

Document Title	Marked-Up Isometrics
DRG Document No.	DRG-101872-2829-I001-R00
Client	Airpack Nederland BV
Project	API 618 Design Approach 2 for 17811-00-0701

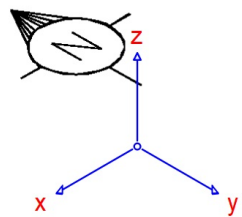
**DYNAFLOW
RESEARCH
GROUP.**

Appendix B

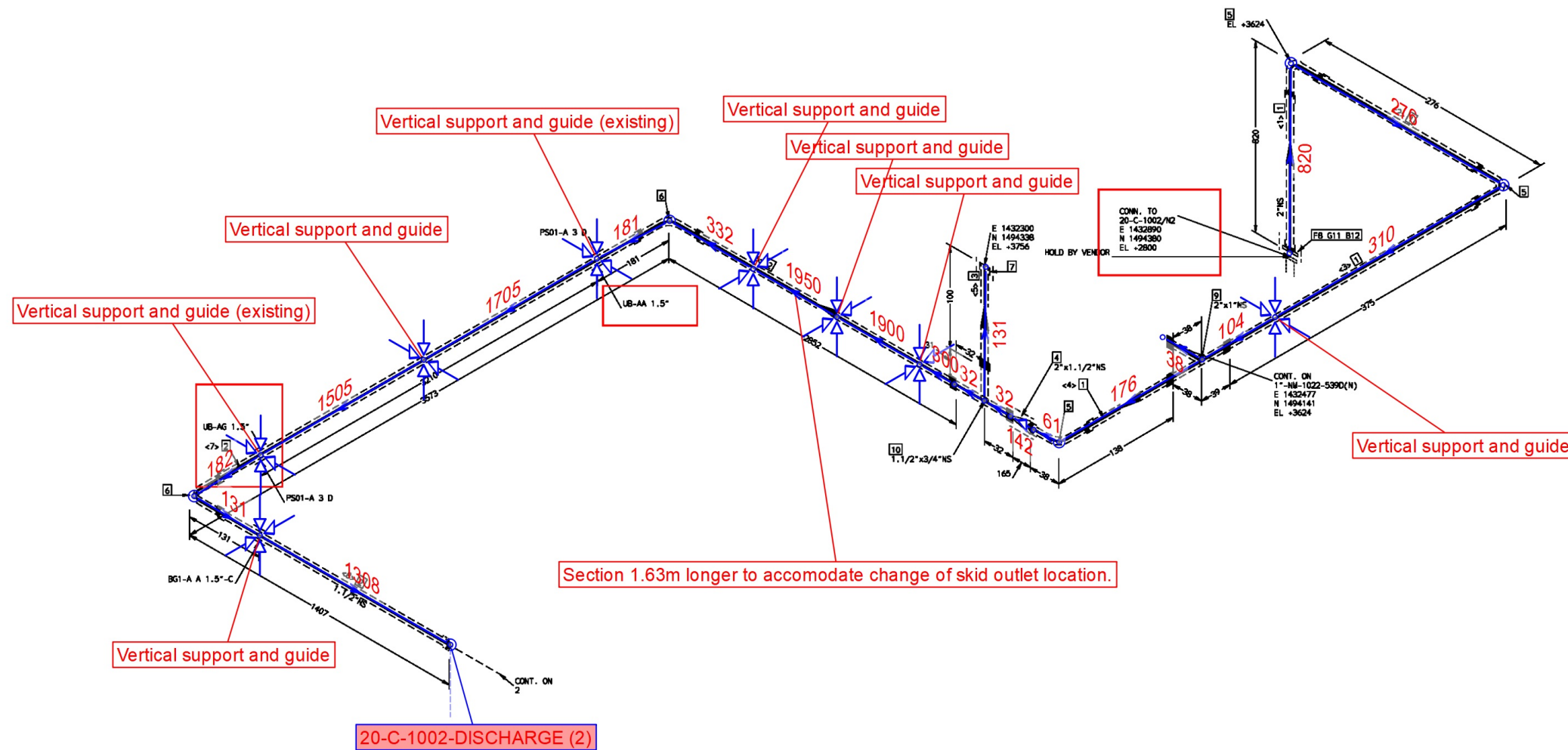
Marked-up isometrics

0	Issued for comments	For Comments	TK	MPB	FMB	18/02/2022
Rev.	Description	Status	Prep'd	Chk'd	App'd	Date

NITROGEN COMPRESSOR SYSTEM 17811-03A



20-C-1002-DISCHARGE (1)



FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
PIPE				
1	PIPE SMLS PE API 5L GR.B B36.10 S-XS	2	PPSP1508PZX\$2	1402MM
2	PIPE SMLS PE API 5L GR.B B36.10 S-XS	1.1/2	PPSP1508PZX\$11/2	7706MM
3	PIPE SMLS PE API 5L GR.B B36.10 S-XS	3/4	PPSP1508PZX\$3/4	100MM
FITTINGS				
4	CONCENTRIC SWAGE PE/PE A234 GR.WPB SMLS MSS-SP-95 S-XS x S-XS	2 x 1.1/2	PJSCSP1601SZXS\$2\$11/2	1
5	90 ELBOW 3000# SW A105 ASME B16.11	2	PJEOFS1801JZL3\$2	3
6	90 ELBOW 3000# SW A105 ASME B16.11	1.1/2	PJEOFS1801JZL3\$11/2	2
7	CAP 3000# FT A105 ASME B16.11	3/4	PJKFFN1801JZL3\$3/4	1
FLANGES				
8	SOCKET WELD FLANGE 300# RF SW 125-250AARH A105 B16.5 S-XS	2	PFFS63R1801NZXS\$2	1

ERECTION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
FITTINGS				
9	REDUCING TEE 3000# SW A105 ASME B16.11	2 x 1	PJTRFS1801JZL3\$2\$1	1
10	REDUCING TEE 3000# SW A105 ASME B16.11	1.1/2 x 3/4	PJTRFS1801JZL3\$11/2\$3/4	1
GASKETS				
11	SPIRAL WOUND GASKET 300# RF SS316/GRAHPITE SS316 OUTER RING:C.S B16.20 B16.5 THK.4.5mm	2	PGGSD63E4XDZ\$2	1
BOLTS				
12	95 STUD BOLTS & 2 HEAVY HEX NUTS A193-B7/A194-2H ASME B18.2.1/2 (DACROMET COATED)	5/8	PLLS33MD\$5/8\$95	8

CUT PIPE LENGTH							
PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<1>	765	2		<2>	200	2	
<3>	337	2		<4>	100	2	
<5>	100	3/4		<6>	2820	1.1/2	
<7>	3510	1.1/2		<8>	1376	1.1/2	

