INSTRUMENT IDENTIFICATION

INSTRUMENT NUMBERING

INSTRUMENT IDENTIFICATION

SET PRESSURE (kPa(g))
SET TEMPERATURE (°C)

XXXX
XXXX

XXXX
XXXX

FUNCTION SYMBOL

X

COMPONENT NUMBER

SYMBOL IDENTIFICATION

- INSTRUMENT MOUNTED ON PIPING OR EQUIPMENT
- PLC AUTOMATION
- DCS AUTOMATION
- COMPUTER FUNCTION OUTSIDE (PLC)
- INSTRUMENTS SHARING COMMON HOUSING
- X—COLOR R=RED G=GREEN B=BLUE A=AMBER LIGHT
- HORN

LOCATION

- FIELD MOUNTED
- CONTROL PANEL FRONT MOUNTED
- CONTROL PANEL REAR MOUNTED
- LOCAL PANEL FRONT MOUNTED
- LOCAL PANEL REAR MOUNTED

- UNDEFINED LOGIC
- CONTROL INTERLOCK
- PURGE
- RESET
- INTERLOCK AND
- INTERLOCK OR

FUNCTION SYMBOLS

- AVERAGE
- BOOST
- CONVERT (INPUT SIGNAL UPPER LEFT)
- DERIVATIVE d/dt
- DIFFERENCE
- DIVIDE
- EXPONENTIAL
- FUNCTION
- HIGH/LOW LIMIT
- HIGH/LOW SELECT
- INTEGRAL
- INVERSE DERIVATIVE I/D
- MINUS BIAS
- MULTIPLY
- ON/OFF
- PERCENT
- PLUS BIAS
- PLUS/MINUS BIAS
- PROPORTIONAL
- ROOT EXTRACTION
- SET POINT
- SQUARE ROOT
- SUMMATION
- USER DEFINED

SIGNAL

A	ANALOG	I	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	R	RESISTANCE
H	HYDRAULIC	S	SELECT (MANUAL)

