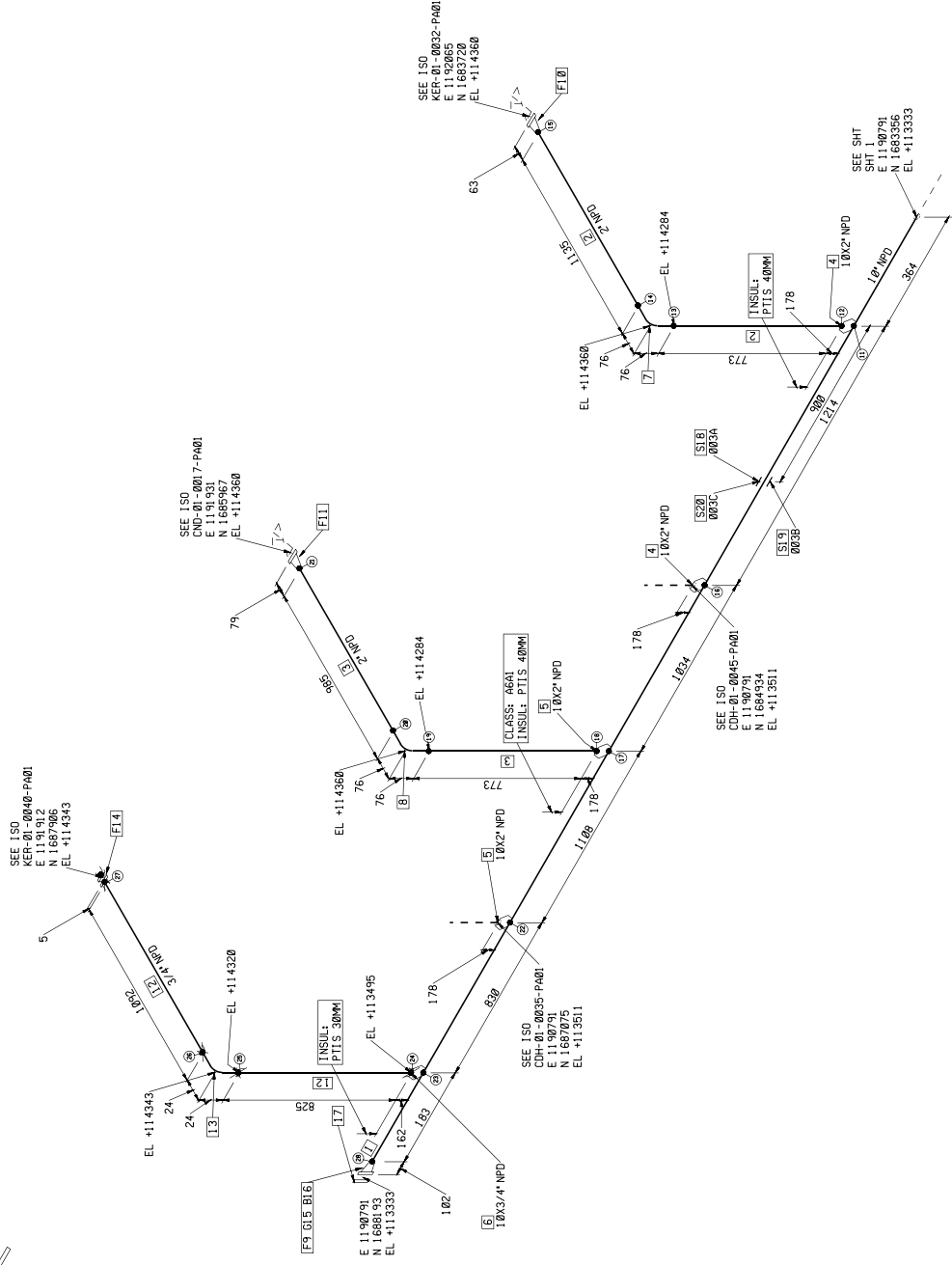




BILL OF MATERIAL - SHOP

PT NO	DESCRIPTION	NPD (IN)	QTY
1	NPS: 10" - THK 12.7MM - PIPE - ASTM A106 GR. B - SM 5 - GA-E-60020	10	4.8 M
2	NPS: 2" - THK 5.54MM - PIPE - ASTM A106 GR. B - SM 5 - GA-E-60020	2	2.0 M
3	NPS: 3/4" - THK 5.54MM - PIPE - ASTM A106 GR. B - SM 5 - GA-E-60020	2	1.8 M
4	NPS: 2X10" - THK 5.54MM X 12.7MM - WELDOLET - GA-E-60020	10X2	2
5	NPS: 2X10" - THK 5.54MM X 12.7MM - WELDOLET - GA-E-60020	10X2	2
6	NPS: 3/4" - RUN SIZE: 1 1/2" - SOCKLET - MSS-SP97-ASTM A105 NORMALIZED	10X3/4	1
7	NPS: 2" - THK 5.54MM - WELDOLET - MSS-SP97-ASTM A105 NORMALIZED	2	1
8	NPS: 2" - THK 5.54MM - 90° LONG RADIUS ELBOW - ASME B16.9 - ASTM A234 WPB - SM 5 - GA-E-60020	2	1
9	NPS: 2" - THK 5.54MM - 90° LONG RADIUS ELBOW - ASME B16.9 - ASTM A234 WPB - SM 5 - GA-E-60020	2	1
10	NPS: 2" - THK 5.54MM - WN FLANGE - ASME B16.5 - CL 150 - RF 1.25" - 1/4" RA - ASTM A105 NORMALIZED	2	1
11	NPS: 2" - THK 5.54MM - WN FLANGE - ASME B16.5 - CL 150 - RF 1.25" - 1/4" RA - ASTM A105 NORMALIZED	2	1

BILL OF MATERIAL - ERECTION

PT NO	DESCRIPTION	NPD (IN)	QTY
12	NPS: 3/4" - THK 5.56MM - PIPE - ASTM A106 GR. B - SM 5 - GA-E-60020	3/4	2.0 M
13	NPS: 3/4" - 90° ELBOW - SW ENDS - ASME B16.9 - ASTM A234 WPB - SM 5 - GA-E-60020	3/4	1
14	NPS: 3/4" - SW FLANGE - ASME B16.5 - CL 150 - RF 1.25" - 1/4" RA - ASTM A105 NORMALIZED	3/4	1
