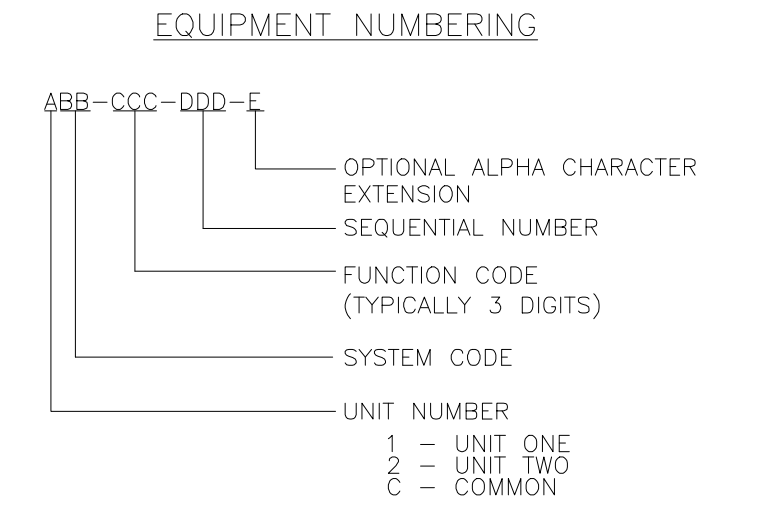


SYSTEM CODES

AA	STANDARDS
AB	BOTTOM ASH HANDLING
AS	AUXILIARY STEAM
BA	COMBUSTION AIR AND FLUE GAS
BD	BOILER DRAINS AND VENTS
BO	BLOWOUT CLEANING
BU	BURNER MANAGEMENT
CA	CONDENSER VACUUM
CD	CONDENSATE
CF	CHEMICAL FEED
CH	COAL HANDLING
CL	CHLORINATION/DECHLORINATION
CP	CONDENSATE POLISHING
CR	COLD REHEAT STEAM
CW	CIRCULATING WATER
CX	COMPUTER
DM	DRAINS AND VENTS
EC	EQUIPMENT CLEANING
ED	EQUIPMENT DRAINS AND VENTS
ES	EXTRACTION STEAM
F6	FUEL GAS
FA	FLY ASH HANDLING SYSTEM
FP	FIRE PROTECTION
FW	FEEDWATER
GA	GENERAL ARRANGMENT
GS	TURBINE GLAND SEAL STEAM
HD	HEATER DRAINS AND VENTS
HR	HOT REHEAT STEAM
IA	INSTRUMENT AIR
LH	LIMESTONE HANDLING
MS	MAIN STEAM
NH	AMMONIA FEED
NT	NITROGEN
OA	FGD FORCED OXIDATION AIR
OD	OIL DRAINS
OL	LUBRICATING OIL
OT	TRANSFER OIL
PA	PRIMARY AIR
PE	PARTICULATE REMOVAL
PS	PROCESS SAMPLING
RE	REFRIGERATION EQUIPMENT
SA	SERVICE AIR
SB	SOOT BLOWERS
SC	SELECTIVE CATALYTIC REDUCTION
SG	STEAM GENERATOR
SI	SORBANT INJECTION
SU	START-UP
TD	TURBINE DRAINS AND VENTS
TG	TURBINE GENERATOR AUXILIARIES
TO	TURBINE OIL
TU	TURBINE
TW	TREATED WATER
WC	CLOSED COOLING WATER
WD	DOMESTIC WATER
WG	GLAND WATER
WH	HP SERVICE WATER
WM	DEMMINERALIZED WATER
WO	CHILLED WATER
WR	RAW WATER
WT	WATER TREATMENT
WW	WASTE WATER
WS	SERVICE WATER

