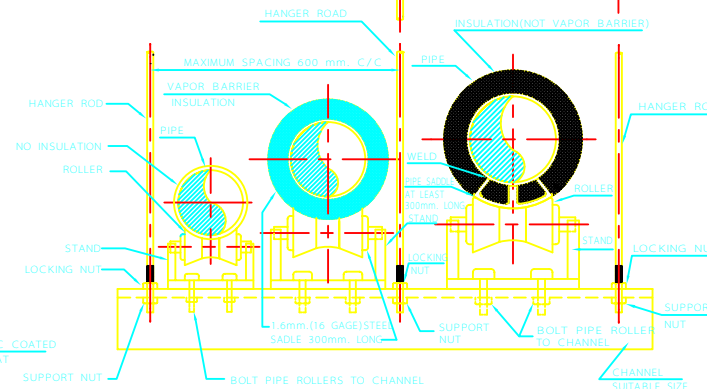
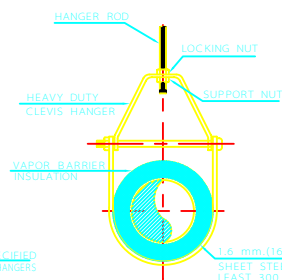
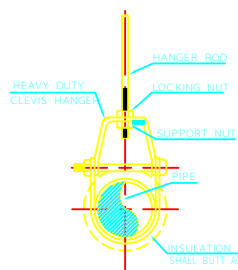
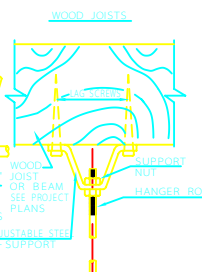
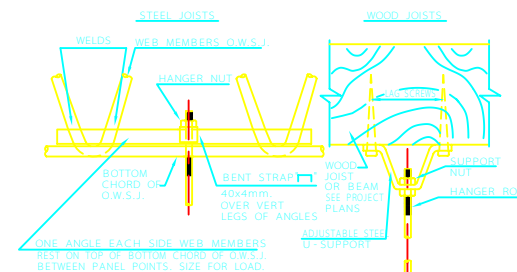
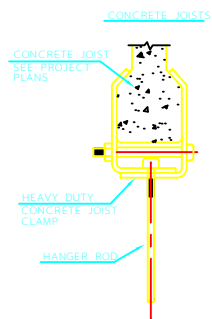
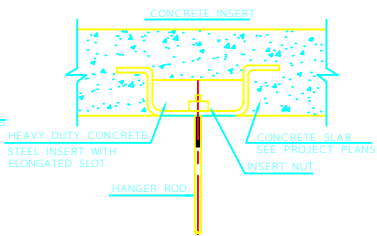
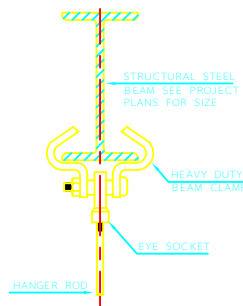


PIPE SUPPORTS

C				IRANIAN PETROLEUM STANDARDS 		
B				NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION		
A				DATE	DRAWING No.	SHT REV.
REV.	DESCRIPTION	DATE	COVER SHEET		IPS - D - AR - 012	



CLEVIS HANGER
SINGLE HORIZONTAL RUNS
NO VAPOR BARRIER INSULATION

CLEVIS HANGER
SINGLE HORIZONTAL RUNS
WITH VAPOR BARRIER INSULATION

TRAPEZE HANGER
ALL MULTIPLE HORIZONTAL RUNS
WITH OR WITHOUT VAPOR BARRIER INSULATION
(SEE NOTE 3)

PIPE HANGERS - USE APPLICABLE TYPE
DETAILS OF THE PIPE SUPPORTS

PIPE SIZE DN(IN)	ROD DIAMETER mm.(IN)
(A) DN20 (3/4") THRU DN50 (2")	10(3/8")
(B) DN65 (2 1/2") THRU DN80 (3")	13(1/2")
(C) DN100(4") THRU DN125 (5")	16(5/8")
(D) DN150 (6")	19(3/4")
(E) DN200 (8") THRU DN300 (12")	22(7/8")

