

EQUIPMENT SPECIFICATIONS

HORIZONTAL TREATER TR-820

1829 mm ID x 7315 mm S/S x 517 kPag DP at 4/93°C, 0 mm CA.

72" ID x 24'-0" S/S x 75 Psig DP at 40/200°F, 0" CA.

Horizontal direct fired treater, inlet downcomer to free water section.

One 'U'-tube firetube, 1.0 MMBTU/hr. (based on 10,000 BTU/hr/sq.ft.).

Flame arrestor with adjustable air damper.

Removable stack.

Spot radiography, no post weld heat treatment.

SA-516-70 Shell and heads, SA-106-B pipe, SA-105 forgings.

ASME Section VIII Division 1 Code design.

Inspection by Alberta Boilers Branch.

6" Mist extractor.

Heating and settling section baffles.

Inlet horseshoe baffle.

2 - 4" Anode connections, 1 in heating, 1 in settling section.

3- Sample funnels.

2 Sets "Clean-Knit" coalescer in oil section.

2 Saddles, lifting lugs.

2" Fibreglass board insulation at outside building, c/w smooth aluminum cover.

No insulation inside building.

Sandblast, prime, paint exposed surfaces, 2 coats Valspar high build epoxy.

Internal sandblast Nace RP-01-78.

Coat 12 - 15 mils DFT Devco 253 epoxy amide.

Internally coated water outlet piping.

Maloney Industries Inc. Serial Number

96-C3731-3000

Canadian Registration Number

N-3628.2

EQUIPMENT SPECIFICATIONS cont'd....

SKID

3048 mm Wide x 10217 mm overall length x 305 I-Beam skid.

10'-0" Wide x 33'-6" overall length x 12" I-Beam skid.

Open steel skid under vessel full length.

3/16" Checkerplate floor under building.

4 Lifting lugs.

Sandblast, prime, paint.

BUILDING

3048 mm Span x 3660 mm length end mount with gable roof.

10'-0" Span x 12'-0" length.

Eave height 3048 (10'-0") from top of skid beam.

Exterior sheathing 22 Ga. pre-painted steel.

Interior sheathing and roof 24 Ga. fluted aluminum.

Insulation rating - walls and roof R-12 c/w 4 mil poly.

Exterior colour Bone white walls, roof doors & burgundy roof flashing.

1 - Single door 915 mm x 2134 mm (3' x 7'), insulated steel door, panic hardware, lockset, 24" x 24" IWG window, check chain, hydraulic closer, steel door frames, extruded thresholds, weatherstrip.

2 - Windows 1015 mm x 1015 mm (40" x 40"), double glazed.

Sliding windows with half screen and latch.

Building with continuous base flashing strip.

Natural ventilation roof vent with manual damper and screen.

1 - Wall louvre 457 mm x 457 mm with manual closure and screen, mounted under window.

1 - Exhaust fan Penn Domex, 12 ACPH, explosion proof, mounted under window.

EQUIPMENT SPECIFICATIONS cont'd....

INSTRUMENT ENCLOSURE

800 mm High x 2000 mm long x 700 mm wide.

2'-7 1/2" High x 6'-6 3/4" long x 2'-3 9/16" wide.

Exterior sheathing 22 Ga. pre-painted steel.

Interior sheathing and roof 24 Ga. fluted aluminum.

Insulation rating - walls and roof R-12 c/w 4 mil poly.

Exterior colour bone white.

1 - Double door set 1829 mm x 1524 mm (6' x 5') complete with piano style hinges, check chain and locks.

2 - Wall louvres 305 mm x 305 mm (12" x 12").

Electric heater - Ruffneck. **Supplied by Northstar.

CONTROLS

<u>Tag No.</u>	<u>Description</u>
LCV-1	2" 150# Flangeless Masoneilan Camflex Model 35-35212 control valve, 316 SS body, 316 SS seat, shaft and hard faced plug, stellite bushing, full sized trim, 1.437" port, TFE packing, 3 - 15 Psig fail closed actuator.
LCV-2	2" 150# Flangeless Masoneilan Camflex Model 35-35212 control valve, 316 SS body, 316 SS seat, shaft and hard faced plug, stellite bushing, full sized trim, 1.00" port, TFE packing, 3 - 15 Psig fail closed actuator.
TCV-1	1" NPT Linc Model 8100-114-533 control valve, 23 sq. inch top works, fail closed, 6000 Psi M.W.P., throttling soft acetal trim, cast steel body, 3/8" orifice, visual indicator.
ESDV-1	1" NPT Linc Model 500-111-112 control valve, 23 sq. inch top works, valve fails closed, 600 Psi M.W.P., integral seat, soft molded nitrile plug for tight shutoff, visual indicator.
PCV-1	2" 150# RF Sur-Flo Model SF10V-C-75-S63-X-2"(150) back pressure regulator, wafer style, carbon steel body, SF75 sleeve material, 316 SST cones, complete with charge system expansion bottle, 1/4" pipe fittings and 1/4" needle valve,
LC-1	2" NPT Norriseal Series 1001A Model 2SM60-N-TRDH-AB level control, direct acting, 3 - 15 Psi output signal, right hand mount, throttling control, 303 SST bearings, SS displacer, teflon O-rings, 1/66" x 12" horizontal displacer.
LC-2	2" 150# RF Magtech liquid level gauge. ** SUPPLIED BY NORTHSTAR ENERGY**