COMPONENT IDENTIFICATION



FUNCTION CODE	COMPONENT
ABS	ABSORBER
ACC	ACCUMULATOR
AHU	AIR HANDLER UNIT
ATM	ATTEMPERATOR
BFP	BACKFLOW PREVENTER
BLO	BLOWER
BNR	BURNER
BU	BELL-UP
CLR	COOLER
CMP	COMPRESSOR
CND	CONDENSER
CRU	CRUSHER
CTW	COOLING TOWER
DG	DIESEL GENERATOR
DEA	DEAERATOR
DMP	DAMPER
DOR	DOOR
DSH	DESUPERHEATER
DRY	DRYER
EF	EXHAUST FAN
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUSTER (INC STEAM JET AIR EXHAUSTER)
EXJ	EXPANSION JOINT
FCC	FIRE CYLINDER CABINET
FD	FIRE DAMPER
FEX	FIRE EXTINGUISHER
FL	FUSIBLE LINK
FLT	FILTER
CSKT	GASKET
GAT	GATE
GVD	GRAVITY VOLUME DAMPER
STC	GENERATOR, STEAM TURBINE
HX	HEAT EXCHANGER
HOS	HOSE
FHOS	HOSE, FLEX
HSS	HOSE, STATION
HYD	HYDRANT
IGN	IGNITER
IHW	INSTANTANEOUS HOT WATER HEATER
LUV	LOUVER
MCD	MOTORIZED CONTROL DAMPER
MPL	MECHANICAL PANEL
PMP	PUMP
REF	ROOF EXHAUST FAN
RPD	RUPTURE DISK
SEP	SEPARATOR
SFD	FIRE DAMPER
SIL	SILENCER
SKD	SKID
SNB	SNUBBER (PIPE)
STP	STEAM PUMP
STR	STRAINER
TNK	TANK
TRP	STEAM TRAP
UH	UNIT HEATER
WEF	WALL EXHAUST FAN

VALVES

	GATE VALVE
	GLOBE VALVE
	BALL VALVE
	CHECK VALVE
	POWER ASSISTED NON-RETURN VALVE
	STOP CHECK VALVE
	BUTTERFLY VALVE
	ANGLE VALVE
	THREE-WAY VALVE
	SAFETY OR RELIEF VALVE
	ALARM CHECK VALVE