PIPE SIZE DN IN	ROD SIZE mm. IN	PIPE SIZE DN IN	ROD SIZE mm. IN
UP TO DN50 (2")	10 (3/8")	DN100(4") THRU DN125 (5")	16 (5/8")
DN65(2 1/2") THRU DN80(3")	13 (1/2")	DN150(6") THRU DN300 (12")	22 (7/8")

PIPE SIZE	DN25 (1")	DN32 (1 1/4")	DN40 (1 1/2")	DN50 (2")	DN65 (2 1/2")	DN80 (3")	DN100 (4")	DN125 (5")	DN150 (6")	DN200 (8")	DN250 (10")	DN300 (12")
MAX ALLOWABLE SPACING	7 FT.	8 FT.	9 FT.	10 FT.	11 FT.	12 FT.	14 FT.	16 FT.	17 FT.	19 FT.	22 FT.	23 FT.
	2.13 m	2.44 m	2.74 m	3 m	3.35 m	3.66 m	4.27 m	4.80 m	5.18 m	5.79 m	6.71 m	7.015 m

NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST PIPE ON TRAPEZE

NOTE:

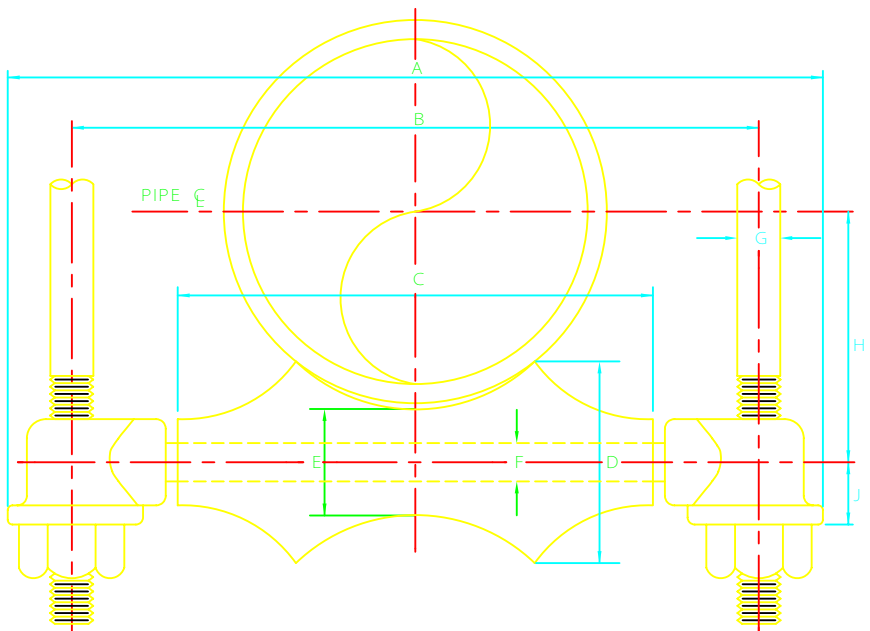
- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- 2- THE STEEL SADDLE STAND CAN BE REPLACED BY ANY OTHER SUITABLE ALTERNATIVE AS RECOMMENDED BY THE DESIGN ENGINEER.
- 3- THE SPACING SHOWN IN SCHEDULE IS MAXIMUM PIPE WILL SPAN. THE HANGER SUPPORTS AND STRUCTURAL ELEMENTS OF THE BUILDING SHOULD BE CHECKED FOR LOAD SUPPORT. SPACING MAY HAVE TO BE REDUCED TO LIGHTEN LOAD ON CERTAIN HANGER SUPPORTS.

