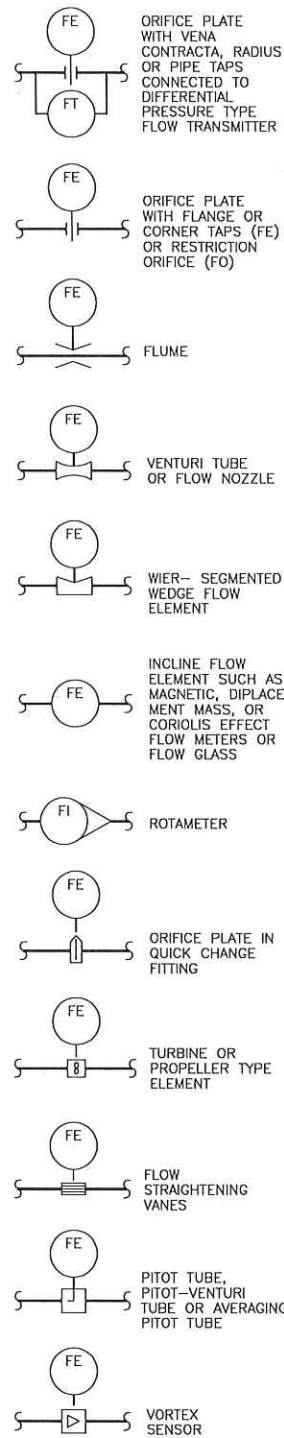
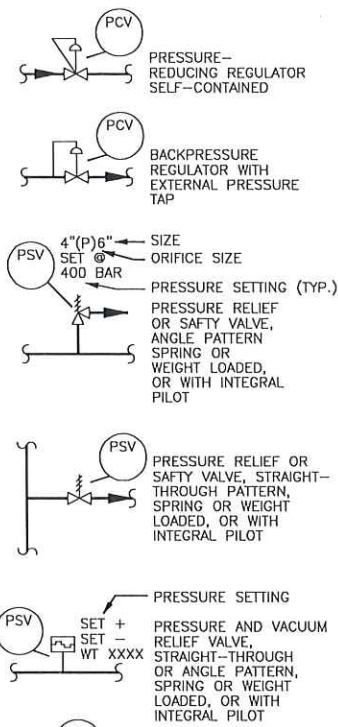
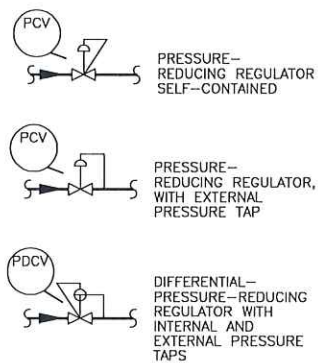


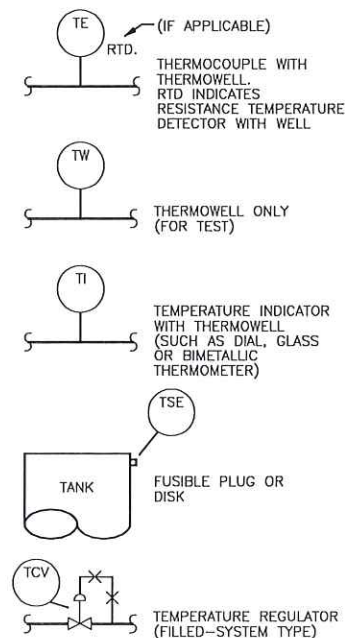
FLOW (SEE NOTE 4)



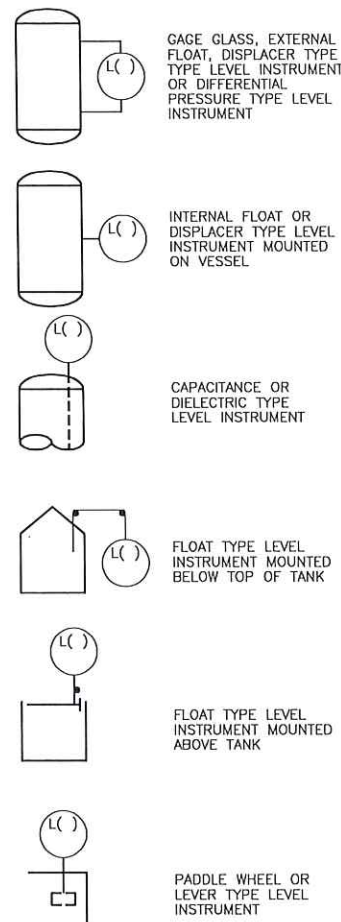
PRESSURE INSTRUMENTS (SEE NOTE 4)