VALVE OPERATORS

	PNEUMATIC DIAPHRAM
	PISTON (CYLINDER)
	MOTOR
	SELF CONTAINED PRESSURE REGULATOR
	SOLENOID
	ELECTRO HYDRAULIC

ABBREVIATIONS

FC	FAIL CLOSED
FL	FAIL LOCKED
FO	FAIL OPEN
LC	LOCK CLOSED
LO	LOCK OPEN
NC	NORMALLY CLOSED
NO	NORMALLY OPEN

INSTRUMENTATION

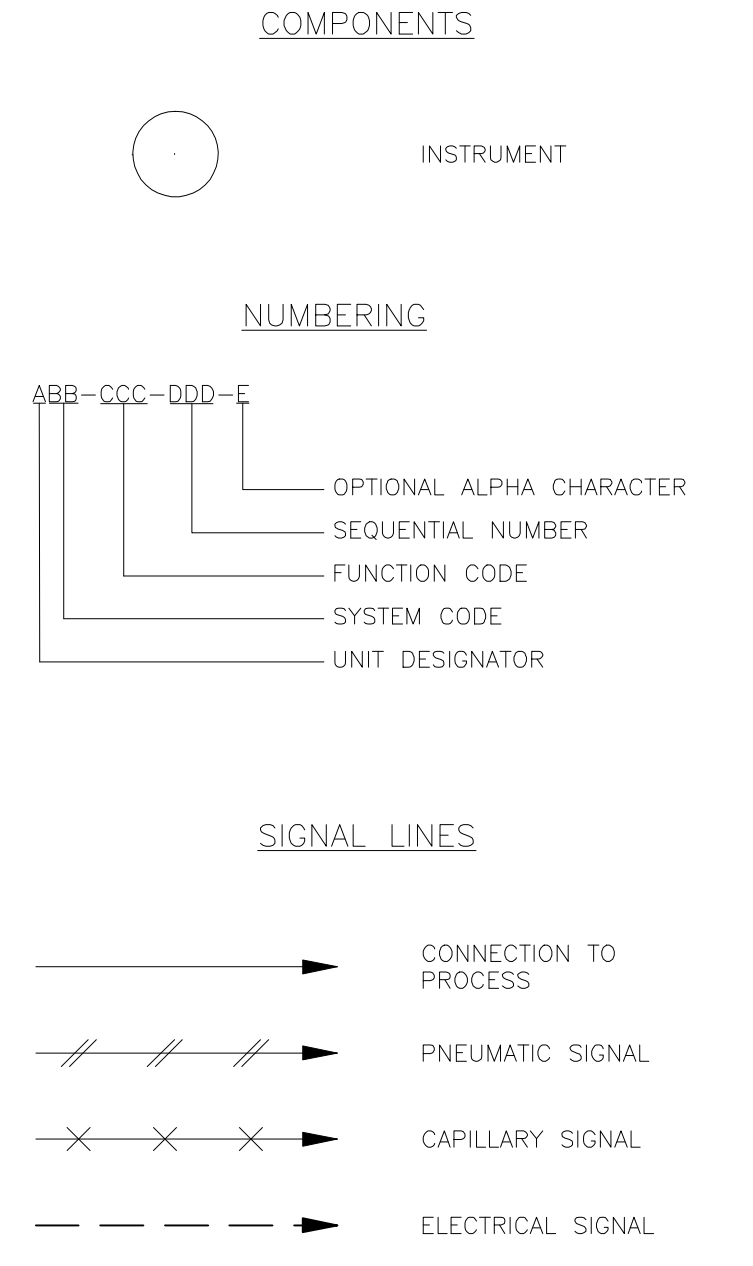
IDENTIFICATION

FUNCTION CODE	INSTRUMENT
ABV	AIR OPERATED BLOCK VALVE
ANZ	ANALYZER
AUV	AIR OPERATED NON RETURN VALVE
CE	CONDUCTIVITY ELEMENT
CT	CONDUCTIVITY TRANSMITTER
DPI	DIFFERENTIAL PRESSURE INDICATOR
DPSH	DIFFERENTIAL PRESSURE SWITCH HI
DPT	DIFFERENTIAL PRESSURE TRANSMITTER
ESS	EMRGENCY STOP
ET	VOLTAGE TRANSMITTER
FC	FLOW CONTROLLER
FCV	FLOW CONTROL VALVE
FE	FLOW ELEMENT
FI	FLOW INDICATOR
FM	FLOW METER
FS	FLOW SWITCH
FSH	FLOW SWITCH HIGH
FT	FLOW TRANSMITTER
GG	GAGE GLASS
IT	AMPERE TRANSMITTER
JT	POWER TRANSMITTER
LCV	LEVEL CONTROL VALVE
LI	LEVEL INDICATOR
LSC	LIMIT SWITCH CLOSED
LSH	LEVEL SWITCH HI
LSHH	LEVEL SWITCH HI HI
LSL	LEVEL SWITCH LOW
LSLL	LEVEL SWITCH LOW LOW
LIT	LEVEL TRANSMITTER
