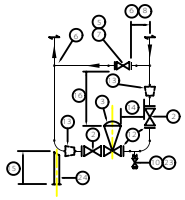


FIGURE No.1

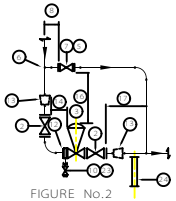


FIGURE No.2

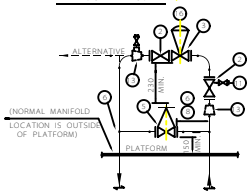



FIGURE No.3

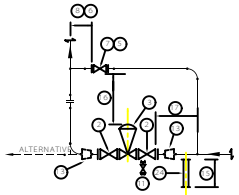



FIGURE No.4

TYPICAL ARRANGEMENTS OF CONTROL VALVE

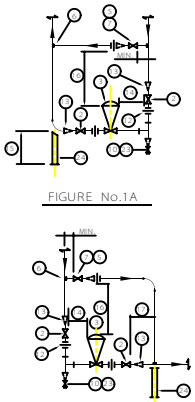



FIGURE No.1A




FIGURE No.2A

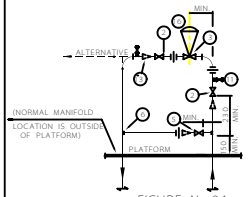



FIGURE No.3A

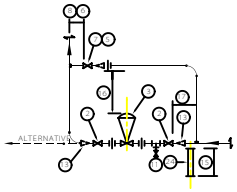



FIGURE No.4A

TYPICAL ARRANGEMENTS OF SCREWD CONTROL VALVE

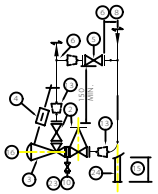



FIGURE No.1B

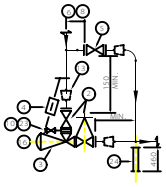



FIGURE No.2B

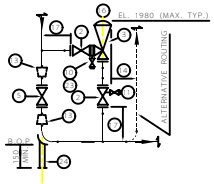



FIGURE No.3B

NORMAL FLOW

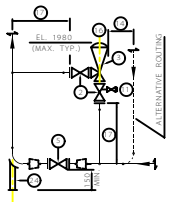



FIGURE No.4B

ALTERNATE FLOW WHEN SPECIFIED

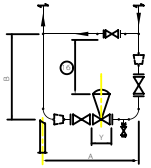
TYPICAL ARRANGEMENTS OF ANGLE CONTROL VALVE

NOTES:

1- DIMENTION "A" DEPENDS ON CONTROL VALVE MANIFOLD ARANGEMENT.

2- CONTROL VALVE OPERATING AT 232 C AND HIGHER GENERALLY HAVE COOLING FINS SEE INSTRUMENT SPECIFICATION.

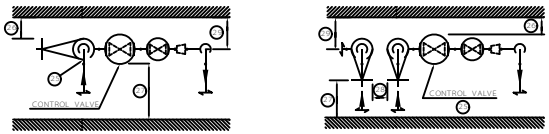
3- FACE TO FACE DIMENSION "Y" FOR 8" CONTROL VALVES AND SMALLER ARE BASED ON MASORING 1000 SERIES HONEY WELL #800 SERIES AND FISHER #657, AND FOR 10" CONTROL VALVES AND LARGER VARY DEPENDING ON MANUFACTURER (SEE CATALOG OR CERTIFIED OUT LINE). DIMENSIONS MUST BE DETERMINED FOR OTHER MANUFACTURERS, VALVES OR ANY OTHER SERIES OR SIZES MENTIONED.




