

1. UNIT IDENTIFICATION NUMBER

PLANT NO. & ABBREVIATION	PLANT DESCRIPTION	UNIT NO.	UNIT DESCRIPTION	ABBREVIATION
130 : 3	PRELINE	1	PROCESS	31

2. GENERAL NOTES

2.1 GENERAL NOTES

- THE SIMPLICITY ROUTING OF PROCESS FLOW LINES, SOME PIECES OF EQUIPMENT MAY APPEAR IN MORE THAN ONE PLACE ON THE FLOW DIAGRAM. EQUIPMENT SO DUPLICATED WILL BE INDICATED BY DASHED LINES.
- INSTRUMENT IDENTIFICATION AS ILLUSTRATED ARE BASED ON IPS-E-PR-230 AND THE INSTRUMENT SOCIETY OF AMERICA STANDARDS S.5.1 AND S.5.3.
- WHEN NECESSARY PIPING AND / OR EQUIPMENT SYMBOLS MAY BE INCLUDED AS PART OF AN INSTRUMENT LOOP.
- DIMENSION FROM CENTER OF LC BALLON TO TANGENT LINE OR BOTTOM OF HORIZONTAL VESSEL INDICATES NOMINAL LEVEL.
- DIMENSION UNDER LC BALLON INDICATES FLOAT RANGE.
- DIMENSION UNDER LS BALLON INDICATES VISIBLE GLASS LENGTH.
- DIMENSION UNDER LS BALLON INDICATES POINT OF ACTUATION OF LS UNIT ABOVE TANGENT LINE OR BOTTOM OF HORIZONTAL VESSEL.
- PIPING COMPONENTS NOT IDENTIFIED BY INSTRUMENT OR MECHANICAL EQUIPMENT, ETC. AND NOT COVERED BY THE PIPING MATERIAL SPECIFICATION, ARE IDENTIFIED BY SPECIAL ITEM NUMBER, UNLESS OTHERWISE SPECIFICALLY NOTED.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFICALLY NOTED.
- HIGH POINT VENTS AND LOW POINT DRAINS USED FOR HYDRAULIC TEST PURPOSES ONLY SHALL BE PROVIDED BUT ARE NOT SHOWN ON THE P & ID. FOR HYDRAULIC TEST PURPOSES SHALL BE PROVIDED ONLY FOR 2" AND LARGER LINE.
- PROVIDE DOUBLE ISOLATION VALVES (BALL VALVES AND BLEED VALVES) FOR VENT.
- TO ATMOSPHERE FOR HYDROCARBON SERVICES WHICH ARE ABOVE 300# RATING, FOR 300# RATING AND UNDER ONE SINGLE BALL VALVE, FOR ACID GAS SYSTEM VENTS AND DRAINS USE DOUBLE ISOLATION BALL VALVE. FOR ALL CLASSES, FOR RELIEF VALVE BYPASS, IN CLASS OF 600# AND HIGHER, DOUBLE ISOLATION (SINGLE BALL VALVE + GLOBE VALVE) FOR 300# AND UNDER ONE SINGLE BALL VALVE.
- ALL DRAINS TO ATMOSPHERE ARE BALL VALVE WITH CAP. FOR ALL CLASS RATING.
- FOR PIPING CLASS 600# AND HIGHER USE DOUBLE BLOCK VALVES FOR 2" AND HIGHER.
- VALVED VENT SHALL BE INSTALLED AT VAPOR POCKET OF 14" AND LARGER LIQUID LINE.
- UNVALVED DRAIN ON SECTION PIPING OF PUMP EXCEPT CLEAN SERVICE SHALL BE LED TO DRIP FUNNEL WITH EXTENDED TAIL PIPE PLUGGED AT END OR FLANGED WITH SPECTACLE BLIND INSERTED AS SHOWN.
- ALL CLOSED PRESSURE RELIEF VALVE DISCHARGE LEADS SHALL BE FREE DRAINING FROM PRESSURE RELIEF VALVE TO THE TOP OR SIDE OF THE DISCHARGE HEADERS.
- 9MM WEEP HOLES ARE PROVIDED AT LOW POINTS OF PRESSURE RELIEF VALVE AND RAPTURE DISC DISCHARGING TO ATMOSPHERE.
- DEFINITIONS :

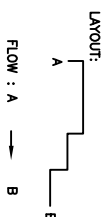
(1) FREE DRAINING : LINE TO BE ROUTED TO A POINT DESIGNATED WITH NO LIQUID POCKET AND NO VAPOR POCKET IN THE LINE.



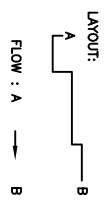
(2) SLOPED LINE : ELEVATION CHANGES ARE CONTINUOUSLY DOWNWARD ONLY. NO POCKETS ARE PERMITTED. SPECIFIC SLOPES REQUIRED ARE SHOWN BY SYMBOL.



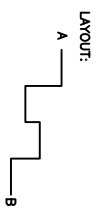
(3) NO LIQUID POCKET : NO LIQUID POCKET IN THE LINE.



(4) NO VAPOR POCKET : NO VAPOR POCKET IN THE LINE.



(5) GRAVITY FLOW : ELEVATION DOWNSTREAM NEVER EXCEED INLET ELEVATIONS. LINE MAY CONTAIN LIQUID POCKETS AND VAPOR POCKETS.



2.2 ABBREVIATIONS

2.2.1 VALVE & CONTROL VALVE

- BDV : BLOWDOWN VALVE
- BV : BALL VALVE
- CAO : CLOSE-AUTOMATIC-OPEN
- CCL : CABLE CONTROL
- CHV : CHECK VALVE
- CO : CHAIN OPERATED
- CSC : CAR SEALED CLOSED
- CSO : CAR SEALED OPEN
- D : DRAIN
- ESDV : EMERGENCY SHUTDOWN VALVE
- FB : FULL BORE
- FC : FAIL CLOSED (CLOSE ON MINIMUM SIGNAL TO VALVE ACTUATOR)
- FCV : FLOW CONTROL VALVE
- FD : FLEX DISC VALVE
- FL : FAIL LOCKED
- FLC : FAIL LOCKED CLOSED. VALVE POSITION DOES NOT CHANGE ON LOSS OF ACTUATING MEDIUM SUPPLY
- FLO : FAIL LOCKED OPEN. VALVE POSITION DOES NOT CHANGE ON LOSS OF ACTUATING MEDIUM SUPPLY
- FO : FAIL OPEN (OPENS ON MINIMUM SIGNAL TO VALVE ACTUATOR)
- FP : FULL PORT
- GM : GEAR OPERATED AND MOTORIZED VALVE
- GO : GEAR OPERATED VALVE
- GW : GEAR OPERATED INSULATED VALVE
- HV : HOT INSULATED VALVE
- LBV : LINE BREAK VALVE
- LC : LOCKED CLOSED
- LCV : LEVEL CONTROL VALVE
- LO : LOCKED OPEN
- MOV : MOTOR OPERATED VALVE
- NC : NORMALLY CLOSED
- NO : NORMALLY OPEN
- NV : NEEDLE VALVE
- ORB : ORBIT VALVE
- OV : OPERATING VALVE
- P : PLUGGED
- PCV : PRESSURE REGULATOR/ PRESSURE CONTROL VALVE
- PMA : POST INDICATOR VALVE
- PSE : RUPTURE DISK ASSEMBLY (PRESSURE SAFETY EQUIPMENT)
- PSV : PRESSURE SAFETY RELIEF VALVE
- PSVJ : PRESSURE / VACUUM VALVE
- SR : SPLIT RANGE
- SS : SOFT SEAT VALVE
- ST : STEELITE VALVE
- T : TRAP
- TCV : TEMPERATURE CONTROL VALVE
- TSO : TIGHT SHUT-OFF VALVE
- V : VENT
- WR(J) : WACKETED FLUG VALVE
- WV : WARNING VALVE
- X : TYPE 316 STAINLESS STEEL TRIM VALVE
- XV : MULTIVARIABLE FINAL ELEMENT (ON/OFF VALVE)
- XX : 18-8 STAINLESS STEEL TRIM VALVE

