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LINE IDENTIFICATION

A–B–CD–EF–GHIJ–KL,M–N

A : NOMINAL LINE SIZE IN INCHES

B : FLUID / SERVICE

A	AMMONIA	IG	INSTRUMENT GAS
AM	AMINE	L	LUBE OIL
C	CARBON DIOXIDE	N	NITROGEN
CO	CARBON MONOXIDE	NG	NATURAL GAS
CW	COOLING WATER	O	OXYGEN
F	FREON	P	PROPANE
FG	FUEL GAS	PG	PURGE GAS
G	GLYCOL	R	REFRIGERANT
H	HYDROGEN	S	STEAM
HE	HELIUM	SG	SYNGAS
HG	HYDROCARBON GAS	V	PRODUCED WATER
HL	HYDROCARBON LIQUID	W	WATER
IA	INSTRUMENT AIR		

C : EQUIPMENT TYPE / MODIFIER (IF REQUIRED)

B	BLOWER OR FAN	H	HEATER
C	COMPRESSOR	JB	JUNCTION BOX
CPL	CONTROL PANEL	P	PUMP
D	DRIVER (MOTOR/ENGINE)	T	TOWER OR TANK
E	EXCHANGER	UH	UNIT HEATER
F	FILTER	V	PRESSURE VESSEL
FS	FLARE STACK		

D : EQUIPMENT NUMBER:
101 TO 999 SEQUENTIAL NUMBERS

CD LINES TO/FROM SKID CALLED UP AS
INLET, OUTLET, HEADER, DRAIN, SUPPLY, ETC.

EF : LINE NUMBER:
E : 1 TO 9 SEQUENTIAL NUMBERS FROM EQUIPMENT
1.1 FOR 1ST BRANCH CONNECTION FROM 1ST LINE
1.2 FOR 2ND BRANCH CONNECTION FROM 1ST LINE
F : SKID/AREA REFERENCE LETTER (A, B, C....)
('X' SIGNIFIES OFF SKID/INTERCONNECTING PIPE)

GHIJ : PIPING SPECIFICATION
G : MATERIAL GROUP
C CARBON STEEL
L LOW TEMPERATURE CARBON STEEL
S STAINLESS STEEL
H : ANSI 16.5 FLANGE CLASS
0 NON CODE
1 150# 6 600# 15 1500#
3 300# 9 900# 25 2500#
I : LINE MATERIAL SPECIFICATION REFERENCE:
PIPING SPECIFICATION NUMBER
J : R RECIPROCATING PACKAGE SPECIFICATION
BLANK FOR PROCESS PACKAGE SPECIFICATION

KL,M : INSULATION (IF REQUIRED)
K : INSULATION TYPE

C	COLD	HT	HEAT TRACING
H	HOT	PP	PERSONAL PROTECTION
HC	HOT/COLD		

L : INSULATION THICKNESS IN MILLIMETERS OR INCHES (")
M : TRACING (IF REQUIRED)

ET	ELECTRICAL TRACING
GT	GLYCOL TRACING
ST	STEAM TRACING

N : PED PIPE IDENTIFICATION SUFFIX (IF REQUIRED)

SEP	SOUND ENGINEERING PRACTICE LINE
CATI	CATEGORY I LINE
CATII	CATEGORY II LINE
CATIII	CATEGORY III LINE

EXAMPLE: 3"–HG–V101–1A–C61R–HTXX,ET–CATII

- 3" – NOMINAL LINE SIZE
- HG – HYDROCARBON GAS
- V101 – PRESSURE VESSEL TAG NUMBER
- 1A – 1 FIRST LINE FROM VESSEL
  - A LOCATED ON SKID/AREA 'A'
- C61R – C CARBON STEEL LINE
  - 6 600# ANSI FLANGE RATING
  - 1 LINE MATERIAL SPECIFICATION REFERENCE
  - R RECIPROCATING PACKAGE PIPE SPEC.
- HT – HEAT TRACING INSULATION
- XX – THICKNESS IN MILLIMETERS OR INCHES (")
- ET – ELECTRIC TRACING
- CATII – PED CATEGORY II LINE