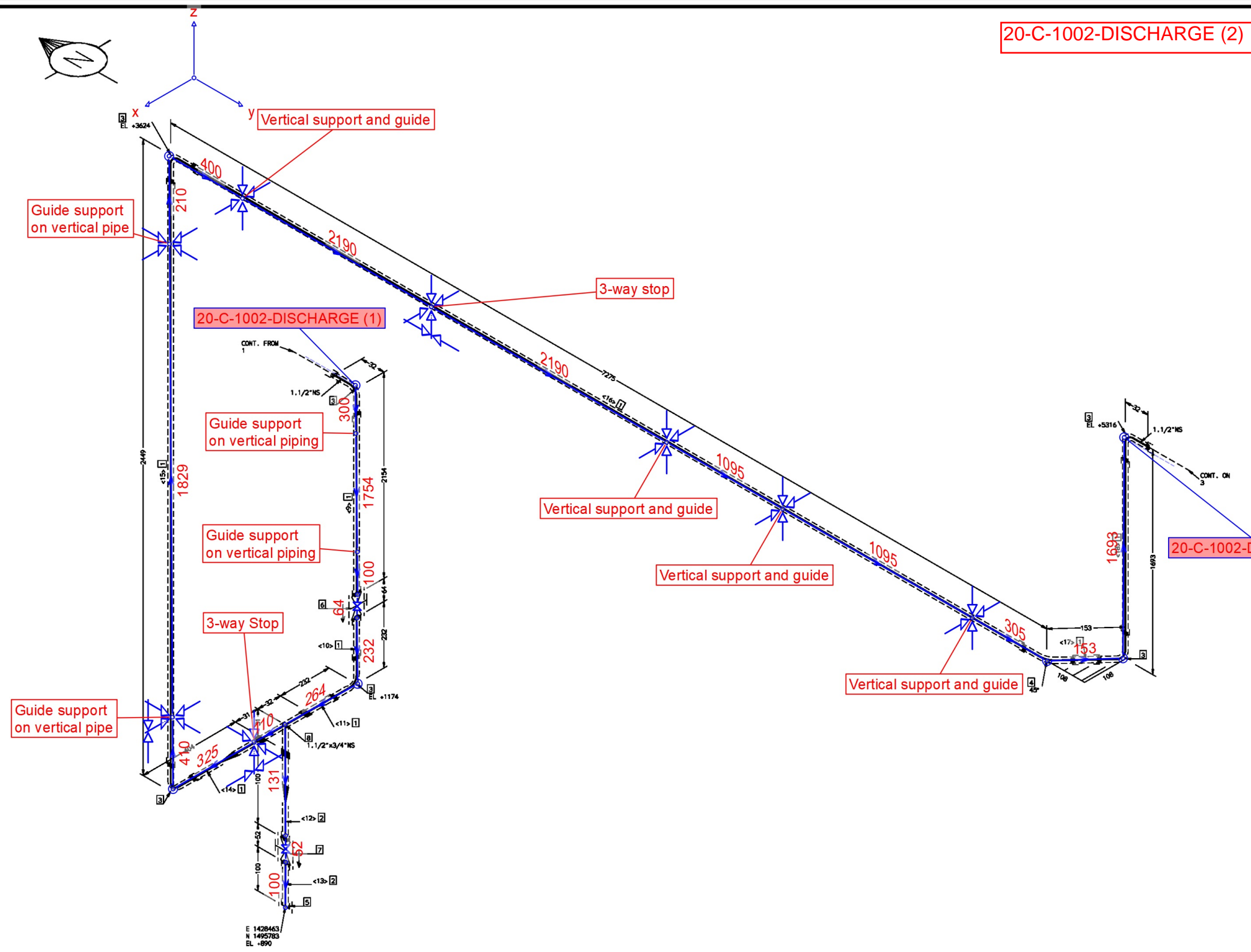


NOTE

- 1-200 mm EXTRA PIPE SHALL BE CONSIDERED FOR FIELD WELD ADJUSTMENT ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.
- 2-ALL CUTTING PIPE LENGTHS ARE FOR INFORMATION ONLY AND SHALL BE ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.
- 3-FOR 11/2" AND SMALLER PIPINGS, SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.
- 4-ACTUAL SIZE OF ALL INSTRUMENT ITEMS AND PIPING SPECIAL ITEMS SHALL BE CHECKED BEFORE ANY SPOOL FABRICATION ACTIVITIES.
- 5-ROOT GAPS OF BUTT-WELDING FITTINGS ARE NOT INCLUDED IN DIMENSIONS.
- 6-ISOMETRIC DRAWING FOR 11/2" AND SMALLER PIPINGS ARE JUST FOR INFORMATION. PIPING ROUTING, DIMENSIONS AND ELEVATIONS TO BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.