2.2.2 PIPING

- CS : CARBON STEEL
- DN : DIAMETER NOMINAL
- FF : FLAT FACE
- FS : FORCED STEEL
- GA : GALVANIZED
- GRP : GLASS REINFORCED PLASTIC
- HB : HAMMER BUND
- IC : INSULATED COLD
- IH : INSULATED HOT
- IS : INSULATED FOR PERSONNEL PROTECTION
- PB : PRESSURE BUND
- PN : PRESSURE NOMINAL
- PRV : PRESSURE REGULATOR VALVE

2.2.3 OTHERS

- RF : RAISED FACE
- RS : REMOVABLE SPOOL
- RSP : RING SPACER
- RTU : RING TYPE JOINT
- SB : SPECTACLE BLIND
- SO : SLOPE ON
- SPB : SPACE BUND
- SS : STAINLESS STEEL
- SW : SOCKET WELD
- VB : VAPOR BUND
- WN : WELD NECK
- A/G : ABOVE GROUND
- B.L.L : BATTERY LIMIT
- COF : CENTER OF FLOAT
- DP : DESIGN PRESSURE
- ELEV : ELEVATION
- EM : EMERGENCY VENT
- F : FURNISHED
- F&P : FURNISHED & PIPED
- GH : GAGE HATCH
- HHLL : HIGH HIGH LIQUID LEVEL
- HIPS : HIGH INTEGRITY PRESSURE PROTECTION SYSTEM
- HL : HIGH INTERFACE LIQUID LEVEL
- HLL : HIGH LIQUID LEVEL
- U : ISOLATION JOINT
- LF : LIQUID FOAM
- LL : LOW INTERFACE LIQUID LEVEL
- LLL : LOW LIQUID LEVEL
- LLLL : LOW LOW LIQUID LEVEL
- MH : MANHOLE
- NLL : NORMAL LIQUID LEVEL
- NLF : NORMALLY NO FLOW
- P : PRESSURE
- P & ID : PIPING & INSTRUMENTATION DIAGRAM
- PB : PUSH BUTTON
- PRD : PROCESS FLOW DIAGRAM
- PO : PUMP OUT
- PTC : PRESSURE TEST CONNECT
- PV : PROCESS VARIABLE
- RES : RESOLVE
- RG : REFRIGERANT GAS
- RL : REFRIGERANT LIQUID
- RO : RESTRICTION ORIFICE
- RS : REMOTE SETPOINT
- RTD : RESISTANCE TEMPERATURE DETECTOR
- RVP : RED VAPOR PRESSURE
- SC : SAMPLE CONNECTION
- SC : SAMPLE CONNECTION
- SC : SAMPLE COOLER
- SF : SOLUTION FOAM
- SG : SIGHT GLASS
- SP : SET POINT
- SP. GR. : RELATIVE MASS DENSITY (SPECIFIC GRAVITY)
- T/L/T : TANGENT TO TANGENT
- T/W : THERMO-WEEL
- TX : SKIN TEMPERATURE
- TXE : SKIN T/C ELEMENT
- UC : UTILITY CONNECTION
- URD : UTILITY FLOW DIAGRAM
- U/G : UNDER GROUND
- VB : VORTEX BREAKER
- IAS : INSTRUMENT AIR SUPPLY
- CC/CP : CORROSION PROBE AND COUPON
- CT : CORROSION TRANSMITTER
- ZS : ZIG ZAG
- ZI : ZIG ZAG INDICATOR

NOTES

REVISION	DATE	DESCRIPTION
REV. 01	01/01/2023	ISSUED FOR CONSTRUCTION
REV. 02	02/01/2023	REVISION
REV. 03	03/01/2023	REVISION

KEY PLAN

NO.	DATE	BY	CHECKED	DATE	BY	DATE	BY
1	01/01/2023	BY	CHECKED	01/01/2023	BY	01/01/2023	BY
2	02/01/2023	BY	CHECKED	02/01/2023	BY	02/01/2023	BY
3	03/01/2023	BY	CHECKED	03/01/2023	BY	03/01/2023	BY

SCALE	SHEET NO.	REV.	DATE
AS	1 OF 6	D02	005-073-0104

(VENDOR TITLE BLOCK)\*\*

	<p>PERIBOABAN DEVELOPMENT COMPANY</p>
<p>EPIC CONTRACTOR</p>	<p>EPIC/EPIC CONTRACTOR (GP)</p>
<p>SEBAN ENERGY - DESIGN &amp; INTEGRATION COMPANY</p>	<p>PERIBOABAN DEVELOPMENT COMPANY</p>

PROJECT NO.: 071000

PROJECT NAME: BINAQ OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES

DATE: 01/01/2023

SCALE: AS

DRAWING NO.: BR-FPL-PEDCO-280-FR-P1-0003

SHEET NO.: 1 OF 6

REV.: D02

DATE: 005-073-0104

BY: P

CHECKED BY: 7000083

SHEET NO.: 1 OF 6

DATE: D02

3. EQUIPMENT

3.1 EQUIPMENT NUMBERING

AA	BCDD	E
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AA: EQUIPMENT CODE EQUIPMENT	CODE
AIRCOLER	AE
COMPRESSOR	C
CONTROL PANEL	LC(OP)
DIESEL ENGINE	DL
EXCHANGER SHELL-AND TUBE, DOUBLE PIPE, PLATE, COIL, AIR COOLED, REBOILER, BOX COOLER, CASQUADE COOLER, SURFACE CONDENSER, BAROMETRIC CONDENSER, WASTE-HEAT BOILER	E
FAN	FA
FILTER	F
FLAME STACK	FS(FS)
GAS TURBINE	GT
HEATER, FIRED, FURNACE	H
HOIST	HI
HOSE HOUSE	HH
HOSE REEL	HR
IGNITION PACKAGE	IG
INDOOR HOSE REELS	IN(HR)
MOTOR ELECTRIC	M
OUTDOOR HOSE REELS	ON(OH)
PACKAGE UNIT	PK
PIG LAUNCHER	PL
PULSATON DAMPENER	PD
PUMP	P
SCALE, WEIGHING, MEASURING	SC
SILENCER, MUFFLER	SI
STACK, CHIMNEY	SE
STRAINER	ST(STN)
SUMP	SU
TANK, SILO, HOPPER	TK
TOWER, COLUMN	T
UNLOADER	UL
VESSEL, (SCRUBBER, ACCUMULATOR, K.O. DRUM, SPHERE, BULLET, SEPARATOR)	V