REV	DESCRIPTION	DATE
C		
B		
A		

IRANIAN PETROLEUM STANDARDS
NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION


PIPE SUPPORTS

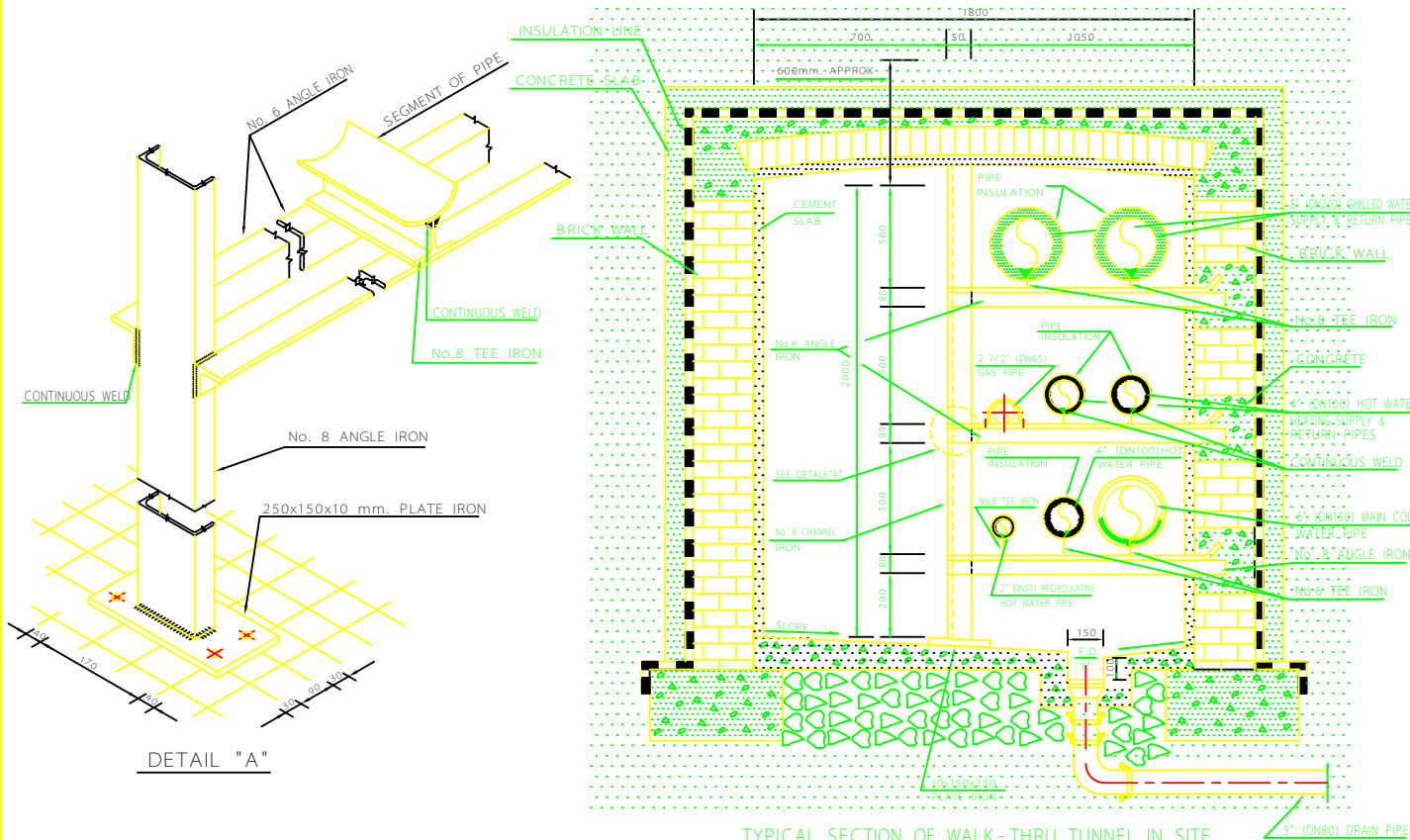
DATE	DRAWING No.	SHEET	REV.
	IPS-D-AR-012	1	6



ALL DIMENSIONS EXCEPT AS SHOWN ARE IN mm.