CONDITION		DESIGN		OPERATING					
PRESS. (barg)		11		7					
TEMP.(°C)		85		AMB					
TEST FLUID: 16.5		PRESS. TEST(barg)FRESH WATER							
INSULATION TYPE: H		INSULATION THK.: 30							
PAINT CODE: 9		FIRE PROOFING: NO		02	02/18/2021	APPROVED FOR CONSTRUCTION		M.A	F.S. M.SH
STRESS ANALYSIS:		DENSITY(kg/m³): 9.1		01	01/13/2021	APPROVED FOR CONSTRUCTION		M.A	F.S. M.SH.
TRACING	STEAM TRACING QTY.	TRACING SIZE	NDT: 10% RT	00	06/20/2020	ISSUED FOR REVIEW		M.A	F.S. M.SH.
	-	-	PWHT: NO	REV.	DATE	DESCRIPTION		PREP'D	CHK'D APP'D
	ELEC. TRACING YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		PHASE: G		REF. P&ID DWG. No.: BU-20-D-100-PR-PID-101				

CLIENT:	MC:	PROJECT:	CONTRACTOR:
		BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	
LINE No:		LINE CLASS:	AREA No.:
11/2"-NM-1021-539D(H)		539D	
PROJECT DOCUMENT No:		ISO DRAWING No:	REV:
BU-20-D-100-PI-ISO-010		NL-1021	02
		SHT.NO.	DOC. CLASS
		1 OF 3	2



20-C-1002-DISCHARGE (2)

FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
PIPE				
1	PIPE SMLS PE API 5L GR.B B36.10 S-XS	1.1/2	PPSP1508PZXS11/2	14233MM
2	PIPE SMLS PE API 5L GR.B B36.10 S-XS	3/4	PPSP1508PZXS3/4	200MM
FITTINGS				
3	90 ELBOW 3000# SW A105 ASME B16.11	1.1/2	PJEQFS1801JZL311/2	6
4	45 ELBOW 3000# SW A105 ASME B16.11	1.1/2	PJEPFS1801JZL311/2	1
5	CAP 3000# FT A105 ASME B16.11	3/4	PJKFFN1801JZL33/4	1
VALVES / IN-LINE ITEMS				
6	GATE VALVE 800# SW A105 1-F6 BB-OS&Y B7/2H SOW HW API 602	1.1/2	PVVG68S0101QEA0Z11/2	1
7	GATE VALVE 800# SW A105 1-F6 BB-OS&Y B7/2H SOW HW API 602	3/4	PVVG68S0101QEA0Z3/4	1

ERECTION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
FITTINGS				
8	REDUCING TEE 3000# SW A105 ASME B16.11	1.1/2 x 3/4	PJTRFS1801JZL311/23/4	1

CUT PIPE LENGTH							
PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<9>	2123	1.1/2		<10>	200	1.1/2	
<11>	200	1.1/2		<12>	100	3/4	
<13>	100	3/4		<14>	372	1.1/2	
<15>	2387	1.1/2		<16>	7222	1.1/2	
<17>	100	1.1/2		<18>	1629	1.1/2	

20-C-1002-DISCHARGE (3)



NOTE

1-200 mm EXTRA PIPE SHALL BE CONSIDERED FOR FIELD WELD ADJUSTMENT ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.

2-ALL CUTTING PIPE LENGTHS ARE FOR INFORMATION ONLY AND SHALL BE ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.

3-FOR 11/2" AND SMALLER PIPINGS, SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.