CONTROLS cont'd....

<u>Tag No.</u>	<u>Description</u>
LSL-1, LSH-1	2" NPT Norriseal Series 1001A Model 2SM60-ELDF-NACE electric level switch, 2" MNPT connection, SPDT explosion proof switch, left hand mount, viton/SS seal/bearing, SST-O float material, horizontal mount, 720 Psig max. rating, complete with 1.66" x 12" 316 SS displacer.
PSL-1	SOR Model 4BA-KB4-M4C2A pressure switch, 2 - 25 Psi pressure range, set point 69 kPa decreasing, 1 SPDT switch, viton O-ring, 316L SS diaphragm, 1/2" NPTF pressure connection, 316 SS CSA Class 1, Division 1, Group D explosion proof, sour service.
PSH-1	SOR Model 6AG-EF3-M4C2A pressure switch, 12 - 100 Psi pressure range, set point 465 kPa increasing, 1 SPDT switch, viton O-ring, 316L SS diaphragm, 1/2" NPTF pressure connection, 316 SS CSA Class 1, Division 1, Group D explosion proof, sour service.
TC-1	Kimray Model HT-12 thermostat base assembly, indirect acting bimetal sensing element, complete with 3/4" NPT x 1/2" NPT x 12" long 316 SS thermowell, 0.385" bore.
TSDH-1	Kimray Model HT-12M high temperature shutdown, indirect acting, manual reset, complete with 3/4" NPT x 1/2" NPT x 12" long 316 SS thermowell, 0.385" bore.
FRPRTR-1	Barton Model 202-E 3-pen flow recorder, type 199 DPU, C1018 CS housing, 2500 Psi safe working pressure, differential pressure range, 0 - 100 in. H ₂ O, static pressure range 0 - 100 Psig, temperature range, 0 - 200°F, VB case compensated, 10' armoured capillary, 12" bendable extension, sour service requirements, 3/4" NPT x 4" long 316 SS thermowell.

CONTROLS cont'd....

<u>Tag No.</u>	<u>Description</u>
FE-1	2" 150# RFWN Valor quick change orifice fitting, two chamber, Sch. standard, teflon seal, 1 - 316 SS orifice plate, bore 1.375".
FFSD-1	J.W. Nagy Model FGI-100 flame guard/ignition system including: <ul style="list-style-type: none">- Type 5 & 6 fibreglass enclosure, 8" x 6" x 4" CSA Class 1 Division 2 approval.- FGI-100-M master control card.- FGI-100-T termination card.- 446 SS thermocouple probe complete with connectors.- FGI-100-S DC spark generator c/w base, coil and circuit card.- High temp ignition wire (10' req'd).- Probe/electrode mounting bracket (1/2" size).- Ensure unit is capable of auto re-light.- Remote start and stop capability.- Flame fail contacts for remote detection.
PRV-1	1" NPT Fisher Model 627 regulator, ductile iron, aluminum case, nitrile disk assembly with aluminum trim, nitrile O-ring and diaphragm, 1/4" diameter port, spring range 15 - 40 Psi, maximum inlet pressure 1000 Psi.
PRV-2,3,4,5	1/4" NPT Fisher 67AFR regulator 5 - 35 Psi. Complete with Wika Model 131.11 pressure gauge, dry case, 2" dial, SS bourdon tube, tip and socket, 0 - 30 Psi dual range, 1/4" center back connection.
LG-1,2	Daniels Model 91TL transparent level gauge, 12.625" visible length, low pressure, complete with type 1S gauge valve, 3/4" MNPT union vessel connection, 1/2" FNPT gauge connection, 1/2" FNPT drain connection.

CONTROLS cont'd....