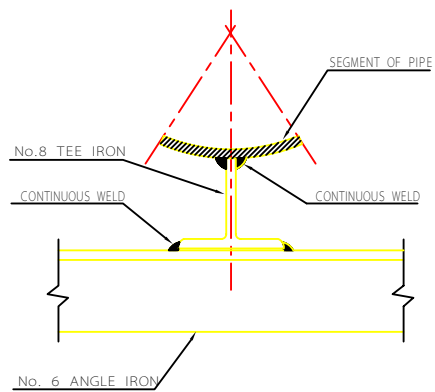
NOM. PIPE SIZE	MAX. O.D. COVERING	HANGER ROD. SIZE, G.	SOCKET No.	A	B	C	D	E	F	H	J
1"	2"	10	1-10	103	75	37	25	19	10	26	14
1 1/4"	2 1/2"	10	1-10	112	85	47	26	19	10	31	14
1 1/2"	2 3/4"	10	1-10	119	90	54	29	19	10	34	14
2"	3 1/4"	10	1-10	131	103	65	30	19	10	40	14
2 1/2"	3 3/4"	12	2-12	156	122	78	34	22	12	49	17
3"	4 1/2"	12	2-12	172	137	95	36	22	12	55	17
3 1/2"	5"	12	2-12	180	153	106	41	25	12	64	19
		15	3-12	194	156						19
4"	5 1/2"	12	2-12	200	165	119	44	25	12	70	19
		15	3-12	206	169						19
5"	7"	12	2-15	236	202	145	50	28	16	86	20
		15	3-15	442							22
6"	8 1/4"	12	2-19	273	239	172	58	31	19	100	22
		15	3-19	280							25
		19	4-19	286							25
		22	5-22	351							30
8"	10 1/2"	12	2-22	333	298	222	70	37	22	128	23
		15	3-22	339							26
		19	4-22	345							29
		22	5-22	351							30
		22	5-22	405							30
10"	12 3/4"	12	2-22	386	356	275	85	44	22	160	25
		15	3-22	392							26
		19	4-22	398							29
		22	5-22	405							30
		22	5-22	405							30
12"	14 3/4"	15	3-25	436	395	312	97	50	25	186	29
		19	4-25	442							31
		22	5-22	448							31

C			IRANIAN PETROLEUM STANDARDS 			
B			NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION			
A			SINGLE PIPE ROLL HANGER	DATE	DRAWING No.	SHT/REV.
REV	DESCRIPTION	DATE			IPS-D-AR-012	2/6

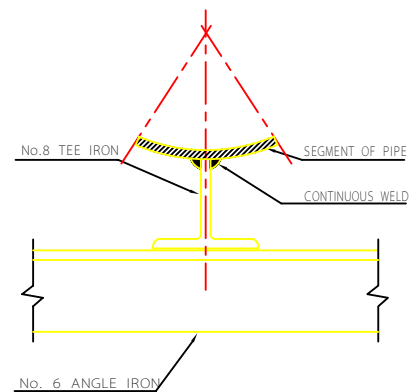


DETAIL "A"

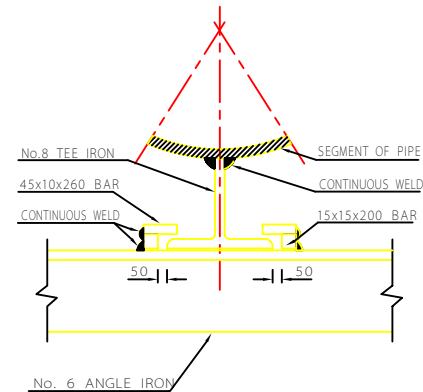
TYPICAL SECTION OF WALK-THRU TUNNEL IN SITE