LIT	MOTOR OPERATED BLOCK VALVE
MBV	OXIDATION REDUCTION POTENTIAL ELEMENT
OPRE	OXIDATION REDUCTION POTENTIAL TRANSMITTER
PC	PRESSURE CONTROLLER
PCV	PRESSURE CONTROL VALVE
PHE	PH ELEMENT
PHT	PH TRANSMITTER
PI	PRESSURE INDICATOR
PP	PRESSURE POINT
PSH	PRESSURE SWITCH HI
PSHH	PRESSURE SWITCH HI HI
PSL	PRESSURE SWITCH LOW
PSLL	PRESSURE SWITCH LOW LOW
PT	PRESSURE TRANSMITTER
SE	SPEED ELEMENT
SI	SPEED INDICATOR
SS	SPEED SWITCH
ST	SPEED TRANSMITTER
SV	SOLENOID VALVE
TE	TEMPERATURE ELEMENT
TC	TEMPERATURE CONTROLLER
TCV	TEMPERATURE CONTROL VALVE
TI	TEMPERATURE INDICATOR
TSH	TEMPERATURE SWITCH HI
TSHH	TEMPERATURE SWITCH HI HI
TSL	TEMPERATURE SWITCH LOW
TSLL	TEMPERATURE SWITCH LOW LOW
TW	TEMPERATURE TEST WALL
TT	TEMPERATURE TRANSMITTER
VE	VIBRATION ELEMENT - PROBE
VI	VIBRATION INDICATOR
VS	VIBRATION SWITCH
VT	VIBRATION TRANSMITTER
WHT	WATT-HOUR TRANSDUCER
XK	ON/OFF STATION
XJ	MODULATING STATION
ZC	POSITION CONTROLLER
ZE	POSITION ELEMENT
ZS	POSITION SWITCH
ZSC	POSITION SWITCH CLOSED
ZSO	POSITION SWITCH OPEN
ZT	POSITION TRANSMITTER

