

INSTRUMENT IDENTIFICATION

INSTRUMENT IDENTIFICATION TABLE			
FIRST-LETTER	SUCCEEDING-LETTERS		
MEASURED OR INITIATING VARIABLE	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	
A	ANALYSIS (1)	ALARM	
B	BURNER, COMBUSTION	CLOSED	CLOSE
C	CONDUCTIVITY		CONTROL
D	DENSITY	OPEN	OPEN
E	VOLTAGE	SENSOR (PRIMARY ELEMENT)	
F	FLOW RATE	FAILURE	
G	GAS	GLASS, VIEWING DEVICE	
H	HAND	HIGH	
I	CURRENT (ELECTRICAL)	INDICATE	
J	POWER		
K	TIME, TIME SCHEDULE		CONTROL STATION
L	LEVEL	LOW, LIGHT	
M	MOTOR	OPERATING OR ON/OFF	
N	MOISTURE		START
O		OVERLOAD	STOP
P	PRESSURE, VACUUM	POINT (TEST) CONNECTION	
Q	COMMON	QUANTITY	
R	RADIATION	RECORD	
S	SPEED, FREQUENCY		SWITCH
T	TEMPERATURE		TRANSMIT
U	MULTIVARIABLE	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS (1)		VALVE DAMPER, LOUVER
W	WEIGHT, FORCE	WELL	
X	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE (2)		RELAY, COMPUTE, CONVERT (3)
Z	POSITION, DIMENSION		DRIVER, ACTUATOR UNCLASSIFIED FINAL CONTROL ELEMENT

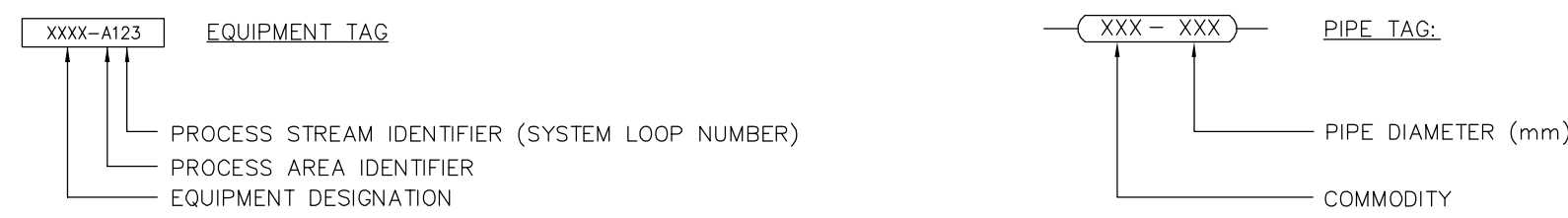
NOTES:

- IT IS EXPECTED THAT THE TYPE OF ANALYSIS BE DEFINED OUTSIDE THE TAGGING BUBBLE.
- FIRST LETTER Y IS INTENDED FOR USE WHEN CONTROL OR MONITORING RESPONSES ARE EVENT DRIVEN AS OPPOSED TO TIME OR TIME-SCHEDULE DRIVEN. THE LETTER Y, IN THIS POSITION, CAN ALSO SIGNIFY PRESENCE OR STATE.
- IT IS EXPECTED THAT THE FUNCTIONS ASSOCIATED WITH THE USE OF SUCCEEDING LETTER Y WILL BE DEFINED OUTSIDE THE TAGGING BUBBLE. THIS DEFINITION NEED NOT BE MADE WHEN THE FUNCTION IS SELF-EVIDENT, AS FOR A SOLENOID VALVE IN A FLUID SIGNAL LINE.

