

PIPING SYMBOLS

	PRIMARY PROCESS LINE
	SECONDARY PROCESS LINE OR SERVICE LINE
	CHEMICAL LINE
	GATE VALVE, GENERAL SYMBOL
	BALL VALVE
	CHECK VALVE
	BUTTERFLY VALVE
	NEEDLE VALVE
	PLUG VALVE
	GLOBE VALVE
	PISTON VALVE
	Y-TYPE VALVE
	DIAPHRAGM VALVE
	THREE WAY VALVE
	AIR RELEASE VALVE
	DOUBLE BLOCK & BLEED WITH GATE VALVE
	DOUBLE B&B VALVE
	RELIEF VALVE (FOR PRESSURE OR THERMAL RELIEF)
	MOTORISED VALVE (ELECTRO-HYDRAULIC)
	HAND OPERATED VALVE
	SOLENOID OPERATED VALVE
	MOTORISED VALVE (ELECTRIC)
	CONTROL VALVE GENERAL SYMBOL
	SELF-ACTING CONTROL VALVE
	WITH EXTERNAL PRESSURE TAP SELF-ACTING CONTROL VALVE
	ALTITUDE VALVE
	CONTROL VALVE WITH HANDWHEEL
	FLOAT VALVE
	CONTROL VALVE (ELECTRIC)
	AIR FILTER REGULATOR
	WEIGHT OPERATED VALVE
	SPRING LOADED VALVE
	FLAP VALE
	FIRE TRUCK CONNECTION

PIPING SYMBOLS

	GATE SOCKET WELD VALVE
	NORMALLY CLOSED VALVE
	PIPE CAP
	LINE SIZE CHANGE
	STRAIGHTENING VANES
	FLAME ARRESTER
	SPADE
	LINE BLIND (NORMALLY CLOSED)
	LINE BLIND (NORMALLY OPEN)
	ISOLATING JOINT
	BLIND FLANGE
	TUNDISH
	RESTRICTION ORIFICE
	ORIFICE FLOW ELEMENT
	ORIFICE PLATE
	TEMPORARY STRAINER
	VENT TO ATMOSPHERE
	SPECIFICATION CHANGE
	Y-TYPE STRAINER
	CONICAL ON-LINE STRAINER
	SPECIAL STRAINER
	FLANGED JOINT
	EXPANSION/FLEXIBLE JOINT
	SIPHON DRAIN
	BASKET STRAINER
	DAMPER
	FAN
	LOUVRE

EQUIPMENT SYMBOLS

	RECIPROCATING PUMP
	POSITIVE DISPLACEMENT PUMP
	MOTOR DRIVEN CENTRIFUGAL PUMP
	COMPRESSOR
	HAND PUMP
	VARIABLE AREA METER
	TURBINE METER
	MOTOR DRIVEN SUBMERSIBLE PUMP
	FAN
	ELECTRICAL MOTOR
	MOTOR (PROCESS)
	VFD DRIVEN MOTOR
	ELECTROMAGNETIC FLOWMETER
	LEVEL ELECTRODE (3 PROBES)
	ULTRASONIC LEVEL MEASUREMENT
	SUBMERSIBLE PUMP
	CRANE
	DIESEL ENGINE
	PENSTOCK
	TRASH RACK

TYPICAL INSTRUMENT SYMBOLS

	LOCALLY MOUNTED
	PANEL MOUNTED IN CONTROL ROOM
	MOUNTED IN LOCAL PANEL
	CONVERTER ETC WITH FUNCTION BLOCK DESIGNATION
	SHARED DISPLAY SHARED CONTROL
	COMPUTER FUNCTION
	PROGRAMMABLE LOGIC CONTROL
	UNDEFINED INTERLOCK LOGIC
	ELECTRIC SIGNAL
	PNEUMATIC SIGNAL / AIR LINE
	HYDRAULIC SIGNAL / LINE
	CONNECTION TO PROCESS
	SYSTEM LINK/SOFTWARE SIGNAL (SOFTWARE OR DATA LINK)

ABBREVIATIONS

CS	COMMON STOP
D1	DUTY 1
D2	DUTY 2
D3	DUTY 3
D4	DUTY 4

CODINGS FOR TYPICAL INSTRUMENT FUNCTIONS

FIRST LETTER			SUCCEEDING LETTERS		
	MEASURED OR INTIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE		USER'S CHOICE
C	CONDUCTIVITY			CONTROL	
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION			
G		GAUGE	GLASS, VIEWING DEVICE		
H	HAND (MANUALLY INITIATED)				HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME OR TIME SCHEDULE	TIME RATE OR CHANGE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOISTURE HUMIDITY MOTOR	MOMENTARY			MIDDLE OR INTERMEDIATE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		
P	PRESSURE OR VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTGRATE OR TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED, FREQUENCY	SAFETY		SWITCH	
T	TEMPREATURE			TRANSMITTER	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECH. ANALYSIS			VALVE, DAMPER OR LOUVRE	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE	Y AXIS		RELAY, COMPUTE OR CONVERT	
Z	POSITION, DIMENSION	Z AXIS		DRIVER, ACTUATOR OR UNCLASSIFIED FINAL CONTROL ELEMENT	

TANK SYMBOLS

	ATMOSPHERIC PRESSURE TANK
	PRESSURE VESSEL

NOTES:

REFERENCE DRAWINGS AND DOCUMENTS

No.	REVISIONS	APP'D	DATE
CLIENT			

TITLE
STANDARD DRAWINGS
STORM WATER WORKS

DRAWING TITLE

STANDARD DRAWING & ID LEGENED
& SYMBOLS

DRAWN	-	SCALE	NTS
CHECKED	-	DATE	-
APPROVED	-	SIZE	A1
PROJECT No.	-	DWG. No.	1301