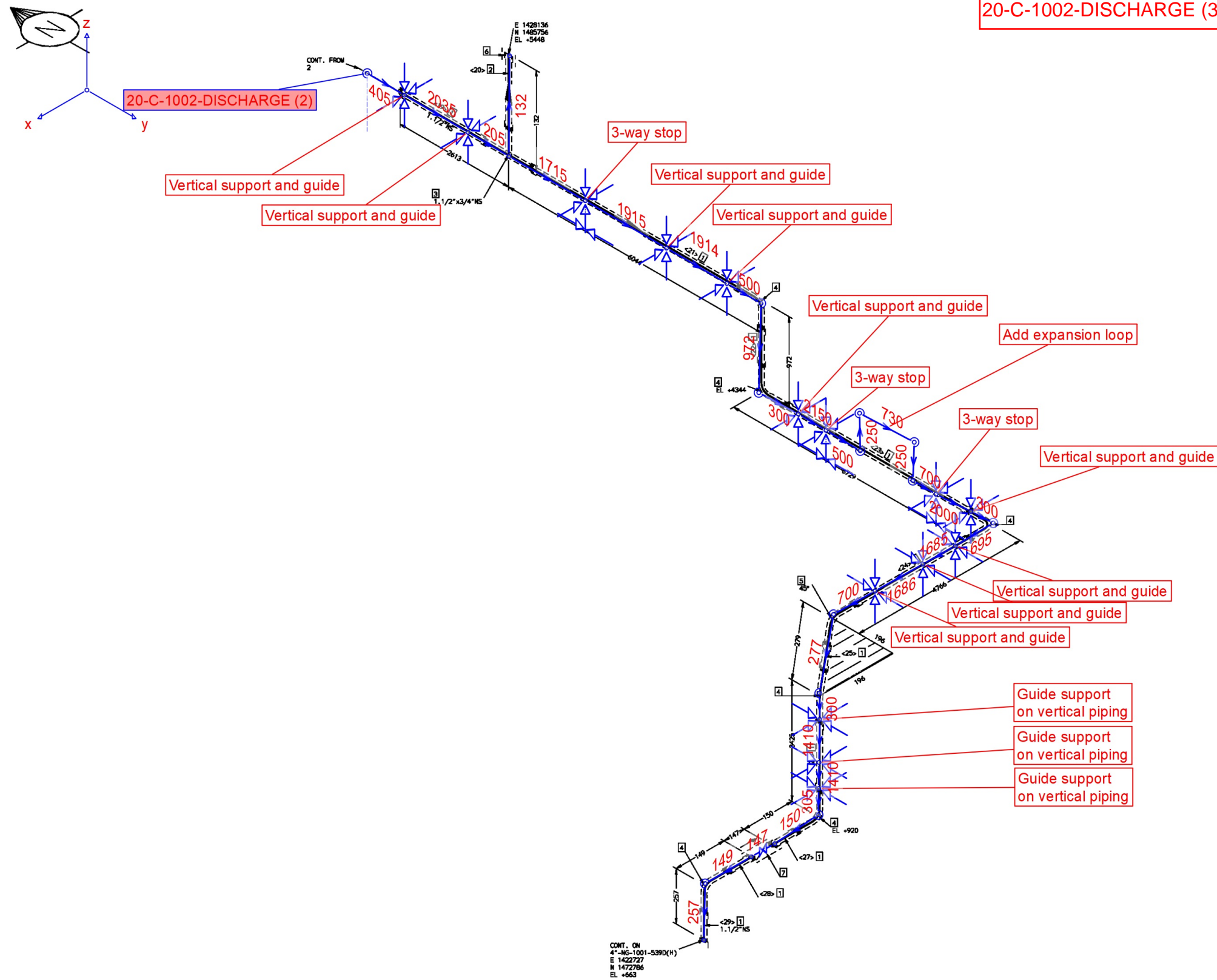
4-ACTUAL SIZE OF ALL INSTRUMENT ITEMS AND PIPING SPECIAL ITEMS SHALL BE CHECKED BEFORE ANY SPOOL FABRICATION ACTIVITIES.

5-ROOT GAPS OF BUTT-WELDING FITTINGS ARE NOT INCLUDED IN DIMENSIONS.

6-ISOMETRIC DRAWING FOR 11/2" AND SMALLER PIPINGS ARE JUST FOR INFORMATION. PIPING ROUTING, DIMENSIONS AND ELEVATIONS TO BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.

CONDITION		DESIGN		OPERATING					
PRESS. (barg)		11		7					
TEMP.(°C)		85		AMB					
TEST FLUID: 16.5		PRESS. TEST(barg)FRESH WATER							
INSULATION TYPE: H		INSULATION THK.: 30							
PAINT CODE: 9		FIRE PROOFING: NO		02	02/18/2021	APPROVED FOR CONSTRUCTION		M.A	F.S.
STRESS ANALYSIS:		DENSITY(kg/m³): 9.1		01	01/13/2021	APPROVED FOR CONSTRUCTION		M.A	F.S.
TRACING	STEAM TRACING QTY.	TRACING SIZE	NDT: 10% RT	00	06/20/2020	ISSUED FOR REVIEW		M.A	F.S.
	-	-	PWHT: NO	REV.	DATE	DESCRIPTION		PREP'D	CHK'D
	ELEC. TRACING YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>		PHASE: G		REF. P&ID DWG. No.: BU-20-D-100-PR-PID-101				