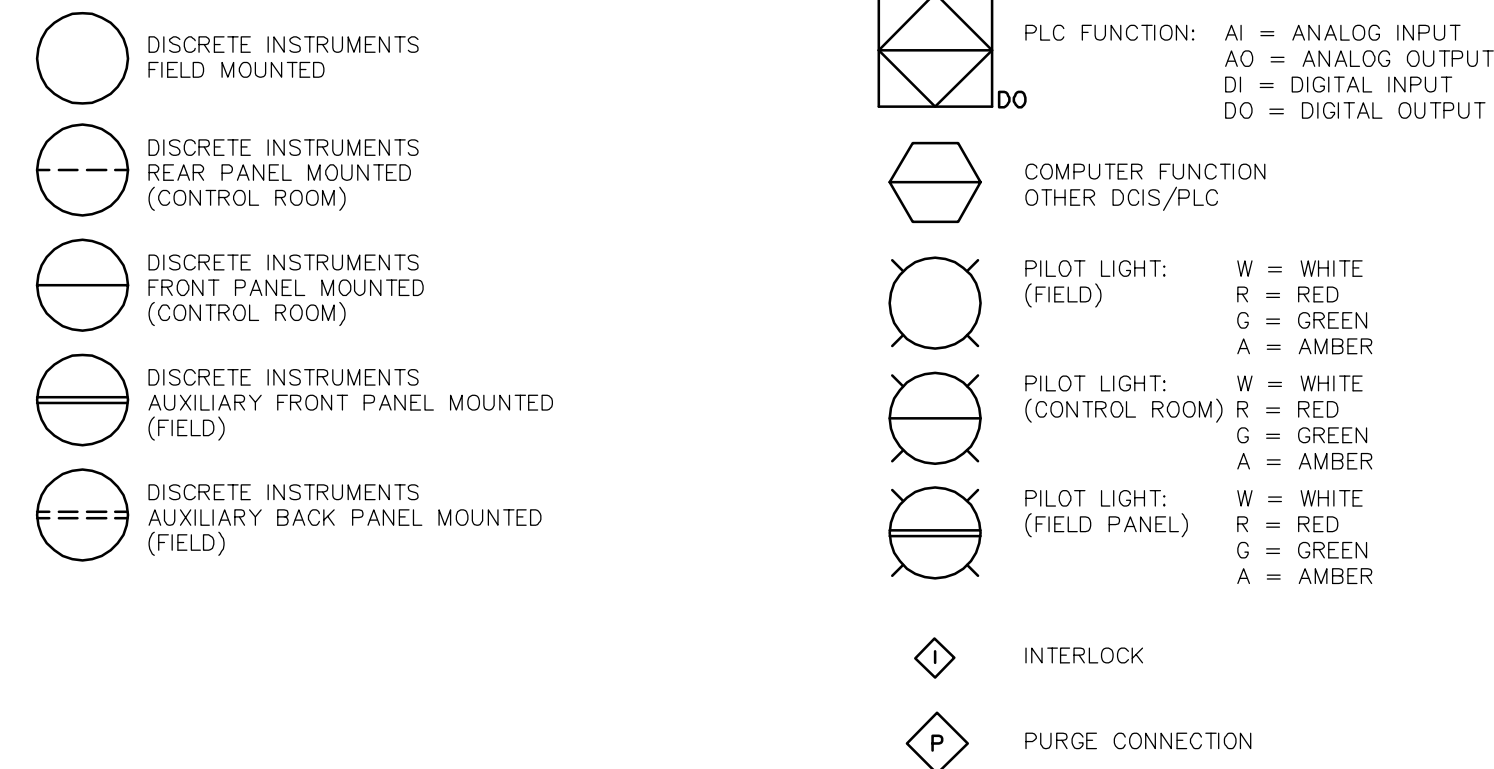
COMMON INSTRUMENT / DEVICE IDENTIFIERS			
ISA IDENTIFIER	INITIATING VARIABLE AND FUNCTION	ISA IDENTIFIER	INITIATING VARIABLE AND FUNCTION
AS	ANALYSIS SWITCH	LY	LEVEL RELAY
AE	ANALYSIS ELEMENT	PC	PRESSURE CONTROLLER
AT	ANALYSIS TRANSMITTER	PI	PRESSURE INDICATOR
CS	CONDUCTIVITY SWITCH	PT	PRESSURE TRANSMITTER
CT	CONDUCTIVITY TRANSMITTER	PS	PRESSURE SWITCH
DS	DENSITY SWITCH	SC	SPEED CONTROLLER
ET	VOLTAGE TRANSMITTER	SI	SPEED INDICATOR
FC	FLOW CONTROLLER	ST	SPEED TRANSMITTER
FE	FLOW ELEMENT	TC	TEMPERATURE CONTROLLER
FI	FLOW INDICATOR	TE	TEMPERATURE ELEMENT
FS	FLOW SWITCH	TI	TEMPERATURE INDICATOR
FT	FLOW TRANSMITTER	TS	TEMPERATURE SWITCH
FY	FLOW RELAY	TT	TEMPERATURE TRANSMITTER
FZ	FLOW DRIVE	TY	TEMPERATURE RELAY
HS	HAND SWITCH	UR	MULTIVARIABLE RECORDER
IT	CURRENT TRANSMITTER	VT	VIBRATION TRANSMITTER
JT	POWER TRANSMITTER	WE	WEIGHT ELEMENT
KC	TIME CONTROLLER	WT	WEIGHT TRANSMITTER
KI	ELAPSED TIME INDICATOR	XX	UNCLASSIFIED
LE	LEVEL ELEMENT	YC	STATE CONTROL
LI	LEVEL INDICATOR	YN	STATE ON
LT	LEVEL TRANSMITTER	YY	EVENT RELAY
LS	LEVEL SWITCH	YS	EVENT SWITCH
LT	LEVEL TRANSMITTER	ZS	POSITION SWITCH
		ZT	POSITION TRANSMITTER
		ZZ	POSITION DRIVE