DETAIL OF ANCHOR



DETAIL OF SUPPORT

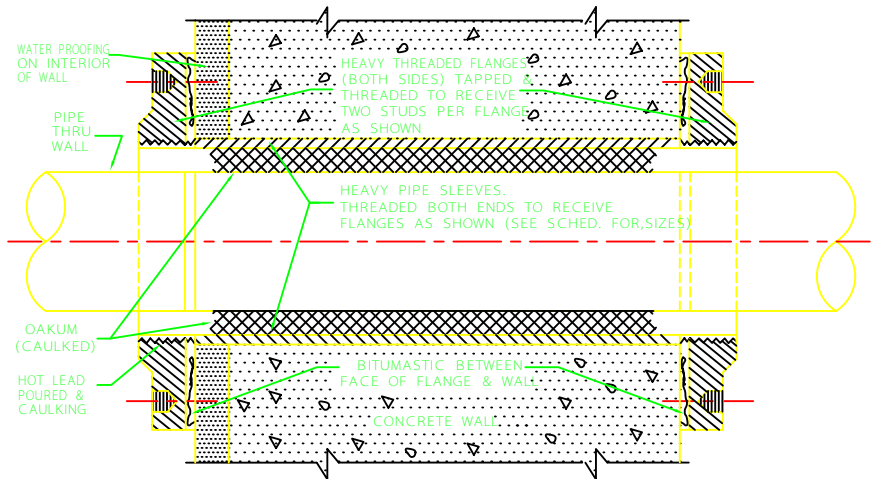


DETAIL OF ALIGNMENT GUIDE

NOTES:

- 1- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED
- 2- TEE IRON PIPE STAND CAN BE REPLACED BY ANY OTHER SUITABLE ALTERNATIVE AS RECOMMENDED BY THE DESIGN ENGINEER.
- 3- WHERE SITE CONDITION DEMANDS THE CONSTRUCTION OF INSIDE WALL CAN BE EXPEDITED WITH CONCRETE IN PLACE OF BRICKS.

C			
B			
A			
REV	DESCRIPTION		DATE
<p>IRANIAN PETROLEUM STANDARDS </p> <p>NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION</p>			
<p>TYPICAL DETAIL OF WALK-THRU TUNNEL IN SITE</p>			
DATE	DRAWING No.	SHEET	REV.
	IPS-D-AR-012	3	6



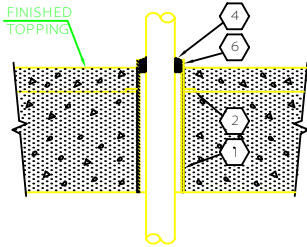
PIPE SLEEVE SCHEDULE

DIA. OF PIPE THRU WALL	DIA. OF SLEEVE REQUIRED
1/2" (DN15)	DN50 (2")
3/4" (DN20)	DN50 (2")
1" (DN25)	DN50 (2")
1 1/4" (DN32)	DN80 (3")
1 1/2" (DN40)	DN80 (3")
2" (DN50)	DN100 (4")
2 1/2" (DN65)	DN100 (4")
3" (DN80)	DN150 (6")
4" (DN100)	DN150 (6")
5" (DN125)	DN200 (8")
6" (DN150)	DN200 (8")
8" (DN200)	DN250 (10")

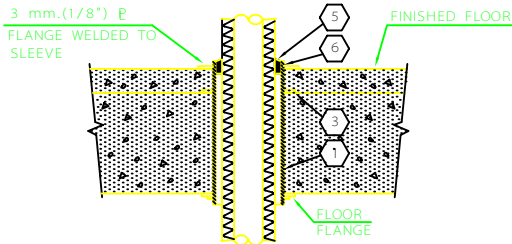
NOTE:

PIPE SLEEVE FLANGES 1/2" THRU 2 1/2" CAN BE DELETED AS PER DESIGN ENGINEER RECOMMENDATION.

C		IRANIAN PETROLEUM STANDARDS			
B					
A			DATE	DRAWING No.	SHT/REV.
REV.	DESCRIPTION	DATE	TYPICAL THRU-WALL SLEEVE DETAIL EXTERIOR	IPS - D - AR - 012	4/6



UNINSULATED PIPE



INSULATED PIPE

1 SLEEVES EXPOSED IN ROOMS SHALL BE ASTM A53 GRADE "B" STEEL PIPE CUT SQUARE & REAMED. SLEEVES CONCEALED IN CHASES, PIPE SPACES, ETC. SHALL BE 0.85 mm. (22 GAUGE) GALVIRON.