CLIENT:	MC:	PROJECT:	CONTRACTOR:
		BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	
LINE No:		LINE CLASS:	AREA No.:
11/2"-NM-1021-539D(H)		539D	
PROJECT DOCUMENT No:		ISO DRAWING No:	REV:
BU-20-D-100-PI-ISO-010		NL-1021	02
		SHT.NO.	DOC. CLASS
		2 OF 3	2



20-C-1002-DISCHARGE (3)

FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
PIPE				
1	PIPE SMLS PE API 5L GR.B B36.10 S-XS	1.1/2	PPSP1508PZXS11/2	24897MM
2	PIPE SMLS PE API 5L GR.B B36.10 S-XS	3/4	PPSP1508PZXS3/4	100MM
FITTINGS				
3	REDUCING TEE 3000# SW A105 ASME B16.11	1.1/2 x 3/4	PJTRFS1801JZL311/2X3/4	1
4	90 ELBOW 3000# SW A105 ASME B16.11	1.1/2	PJEQFS1801JZL311/2	6
5	45 ELBOW 3000# SW A105 ASME B16.11	1.1/2	PJEPFS1801JZL311/2	1
6	CAP 3000# FT A105 ASME B16.11	3/4	PJKFFN1801JZL33/4	1
VALVES / IN-LINE ITEMS				
7	BALL CHECK VALVE 800# SW A105 1-F6 BC B7/2H NS HORIZONTAL API 602	1.1/2	PVVCX68S0101QEAD0Z11/2	1

CUT PIPE LENGTH							
PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<19>	2581	1.1/2		<20>	100	3/4	
<21>	5980	1.1/2		<22>	909	1.1/2	
<23>	6665	1.1/2		<24>	4713	1.1/2	
<25>	226	1.1/2		<26>	3361	1.1/2	
<27>	118	1.1/2		<28>	118	1.1/2	
<29>	226	1.1/2					



NOTE

1-200 mm EXTRA PIPE SHALL BE CONSIDERED FOR FIELD WELD ADJUSTMENT ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.

2-ALL CUTTING PIPE LENGTHS ARE FOR INFORMATION ONLY AND SHALL BE ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.

3-FOR 11/2" AND SMALLER PIPINGS, SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.

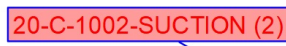
4-ACTUAL SIZE OF ALL INSTRUMENT ITEMS AND PIPING SPECIAL ITEMS SHALL BE CHECKED BEFORE ANY SPOOL FABRICATION ACTIVITIES.

5-ROOT GAPS OF BUTT-WELDING FITTINGS ARE NOT INCLUDED IN DIMENSIONS.

6-ISOMETRIC DRAWING FOR 11/2" AND SMALLER PIPINGS ARE JUST FOR INFORMATION. PIPING ROUTING, DIMENSIONS AND ELEVATIONS TO BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.

CONDITION		DESIGN		OPERATING						
PRESS. (barg)		11		7						
TEMP.(°C)		85		AMB						
TEST FLUID: 16.5		PRESS. TEST(barg)FRESH WATER								
INSULATION TYPE: H		INSULATION THK.: 30								
PAINT CODE: 9		FIRE PROOFING: NO		02	02/18/2021	APPROVED FOR CONSTRUCTION		M.A	F.S.	M.SH
STRESS ANALYSIS:		DENSITY(kg/m³): 9.1		01	01/13/2021	APPROVED FOR CONSTRUCTION		M.A	F.S.	M.SH.
TRACING	STEAM TRACING QTY.	TRACING SIZE	NDT: 10% RT	00	06/20/2020	ISSUED FOR REVIEW		M.A	F.S.	M.SH.
	-	-	PWHT: NO	REV.	DATE	DESCRIPTION		PREP'D	CHK'D	APP'D
	ELEC. TRACING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PHASE: G	REF. P&ID DWG. No.: BU-20-D-100-PR-PID-101						