CONTROL VALVES DIMENSION

CONTROL VALVE DIM. TABLE

| SIZE | | 150# RF | 300# RF | B | |
|---|---|---|---|---|---|
| NPS | DN | Y | Y | NO FINS | W/FINS |
| 3/4" | 20 | 184 | 193.5 | 990 | 1070 |
| 1" | 25 | 184 | 197 | 1020 | 1100 |
| 1 1/2" | 40 | 222.5 | 235 | 1120 | 1220 |
| 2" | 50 | 254 | 266.5 | 1220 | 1320 |
| 3" | 80 | 298.5 | 317.5 | 1250 | 1370 |
| 4" | 100 | 352.5 | 368.5 | 1420 | 1550 |
| 6" | 150 | 451 | 473 | 1580 | 1680 |
| 8" | 200 | 543 | 568 | 1650 | 1800 |




TYPICAL CONTROL VALVE LOCATION & CLEARANCES

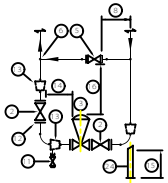
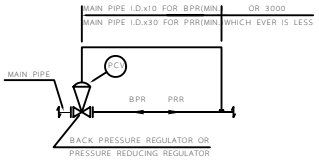


FIGURE No.5

FLASHING CONDITION ETC.

DOWNSTREAM BLOCK VALVE LARGER THAN CONTROL VALVE AS NOTED ON FLOW DIAGRAM




LOCATION OF PRESSURE CONNECTION FOR PILOT OPERATED CONTROL VALVE.

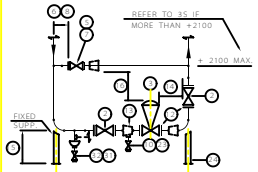



FIGURE No. 1S

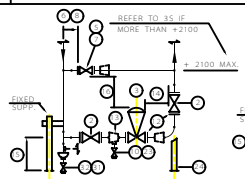



FIGURE No. 2S

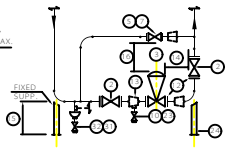
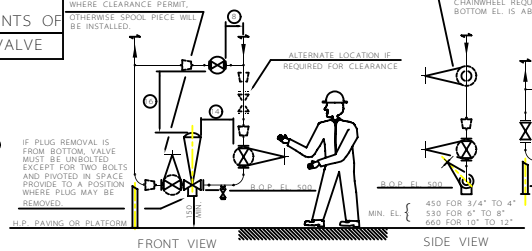



FIGURE No. 3S

WHERE BYPASS EL. IN FIGURES 1S,2S EXCEDES +2100

TYPICAL ARRANGEMENTS FOR STEAM CONTROL VALVE




FRONT VIEW

SIDE VIEW

FIGURE No.6

WHERE BYPASS EL. EXCEEDS +2100

TYPICAL ELEVATION OF CONTROL VALVE MANIFOLD

NOTES

1- ALL THICKNESS VALUES AND DIMENSIONS ARE IN mm.

2- BLOCK VALVES SHALL BE SIZED IN ACCORDANCE WITH P& ID DWG.

3- ON CARBON STEEL LINES, CONTROL VALVES SHALL NORMALY BE AS PER LINE SPEC.

4- SUPPORT WITH TIE RODS AND PIPE BANDS FROM PIPE,FOR HORIZONTAL POSITIONED ANGLE CONTROL VALVE.

5- SIZE AND TYPE OF BYPASS VALVE SHALL BE SPECIFIED IN P &ID DWG.

6- BAYPASS BRANCH CONNECTION SHALL BE AS SPECIFIED IN N.I.O.C. PIPING CLASS.

7- BYPASS VALVE SHALL NORMALLY BE SO LOCATED TO MAKE DRAIN OF BYPASS LINE POSSIBLE.

8- DISTANCE BETWEEN BRANCH CONNECTION AND BYPASS VALVE SHALL BE KEPT AT MINIMUM TAKING INTO ACCOUNT CLEARANCE REQUIRED FOR HANDWHEEL.

9- MAXIMUM SIZE OF GLOBE TYPE BYPASS VALVE SHALL BE 6"(DN150).

10- 3/4" (DN20) VALVE USED FOR DRAIN OF HYDROTEST AND CONTROL VALVE. IT MAY ALSO BE USED FOR VENTING.

11- 1/2"(DN15) VALVE MAY BE USED FOR DRAINING OF CONTROL VALVE AND THE HYDROTEST. DRAIN SHALL BE LOCATED IN THE LOW POINT OF CONTROL VALVE BODY.