VALVE IDENTIFICATION

A"BCDE,F

A : NOMINAL VALVE SIZE IN INCHES

B : TYPE

A	ANGLE GLOBE	N	NEEDLE
B	BALL	P	PLUG
C	CHECK	S	START–UP STRAINER
G	GATE	T	TEE STRAINER
L	GLOBE	U	BUTTERFLY
M	MANIFOLD	Y	Y PATTERN STRAINER

C : BODY MATERIAL

B	BRONZE	L	LOW TEMP. CARBON STEEL
C	CARBON STEEL	S	STAINLESS STEEL
I	CAST IRON		

D : END CONNECTIONS

1	FLANGED 150#	B	BUTT WELD
3	FLANGED 300#	C	SW BY NPT
6	FLANGED 600#	F	NPT BY FLANGE (MANIFOLD)
9	FLANGED 900#	M	NPT MALE BY NPT FEMALE
15	FLANGED 1500#	N	NPT (THREADED)
25	FLANGED 2500#	S	SW (SOCKETWELD)
		T	TUBE (IE: SWAGELOK)

E : UNIQUE DESCRIPTION
REFER TO VALVE DATA SHEETS

F : MODIFIER

C	CHAIN OPERATOR	O	OXYGEN SERVICE/CLEANING
E	EXTENDED BONNET	P	FULL PORT DESIGN
G	GEAR OPERATOR	R	RTJ FLANGED
L	LOCKING DEVICE	S	SPRING HANDLE (CLOSE)
N	NACE TRIM	X	SPECIAL SPECIFICATIONS

EXAMPLE: 6"GC11,C

6"	VALVE SIZE	1	150#
G	GATE	1	API–600
C	CARBON STEEL	C	CHAIN OPERATOR

LINE CODE

- PRIMARY PROCESS LINE
- SECONDARY PROCESS LINE
- MINOR PROCESS LINE
- AUXILIARY PROCESS LINE
- INSTRUMENT/IMPULSE LINE
- ELECTRIC SIGNAL
- FILLED CAPILLARY TUBE
- PNEUMATIC LINE
- MECHANICAL LINK
- INSTRUMENT DATA LINK
- INTERCONNECTING PIPING
- SKID LIMIT
- FUTURE
- SONIC OR ELECTRO–MAGNETIC SIGNAL (GUIDED)
- SONIC OR ELECTRO–MAGNETIC SIGNAL (UN–GUIDED)

VALVE CONNECTIONS

(COMBINATIONS MAY BE USED)

- THREADED
- SOCKET WELDED
- BUTT WELDED
- FLANGED

VALVE TYPES

- ANGLE GLOBE VALVE
- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- DIAPHRAGM VALVE
- DUMP VALVE
- GATE VALVE
- GAUGE VALVE
- GLOBE VALVE
- NEEDLE VALVE
- NEEDLE VALVE W/BLEED
- MANIFOLD VALVE
- PLUG VALVE
- PINCH VALVE
- QUICK ACTING VALVE
- VALVE W/PLUG
- 3–WAY VALVE
- 4–WAY VALVE

CONTROL VALVES

- DIAPHRAGM CONTROL VALVE
- DIAPHRAGM CONTROL VALVE W/ POSITIONER
- INLET PRESSURE REGULATOR SELF–CONTAINED
- OUTLET PRESSURE REGULATOR SELF–CONTAINED
- DIFFERENTIAL PRESSURE REGULATOR SELF–CONTAINED
- INLET PRESSURE REGULATOR
- OUTLET PRESSURE REGULATOR
- HYDRAULIC / PNEUMATIC PISTON OPERATED OR SPRING RETURN
- PNEUMATIC RELAY VALVE
- 2–WAY SOLENOID VALVE
- MOTOR ACTUATED
- ROTARY MOTOR ACTUATED
- 3–WAY SOLENOID VALVE
- THERMOSTATIC CONTROL VALVE
- PRESSURE SAFETY /RELIEF VALVE — DESIGNATES API ORIFICE SIZE
- PRESSURE SAFETY /RELIEF VALVE PILOT OPERATED — DESIGNATES API ORIFICE SIZE

INSTRUMENT IDENTIFICATION GENERAL REFERENCE (ISA – S5.1)