B: PLANT NO ABBREVIATION  
PRELINE : 3

C: UNIT NO  
2 GAS/CONDENSATE PIPELINE

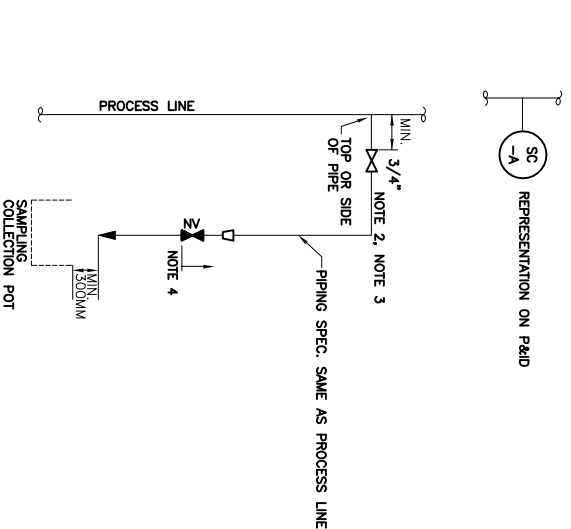
D0: SEQUENTIAL NO (01 TO 99) IF MORE REQUIRED IT CAN BE IDENTIFIED UNIT NO. BUT SUCH THAT THE FIRST DOT COMES FROM THE LAST DOT  
E: ALPHABETICAL LETTER (FOR MULTIPLE IDENTICAL EQ. AND SPARE)

3.2 SYMBOL

SYMBOL	DESCRIPTION
	PIG LAUNCHER
	PIG RECEIVER

4. SAMPLE CONNECTION DETAILS

4.1 TYPE-A : FOR NON-HAZARDOUS LIQUID AND VAPOR WHOSE TEMPERATURE IS LOWER THAN 65°C. (NOTE 1)

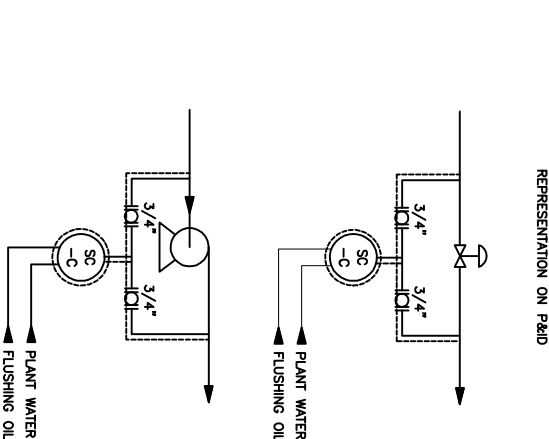


4.2 TYPE-B : FOR NON-HAZARDOUS LIQUID AND VAPOR WHOSE TEMPERATURE IS LOWER THAN 65°C. (NOTE 1)

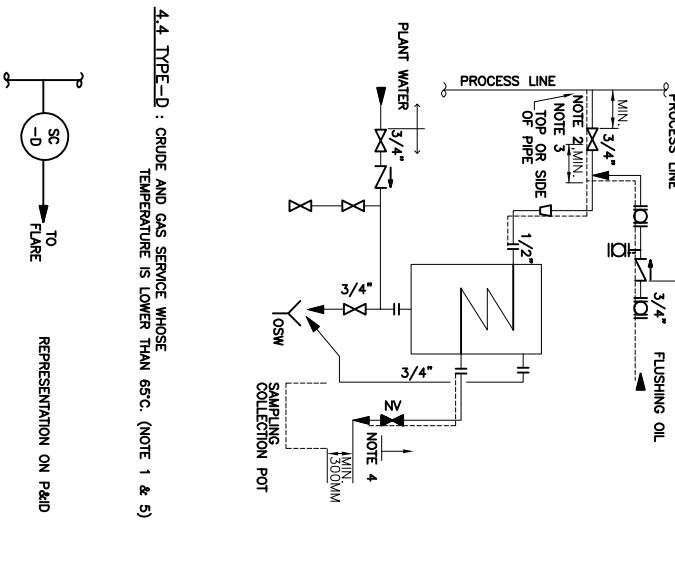


4.3 TYPE-C : FOR NON-HAZARDOUS LIQUID WITH HIGH POUR POINT (HEAVIER H.C. LIQUID THAN LIGHT DIESEL) WHOSE TEMPERATURE IS HIGHER THAN 65°C. (HEAT TRACE IS REQUIRED)

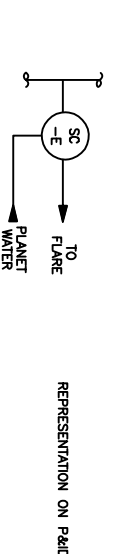
FOR TYPE-C, TO AVOID SOLIDIFICATION IN LEAD PIPING, FAST LOOP SHALL BE PROVIDED ACROSS CONTROL VALVE OR PUMP AS FOLLOWS :



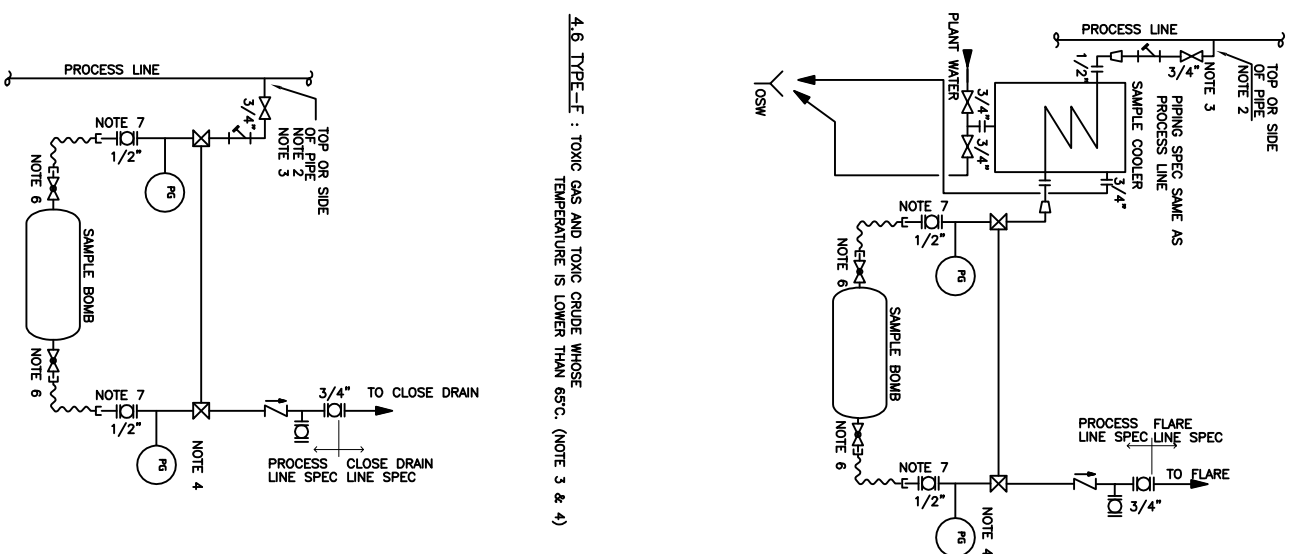
4.4 TYPE-D : CRUDE AND GAS SERVICE WHOSE TEMPERATURE IS LOWER THAN 65°C. (NOTE 1 & 5)