IDENTIFICATION

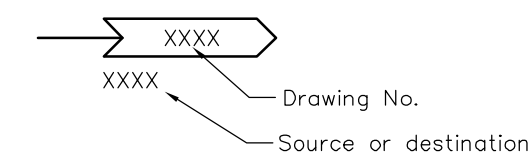
EQUIPMENT IDENTIFICATION AND TAGGING



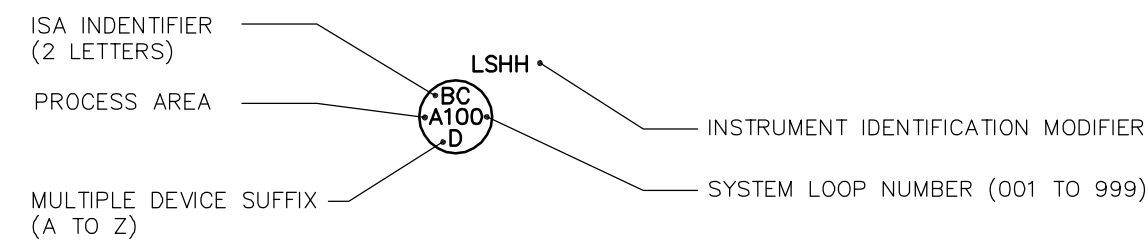
INSTRUMENT SYMBOLS



LINE CONTINUATION



INSTRUMENT DESIGNATION NUMBER



POSITION FORMATS

PROCESS AREA IDENTIFIER

CHEMICAL FEED	C	001 - 999
DEACON BOOSTER PUMP STATION	D	001 - 999
FILTRATION	F	001 - 999
PLANT UTILITIES:	H	
AIR PRESSURE		
BUILDING SAFETY & SECURITY		
ELECTRICAL DISTRIBUTION		
EMERGENCY GENERATOR		901 - 950
ELECTRICAL SUBSTATION		951 - 999
HVAC		
SITE COMMUNICATION		
FLOOD CONTROL		
FLUSH WATER		
NATURAL GAS		
INLET WORKS & RAW WATER	I	001 - 999
FREEZE THAW POND	L	001 - 999
GENERAL SITE SERVICES/ MISCELLANEOUS:	M	001 - 999
YARD PIPING		
YARD LIGHTING		
OZONE	O	001 - 999
FLOCCULATION AND DAF	P	001 - 999
RESIDUALS HANDLING	R	001 - 999
BULK CHEMICAL STORAGE	S	001 - 999
TREATED WATER STORAGE & HANDLING (CLEARWELL)	T	001 - 999
ULTRAVIOLET LIGHT DISINFECTION	U	001 - 999
ON-SITE HYPOCHLORITE GENERATION	X	001 - 999

PROCESS STREAM IDENTIFIER (LOOP NUMBER)

