



## SWEET NATURAL GAS

### PNEUMATIC TERMINATIONS

(C10)	SUCTION PRESSURE STG. ONE [PC] [PST] [PS] [PT]
(40)	ENGINE CRANK SIGNAL
(50)	AUX. LUBE PUMP SIGNAL
(60)	FUEL GAS VALVE SIGNAL
(70)	INSTRUMENT GAS [PT]
(90)	GOVERNOR SPEED CONTROL SIGNAL
(92)	SUCTION CONTROL VALVE SIGNAL
(53)	AUTOBLOWDOWN VALVE SIGNAL
(100)	ENGINE OIL PRESSURE [PT]
(101)	COMPRESSOR OIL PRESSURE [PT]
(103)	FUEL GAS PRESSURE [PT]
(105)	START GAS PRESSURE [PT]
(106/107)	ENGINE MANIFOLD PRESSURE L. & R. [PT]

### ELECTRIC TERMINATIONS

(15)	HIGH DISCHARGE TEMP. CYLINDER #1
(16)	HIGH DISCHARGE TEMP. CYLINDER #2
(17)	HIGH DISCHARGE TEMP. CYLINDER #3
(18)	HIGH DISCHARGE TEMP. CYLINDER #4
(36)	ENGINE RUN SIGNAL
(30)	HIGH TEMP. CATALYTIC CONVERTER
(31)	HIGH SUCTION TEMP. CYLINDERS
(24)	HIGH LIQUID LEVEL SCRUBBER STG. ONE
(25)	HIGH LIQUID LEVEL SCRUBBER STG. TWO
(26)	HIGH LIQUID LEVEL SCRUBBER STG. THREE
(8)	FUEL FILTER HIGH LIQ. LEVEL
(5)	VIBRATION COOLER
(6)	VIBRATION COMPRESSOR
(7)	VIBRATION ENGINE
(19)	HIGH TEMPERATURE ENGINE OIL
(20)	HIGH TEMPERATURE COMPRESSOR OIL
(4)	HIGH TEMPERATURE ENGINE J.W.
(3)	LOW PRESSURE ENGINE OIL
(2)	LOW PRESSURE COMP. OIL
(21)	LOW LEVEL ENGINE OIL
(22)	LOW LEVEL COMP. OIL
(1)	LUBRICATOR NO FLOW SWITCH (2x)
(28/29)	HIGH TEMPERATURE ENGINE TURBO AIR L. & R.
(23)	LOW LEVEL E.J.W. SURGE TANK
(27)	LOW LEVEL T.A.W. SURGE TANK
(11)	DISCHARGE PRESSURE STG. ONE [PST] [PS] [PT]
(12)	DISCHARGE PRESSURE STG. TWO [PST] [PS] [PT]
(13)	DISCHARGE PRESSURE STG. THREE [PST] [PS] [PT]

### GENERAL NOTES

#### 1. INSTRUMENTATION

- TEMP. & PRESS. GAUGES SHALL BE DUAL SCALE
- INSTRUMENT MEDIUM TO CLEAN DRY FUEL GAS
- CONTROL PANEL POWERED BY - 24 V DC
- PROCESS TUBING TO BE 1/4" OD x .035" w.t. CAD PLATED CS
- FITTINGS TO BE CAD PLATED c/v S.S. FERRULES
- INSTRUMENT TUBING TO BE 1/4" OD x .035" w.t. CAD PLATED CS
- FITTINGS TO BE CAD PLATED c/v S.S. FERRULES
- LUBE OIL TUBING TO BE OD AS NOTED x .035" w.t. CAD PLATED CS
- FITTINGS TO BE CAD PLATED c/v S.S. FERRULES
- TUBING RUNS IN TRAFFIC AREAS SHALL BE PROTECTED WITH REMOVABLE COVER
- ON SKID TUBING BY BIDELL
- ON SKID I.S. WIRING (c/v E.M.T. CONDUIT) BY BIDELL
- ON SKID ELECTRICAL BY BIDELL (AS PER SCOPE OF SUPPLY)