4.5 TYPE-E : TOXIC CRUDE AND TOXIC GAS SERVICE WHOSE TEMPERATURE IS HIGHER THAN 65°C. (NOTE 1 & 3)



4.6 TYPE-F : TOXIC GAS AND TOXIC CRUDE WHOSE TEMPERATURE IS LOWER THAN 65°C. (NOTE 3 & 4)



NOTES

- 1- IF PROCESS LINE HAS HEAT TRACE, SAMPLE CONNECTIONS SHALL BE PROVIDED WITH HEAT TRACE.
- 2- MINIMIZE DISTANCE FROM PROCESS TAKE-OFF TO SAMPLE STATION.
- 3- SAMPLE CONNECTIONS IN SERVICES WITH ANSI CLASS 900 RATINGS OR MORE SHALL BE PROVIDED WITH TWO BLOCK VALVES.
- 4- LINE CLASS SHALL BE THE SAME AS MAIN LINE.
- 5- SAMPLE CONNECTIONS SHALL BE ACCESSIBLE FROM GRADE AS MUCH AS POSSIBLE.
- 6- THREADED FEMALE CONNECTIONS TO MATE WITH MALE CONNECTION OF SAMPLE CYLINDER CONNECTIONS SHALL NOT PUT TORQUE ON TUBE OR PIPING.
- 7- BALL VALVE SHALL BE PROVIDED.

LEGEND

REFERENCE DRAWING	DRG. No.

KEY PLAN

NO.	DESCRIPTION	BY	DATE	REV.	DATE

THE ORIGINAL AND ALL COPIES OF THIS DRAWING TOGETHER WITH THE OVERPRINT THEREON ARE THE SOLE PROPERTY OF N.I.S.O.C./ FIELDS

BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES

DRAWING BY: PROJECT ENG. CHECKED BY: PROJECT ENG.

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED FOR CONSTRUCTION BY: DATE:

BUDGET REF. LOCATION: SIZE: CLASS: SERIAL NO. SHEET: REVISION: DATE:

18 13 12 11 10 9 8 7 6 5 4 3 2 1

(VENDOR TITLE BLOCK)

SCALE: AS

REV.	DATE	BY	CHK.	APP.	ALT.

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES

PRODUCT NO.: 971060

EPD/ERC CONTRACTOR (GP): PERIHOBIAN DEVELOPMENT COMPANY

IRRAWADDI ENERGY - DESIGN & INSPECTION COMPANY

DRAWING TITLE: Symbol & Legend for P/P and P&ID

DATE: 2023-07-04

SCALE: AS

DRAWING NO: BC-FPL-PD00-280-FR-P1-0003

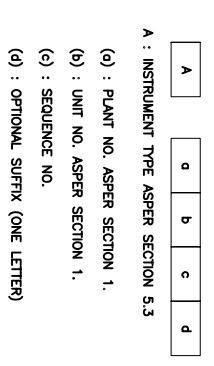
SHEET NO: 2 OF 6

REV: 1

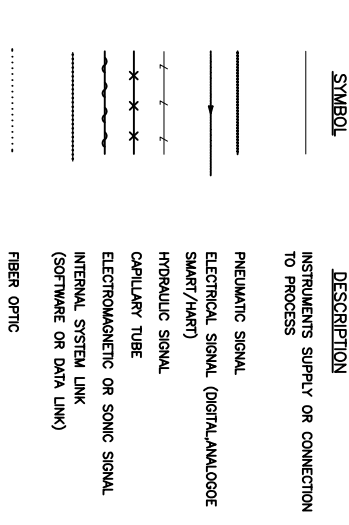
6. INSTRUMENT

NOTES  
1- ALL ESD VALVES ARE SPRING RETURN TYPE.