ABBREVIATIONS

INSTRUMENT IDENTIFICATION MODIFIER

CAH	CONDUCTIVITY ALARM HIGH	LSH	LEVEL SWITCH HIGH
COH	COMPUTER/OFF/HAND	LSL	LEVEL SWITCH LOW
DO	DISSOLVED OXYGEN	MCC	MOTOR CONTROL CENTRE
D/P	DIFFERENTIAL PRESSURE	O/L	OVERLOAD
FAH	FLOW ALARM HIGH	PAH	PRESSURE ALARM HIGH
FAL	FLOW ALARM LOW	PAL	PRESSURE ALARM LOW
FSH	FLOW SWITCH HIGH	pH	pH
FSL	FLOW SWITCH LOW	PSH	PRESSURE SWITCH HIGH
H/A	HAND / AUTO	PSL	PRESSURE SWITCH LOW
HOA	HAND / OFF / AUTO	RTD	RESISTIVE TEMPERATURE DEVICE
I/I	CURRENT / CURRENT ISOLATOR	S/S	START / STOP
I/P	CURRENT / PRESSURE CONVERTER	SEL	SELECTOR
IAH	CURRENT ALARM HIGH	SOL	SOLENOID
LAH	LEVEL ALARM HIGH	T/C	THERMOCOUPLE
LAL	LEVEL ALARM LOW	TAH	TEMPERATURE ALARM HIGH
LCP	LOCAL CONTROL PANEL	TAL	TEMPERATURE ALARM LOW
LJB	LOCAL JUNCTION BOX	TSH	TEMPERATURE SWITCH HIGH
L/L	LEAD / LAG	TSL	TEMPERATURE SWITCH LOW
LOS	LOCK-OFF-STOP	WDG	WINDING
L/R	LOCAL / REMOTE		

PROCESS LINE CODES

COMMODITY

AA	AQUA AMMONIA	HST	12% HYPOCHLORITE SOLUTION
AGA	ATOMIZING AIR	HWS	HOT WATER SUPPLY
AS	AIR SCOUR	HYP	0.8% HYPOCHLORITE SOLUTION
AHP	AIR HIGH PRESSURE	ITA	INSTRUMENT AIR
ALP	AIR LOW PRESSURE	LDC	LIQUID CAUSTIC
BCT	BOILER CHEMICAL TREATMENT	LDS	LAND DRAINAGE SEWER
BOL	BOILER BLOWDOWN	LEF	LIME FEED
BFL	BOILER FEED WATER	LOG	LUBRICATING OIL
BLN	BLOWDOWN	LOX	LIQUID OXYGEN
BS	BRINE SOLUTION	NLG	NATURAL GAS
BWS	BACKWASH SUPPLY WATER	OF	OVERFLOW
BWW	BACKWASH WASTE WATER	OZG	OZONE OFF GAS
CA	COMPRESSED AIR	OZO	OZONATED OXYGEN
CCW	CIRCULATING COOLING WATER	OZW	OZONATED WATER
CL2	CHLORINE	PEA	POLYELECTROLYTE ANIONIC
CLG	CHLORINE GAS	PEC	POLYELECTROLYTE CATIONIC
CLS	CHLORINE SOLUTION	PEF	PHOSPHATE FEED
CO2	CARBON DIOXIDE	PEN	POLYELECTROLYTE NONIONIC
CRW	CLARIFIER DISCHARGE WATER	PLD	POLYMER DRY
CS	CAUSTIC SODA	PLS	POLYMER SOLUTION
CHR	CHILLED WATER RETURN	PLF	POLYMER FEED
CHS	CHILLED WATER SUPPLY	PTW	PRE-TREATED WATER
CWR	COOLING WATER RETURN	PSW	PLANT SERVICE WATER
CWS	COOLING WATER SUPPLY	PW	POTABLE WATER
DDW	DEMINERALIZED WATER	PWD	PROCESS WASTE DRAIN
DEA	DILUTE ACID	RDR	RECIRCULATED WATER
DEC	DILUTE CAUSTIC	RFH	REFRIGERANT HOT GAS BYPASS
DHF	DOMESTIC HOT WATER SUPPLY	RFL	REFRIGERANT LIQUID
DHR	DOMESTIC HOT WATER RECIRC	RFS	REFRIGERANT SUCTION
DF	DAF FLOAT	RW	RAW WATER
DFR	DIESEL FUEL RETURN	SAM	SAMPLE
DFS	DIESEL FUEL SUPPLY	SAN	SANITARY
DO	DISSOLVED OXYGEN	SBS	SODIUM BISULPHITE
DRA	DRAINAGE (FLOORS)	SCA	SULPHURIC ACID
DRN	DRAINS, CLEAN DRAINS	SD	DRY SALT
DSW	DISTILLED WATER	SDR	DAF RECYCLE
EE	ENGINE EXHAUST	SEA	SERVICE AIR
FC	FERRIC CHLORIDE	SLO	SEAL OIL
FIN	FILTER INFILUENT	SLG	SLUDGE
FPW	FIRE PROTECTION WATER	SST	SUPERNATANT
FTR	FILTER-TO-RECYCLE	SWD	STORMWATER DRAINAGE
FW	FILTERED WATER	STM	STEAM
NG	GAS	SW	SEAL WATER
GLR	GLYCOL RETURN	TW	TREATED WATER
GLS	GLYCOL SUPPLY	VA	VACUUM LABORATORY
GOX	GASEOUS OXYGEN	VTA	VENT AIR
HCO	HYDRAULIC OIL	WS	SOFTENED WATER
HFS	HYDROFLUOSILIC ACID	WW	WASTEWATER
HP	HYDROGEN PEROXIDE		