INSTRUMENT IDENTIFICATION/FUNCTION PREFIXES

INSTRUMENT FUNCTION →
MEASURED VARIABLE ↓

	PRIMARY ELEMENT	TRANSMITTER	INDICATING TRANSMITTER	CONVERTER, TRANSDUCER, SIGNAL SPECIAL DEVICES	INDICATOR	PRIMARY RECORDING	CONTROLLER (BLIND)	INDICATING CONTROLLER	RECORDING CONTROLLER	SWITCH	CONTROLLER: SWITCH LOW LOW	CONTROLLER: SWITCH LOW	CONTROLLER: SWITCH HIGH	CONTROLLER: SWITCH HIGH HIGH	CONTROLLER: SWITCH HIGH HIGH SWITCH LOW COMBINATION	ALARM: ALARM LOW LOW	ALARM: ALARM LOW	ALARM: ALARM HIGH	ALARM: ALARM HIGH HIGH	TOTALIZER	CONTROL VALVE	GAUGE	LIGHT
A	ANALYSIS	AE	AT	AIT	AY	AI	AR	AC	AIC	ARC	AS	ASLL	ASL	ASH	ASHH	ASHH	ASHL	AALL	AAL	AAH	AAHH		ACV			AL
B	BURNER FLAME	BE	BT	BIT	BY	BI	BR	BC	BIC	BRC	BS	BSLL	BSL	BSH	BSHH	BSHH		BALL	BAL	BAH	BAHH				BG	BL
C	CONDUCTIVITY	CE	CT	CIT	CY	CI	CR	CC	CIC	CRC	CS	CSLL	CSL	CSH	CSHH	CSHH	CSHL	CALL	CAL	CAH	CAHH					CL
D	DENSITY	DE	DT	DIT	DY	DI	DR	DC	DIC	DRC	DS	DSLL	DSL	DSH	DSHH	DSHH	DSHL	DALL	DAL	DAH	DAHH					DL
E	VOLTAGE	EE	ET	EIT	EY	EI	ER	EC	EIC	ERC	ES	ESLL	ESL	ESH	ESHH	ESHH	ESHL	EALL	EAL	EAH	EAHH					
F	FLOW	FE	FT	FIT	FY	FI	FR	FC	FIC	FRC	FS	FSLL	FSL	FSH	FSHH	FSHH	FSHL	FALL	FAL	FAH	FAHH	FQI	FCV	FG		FL
FF	FLOW RATIO				FFY	FFI		FFC	FFIC		FFS															FFL
H	HAND (MANUAL)							HC	HIC		HS												HV			HL
I	CURRENT		IT		IY	II	IR	IC	IIC	IRC	IS	ISLL	ISL	ISH	ISHH	ISHH		IALL	IAL	IAH	IAHH					IL
J	POWER		JT			JI																				
K	TIME				KY	KI	KR	KC	KIC	KRC	KS	KSLL	KSL	KSH	KSHH	KSHH		KALL	KAL	KAH	KAHH		KV			KL
L	LEVEL		LT	LIT	LY	LI	LR	LC	LIC	LRC	LS	LSLL	LSL	LSH	LSHH	LSHH	LSHL	LALL	LAL	LAH	LAHH		LCV	LG		LL
M	MOISTURE OR HUMIDITY	ME	MT	MIT	MY	MI	MR	MC	MIC	MRC	MS	MSLL	MSL	MSH	MSHH	MSHH		MALL	MAL	MAH	MAHH					ML
N	UNASSIGNED																									
P	PRESSURE OR VACUUM		PT	PIT	PY	PI	PR	PC	PIC	PRC	PS	PSLL	PSL	PSH	PSHH	PSHH	PSHL	PALL	PAL	PAH	PAHH		PCV			PL
PD	DIFFERENTIAL PRESSURE		PDT	PDIT	PDY	PDI	PDR	PDC	PDIC	PDRC	PDS	PDSLL	PDSL	PDSH	PDSHH	PDSHH		PDALL	PDAL	PDAH	PDAHH		PDCV			PDL
Q	QUANTITY	QE	QT	QIT	QY	QI	QR				QS	QSLL	QSL	QSH	QSH	QSH		QALL	QAL	QAH	QAHH					
S	SPEED	SE	ST	SIT	SY	SI	SR	SC	SIC	SRC	SS	SSLL	SSL	SSH	SSHH	SSHH		SALL	SAL	SAH	SAHH					
T	TEMPERATURE	TE	TT	TIT	TY	TI	TR	TC	TIC	TRC	TS	TSLL	TSL	TSH	TSHH	TSHH	TSHL	TALL	TAL	TAH	TAHH		TCV			TL
TD	DIFFERENTIAL TEMPERATURE		TDT	TDIT	TDY	TDI	TDR	TDC	TDIC	TDRC	TDS	TDLL	TDSL	TDSH	TDSHH	TDSHH		TDALL	TDAL	TDAH	TDAHH		TDCV			TDL
U	MULTIVARIABLE					UI	UR	UC	UIC	URC	US															UL
V	VISCOSITY	VE	VT	VIT	VY	VI	VR	VC	VIC	VRC	VS	VSLL	VSL	VSH	VSHH	VSHH		VALL	VAL	VAH	VAHH					VL
VB	VIBRATION	XVE	XVT		XVY	XVI	XVR				XVS			XVSH	XVSHH	XVSHH				XVAH	XVAHH					XVL
W	WEIGHT	WE	WT	WIT	WY	WI	WR				WS	WSLL	WSL	WSH	WSHH	WSHH		WALL	WAL	WAH	WAHH					
X	UNCLASSIFIED	XE	XT	XIT	XY	XI	XR	XC	XIC	XRC	XS	XSLL	XSL	XSH	XSHH	XSHH		XALL	XAL	XAH	XAHH		XCV	XG		XL
Y	UNASSIGNED																									
Z	POSITION/LIMIT	ZE	ZT	ZIT	ZY	ZI					ZS												ZV			ZL