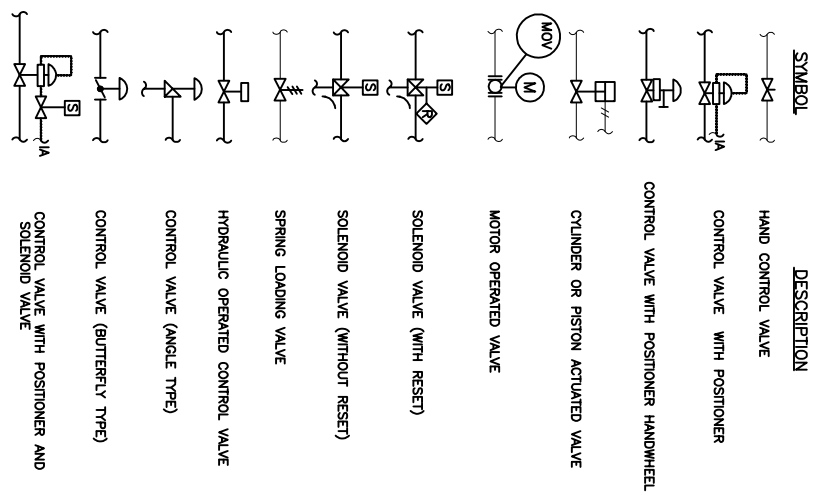
6.1 INSTRUMENT NUMBERING



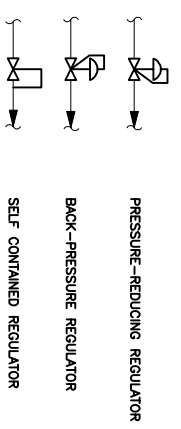
6.2 SYMBOLS NOTE 1



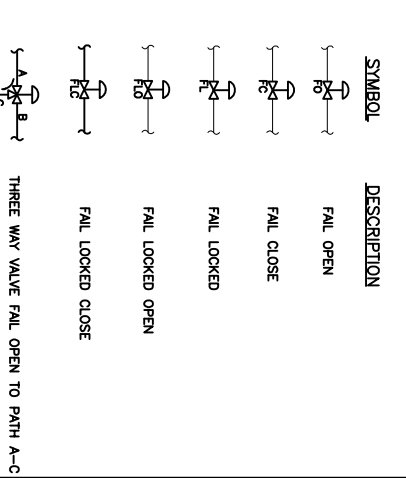
6.2.2 CONTROL VALVE & ACTUATOR



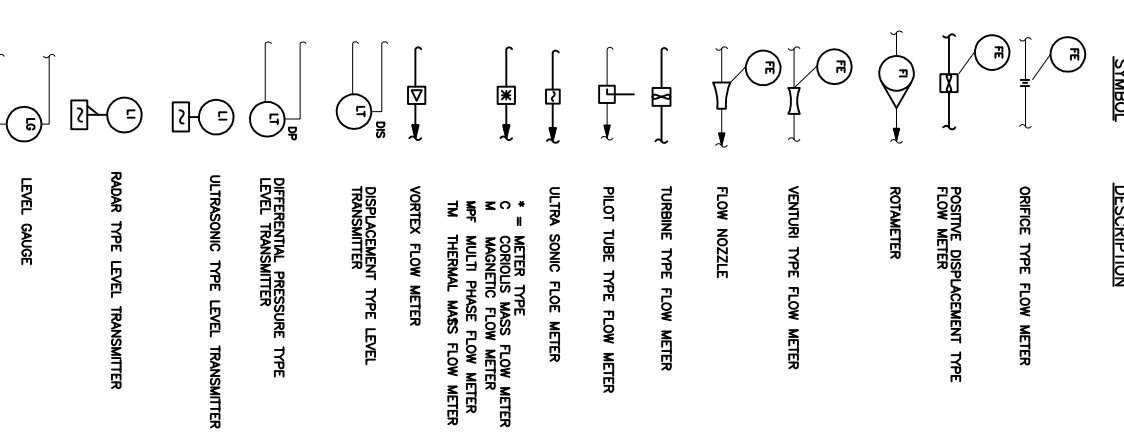
6.2.3 SELF ACTUATED REGULATOR



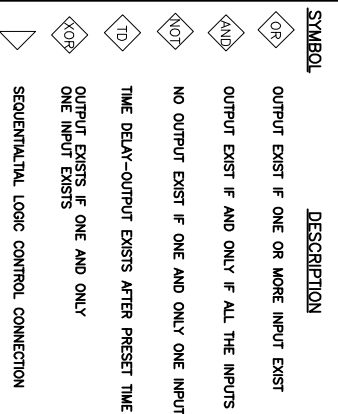
6.2.4 FAILURE ACTION OF CONTROL VALVE



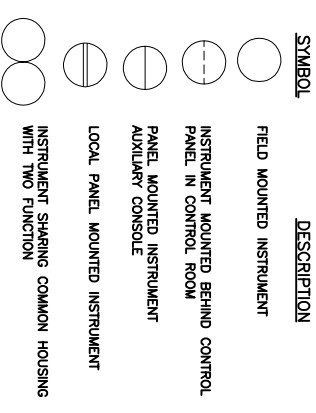
6.2.5 PRIMARY ELEMENT



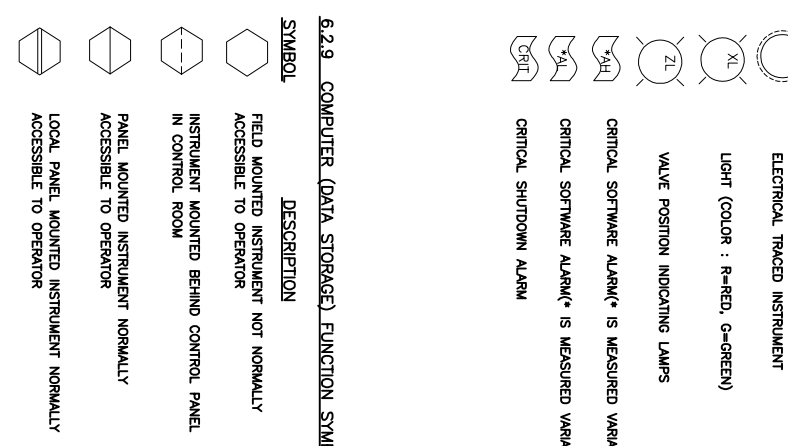
6.2.6 INTERLOCK LOGIC SYMBOL



6.2.7 GENERAL INSTRUMENT SYMBOL



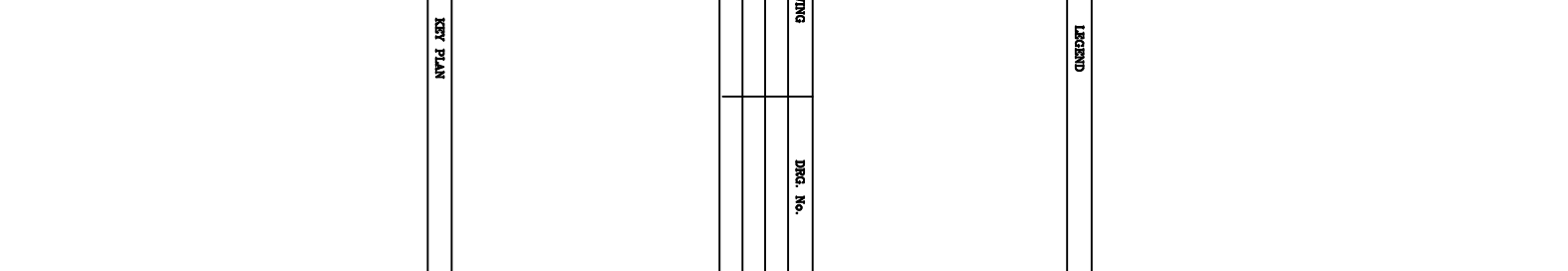
6.2.8 DISTRIBUTED CONTROL / SHARED DISPLAY SYMBOL



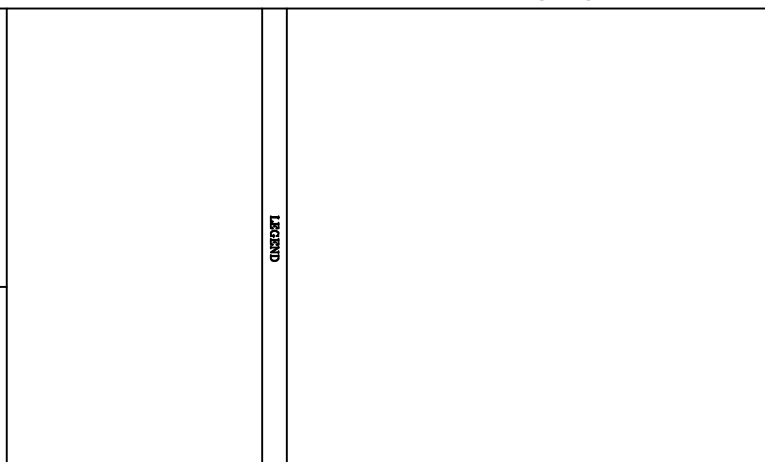
6.2.9 COMPUTER (DATA STORAGE) FUNCTION SYMBOL



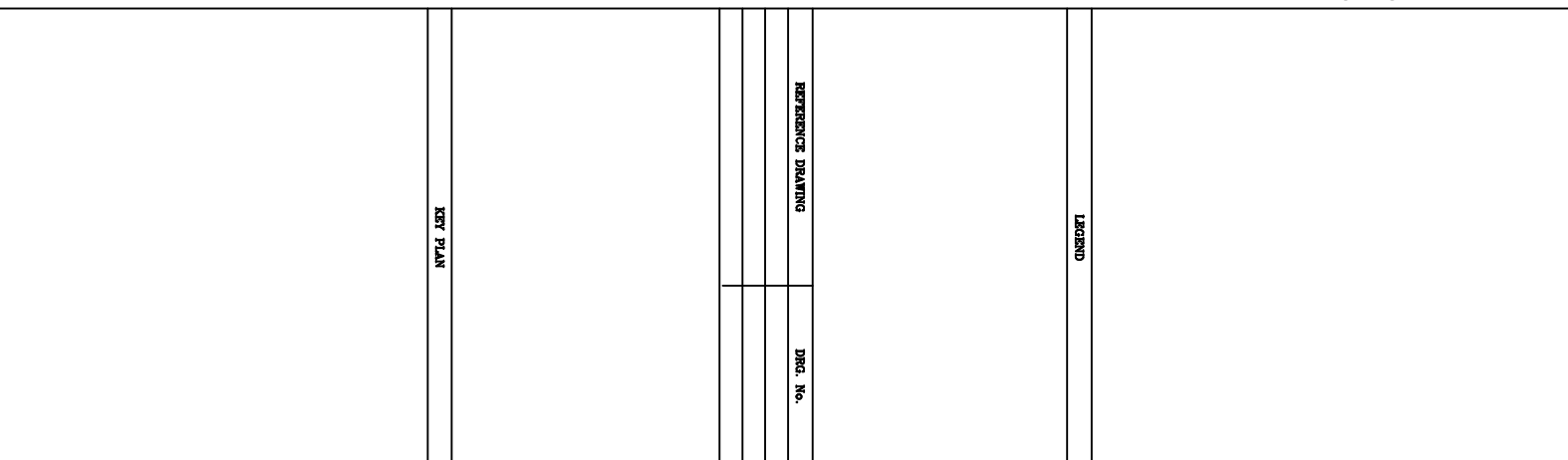
6.2.10 PROGRAMMABLE LOGIC CONTROLLER (PLC)