12- BREAK OUT FLG.S OR UNIONS FOR CONTROL VALVE REMOVAL SHALL , IF POSSIBLE BE LOCATED ONE IN THE HORIZONTAL AND ONE IN THE VERTICAL.

13- LOCATION AND No. OF REDUCERS OR SWAGES DEPEND ON CONTROL VALVE AND LINE SIZE AND WILL BE ACCORDING TO P & ID DWG.

14- MINIMUM DISTANCE REQUIRED TO ALLOW DIAPHRAGM CASE CLEARANCE.

15- GENERALY CONTROL VALVE MANIFOLD SHALL BE LOCATED AT 500 ABOVE GRADE (460 FOR ANGEL TYPE)AND SEE TYPICAL ELEVATION OF CONTROL VALVE MANIFOLD (SIDE VIEW).

16- 300 CLEAR FOR STEM REMOVAL SHALL BE PROVIDED, ADITIONAL SPACE WILL BE REQUIRED IF VALVES ARE HOUSED FOR WINTERIZING.

17- DISTANCE BETWEEN BRANCH CONNECTION AND UPSTREAM BLOCK VALVE SHALL BE KEPT AT MINIMUM.

18- 3/4"(DN20) CONTROL VALVES & SMALLER MAY BE SCR,D. 1" (DN 25) AND LARGER CONTROL VALVE ARE FLANGED.

19- ALL CONTROL VALVES SHALL BE INSTALLED IN VERTICAL POSITION.

20- THE ARRANGEMENT OF THE CONTROL VALVE, BLOCK VALVES & BYPASS VALVE SHALL BE SUCH THAT ENOUGH CLEARANCE EXISTS FOR REMOVAL OF CONTROL VALVE WITHOUT CUTTING OR BURNNING OF THE LINE OR BOLTS.

21- ANY SPECIAL ARRANGEMENT NOT COVERED BY THIS DWG. HAVE THE APPROVAL OF CLIENT.

22- BYPASS VALVE ELEVATION SHALL BE ABOVE CONTROL VALVE ELEVATION IN DIRTY OR CORROSIVE SERVICES.

23- DRAIN VALVE ( DEPRESSURIZING VALVE ) SHALL BE LOCATED BETWEEN CONTROL VALVE & UPSTREAM BLOCK VLAVE.

24- SUPPORT NORMALLY LOCATED SO THAT ASSEMBLY IS SELF-SUPPORTING WITH CONTROL VALVE REMOVED. SEE DWG. No.IPS-D-PI-133.

25- CONTROL VALVE SHALL BE ACCESSIBLE AND ADJACENT TO RELATED EQUIPMENT WHENEVER POSSIBLE.

26- 25 MINIMUM CLEARANCE SHALL BE PROVIDED BETWEEN DIAPHRAGM & ADJACENT ITEMS.

27- 1000 MINIMUM CLEARANCE SHALL BE PROVIDED BETWEEN DIAPHRAGM OR HANDWHEELS AND ADJACENT ITEMS FOR PASSAGE WAY.

28- 25 MINIMUM CLEARANCE BETWEEN ADJACENT HANDWHEELS SHALL BE BE PROVIDED.

29- TO MINIMIZE CLEARANCE PROBLEMS AT PLATFORM,CONTROL VALVE SHALL BE LOCATED OUTSIDE OF THE PLATFORM & SUPPORTED AS REQUIRED FROM THEM.

30- DIMENSIONS FOR CONTROL VALVE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN IPS-G-IN-160.

31- ORIENT TRAP CONNECTION TO SUIT LOCATION.

32- FOR DRIP POCKET AND DRAIN SIZE SEE DWG. No. IPS-D-PI-125.

THIS DRAWING SUPERSEDES DRAWING No. D-O-5025

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| REV. | DESCRIPTION | DATE |

IRANIAN PETROLEUM STANDARD

NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION

CONTROL VALVE PIPING MANIFOLDS

| DATE | DRAWING No. | SHEET | REV. |
|---|---|---|---|
| | IPS-D-PI-122 | | 0 |