MISCELLANEOUS

ABBREVIATIONS

ACK	ACKNOWLEDGE	NO	NORMALLY OPEN
ALM	ALARM	O/A	OUTSIDE AIR
A/M	AUTO/MANUAL	O/C	OPEN/CLOSED
A/S	AIR SUPPLY	ODE	OPPOSITE DRIVE END
BRG	BEARING	PF	POWER FACTOR
CURR	CURRENT	PO	PUMP OUT
DEC	DECREASE	PSD	PLANT SHUTDOWN
DE	DRIVE END	PV	PROCESS VARIABLE
E/A	EXHAUST AIR	PWR	POWER
E/S	ELECTRICAL SUPPLY	RSP	REMOTE SET POINT
ESD	EMERGENCY SHUTDOWN	RST	RESET
FCL	FAIL CLOSE	SP	SAMPLE POINT or SET POINT (Depending on Application)
FOP	FAIL OPEN		
F/R	FORWARD or REVERSE	STN	STATION
HI	HIGH	SPD	SPEED
HP	HORSE POWER (kW)	STDBY	STANDBY
kW	KILOWATT	STP	STOP
HVAC	HEATING/VENTILATION/AIR CONDITIONING	STR	START
INC	INCREASE	STS	STATUS
INJ	INJECTOR	TST	TEST
LO	LOW	TYP	TYPICAL
LOS	LOCAL/OFF/STOP	UV	ULTRA-VIOLET LIGHT
L/R	LOCAL/REMOTE	VAC	VACUUM
MLD	MEGALITERS PER DAY	VIB	VIBRATION
NC	NORMALLY CLOSED	W/S	WATER SUPPLY
NLL	NORMALLY LIQUID LEVEL	WDG	WINDING
NNF	NORMALLY NO FLOW		