CLIENT:	MC:	PROJECT:	CONTRACTOR:
		BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	
LINE No:		LINE CLASS:	AREA No.:
11/2"-NM-1021-539D(H)		539D	
PROJECT DOCUMENT No:		ISO DRAWING No:	REV:
BU-20-D-100-PI-ISO-010		NL-1021	02
		SHT.NO.	DOC. CLASS
		3 OF 3	2







20-C-1002-SUCTION (1)

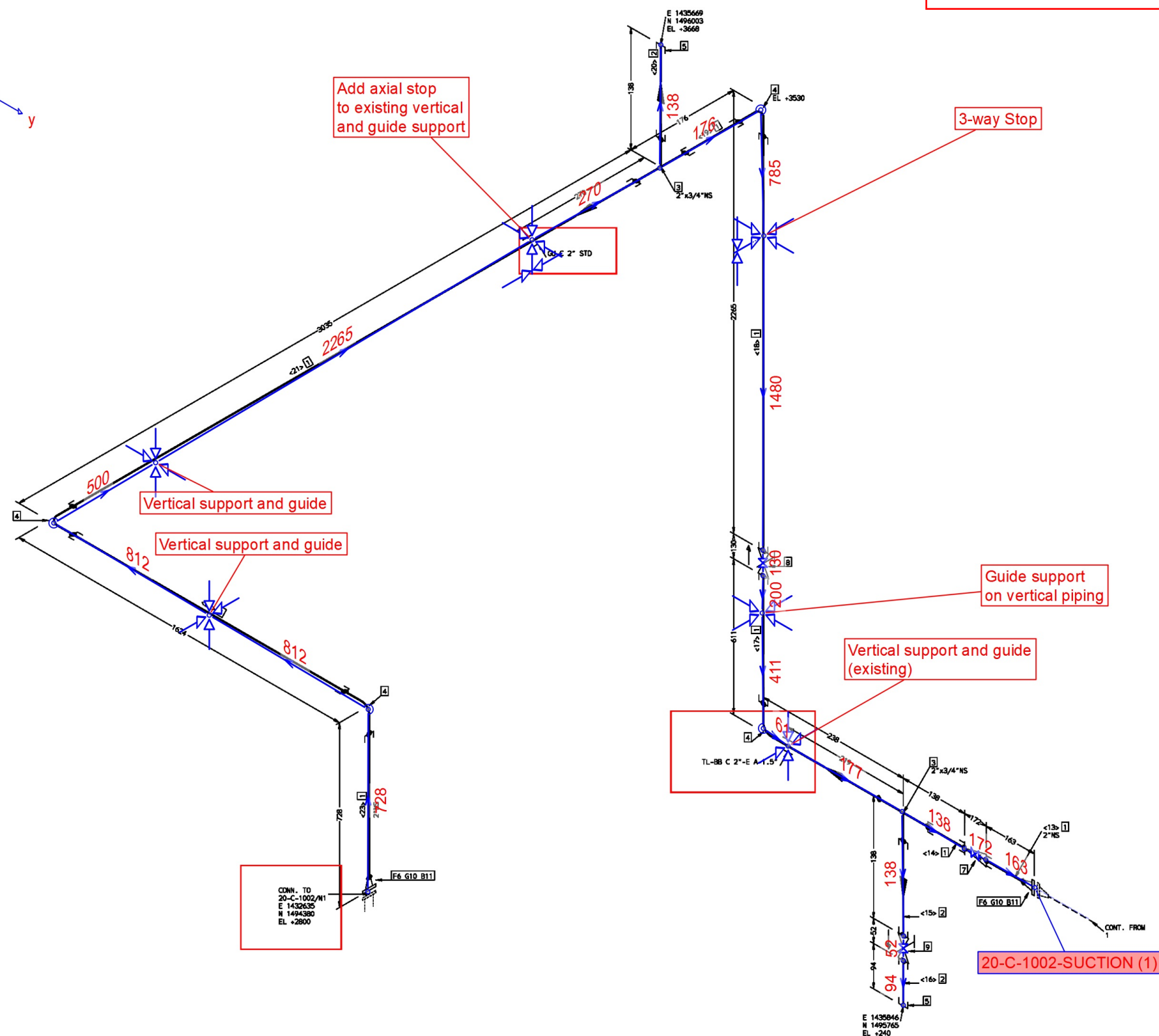
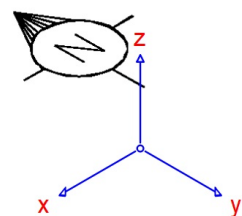
FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
	<u>PIPE</u>			
1	PIPE SMLS PE API 5L GR.B B36.10 S-XS	2	PPPSP1508PZX\$2	20892MM
2	PIPE SMLS PE API 5L GR.B B36.10 S-XS	3/4	PPPSP1508PZX\$3/4	100MM
	<u>FITTINGS</u>			
3	REDUCING TEE 3000# SW A105 ASME B16.11	2 x 3/4	PJTRFS1801JZL3\$2\$3/4	1
4	90 ELBOW 3000# SW A105 ASME B16.11	2	PJEQFS1801JZL3\$2	6
5	COUPLING 3000# SW A105 ASME B16.11	2	PJCDFS1801JZL3\$2	1
6	CAP 3000# FT A105 ASME B16.11	3/4	PJKFFN1801JZL3\$3/4	1
	<u>FLANGES</u>			
7	WELD NECK FLANGE 150# RF BE 125-250AARH A105 B16.5 S-XS	2	PFFW62R1801NZXS\$2	3
	<u>VALVES / IN-LINE ITEMS</u>			
8	GATE VALVE 800# SW A105 1-F6 BB-OS&Y B7/2H SOW HW API 602	2	PVVGC68S0101QCAD0Z\$2	1

