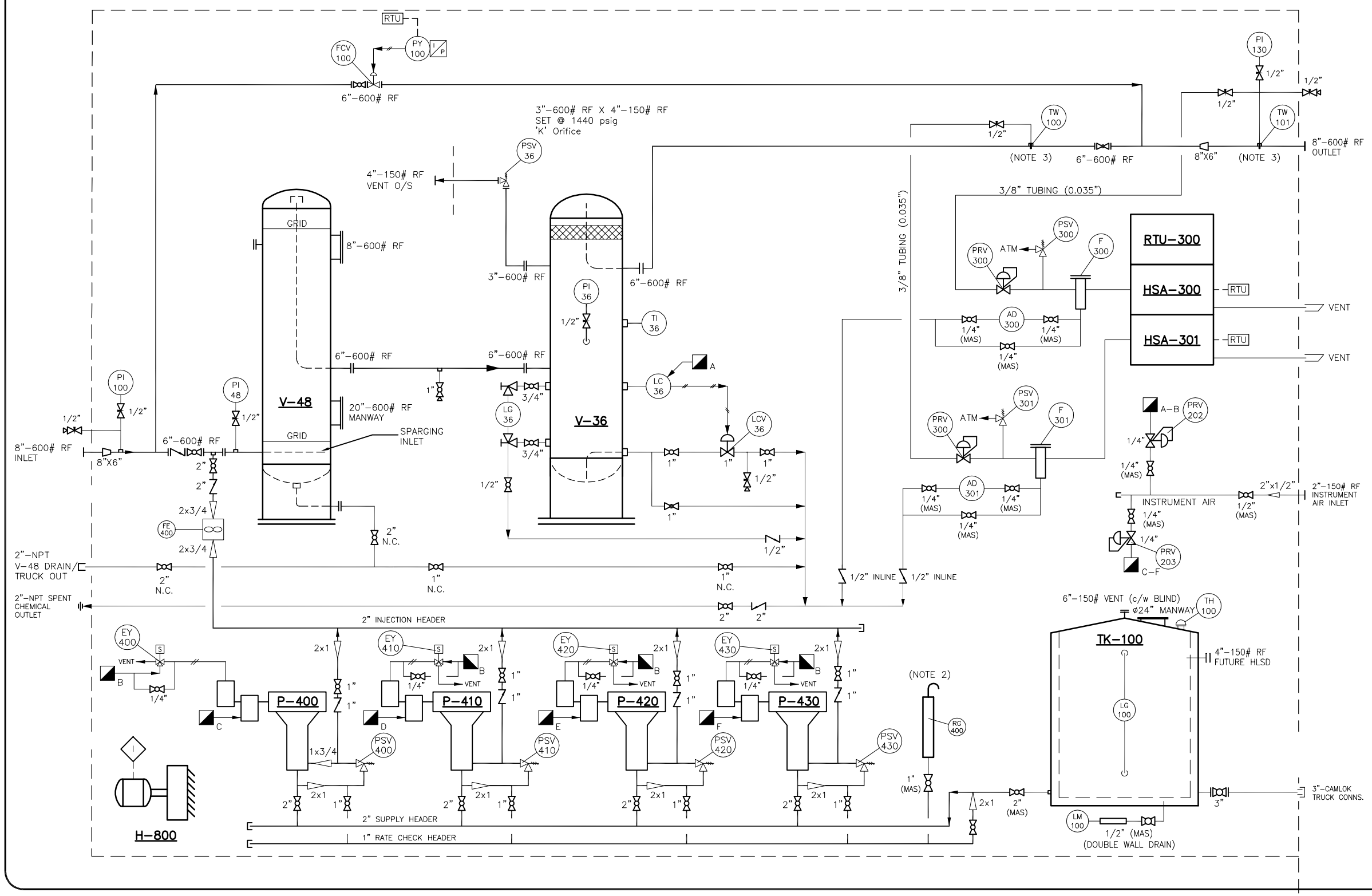
HSA-300
ENVENT MODEL 331
110V

HSA-301
ENVENT MODEL 331
110V

RTU-300
ABB TOTALFLOW 6790

H-800
BUILDING HEATER
RUFFNECK
MODEL: FX5-480360-050-T

P-400/410/420/430
CHEMICAL PUMP
WILLIAMS
SERIES CRP2250W-800ATG



BILL OF MATERIALS

ITEM	QTY	DESCRIPTION	MODEL #	MANUFACT.	P/N
AD-300/301	2	AUTO DUMP VALVE	11LD	ARMSTRONG	VA-1165
F-300/301	2	1/4"- FILTER, MAWP 250 psig.	FRAT066	UNITED FILTRATIION	AN-1032
LC-36	1	2"- NPT LEVEL CONTROLLER. DIRECT/SNAP ACTING, C/W SS VERTICAL FLOAT, 6-30 psig OUTPUT	1001A	NORRISEAL	CO-1065
LCV-36	1	1"- NPT CONTROL VALVE, FAIL CLOSED, 6-30 psig ACTUATOR PRESSURE, 0.25" SEAT	2220	NORRISEAL	VA-1433
LG-36	1	LEVEL GAUGE (REFLECTIVE) c/w 3/4" NPT GAUGE COCKS	91RM	QUEST-TECH	GG-1074/ VA-1318
LG-100	1	LEVEL GAUGE - INCLUDES SEALED SOUR PULLEY, PVC FLOAT, 10' FLOAT GUIDE PACKAGE, 10' INDICATOR & GUIDE PACKAGE AND A 10' X 9m3 GAUGE BOARD	-	-	UFS GB-10' SOUR/GG-1296
LM-100	1	LEAK MONITOR	-	LOUVRES & GUAGES	GG-1075
PI-48/36/ 100	3	1/2"- NPT BOTTOM MOUNT x 4.5" DIAL, LIQUID FILLED PRESSURE GAUGE, 0-2000 psig	-	WGI	GG-1103
PRV-300/ 301	2	1/4" NPT REGULATOR, NICKLE PLATED BODY. 0-120 psig RANGE.	P39	BELLOFRAM	PR-1068
PRV-202/ 203	1	1/4"- NPT REGULATOR, 30# SPRING C/W PI, MAWP 250 psig	962-275-000/ WJ2052	BELLOFRAM	PR-1141 GG-1215