THIS TABLE APPLIES ONLY TO THE FUNCTIONAL IDENTIFICATION OF INSTRUMENTS AND IS BASED ON ISA/ANSI STANDARD Y32.20

BDV	BLOWDOWN VALVE
BSW	BASIC SEDIMENT AND WATER MONITOR
DV	DELUGE VALVE
ESD	EMERGENCY SHUTDOWN
FA	FLAME ARRESTOR
FQY	FLOW INTEGRATING OR TOTALIZING COMPUTER
FX	FLOW STRAIGHTENING VANES
GD	GAS DETECTOR
GAH	GAS ALARM HIGH
GAHH	GAS ALARM HIGH HIGH
HOA	HAND SELECTOR SWITCH (HAND-OFF-AUTO)
MOV	MOTOR OPERATED VALVE
MVT	MULTI VARIABLE TRANSMITTER
NI	SAND INDICATOR
NPT	SAND PROBE TRANSMITTER
PSD	PROCESS SHUTDOWN
PSE	PRESSURE SAFETY ELEMENT (RUPTURE DISK)
PSV	PRESSURE SAFETY VALVE
RO	RESTRICTION ORIFICE
SDV	SHUTDOWN VALVE
SDY	SHUTDOWN SOLENOID VALVE OR TRANSDUCER
SV	SOLENOID VALVE
TW	THERMOWELL
UA	UNIT ALARM
USD	UNIT SHUTDOWN
USH	FLAME DETECTOR (IR AND UV)
XC	CHOKE FIXED
XCE	ELECTRIC CORROSION PROBE
XCI	CORROSION INDICATOR
XCP	CORROSION COUPON
XCV	CHOKE ADJUSTABLE
XI	PIG PASSAGE INDICATOR
XSR	STATUS RUNNING
XSS	STATUS STOPPED
XV	ON-OFF CONTROL VALVE
YSH	SMOKE DETECTOR
ZIC	POSITION/LIMIT INDICATING CLOSED
ZIO	POSITION/LIMIT INDICATING OPEN
ZSO	POSITION/LIMIT SWITCH OPEN
ZSC	POSITION/LIMIT SWITCH CLOSED

LINE IDENTIFICATION

LINE DESIGNATIONS

- MAJOR PROCESS
- MINOR PROCESS/UTILITY
- SKID LIMITS
- PNEUMATIC/TUBING
- HYDRAULIC
- CAPILLARY
- ELECTRICAL
- MECHANICAL
- SOFTWARE/DATA LINK
- UNDEFINED