15	NPS: 3/4" - THK 5.56MM - 90° LONG RADIUS ELBOW - ASME B16.9 - ASTM A234 WPB - SM 5 - GA-E-60020	3/4	1
16	7/8" INCH - L=1200MM - ST. BOLT T2 NUTS - ANSI SS-304/316 - C.S. OUT. RING	7/8	12
17	NPS: 10" - BLIND FLANGE - 115.0MM BOLT LENGTH - ASME B16.5 - CL 150 - RF 1.25" - 1/4" RA - ASTM A105 NORMALIZED	10	1
18	RSI 7-10" - C-700-514-113046-90	10	1
19	OSI-10"	10	1
20	SS-10" - B-400-CS	10	1

1-ROOT GAPS OF BUTT WELD FITTINGS ARE NOT INCLUDED IN DIMENSIONS.
2-ISOMETRIC DRAWINGS FOR 1 1/2" AND SMALLER PIPING ARE JUST FOR REFERENCE. PIPING CONTRACTOR SHALL BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.
3-FOR 1 1/2" AND SMALLER SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.
4-BEFORE PRE-FABRICATION CHECK ACTUAL SIZE OF SPECIAL ITEMS.

NOTES	CONDITION	DESIGN	OPERATING
PRESS.(bar)	3.5	ATM	
TEMP.(°C)	248	48	
TEST FLUID: WATER	PRESS TEST.(bar)	7	
INSULATION TYPE: PT	INSULATION THK: -		
PAINT CODE: 1	HEAT TRANSFER CEMENT: -		
STRESS ANALYSIS: 01-061	TRACING SIZE: 10	PERM: YES	
STEAM TRACING QTY: -	REF. PAD DWG. No.: 01-ED-P1-P1-D-0105 SH. 1		
TRACING	ELEC. TRACING YES ☐ NO ☒	PHASE: L	

DESIGN	OPERATING	REV.	DATE	DESCRIPTION
A6				
A5				
A4				
A3				
A2				
A1				

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING

OPERATING	DESIGN	CONDITION
ATM	3.5	PRESS.(bar)
48	248	TEMP.(°C)
7		TEST FLUID: WATER
		INSULATION TYPE: PT
		PAINT CODE: 1
		STRESS ANALYSIS: 01-061
		STEAM TRACING QTY: -
		TRACING