PSV-36	1	3"- 600# RF X 4"-150# RF RELIEF VALVE. 'J' ORIFICE. SET @ 1440 PSI	-	-	-
PSV-300/301	2	RELIEF VALVE. SET @ 125 psig	RH4A	PARKER	VA-1236/VA-1201
TH-100	1	8" THIEF HATCH 32oz. PRESSURE/0.4oz. VACUM. SOUR	TH8S-32	WENCO	TK-1031
TI-36	1	1/2"- NPT BK. MOUNT x 3" DIAL, 0 - 250 °F DUAL c/w 3/4" NPT x 6" LONG TW	-	WGI	GG-1193/ GG-1228
TW-100/101	2	THERMOWELL 1/2 x 1/2" x 2 1/2" LG. (NOTE 4)	-	WIKA/WGI	GG-1216
FCV-100	1	6"- 600# RF CONTROL VALVE, WCC STEEL, 7" EQ% CAGE GUIDED, TRIM # 85C 316 SST/ENC, 316 SST PLUG, SEAT RING MATERIAL 316 SST (PTFE SOFT SEAT), STEM NITRONIC 50 SST, PACKING DOUBLE PTFE, BODY/BONNET BOLTING 17-4PH STUDS/2HM NUTS, COMPLIES TO MR0175-2002, FISHER 667 SPRING AND DIAPHRAGM ACTUATOR, SIZE 70 FAIL CLOSED 2" TRAVEL, 0 TO 33 PSIG OPERATING RANGE	667-45 ET	CVS	-
PY-100	1	FIELDVUE POSITIONER, 4-20 MA LOOP POWERED ELECTRONICS, QUICK REPEATABLE AUTO-CALIBRATION, REMOTE CALIBRATION AND CONFIGURATION,- LINKAGE-LESS NON-CONTACT POSITION FEEDBACK, AUTO CALIBRATE-AC DIAGNOSTIC TIER, LOW BLEED RELAY, CSA EXPLOSION PROOF/INTRINSIC SAFE, -40 DEG F, ALUMINUM ENCLOSURE, 1/4" NPT FISHER 67CFR PRESSURE REGULATOR, ALUMINUM CONSTRUCTION, 0-35 PSIG ADJUSTABLE OUTPUT RANGE, TAPPED BONNET, C/W INTEGRAL MTG TO A DVC, 316 SST TUBING AND SWAGELOK FITTINGS	DVC6200	CVS	-