LINE NUMBERING

3"–PL–A1–2500

LINE SIZE
SERVICE IDENTIFICATION
PIPE CLASS SPECIFICATION
LINE NUMBER

PIPING CLASS SPECIFICATION

CLASS	RATING	SERVICE
A1	150# ANSI RF	AI, AU, CA, DC, DO, GF, GL, OF, OL, OS, PF, PG, PL, TE, VA, VC, VH, VL, WC, WH, WO, WP
A2	150# ANSI RF(316SS)	CA, CI, CP, GF, OF, OH, OL, OS, GA
A3	150# ANSI RF(GALV.)	AB, GI, TE
A4	150# ANSI RF(0.125" C.A.)	
A5	150# ANSI RF(0.125" C.A.)	DC, DO, PF, PG, PL, TE, VA, WA, WC, WF,WP, WS, VH, VL
A6	125# ANSI FF	
A7	150# ANSI FF(CPVC)	CC,
A8	150# ANSI RF(LOW TEMP)	VH, VL, PF, PG, PL
A9	150# ANSI RF	CV,
A10	150# ANSI FF(FIBERGLASS)	DO, VA, WC, WO, WF, WI, WS,
A11	150# ANSI RF(DUPLEX SS)	PG, PL, TE
A12	150# ANSI RF(316SS LOW TEMP)	PF, PG, PL, VC, VH, VL, TE
A13	150# ANSI RF(316SS LOW TEMP)	PL, VL
B1	300# ANSI RF	GF, GL, OL, OS, PF, PG, PL, TE, VH, VL
B2	300# ANSI RF(316SS)	CI, CP, GF, OH, OL, OS
B3	300# ANSI RF(DUPLEX SS)	PF, PG, PL, TE
B4	300# ANSI RF(HIGH TEMP.)	WH, PF, PG, PL
B5	300# ANSI RF(0.125" C.A.)	DC, WP, WS
B6	300# ANSI RF(LOW TEMP)	PG, TE
B7	300# ANSI RF(316SS LOW TEMP)	PF, PG, PL, TE, VH, VL
B8	300# ANSI RF(SUPER DUPLEX)	PG, PL, WP
D1	600# ANSI RF	CI, CP, GF, GL, OL, OS, PF, PG, PL, TE, WP, TE
D2	600# ANSI RF(DUPLEX SS)	PF, PG, PL, TE, WP
D3	600# ANSI RF(HIGH TEMP.)	PG, TE
D4	600# ANSI RF(316SS LOW TEMP)	CA, PF, PG, PL, TE
D5	600# ANSI RF(DUPLEX SS HIGH TEMP)	PG, PL
D6	600# ANSI RF(DUPLEX SS NACE)	PF, PG, PL, WP
E1	900# ANSI RTJ	CI, CP, GF, GL, PF, PG, PL, TE, WP
E2	900# ANSI RTJ(SOUR SERV.)	PF, PG, PL, TE
E3	900# ANSI RTJ(DUPLEX SS)	PF, PG, PL, TE
E4	900# ANSI RTJ(SUPER DUP. SS)	PF, PG, PL
F1	1500# ANSI RTJ	CP, GL, PF, PG, PL, TE, WP
F2	3500# (5000)# API FLGS.)(SUPER DUP. SS)	PF, PG, PL
F3	1500# ANSI RTJ(0.125" C.A.)	PF, PG, PL
F4	1500# ANSI RTJ(SUPER DUPLEX)	
F5	5000# API FLGS(DUPLEX SS NACE)	PF, PG, PL
G1	2500# ANSI RTJ	PF, PG, PL
G2	2500# ANSI RTJ (DUPLEX SS)	PF, PG, PL
I1	3000# API	PF, PG, PL
J1	5000# API	PF, PG, PL,

SERVICE IDENTIFICATION

IDENT.	SERVICE
AB	BULK AIR
AI	INSTRUMENT AIR
AU	UTILITY AIR (NON DRIED)
CA	AMINE
CC	SODIUM HYPOCHLORITE
CF	FIRE FIGHTING CHEMICALS
CI	CORROSION INHIBITOR
CP	CHEMICALS, SOLVENT
CV	CEMENT VENT
CW	CHILLED WATER
DC	CLOSED DRAIN
DO	OPEN DRAIN
GA	ACID GAS
GF	FUEL GAS
GH	HALON
GI	INERT GAS
GL	GLYCOL
N	NITROGEN
OF	FUEL OIL (DIESEL)
OH	HYDRAULIC OIL
OL	LUBE OIL
OS	SEAL OIL
PF	PROCESS FLUID
PG	PROCESS HYDROCARBON GAS
PL	PROCESS HYDROCARBON LIQUID
RF	REFRIGERANT
SC	STEAM CONDENSATE
ST	STEAM
TE	EQUIPMENT TRIM
VA	ATMOSPHERIC VENT/RELIEF
VC	COLD VENT
VH	HIGH PRESSURE VENT/RELIEF
VL	LOW PRESSURE VENT/RELIEF
WA	SERVICE WATER
WC	COOLING WATER
WD	POTABLE (DRINKING) WATER
WF	FIREWATER
WH	HEATING MEDIUM
WI	INJECTION WATER
WO	OILY WATER
WP	PRODUCED WATER
WS	SEAWATER
WT	TREATED WATER