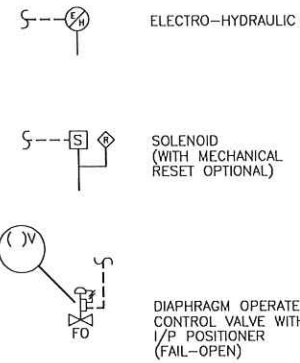
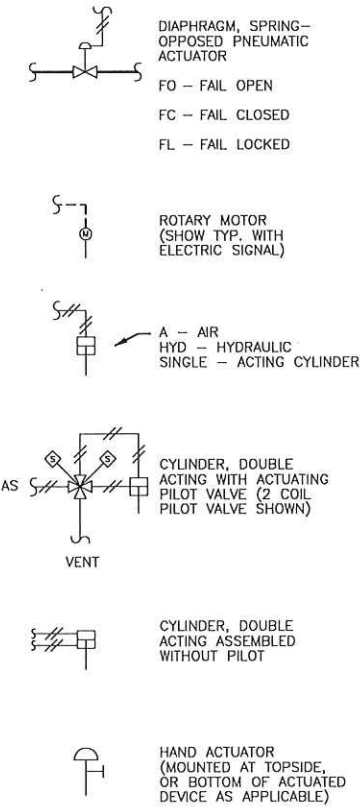
TEMPERATURE



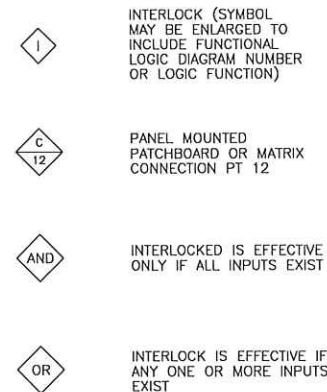
LEVEL (SEE NOTE 5)



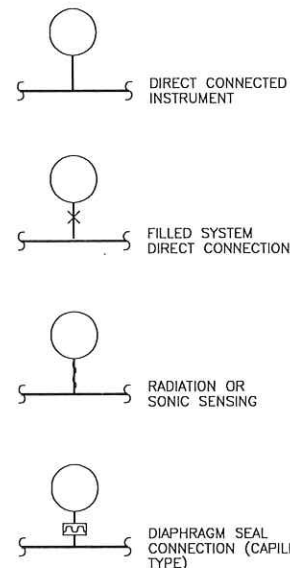
ACTUATORS



INTERLOCK SYMBOLS



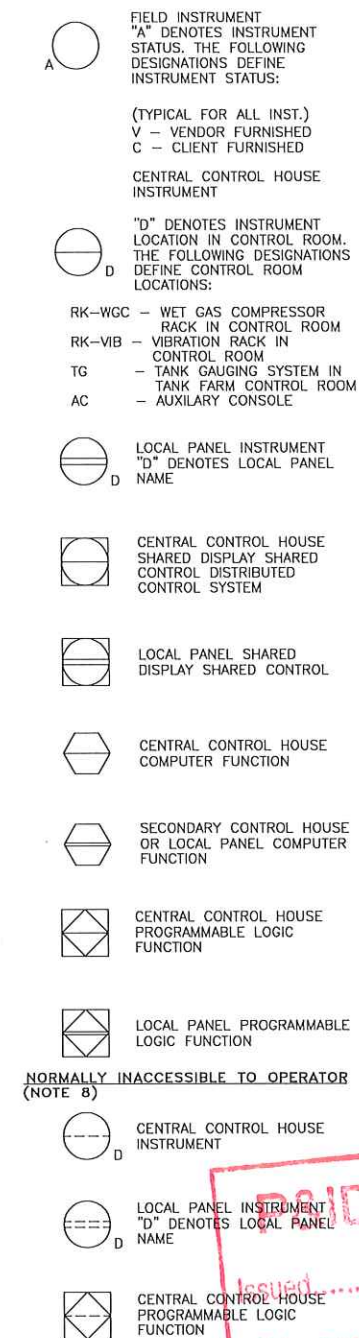
TYPICAL CONNECTION ANY VARIABLE



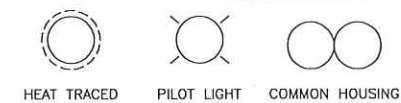
POWER SUPPLY SYSTEMS SYMBOLOGY

AS - AIR SUPPLY
IA - INSTRUMENT AIR
PA - PLANT AIR
ES - ELECTRIC SUPPLY
GS - GAS SUPPLY
HS - HYDRAULIC SUPPLY
NS - NITROGEN SUPPLY
SS - STEAM SUPPLY
WS - WATER SUPPLY

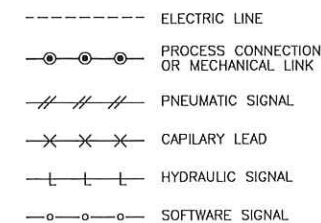
GENERAL INSTRUMENT OR FUNCTION SYMBOLS (NOTES 2 & 8)