VALVES

QTY.	DESCRIPTION	MODEL#	MANUFACT.	P/N
2	6"- 600# RF. RP. BALL VALVE, LEVER OP. NACE TRIM	-	WKM	VA-1593
1	3"- 150# RF. RP. BALL VALVE, LEVER OP.	EB03-0F012FA123TL	ENFLOW	VA-1127
6	2"- 3000# NPT RP BALL VALVE, STD TRIM, LEVER OP.	-	WKM	VA-1727
3	1"- 3000# NPT RP BALL VALVE, STD TRIM, LEVER OP.	-	WKM	VA-1599
2	3/4"- 3000# NPT RP BALL VALVE, STD TRIM, LEVER OP.	-	WKM	VA-1597
1	1/2"- 3000# NPT RP BALL VALVE, STD TRIM, LEVER OP.	-	WKM	VA-1596
2	1/2"- 2000# NPT RP. BALL VALVE, LEVER OP.	-	MAS	VA-1731
8	1/4"- 2000# NPT RP. BALL VALVE, LEVER OP.	-	MAS	VA-1103
1	6"- 600# RF GLOBE VALVE	-	PK	VA-2112
1	2"- 800# NPT GLOBE VALVE	-	GWC	VA-2123
1	6"- 600# RF CHECK VALVE. NACE TRIM	-	KF	VA-1990
1	2"- 800# NPT CHECK VALVE.	-	NEWAY	VA-2163
1	1/2"- 3000# NPT CHECK VALVE.	-	NEWCO	VA-2006
2	1/2"- 800# NPT LINE CHECK VALVE.	-	PLAINSMAN	VA-1862
4	1/2"- 6000# NPT FxF, NEEDLE VALVE.	-	WGI	VA-1117
4	1/2"- 6000# NPT FxF, NEEDLE VALVE.	-	WGI	VA-1044

TUBING NOTES:
TUBING: 3/8" O.D. x 0.035" WT 304L WELDED
TUBE FITTINGS: PARKER CAD. PLATTED
VENT ALL NORMAL BLEEDING DEVICES OUTSIDE
OTHER: N/A

PIPING CLASS: A (150 ANSI RF)
SERVICE: SWEET, NORMAL, STD-TEMP
DESIGN: 275 PSIG @ -20°F/+140°F
CORR. ALLOW.: 0.0625" (APPROX.)
NPT PIPING: SA-106-B SCH 80.
NPT FITTINGS: SA-105-N 3000#
OTHER: HYDROTEST PRESSURE 428 PSI

PIPING CLASS: CS (600 ANSI RF)
SERVICE: SOUR, NORMAL, STD-TEMP
DESIGN: 1428 PSIG @ -20°F/+140°F
CORR. ALLOW.: 0.125" (APPROX.)
NPT PIPING: SA-106-B SCH 160.
NPT FITTINGS: SA-105-N 3000#
OTHER: HYDROTEST PRESSURE 2220 PSI

GENERAL NOTES:-

1.) VENT ALL INSTRUMENTS OUTSIDE OF BUILDINGS.
2.) VENT TO ABOVE TOP OF TANK(S). (TK-100).
3.) CUT THERMOWELL TIP AT 45° AND INSTALL WITH ANGLED PORTION AWAY FROM THE FLOW.

REV.	DATE	DESCRIPTION	DRAWN	CHECK	DESIGN	APPR.
0	03-JUN-13	ISSUED FOR APPROVAL	CB		LM	

ULTRAFAB INDUSTRIES LTD.

CLIENT. TOURMALINE OIL CORP.

TITLE. 200 BBL DOUBLE WALL TANK, c/w SWEETENING TOWER & SEPARATOR - P&ID

SCALE.	DRAWING No. & Computer File #	DATE	TIME
N.T.S.	PD139-404	02-05-13	16:13

QUOTE REF:- N/A FILE:- Projects 2013/139-400/139-404/Drawings/PD139-404

THIS DRAWING AND THE DESIGN IT COVERS ARE CONFIDENTIAL AND THE PROPERTY OF ULTRAFAB INDUSTRIES LTD., AND SHALL NOT BE DISCLOSED TO OTHERS OR REPRODUCED IN ANY MANNER OR USED FOR ANY PURPOSE WHATSOEVER EXCEPT BY WRITTEN CONSENT OF ULTRAFAB.