LINE NUMBERS

DESCRIPTION	OFF SKID LINE NO	ON SKID LINE NO
LOW PRESSURE PROCESS (ANSI 300# AND BELOW)	1000	100
HIGH PRESSURE PROCESS (ANSI 600# AND ABOVE)	2000	200
EXTRA HIGH PRESSURE PROCESS (API 3000 PSI AND ABOVE)	3000	300
LOW PRESSURE FLARE/VENT	4000	400
HIGH PRESSURE FLARE/VENT	5000	500
DRAINS OPEN AND CLOSED	6000	600
FUEL AND UTILITY GASES	7000	700
FUEL AND UTILITY LIQUID	8000	800
FIRE WATER AND UTILITY WATER	9000	900

LINE CONTINUATION SYMBOL

XXX XXXX

SEQUENTIAL IDENTIFICATION TO PAGE OR DRAWING
ABBREVIATED UNIQUE DRAWING NUMBER

MAJOR COMPONENT IDENTIFICATION

ZZZ–M–1000 A

LOCATION
COMPONENT NUMBER
LETTER IDENTIFICATION FOR IDENTICAL EQUIPMENT

COMPONENT TYPE

TAG No.	EQUIPMENT
A–XXXX	CHOKE MANIFOLD
B–XXXX	BURNER
C–XXXX	DISTILLATION, RECTIFYING OR ABSORBTION COLUMN
D–XXXX	DRYER
E–XXXX	HEAT EXCHANGER (NOT FIRED)
EA–XXXX	AIR COOLER
F–XXXX	FILTER
G–XXXX	ELECTRICAL GENERATOR
H–XXXX	FIRED EQUIPMENT
J–XXXX	EDUCTOR
K–XXXX	COMPRESSOR, BLOWER, FAN
LHC–XXXX	LIQUID HYDROCYCLONE
M–XXXX	MIXER
MCC	MOTOR CONTROL CENTER
N–XXXX	TRANSFORMER
P–XXXX	PUMP (WITH DRIVER)
PCU	PROCESS CONTROL UNIT
PL	PIPELINE COMPONENT
Q–XXXX	METERING PACKAGE
SWG	SWITCH GEAR
T–XXXX	TANK
V–XXXX	VESSEL
Y–XXXX	VENT OR FLARE STACK
Z–XXXX	MISCELLANEOUS/OTHER EQUIPMENT

UTILITIES

- IA — INSTRUMENT AIR
- LPS — LOW PRESSURE STEAM 3–5bar (sat)
- MPS — MEDIUM PRESSURE STEAM 10–15bar (sat)
- HPS — HIGH PRESSURE STEAM 40–50bar (sat)
- BW — BOILER FEED WATER
- CW — COOLING WATER
- RW — REFRIGERATED WATER
- RB — REFRIGERATED BRINE
- FO — FUEL OIL
- FG — FUEL GAS
- BS — LIQUID BLOWDOWN
- BD — VAPOUR BLOWDOWN
- N — NITROGEN
- HC — HP CONDENSATE
- MC — MP CONDENSATE
- LC — LP CONDENSATE
- FW — FIRE WATER

VALVE IDENTIFICATION

SIZE
VALVE NUMBER

6"–VB–101–H

VALVE TYPE		NUMBER		MODIFIER
VB	BALL	0–99	SCREWED/SOCKET WELD	H HIGH TEMP SERVICE (175°C)
VC	CHECK	100–199	ANSI 150#	L LOW TEMP SERVICE (–100°C)
VF	BUTTERFLY	300–399	ANSI 300#	N NACE MR–01–75 CERTIFIED
VG	GATE	600–699	ANSI 600#	F FULL PORT
VN	NEEDLE	900–999	ANSI 900#	
VO	GLOBE	1500–1599	ANSI 1500#	
VP	PLUG	2500–2599	ANSI 2500#	
VX	SPECIAL	3000–3099	API 3000 PSI	
		5000–5099	API 5000 PSI	
		10000–10099	API 10000 PSI	