2 SLEEVE SHALL BE SET IN SLAB WITH ANCHOR LUGS. A MINIMUM OF 3 LUGS PER SLEEVE.

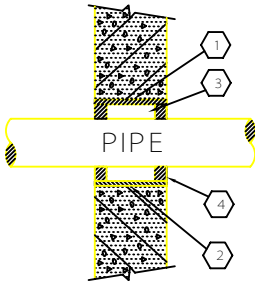
3 SLEEVE SHALL BE THREADED & HELD IN PLACE W/FLOOR FLANGE. PROVIDE. PLASTIC CAULKING COMPOUND BETWEEN 3 mm. (1/8") R FLANGE & FLOOR.

4 SLEEVE SHALL BE CAULKED W/OAKUM OR ASBESTOS ROPE. FINISH W/25mm(1") PLASTIC CAULKING COMPOUND.

5 SLEEVE SHALL BE CAULKED W/25mm(1") PLASTIC CAULKING COMPOUND.

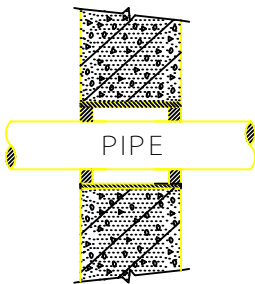
6 SLEEVES SHALL EXTEND 13mm.(1/2") ABOVE FINISHED FLOOR EXCEPT IN KITCHENS, TOILETS, LOCKER ROOMS & SIMILAR. DAMP AREAS: IN THESE AREAS THE SLEEVES SHALL EXTEND 40mm. (1 1/2") ABOVE THE FINISHED FLOOR.

C			IRANIAN PETROLEUM STANDARDS 			
B			NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION			
A			TYPICAL MECHANICAL DETAIL	DATE	DRAWING No.	SHT/REV.
REV	DESCRIPTION	DATE	FOR PIPE SLEEVES IN FLOORS		IPS - D - AR - 012	5/6



INTERIOR WALLS

FOR CLEARANCES AND CAULKINGS OF INSULATED PIPE SEE STANDARD DETAIL OF INSULATED PIPE SLEEVED THRU FLOORS.



EXTERIOR WALLS

WHEN INSULATED PIPE IS SLEEVED THRU, EXTERIOR WALLS INTERRUPT THE INSULATION FOR THE LENGTH OF THE SLEEVE

① SLEEVES SHALL BE ASTM A53 GRADE "B" STEEL PIPE CUT SQUARE & REAMED. SLEEVE FULL THICKNESS OF THE WALL FLUSH WITH FINISHED SURFACES.

② SLEEVES SHALL BE SET W/ANCHOR LUGS INTO MASONRY JOINT, GROUT,OR POURED CONCRETE

③ SLEEVE SHALL BE OF PROPER SIZE TO ALLOW A MINIMUM OF 13mm.(1/2") CLEARANCE BETWEEN THE SLEEVE AND THE PIPE.

④ IN AREAS REQUIRING AN ACOUSTICAL BARRIER CAULK SLEEVE W/OAKUM OR ASBESTOS ROPE. FINISH BOTH ENDS W/25mm.(1")PLASTIC CAULKING COMPOUND.

⑤ CAULK SLEEVE W/OAKUM AND LEAD. WHEN SLEEVE OCCURS ABOVE GRADE PROVIDE LEAD ON BOTH SIDES.

C				IRANIAN PETROLEUM STANDARDS 			
B				NO REVISION PERMITTED UNLESS APPROVED BY STANDARD ORGANIZATION			
A				TYPICAL MECHANICAL DETAILS	DATE	DRAWING No.	SHT/REV.
REV	DESCRIPTION	DATE	FOR THRU-WALL PIPE SLEEVES		IPS-D-AR-012	6/6	