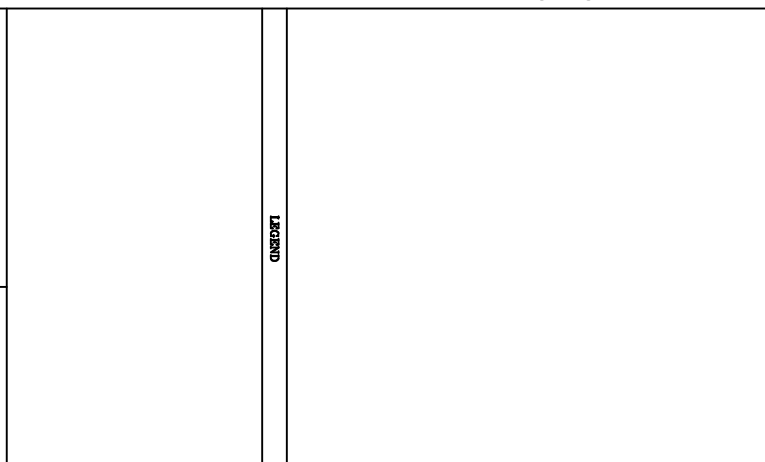
6.2.11 FUNCTION IDENTIFICATION



6.2.12 MCC IDENTIFICATION



6.2.13 KEY PLAN



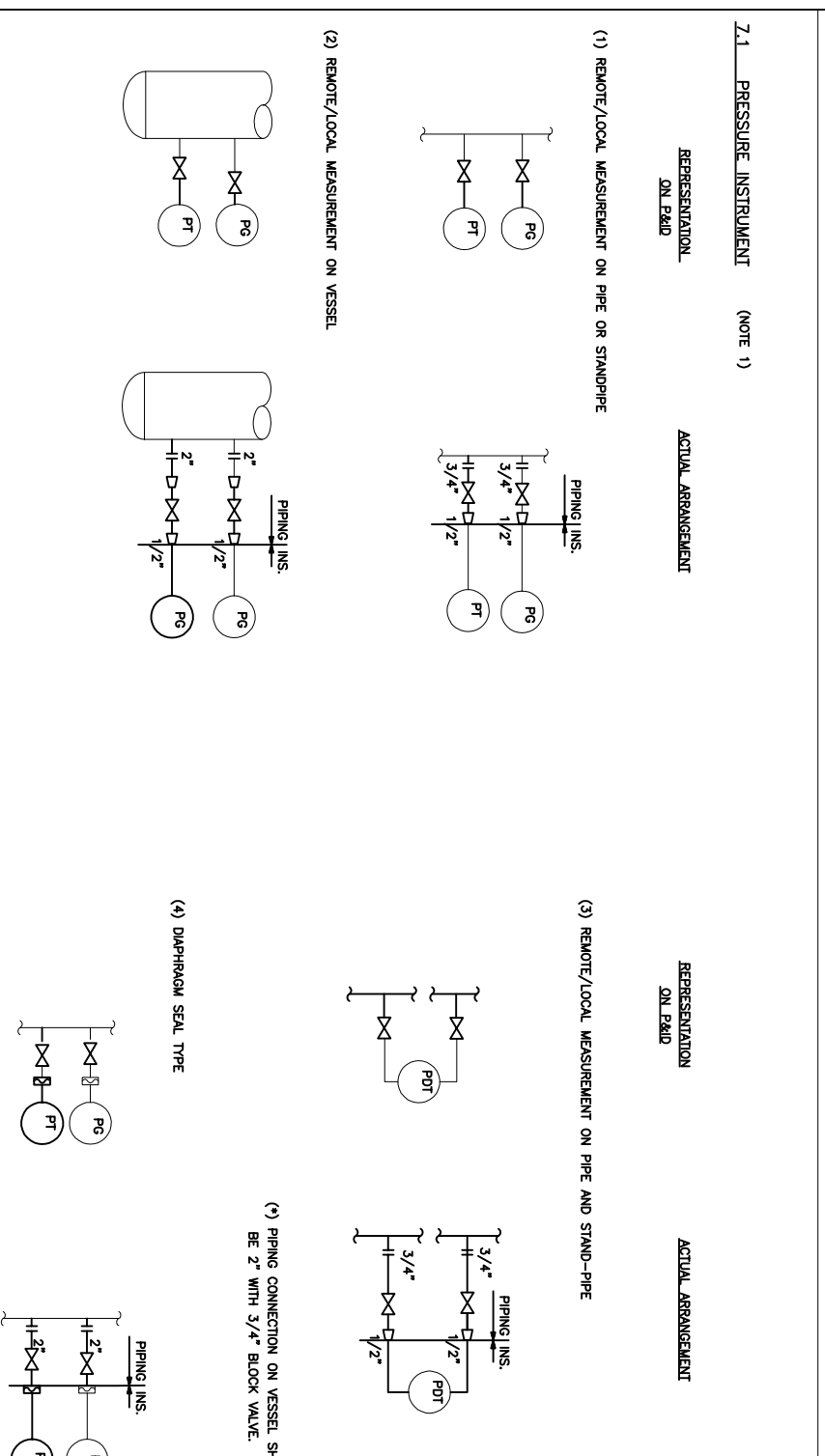
<p>ENDORSE TITLE BLOCK**</p> <p>SCALE: A3</p> <p>DRAWING NO.: BR-PPL-PD00-320-FR-P1-003</p> <p>SHEET NO.: 3 OF 6</p> <p>REV. DATE: 003-073-0104</p>		<p>PERFORMAN DEVELOPMENT COMPANY</p> <p>BRINAK OILFIELD DEVELOPMENT SURFACE FACILITIES</p> <p>GAS &amp; GAS-CONDENSATE PIPELINES</p> <p>DATE: 003-073-0104</p> <p>SCALE: DRAWING BY: 7</p> <p>CHECKED BY: 2</p> <p>DATE: 003-073-0104</p> <p>APPROVED FOR CONSTRUCTION BY: 1</p> <p>BUDGET REF. LOCATION: 7</p> <p>CLASS: SERIAL NO.: 7000028</p> <p>SHEET: 3 OF 6</p> <p>REVISION: 002</p>	
<p>PROJECT VALUE: BRINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS &amp; GAS-CONDENSATE PIPELINES</p> <p>PROJECT NO.: 071000</p> <p>EPD/EPIC CONTRACTOR (GP): PERFORMAN DEVELOPMENT COMPANY</p> <p>EPIC CONTRACTOR: BRINAK ENERGY - DESIGN &amp; INTEGRATION COMPANY</p>		<p>NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED</p> <p>APPROVED FOR CONSTRUCTION BY: 1</p> <p>DATE: 003-073-0104</p> <p>BUDGET REF. LOCATION: 7</p> <p>CLASS: SERIAL NO.: 7000028</p> <p>SHEET: 3 OF 6</p> <p>REVISION: 002</p>	

6. INSTRUMENT (CONTINUED)

6.3 FUNCTIONAL IDENTIFICATION LETTERS

Table with columns: SIGNAL TYPES, MEASURED OR INITIATING VARIABLE, MODIFIER, READOUT OR PASSIVE FUNCTION, SUCCEEDING-LETTER OUTPUT FUNCTION, MODIFIER. Includes codes like BZIO, EZCS, EZSO, etc.