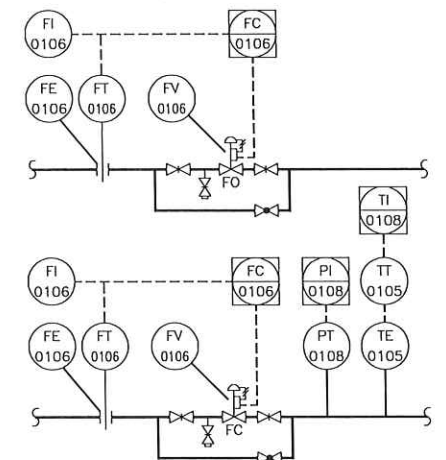
MISCELLANEOUS SYMBOLS



INSTRUMENT SIGNALS



INSTRUMENTATION LOOP'S AND NOTES



- THIS DRAWING SHOWS BASIC INSTRUMENTATION SYMBOLOGY TO ASSIST WITH P & ID INTERPRETATION ONLY. FOR DESIGN INFORMATION AND EXAMPLES, CONSULT ISA S5.1.
- THE "GENERAL INSTRUMENTATION AND FUNCTION" SYMBOLS AND "INTERNAL SYSTEM LINK" SYMBOL ARE DESIGNED TO BE CAPATIBLE WITH ANSI/ISA STANDARD S5.1. IN THE EVENT OF CONFLICT, ISA STANDARD S5.1 IS THE CONTROLLING DOCUMENT.
- ADDITIONAL SYMBOLS AS MAY BE REQUIRED SHALL BE FORM ISA S5.1 STANDARD. DEFINE "USER CHOICE" AND USER DEFINED TAG LETTERS AND "SPECIAL" LOGIC BLOCKS ON THE DRAWINGS ON WHICH THEY APPEAR.
- ALL PRESSURE AND FLOW CONNECTIONS ARE UNDERSTOOD TO HAVE SINGLE, PIPING CLASS ROOT VALVES. THIS AND ANY EXCEPTIONS WILL BE COVERED BY NOTES ON THE P & ID'S. INSTRUMENTATION INSTALLATION DETAILS SHALL INCLUDE ALL CONNECTION FITTINGS BEYOND THE PRIMARY BLOCK VALVES.
- FOR LEVEL INSTRUMENTS, ALL PIPING CLASS VALVES AND FITTINGS SHALL BE SHOWN ON LEVEL DETAIL DRAWINGS. THE P & ID SHALL INDICATE ONLY GENERAL PIPING ARRANGEMENT AND PRIMARY BLOCK VALVES.
- WHERE SHOWN, () REFERS TO LOOP'S PRIMARY CONTROL ELEMENT SUCH AS F=FLOW, L=LEVEL, T=TEMPERATURE, P=PRESSURE, H=HAND OPERATED OR SUCCEEDING LETTERS SUCH AS C=CONTROL, T=TRANSMIT, I=INDICATE.
- SUBSCRIPTED ABBREVIATIONS OF THE USER'S CHOICE SUCH AS LP-1 (LOCAL PANEL #1) OR OC2 (OPERATOR CONSOLE #2) MAY BE ADDED TO P&ID SYMBOLS WHEN IT IS NECESSARY TO SPECIFY INSTRUMENT OR FUNCTION LOCATION. SUCH ABBREVIATIONS SHALL BE DEFINED ON THIS DRAWING UNDER "GENERAL INSTRUMENT OR FUNCTION SYMBOLS".
- NORMALLY INACCESSIBLE, BEHIND-THE-PANEL OR RACK-MOUNTED DEVICES OR FUNCTIONS MAY BE DEPICTED USING "GENERAL INSTRUMENTATION OR FUNCTION SYMBOLS" BUT WITH DASHED HORIZONTAL BARS.
- DIRECT CONTROLLERS WILL NOT SHOW. REVERSE ACTING CONTROLLERS WILL SHOW "REV" ACTION.
- POWER SUPPLY SYSTEMS SYMBOLOGY WITH/* TO DENOTE TYPES OF POWER SUPPLY.

REV.	DATE	DESCRIPTION OF ISSUE	DRWN	CHKD	APPD	APPD	APPD
1	03-14-08	UPDATE 2008	NR	TH			
2	08-12-05	F.F.C	YSJ	JHS	BYJ	JUL	
3	03-31-95	A.F.D	YSJ	JHS	BYJ	JUL	

IRPC IRPC PUBLIC COMPANY LIMITED TPI SPLITTER PLANT PHASE III PROJECT RAYONG, THAILAND							
LG Engineering Co., Ltd. SEOUL, KOREA							
TETRA ENGINEERING & TECHNOLOGY INC. BREA, CALIFORNIA, U.S.A.							
D/K HDS UNIT PIPING & INSTRUMENT DIAGRAM STANDARD LOGIC & INSTRUMENT SYMBOLS							
JOB NUMBER		DRAWING NUMBER		REV. NO.			
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