#### 2. PROCESS PIPING

- CONSTRUCTED IN ACCORDANCE WITH ANSI B31.3
- HYDROSTATIC TESTED TO 1.5 x DESIGN PRESS. • AMBIENT
- CORROSION ALLOWANCE = 0.0625 INCHES
- RADIOGRAPHIC EXAMINATION = 25 % OF WELDS 100% X-RAY
- STRESS RELIEVED - NONE
- EXTERNALLY SANDBLASTED TO SSPC SP-6
- INTERNALLY POWER CLEANED
- ALL FLANGED RELIEF VALVES SHALL BE BRACED BACK TO PIPING OR VESSEL
- INLETS OF ALL SCREWED RELIEF VALVES SHALL HAVE XXH NIPPLE c/v TAPPED BLIND FLANGE AND GUSSETED BACK TO PIPING OR VESSEL
- PIPING TO BE ANCHORED TO STRUCTURAL MEMBER WITH BIDELL STANDARD STRAP TYPE HEAVY DUTY CLAMPS (NO "U-BOLT" TYPE)
- PROCESS SCREWED CONNECTIONS SHALL BE 3000# F.S. THREADOLETS
- ALL PIPING MATERIAL TO BE SA-106-B

#### 3. PROCESS PRESSURE VESSELS

- CONSTRUCTED IN ACCORDANCE WITH ASME SECTION VIII, DIV. 1
- HYDROSTATIC TESTED TO 1.5 x DESIGN PRESS. • AMBIENT
- CORROSION ALLOWANCE = 0.0625 INCHES
- RADIOGRAPHIC EXAMINATION = FULL PER UW 11a(5b) - 25 % OF WELDS 100% X-RAY (MIN. ONE WELD PER VESSEL)
- STRESS RELIEVED - 1150 Deg. F. / ONE HOUR (BOTTLES ONLY)
- EXTERNALLY SANDBLASTED TO SSPC SP-6
- INTERNALLY CLEANED, PICKLED, NEUTRALIZED, WASHED AND OILED (BOTTLES ONLY)
- SCREWED CONNECTIONS ON VESSELS SHALL BE 3000# F.S. THREADOLETS

#### 4. CUSTOMER NOTES

- COLOR OF PACKAGE: - GRATING BLACK
- UNIT RUSTOLEUM SILVER GRAY
- EXHAUST AND MUFFLER ALUMINUM HIGH TEMP.
- BUILDING BONE WHITE c/v SAPPHIRE BLUE TRIM
- LSD: 7 - 13 - 56 - 4 - V4M

**RELEASED**  
FOR FABRICATION:

CUSTOMER PER \_\_\_\_\_ DATE \_\_\_\_\_  
ENGINEERING PER \_\_\_\_\_ DATE \_\_\_\_\_  
SHOP PROD. PER \_\_\_\_\_ DATE \_\_\_\_\_

REV	DATE	DESCRIPTION
C	JAN31	PER CUSTOMER MARK-UP
B	DEC 7	PER CUSTOMER FAX
A	NOV24	PER CUSTOMER MARK-UP

DRAWN K. POREMSKY  
DATE FEB 28/95  
SCALE N.T.S.  
CHK'D

### PROCESS and INSTRUMENTATION FLOW DIAGRAM

FOR:

WAUKESHA 7042 GSI / ARIEL JGK-4 / AIR-X 156 EH

**BIDELL EQUIPMENT**  
GAS COMPRESSION

#1, 3521 - 78 AVENUE S.E.  
CALGARY, ALTA. T2C-1J7

PHONE: (403) 236-7461  
FAX: (403) 279-9625

CUSTOMER: WASCANA ENERGY

PROJECT: FROG LAKE COMPRESSOR

SHOP ORDER: BIMAC 94-37 A

DWG. No: 94-37A-1A  
O-AS BUILT