<u>Tag No.</u>	<u>Description</u>
PSV-1	2" 150# RF x 3" 150# RF Farris Model 26JA10-120 conventional design relief valve, carbon steel body and bonnet, 316 SS trim, 517 kPa (75 Psig) set pressure, aluminized spring,.
SAV-1,2	1/4" NPT Asco Model EF8320G200 3-way direct acting solenoid valve, Universal operation, 24V DC, 3/32" orifice, 303 SS body, CSA Class 1, Division 1, Group D explosion proof.
PI-1	Wika Model 232.54 pressure gauge, 4" dial, 0 - 100 Psig dual scale, 1/2" back connection.
PI-2	Wika Model 232.54 pressure gauge, 4" dial, 0 - 30 Psig dual scale, 1/2" bottom connection.
PI-3	Wika Model 232.54 pressure gauge, 4" dial, 0 - 100 Psig dual scale, 1/2" bottom connection.
TI-1,2	Trend Model 50090 temperature gauge, 5" dial, 0 - 250°F/-20 to 120°C dual scale, 1/2" NPT back connection, 9" stem. 3/4" NPT x 1/2" NPT x 9" long 316 SS thermowell, 0.260" bore.

VALVES

<u>Tag No.</u>	<u>Description</u>
V-1	2" 150# RF G.W.C. Model CAA15-BG ball valve, regular port, 1-piece body, floating ball, sour trim, handle operated, WCB CS body, 316 SS ball and stem, teflon seat, teflon/graphite seals.
V-3	1" NPT 3000# K.F. Model 6104-11231 Series B ball valve, regular port, 3-piece threaded body, sour trim, handle operated, WCB CS body, 316 SS ball and stem, Delrin seats and viton seals.
V-4	3/4" NPT 3000# K.F. Model 6103-11231 Series B ball valve, full port, 3-piece threaded body, handle operated, WCB CS body, 316 SS ball and stem, Delrin seats and viton seals.
V-5	1/2" NPT 3000# K.F. Model 6102-11231 Series B ball valve, full port, 3-piece threaded body, handle operated, WCB CS body, 316 SS ball and stem, Delrin seats and viton seals.
V-6	1/2" FNPT x 1/2" FNPT Precision General Model V508-SCT hand valve, carbide ball hard seat, teflon pressure core seal, 0.187" orifice.
V-7	1/4" FNPT x 1/4" FNPT Precision General Model V502-SCT hand valve, carbide ball hard seat, teflon pressure core seal, 0.187" orifice.
V-8	2" 150# RF G.W.C. Model CBA15-BG ball valve, full port, 2-piece body, floating ball, sour trim handle operated, WCB CS body, 316 SS ball and stem, teflon seat, teflon/graphite seals.

VALVES cont'd....

<u>Tag No.</u>	<u>Description</u>
V-9	3" 150# RF G.W.C. Model CAA15-BG ball valve, regular port, 1-piece body, floating ball, sour trim, handle operated, WCB CS body, 316 SS ball and stem, teflon seat, teflon/graphite seals.
V-10	4" 150# RF G.W.C. Model CAA15-BG ball valve, regular port, 1-piece body, floating ball, sour trim, handle operated, WCB CS body, 316 SS ball and stem, teflon seat, teflon/graphite seals.
V-11	3" 150# RF K.F. Model 7778-1132KA1921 Series 35 swing check valve, bolted cap, WCB CS body, Nace trim, 316 SS disc, shaft and bushings, standard bonnet seal with no spring, integral metal/resilient seat and disc configuration, viton seal material.
V-12	2" 150# RF K.F. Model 7776-1132KA1921 Series 35 swing check valve, bolted cap, WCB CS body, Nace trim, 316 SS disc, shaft and bushings, standard bonnet seal with no spring, integral metal/resilient seat and disc configuration, viton seal material.
V-13	1" NPT 2220 MOP K.F. Model 7677-1713K191 swing check valve, bolted cap, CS body, 316 SS disc, shaft and bushings, integral metal/resilient seat and disc, Buna-N seal material.
V-14	1/2" FNPT x 1/2" FNPT Precision General Model M-502-SCT 5-valve manifold, SS body, carbide ball, teflon packing, 0.187" orifice.
V-15	2" 150# RFRO Texsteam Model 6104 plug valve, screwed bonnet, WCB carbon steel body, regular opening.

VALVES cont'd....

<u>Tag No.</u>	<u>Description</u>
V-16	1" NPT 3000# K.F. Model 6104-11231 Series B ball valve, regular port, 3-piece threaded body, sour trim, spring return handle, WCB CS body, 316 SS ball and stem, Delrin seats and viton seals, complete with Watts SR handle.