	(MODIFIER) FIRST LETTER	(MODIFIER) SUCCEEDING LETTERS	PRIMARY ELEMENT	INDICATOR	RECORDER	CONTROLLER BLIND	CONTROLLER INDICATING	CONTROLLER RECORDING	TRANS–MITTER	CONTROL SWITCH	CONTROL ALARM	CONTROL VALVE OR REGULATOR	SELF–ACTIVATED VALVE	RELAY OR CONVERTOR
A	ANALYSIS	ALARM	AE	AI	AR	AC	AIC	ARC	AT	AS( )	AA( )	AV		AY
B	BURNER FLAME													
C	CONDUCTIVITY	CONTROL OR CLOSE	CE	CI	CR	CC	CIC	CRC	CT	CS( )	CA( )	CV		CY
D	DENSITY OR MASS (DIFFERENTIAL)	DIFFERENTIAL	DE	DI	DR	DC	DIC	DRC	DT	DS( )	DA( )	DV		DY
E	VOLTAGE	PRIMARY ELEMENT	EE	EI	ER	EC	EIC	ERC	ET	ES( )	EA( )	EV		EY
F	FLOW (RATIO OR FRACTION)	SHUTDOWN FIRST OUT	FE	FI	FR	FC	FIC	FRC	FT	FS( )	FA( )	FV	FCV	FY
G	GAUGING	GLASS	GE	GI	GR	GC	GIC	GRC	GT	GS( )	GA( )	GV		
H	HAND	HIGH				HC	HIC	HRC	HT	HS( )		HV	HCV	HY
I	CURRENT	INDICATE	IE	II	IR	IC	IIC	IRC	IT	IS( )	IA( )			IY
J	POWER (SCAN)		JE	JI	JR	JC	JIC	JRC	JT	JS( )	JA( )			JY
K	TIME	CONTROL STATION		KI	KR	KC	KIC	KRC	KT	KS( )	KA( )	KV		KY
L	LEVEL	LOW OR LIGHT	LE	LI	LR	LC	LIC	LRC	LT	LS( )	LA( )	LV	LCV	LY
M	MOISTURE, HUMIDITY	MIDDLE OR INTERMEDIATE	ME	MI	MR	MC	MIC	MRC	MT	MS( )	MA( )	MV		MY
N	USER'S CHOICE													
O	USER'S CHOICE	ORIFICE OR OPEN												
P	PRESSURE OR VACUUM	POINT	PE	PI	PR	PC	PIC	PRC	PT	PS( )	PA( )	PV	PCV	PY
Q	QUANTITY OR EVENT (INTEGRATE/TOTALIZE)			QI	QR	QC	QIC	QRC	QT	QS( )	QA( )	QV		QY
R	RELIEF OR RESTRICTION OR RADIOACTIVITY	RECORD OR PRINT	RE	RI	RR	RC	RIC	RRC	RT	RS( )	RA( )			RY
S	SPEED OR FREQUENCY	SWITCH OR SAFETY		SI	SR	SC	SIC	SRC	ST	SS( )	SA( )			SY
T	TEMPERATURE	TRANSMIT	TE	TI	TR	TC	TIC	TRC	TT	TS( )	TA( )	TV	TCV	TY
U	MULTI–VARIABLE	MULTIFUNCTION		UI	UR	UC	UIC	URC				UV		
V	VIBRATION OR VISCOSITY	VALVE OR DAMPER	VE	VI	VR	VC	VIC	VRC	VT	VS( )	VA( )	VV		VY
W	WEIGHT OR FORCE	WELL	WE	WI	WR	WC	WIC	WRC	WT	WS( )	WA( )	WV		WY
X	LIGHT	UNCLASSIFIED (DIAGNOSTIC)	XE	XI	XR	XC	XIC	XRC	XT	XS( )	XA( )	XV		XY
Y	USER'S CHOICE	RELAY OR COMPUTE												YY
Z	POSITION	DRIVE OR ACTUATE	ZE	ZI	ZR	ZC	ZIC	ZRC	ZT	ZS( )	ZA( )			ZY