EQUIPMENT DESIGNATIONS

ARV	AIR RELEASE VALVE	M	MOTOR
ACU	AIR CONDITIONING UNIT	MAU	MAKE-UP AIR UNIT
ACR	ACCESS CARD READER	MCC	MOTOR CONTROL CENTRE
AD	AIR DRYER	MD	MOTION DETECTOR
AHU	AIR HANDLING UNIT	MDV	MUD VALVE
ATS	AUTOMATIC TRANSFER SWITCH	MP	METERING PUMP
BAT	BATTERY	MXR	MIXER
BB	BASEBOARD HEATER	P	PUMP
BFP	BACK FLOW PREVENTER	PCT	PARTICLE COUNTER
BKR	BREAKER	PCU	POLYMER BULK BAG UNLOADER
BLR	BOILER	PCV	PRESSURE CONTROL VALVE
BLW	BLOWER	PF	POWER FACTOR CORRECTION
CC	COOLING COIL	PLT	POWER FILTER (LINE REACTOR, ETC)
CCTV	CLOSED CIRCUIT TELEVISION	PNL	PANEL BOARD
CDR	CONDENSER	PLC	PROGRAMMABLE LOGIC CONTROLLER
CDU	CATALYTIC DESTRUCT UNIT	PPU	POLYMER PREPARATION UNIT
CE	CENTRIFUGE	PRV	PRESSURE REGULATING / REDUCING VALVE
CFR	CHEMICAL FEEDER (POLYMER, CHLORINATOR, ETC.)	PSU	POWER SUPPLY UNIT
CHLR	CHILLER	PSV	PRESSURE / VACUUM RELIEF VALVE
CHR	BATTERY CHARGER	PV	PRESSURE VESSEL
CMP	COMPRESSOR	RV	RELIEF VALVE / RUPTURE DISC
CON	CONVEYOR	SOL	SOLENOID ACTUATOR
CP	CONTROL PANEL	SCRIB	SCRUBBER
GPU	COMPUTER	SE	SAMPLER ELEMENT
CRN	CRANE OR HOIST	SF	SUPPLY FAN
CTS	CATHODIC TEST STATION	SP	SAMPLE PUMP
CV	CHECK VALVE	SLG	SLUICE GATE
DC	DOOR CONTACT	SLR	SILENCER
DEM	DEMISTER	SMP	SUMP PUMP
DES	DESICCANT DRYER	STA	STATIC MIXER
DIF	DIFFUSER	STR	STRAINER
E	ENGINE	SUB	SUBSTATION
EF	EXHAUST FAN	SWGR	SWITCHGEAR
EL	ELECTROLYTIC CELL	SWP	SWASH PLATE
EPR	EVAPORATOR	T	TRAP
ETM	ELAPSED TIME METER	TCV	TEMPERATURE CONTROL VALVE
ETNK	EXPANSION TANK	TV	TEMPERATURE / VIBRATION MONITOR
F	FAN	TK	TANK (NON-PRESSURIZED)
FAP	FIRE ALARM ANNUNCIATOR PANEL	TOTE	TOTE TANK
FCV	FLOW CONTROL VALVE	UH	UNIT HEATER ELECTRIC AND NON-ELECTRIC
FF	FORCE FLOW HEATER	UPS	UNINTERRUPTIBLE POWER SUPPLY
FVC	FLOCCULATOR	UVR	ULTRA-VIOLET LIGHT REACTOR
FV	FLOW CONTROL VALVE (OPEN/CLOSE)	VFD	VARIABLE FREQUENCY DRIVE
GF	GAS FILTER	VSD	VARIABLE SPEED DRIVE
GEN	GENERATOR	V	VALVE
GV	GATE VALVE	VP	VAPOURIZER
GP	GLYCOL PUMP	WP	WELL PUMP
HC	HEAT COIL	WSF	WATER SOFTENER
HEX	HEAT EXCHANGER	XFMR	TRANSFORMER
HWH	HOT WATER HEATER	86	EQUIPMENT LOCKOUT RELAY
HRC	HEAT RECOVERY COIL		
HTR	ELECTRIC HEATER		
HV	HAND VALVE		
HWP	HOT WATER PUMP		
KP	KEY PAD		
LCV	LEVEL CONTROL VALVE		
LOP	LUBE OIL PUMP		
LV	LEVEL CONTROL VALVE (OPEN/CLOSE)		

B.M. ELEV.		ENGINEER'S SEAL	
	DESIGNED BY: SWT	CHECKED BY: SWT	<p>PRELIMINARY</p> <p>NOT FOR CONSTRUCTION</p>
	DRAWN BY: CPG	APPROVED BY:	WATER TREATMENT PLANT
	SCALE: NONE	RELEASED FOR CONSTRUCTION BY:	CITY FILE NUMBER
NO. REVISIONS	DATE	BY	SHEET OF
	2005/06/30		CITY DRAWING NUMBER
			CONSTRUCTION STANDARDS INSTRUMENTATION AND PROCESS IDENTIFICATION
		CONSULTANT DRAWING NO. WM-P0001	