7. TYPICAL PIPING ARRANGEMENT



TYPICAL LETTER COMBINATIONS

Large table mapping process variables (e.g., ANALYSIS, FLOW, TEMPERATURE) to various instrument function letters (e.g., AE, AT, AU, AR, etc.) for different combinations like PRIMARY ELEMENT, TRANSMITTER, etc.

NOTES

1 - FOR MORE DETAILS REFER TO INSTRUMENT HOOK UP DIAGRAM AND PIPING ASSEMBLY DRAWING FOR EACH ITEM.

KEY PLAN

Project information and revision table. Includes project name 'BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES', scale 'AS', drawing no. 'BR-FP--P&ID--S&C--FR--PI--0003', and a table of revisions with columns for NO., DATE, BY, and DESCRIPTION.

8.1. LINE NUMBERING

AAA - XXX - YYYY - ZZZZ - 0 - CC(\*)
(1) - (2) - (3) - (4) - (5) - (6)
(1) FLUID IDENTIFICATION CODE

A. AIR SYSTEM

ISA INSTRUMENT AIR
PLA PLANT AIR

B. BLOWDOWN & PUMP OUT SYSTEM/EFFLUENT DISPOSAL

BND BLOW DOWN
CBD CONTINUOUS BLOW DOWN
IBD INTERMITTENT BLOW DOWN

C. DRAIN (SEWER) SYSTEM

CRB CONCRETE DRAIN BOX
CDB CLOSED DRAIN HEADER
CSW CHEMICAL SEWER
CWP CHEMICAL DRAIN PIT
DWP DRAIN PIT
NSW NON OILY WATER SEWER
OPD OPEN DRAIN
OSW OILY WATER SEWER
SSW SWANTRY WATER SEWER
Y DRAIN FUNNEL (GENERAL)

D. FLARE SYSTEM AND VENT

ATM ATMOSPHERE
FL FLARE (NORMAL)
HFL HIGH PRESSURE FLARE
LFL LOW PRESSURE FLARE

E. LINES

FLG FUEL GAS / PIJGT GAS
FLO FUEL OIL
NG NATURAL GAS
DO DIESEL OIL

F. SPECIAL GAS SYSTEM

AR AIR (DRIVING SERVICES)
FUG FUG GAS
NIT NITROGEN

G. SPECIAL CHEMICAL AND SOLVENT SYSTEM

CHM CHEMICALS
MEL METHANOL

I. WATER SYSTEM

PWA FIRE WATER
OWA OILY WATER
PWW PROCESS WATER
PTW POTABLE WATER
PVA PLANT WATER
RWA RAW WATER

K. PROCESS SERVICE

GAS GAS
GSO GAS OIL
HOB HYDROCARBON
PRO PROCESS FLUID
REG RECYCLE GAS
SLP SLOPE
CRO CRUDE OIL
TEG TRIMETHYLE GLYCOL

(2) UNIT SERIAL NUMBER

PROCESS NUMBER : 111
UTILITY NUMBER : 112
FIRE WATER : 113

(3) PIPING SERIAL NUMBER

8.2.3 VALVE

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for BUTTERFLY VALVE, GATE VALVE, CHECK VALVE, BALL VALVE, etc.

8.2.4 PIPE FITTING

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for END CAP, END SOCKET, END SPOUT, etc.

8.2.5 PRESSURE RELIEF VALVE

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for PRESSURE RELIEF OR SAFETY VALVE, VACUUM RELIEF VALVE, etc.

8.2.6 MISCELLANEOUS

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for OPEN VENT, SYPHONE DRAIN, SIGHT GLASS, etc.

LEGEND

Table with 2 columns: SYMBOL, DESCRIPTION. Includes symbols for FOAM DISCHARGE OUTLET, RESTRICTION ORIFICE, SAMPLE CONNECTION, etc.

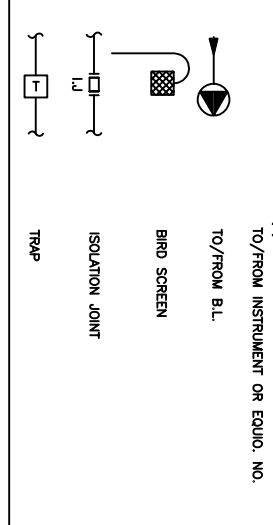
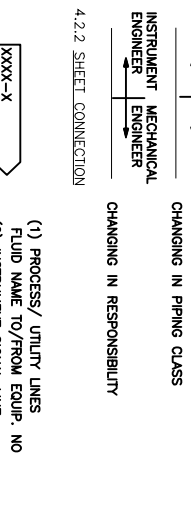
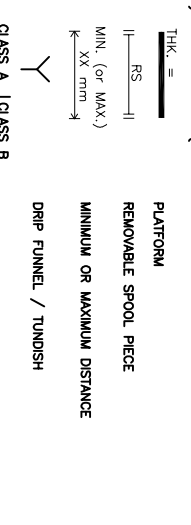
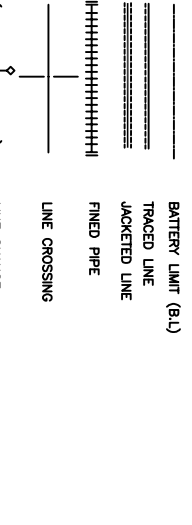
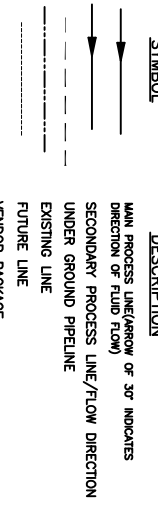
(4) PIPING CLASS CODE
PIPING CLASS ACCORDING TO BS-5353
CLASS IS IDENTIFIED BY A FOUR-DIGIT ALPHANUMERIC CODE
AS FOLLOWS:

Table with 4 columns: 3 RD DIGIT, 4 TH DIGIT, FOR METAL PIPE, 4 TH DIGIT. Contains rows for design standards like BS 1585, BS 5353, etc.