MISCELLANEOUS

- INLINE FLANGE SET
- SPECTACLE BLIND (LINE OPEN)
- SPECTACLE BLIND (LINE CLOSED)
- UNION (NPT)
- ORIFICE FLANGE W/ SPACER
- PADDLE BLIND
- BLEED RING
- BASKET STRAINER
- CONE STRAINER
- CONCENTRIC REDUCER
- ECCENTRIC REDUCER
- EXPANSION JOINT
- FLEXIBLE HOSE
- FLEXIBLE COUPLING
- TEE STRAINER
- Y–PATTERN STRAINER
- MAGNETIC METER
- VENTURI
- SIGHT GLASS
- SONIC FLOW METER
- POSITIVE DISPLACEMENT METER
- TURBINE OR PROPELLOR METER
- VORTEX METER
- BALL CHECK VALVE
- THROTTLE BLOCK
- PIG LAUNCHER / RECEIVER
- 15U x 50 METER RUN
- FI FLOW INDICATOR
- CONTINUOUS LIQUID DRAINER OR STEAM TRAP
- spec2 spec1 SPEC BREAK
- OPEN DRAIN
- THICKNESS MM OR (") ?? ?? INSULATION TYPE
- ?? ?? INSULATION BLOCK W/ ELECTRIC HEAT TRACE
- ?? ?? INSULATION BLOCK W/ GLYCOL OR STEAM HEAT TRACE
- SP ?? SPECIALTY ITEM
- SIZE –RATING / TYPE PROCESS DESCRIPTION TO/FROM DRAWING/SHEET — CONTINUATION ARROW
- SIZE –RATING / TYPE PROCESS DESCRIPTION TO/FROM DRAWING/SHEET — CONTINUATION ARROW DUAL DIRECTION
- PIPE SLOPE DIRECTION
- VORTEX BREAKER
- DIAPHRAGM SEAL
- RUPTURE DISC FOR PRESSURE RELIEF
- RUPTURE DISC FOR VACUUM RELIEF
- E W EYE WASH
- S S SAFETY SHOWER
- SKID TIE–POINTS
- INSTRUMENT AIR
- INSTRUMENT GAS
- CURRENT/PRESSURE
- SPRAY NOZZLE
- VENT CAP
- BEVELED PIPE END
- END CAP
- PLUG
- LINE BREAK

(C) –CLOSE (O) –OPEN
(H) –HIGH ALARM (L) –LOW ALARM
(HH)–HIGH SHUTDOWN (LL)–LOW SHUTDOWN
(XX)–DIAGNOSTIC SHUTDOWN (USED TO INDICATE THE DIAGNOSTIC CHECK REQ'D ON THE ANALOG INPUT)

INSTRUMENTS

- LOCAL MOUNTED
- LOCAL PANEL MOUNTED
- LOCAL PANEL MOUNTED BEHIND OR INSIDE
- MAIN PANEL MOUNTED
- MAIN PANEL MOUNTED BEHIND OR INSIDE
- BY OTHERS
- HUMAN MACHINE INTERFACE HMI (DCS)
- HUMAN MACHINE INTERFACE HMI (PLC)
- ENGINE CONTROL
- XC PROGRAMMABLE LOGIC CONTROLLER (PLC) XC REPRESENTS GENERAL LOGIC
- YYE ALARM/SHUTDOWN
- I INTERLOCK
- E ELECTRICAL INTERLOCK (HARDWIRE)
- THERMOWELL (THREADED)
- THERMOWELL (SOCKET WELDED)
- THERMOWELL (FLANGED)
- * PILOT LIGHT
  * COLOUR
  (A) AMBER (B) BLUE
  (G) GREEN (O) ORANGE
  (R) RED (W) WHITE

FOR REFERENCE ONLY
NAME C.SMITH DATE NOV 13/13

REV	DESCRIPTION	DATE	BY	APR
0	ISSUED FOR REFERENCE	NOV 14/13	CS	SG
A	ISSUED FOR REFERENCE	NOV 06/13	CS	SG

DATE JUNE 14/13 SCALE NTS
DRAWN BY C.SMITH CHECKED BY S.GURI APPROVED BY B.MINSHULL
PROJECT MANAGER S.GURI PROJECT ENGINEER B.MINSHULL
CUST PO 4100001360
APEGGA PERMIT No: P8651 STEP CODE WORK ORDER 12635

DEVON CANADA CORPORATION
FERRIER CENTRAL
PROCESSING FACILITY
FUEL GAS PACKAGE

ENERFLEX
Calgary, Alberta, Canada

P & I DIAGRAM
LEGEND & SYMBOLOGY

DWG NO 12635–199 SHT 1 REV 0

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PLOT DATE Nov 14, 2013, gsohl