VALVE SYMBOLS

- HAND
- GATE
- BALL
- PLUG
- ANGLE
- THREE WAY
- FOUR WAY
- GLOBE
- BUTTERFLY
- CHECK
- NEEDLE
- FIXED CHOKE
- ADJUSTABLE CHOKE
- GAUGE VALVE w/BLEED
- NORMALLY CLOSED (SHADE PRESSURE SIDE)
- KNIFE
- DIAPHARGM
- PINCH

SYMBOLS

FLOW ELEMENTS

- RESTRICTION ORIFICE
- QUICK CHANGE ORIFICE
- VENTURI
- ROTAMETER
- VORTEX FLOW METER
- FLOW NOZZLE
- STRAIGHTENING VANES
- TURBINE METER
- PITOT TUBE
- AVERAGING PITOT
- MAGMETER
- POSITIVE DISPLACEMENT METER
- SONIC FLOWMETER
- SIGHT FLOW GLASS
- SIDE STREAM ROTAMETER OR CALIBRATED GAUGE GLASS
- CORIOLIS METER

PRESSURE SAFETY VALVE/ELEMENT

- PSV ANGLE VALVE SPRING OPERATED
- PSV ANGLE VALVE PILOT OPERATED SELF CONTAINED
- PSV ANGLE VALVE PILOT OPERATED REMOTE PICKUP
- PSV PRESSURE–VACUUM RELIEF HATCH
- PSV INLINE
- PSV VACUUM
- PSV PRESSURE–VACUUM
- PRESSURE SAFETY ELEMENT (RUPTURE DISK)
- VACUUM SAFETY ELEMENT (RUPTURE DISK)

CONTROL VALVE ACTUATORS

- PNEUMATIC DIAPHRAGM/SPRING OPPOSED
- DIAPHRAGM/PRESSURE BALANCE
- HYDRAULIC
- ELECTRO/HYDRAULIC
- PISTON/SINGLE ACTION
- PISTON/DOUBLE ACTION
- SPRING CONTROL REGULATOR (SELF CONTAINED) (MANUAL ADJUSTMENT)
- SOLENOID
- MOTOR OPERATED
- PNEUMATIC ACTUATOR W/MANUAL OVERRIDE (TYPE 1)

MISCELLANEOUS

- BS&W MONITOR
- START–STOP SWITCH
- EMERGENCY SHUTDOWN
- FUSIBLE PLUG
- TO CONTROL PANEL (PANEL DESIGNATION)
- NUCLEONIC LEVEL DEVICE

VESSEL ITEMS

- NOZZLE
- FLANGE SET
- MANWAY (MW)
- INSULATION
- VORTEX BREAKER

PIPING

- SAMPLE
- FILTER
- LIQUID DRAIN/TRAP
- AIR ELIMINATOR
- LUBRICATOR
- STEAM TRAP
- CHEMICAL INJECTION
- PADDLE SPACER (OPEN)
- PADDLE BLIND (CLOSED)
- SPECTACLE BLIND (OPEN)
- SPECTACLE BLIND (CLOSED)
- CONE STRAINER
- "Y" TYPE STRAINER
- BASKET STRAINER
- FLAME OR SPARK ARRESTOR
- PIPING CLASS CHANGE
- SPECIALTY ITEM
- TIE–IN POINT
- FLEXIBLE HOSE
- FLEXIBLE JOINT
- UNION (THR'D)
- UNION (SOCKET WELD)
- FLANGE SET
- PIPE CAP (THR'D)
- OPEN DRAIN HUB
- STATIC MIXER
- ATMOSPHERIC VENT
- PULSATION DAMPENER
- SPRAY NOZZLE SPRINKLER HEAD
- TYPE (TYP) — THICKNESS (TYP) — HEAT TRACING (TYP) — XX XXmm X
- PIPE INSULATION
- PIPE INSULATION (STEAM TRACED)
- PIPE INSULATION (ELECTRICAL TRACED)
- PLUG (THR'D)
- LINE SIZE CHANGE (REDUCER)
- PIPE CAP (WELD)
- HOSE CONNECTION (QUICK DISCONNECT)
- HOSE CONNECTION w/CAP (QUICK DISCONNECT)
- WEATHER HOOD
- TEST OR BLEED RING
- "P" TRAP
- LIQUID SEAL LOOP
- FIRE MONITOR
- HOSE REEL
- CHEMICAL SEAL