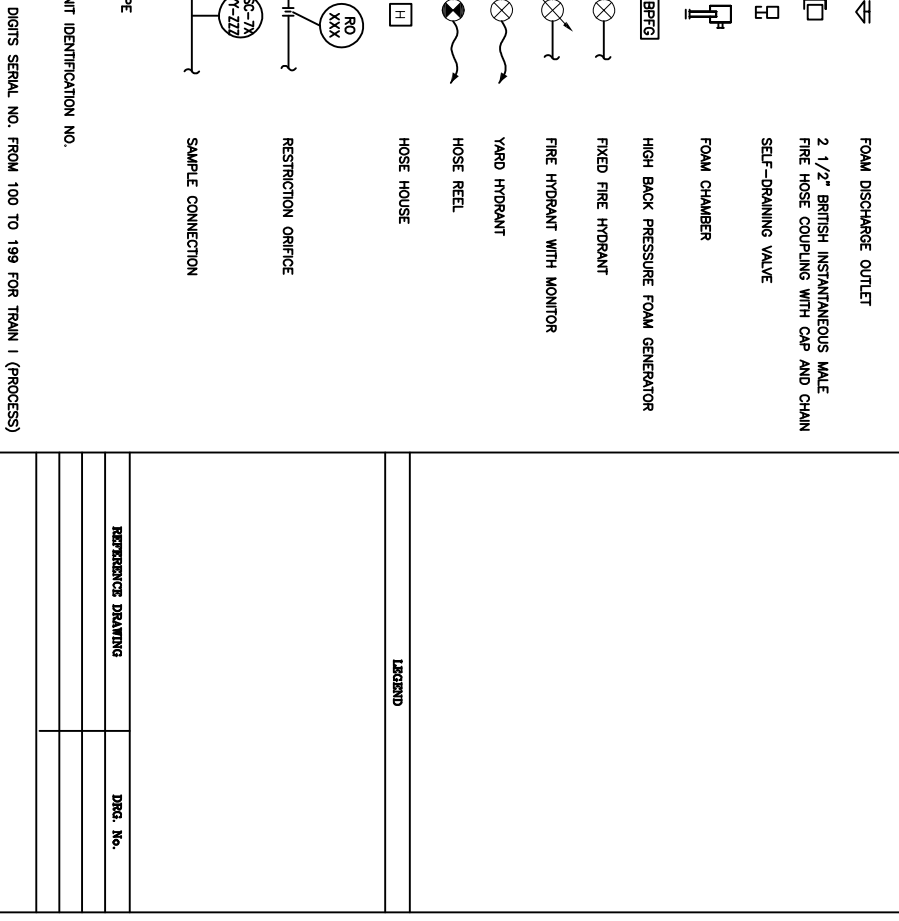
(5) NOMINAL PIPE SIZE
(6) CODE OF INSULATION OR HEATH TRACING:

Table with 2 columns: CODE, DESCRIPTION. Lists insulation and tracing codes like ET(1), ET(2), ET(3), etc.

8.2.1 LINE
8.2.2 SYMBOL



KEY PLAN



BINAQ OILFIELD DEVELOPMENT SURFACE FACILITIES

Table with columns for Dwg. No., Date, and Description. Includes entries for PIPING, ELECTRICAL RESISTANCE, etc.

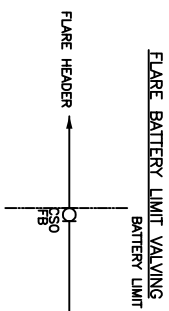
LEGEND

Table with columns for Dwg. No., Date, and Description. Includes entries for CORROSION COUPON, ELECTRICAL RESISTANCE, etc.

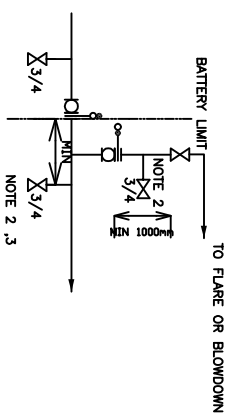
PERFORMAN DEVELOPMENT COMPANY

Company information, contact details, and drawing metadata including scale, sheet number, and date.

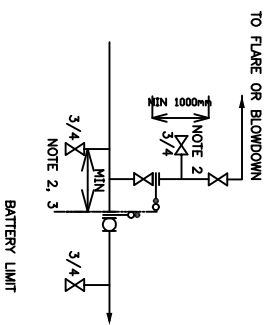
9. TYPICAL DETAIL FOR ISOLATION BATTERY LIMIT VALVING



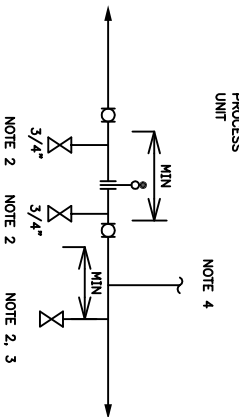
HIGH VAPOUR PRESSURE SERVICE UPSTREAM ISOLATION



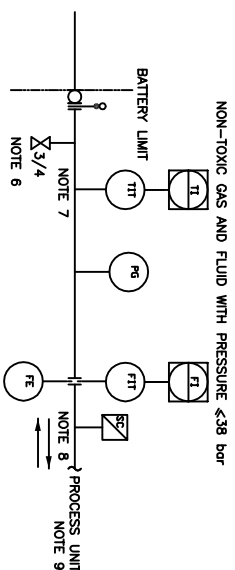
HIGH VAPOUR PRESSURE SERVICE DOWN STREAM ISOLATION



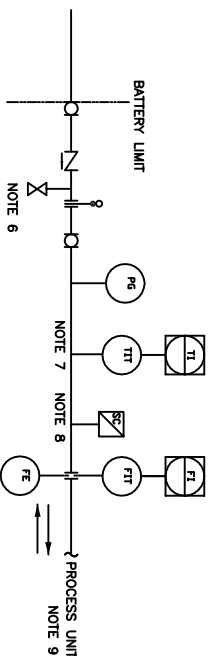
TWO WAY ISOLATION



PROCESS BATTERY LIMIT VALVING

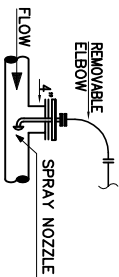


TOXIC GAS AND FLUID WITH PRESSURE >38 bar



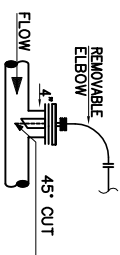
10. CONTINUOUS CHEMICAL INJECTION IN PROCESS LINE

TYPE 1



INJECTION DEVICE PERMANENTLY CONNECTED (GAS SERVICE)

TYPE 2



INJECTION DEVICE PERMANENTLY CONNECTED (OTHER SERVICE)

NOTES

- 1- A LOCAL PG ON EACH STREAM SHALL BE PROVIDED.
- 2- END CONNECTION WILL BE SPECIFIED BY PIPING MATERIAL SPECIFICATION FOR EACH PIPING CLASS.
- 3- DRAIN VALVE SIZE IS DEPENDENT ON PROCESS LINE SIZE (NOMINALLY 3/4").
- 4- TO/FROM FLUSHING OIL FLARE CONNECTION, ETC., IF REQUIRED.

LEGEND

REFERENCE DRAWING	DRG. No.

KEY PLAN

REV.	DATE	BY	CHECKED	DESCRIPTION

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BINAK OILFIELD DEVELOPMENT SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES

DATE	SCALE	DRAWING BY	CHECKED BY	PROJECT ENG.

NO CONSTRUCTION PERMITTED UNLESS DRAWING APPROVED APPROVED FOR CONSTRUCTION BY: DATE:

BUDGET REF.	LOCATION	SIZE (CLASS)	SERIAL NO.	SHEET	REVISION

(VENDOR TITLE BLOCK)

SCALE	SIZE	DRAWING NO.	SHEET NO.	REV.	DWG. NO.
AS	A3	BR-PPL-PEDCO-320-FR-P1-003	6 OF 6		



EPCC CONTRACTOR: BIRHAN ENERGY - DESIGN & INSPECTION COMPANY

EPD/EPCC CONTRACTOR (CD): PEDCO PETROBRAS DEVELOPMENT COMPANY

PROJECT NAME: BINAK OILFIELD DEVELOPMENT/SURFACE FACILITIES GAS & GAS-CONDENSATE PIPELINES

PROJECT NO.: 071060

DRAWING TITLE: Symbol & Legend for PPL and P&ID