ABBREVIATIONS

BMS	BURNER MANAGEMENT SYSTEM
DCS	DISTRIBUTED CONTROL SYSTEM
TCS	TURBINE CONTROL SYSTEM
CEM	CONTINUOUS EMISSIONS MONITORING SYSTEM

INSTRUMENTATION



FIRE PROTECTION

	CLOSED-HEAD SPRAY NOZZLES (FP PRE-ACTION SPRAY SYSTEM)
	OPEN-HEAD SPRAY NOZZLES (FP DELUGE WATER SPRAY SYSTEM)
	DOUBLE INTERLOCK FP SYSTEM (PILOT CLOSED HEAD, NOZZLE CLOSED HEAD)
	DRY PILOT DETECTION (PRE-ACTION OR DELUGE)
	ELECTRIC DETECTION (HEAT, SMOKE, LINEAR HEAT, SENSING CABLE, ETC.) (PRE-ACTION OR DELUGE)
	DENOTES WET PIPE (FIRE PROTECTION)
	DENOTES DRY PIPE (FIRE PROTECTION)
	DELUGE VALVE
	FIRE HOSE RACK
	FIRE HYDRANT
	SMOKE DETECTOR
	FUSIBLE LINK

PIPING ACCESORIES

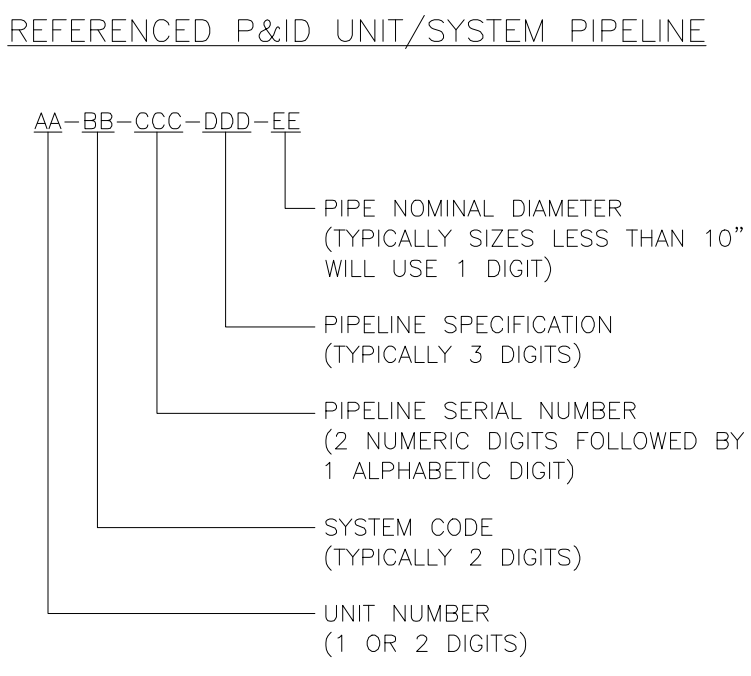
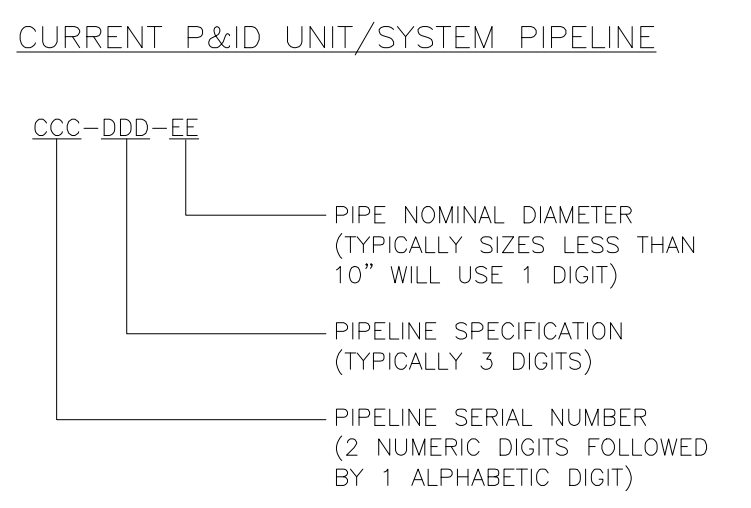
	FLEXIBLE HOSE
	REDUCER / ENLARGER
	METERING FEEDER
	Y-TYPE STRAINER
	Y-TYPE STRAINER W/BLOCK VALVE
	DUPLEX BASKET STRAINER
	BASKET STRAINER
	TEMPORARY CONE STRAINER
	FLANGE
	INSULATING FLANGE
	UNION
	SCREWED CAP
	PLUGGED CONNECTION
	WELDED CAP
	BLIND - NORMALLY OPEN
	DESUPERHEATER
	EXPANSION JOINT
	DUCTWORK EXPANSION JOINT
	STEAM TRAP
	CAPPED DRAIN
	OPEN DRAIN
	BELL UP
	FLOW ELEMENT (ORIFICE)
	FLOW ORIFICE (RESTRICTIVE)
	FLOW ELEMENT (NOZZLE)
	DUCTWORK AIR FOIL FLOW ELEMENT
	SIGHT FLOW INDICATOR
	DISPLACEMENT METER
	AVERAGING PITOT TUBE
	CORROSION COUPON
	HOSE BIB - SERVICE WATER
	EXPANSION TANK
	VENT SCREEN
	AIR VENT VALVE
	BUSHED STRAINER
	GUILLOTINE DAMPER
	LOUVER W/ DAMPERS
	ROTARY FEEDER

LINE SPECIFICATION BREAK INDICATES A CHANGE IN ONE OR MORE LINE ATTRIBUTES INCLUDING: PIPE NOMINAL DIAMETER WALL THICKNESS OR SCHEDULE PIPELINE SPECIFICATION (MATERIAL) DESIGN PRESSURE DESIGN TEMPERATURE OPERATING PRESSURE OPERATING TEMPERATURE INSULATION TYPE INSULATION THICKNESS

PIPING

	MAJOR PROCESS
	MINOR PROCESS
	EXISTING MAJOR PROCESS
	EXISTING MINOR PROCESS
	INSTRUMENT TUBING
	FREEZE PROTECTION
	VENDOR PIPING

PIPING IDENTIFICATION



REV	DATE	DESCRIPTION	DWN	ENGR	CHK	APPV
A	27 JUL 07	OWNER REVIEW		MJR	DRW	SMB RTU

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 PIPING & INSTRUMENTATION DIAGRAM
 LEGEND

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