COMMON ABBREVIATIONS

AC	AIR TO CLOSE
AFL	AIR FAIL LOCKED
AI	ACOUSTIC INSULATION
AO	AIR TO OPEN
AR	AIR RELEASE
BF	BLIND FLANGE
CC	COLD CONSERVATION
CCP	CENTRAL CONTROL PANEL
CONC	CONCENTRIC
CPLG	COUPLING
CSC	CAR SEAL CLOSED
CSO	CAR SEAL OPEN
ECC	ECCENTRIC
E/E	END TO END
EL	ELAVATION
FB	FULL BORE
FF	FLAT FACE (FLANGE)
FC	FAIL CLOSED
FL	FAIL LOCKED
FO	FAIL OPEN
FP	FIRE PROTECTION
HC	HEAT CONSERVATION
HS	HYDRAULIC SUPPLY
HH	HAND HOLE
HLL	HIGH LIQUID LEVEL
HP	HIGH PRESSURE
IAS	INSTRUMENT AIR SUPPLY
IP	INTERMEDIATE PRESSURE
LACT	LEASE AUTOMATIC CUSTODY TRANSFER
LC	LOCKED CLOSED
LEL	LOWER EXPLOSION LIMITS
LLL	LOW LIQUID LEVEL
LLSD	LOW LEVEL SHUTDOWN
LO	LOCKED OPEN
LP	LOW PRESSURE
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CONTROL PANEL
MW	MANWAY
NC	NORMALLY CLOSED
NLL	NORMAL LIQUID LEVEL
NNF	NORMALLY NO FLOW
NO	NORMALLY OPEN
NPT	NATIONAL PIPE THREAD
O/C	OPEN/CLOSE
PP	PERSONNEL PROTECTION
RB	REDUCED BORE
RF	RAISED FACE (FLANGE)
RJ	RING JOINT (FLANGE)
RSP	REMOVABLE SPOOL PIECE
SA	SPARK ARRESTOR
SC	SAMPLE CONNECTION
SDP	SHUTDOWN PANEL
SIL	SAFETY INTEGRITY LEVEL
STR	STRAINER
SS	STAINLESS STEEL
S/S	SEAM TO SEAM
ST	STEAM TRAP
T	LIQUID DRAIN (TRAP)
T/T	TANGENT TO TANGENT
TSO	TIGHT SHUT OFF
TYP	TYPICAL
WCP	WELLHEAD CONTROL PANEL

PRODUCTS AND TECHNOLOGY DEVELOPED IN U.S.A., OR BY CITIZENS OF THE U.S.A. ARE DEEMED TO BE OF U.S. ORIGIN AND THERBY SUBJECT TO U.S. EXPORT CONTROL LAWS.
THE EXPORT OR RE–EXPORT OF U.S. ORIGIN TECHNOLOGY BY ANY MEANS, INCLUDING DATA TRANSFER, IS PROHIBITED EXCEPT IN ACCORDANCE WITH U.S. LAW AND POWERWELL SERVICES POLICY.

NOTES:

© Design Rights POWERWELL SERVICES.
This document and the information it contains is confidential and the property of POWERWELL SERVICES and is not to be reproduced, communicated to a third party or used in any manner whatsoever without the prior written consent of POWERWELL SERVICES.

NO.	REVISION	DWN. BY.	CHK. BY	ENGR. APPV.	APPV. BY	DATE
A						

DWN. BY: K. Ward	DATE:	ENGR. APPV.	DATE:
CHK. BY:	DATE:	APPV. BY:	DATE:
PROJECT NO: STANDARD		PHASE NO:	SCALE: NONE

PowerWell TESTING

PIPING AND INSTRUMENTATION DIAGRAM LEGEND

DWG. NO. PWS STD 2001 — REV. NO. A