ERECTION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
	<u>GASKETS</u>			
9	FLAT RING GASKET 150# RF NON-ASB SYNT FIBER WITH NBR BINDER B16.21 B16.5 THK.3mm	2	PGGPR6207YCZ#2	1
	<u>BOLTS</u>			
10	85 STUD BOLTS & 2 HEAVY HEX NUTS A193-B7/A194-2H ASME B18.2.1/2 (DACROMET COATED)	5/8	PLLS33MD#5/8#85	4

CUT PIPE LENGTH				CUT PIPE LENGTH			
PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<1>	839	2		<2>	100	2	
<3>	100	3/4		<4>	4198	2	
<5>	224	2		<6>	6000	2	
<7>	399	2		<8>	5943	2	
<9>	2227	2		<10>	573	2	
<11>	100	2		<12>	289	2	

NOTE	CONDITION		DESIGN	OPERATING							
1-200 mm EXTRA PIPE SHALL BE CONSIDERED FOR FIELD WELD ADJUSTMENT ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.	PRESS. (barg)		11	7							
	TEMP.(°C)		85	AMB							
2-ALL CUTTING PIPE LENGTHS ARE FOR INFORMATION ONLY AND SHALL BE ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.	TEST FLUID:	16.5	PRESS. TEST(barg)FRESH WATER								
3-FOR 11/2" AND SMALLER PIPINGS, SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.	INSULATION TYPE: N		INSULATION THK.: -								
	PAINT CODE: 2		FIRE PROOFING: NO								
4-ACTUAL SIZE OF ALL INSTRUMENT ITEMS AND PIPING SPECIAL ITEMS SHALL BE CHECKED BEFORE ANY SPOOL FABRICATION ACTIVITIES.	STRESS ANALYSIS:		DENSITY(kg/m³): 9.1		01	01/13/2021	APPROVED FOR CONSTRUCTION		M.A.	F.S.	M.SH
5-ROOT GAPS OF BUTT-WELDING FITTINGS ARE NOT INCLUDED IN DIMENSIONS.	TRACING	STEAM TRACING QTY.	TRACING SIZE	NDT: 10% RT	00	44002	ISSUED FOR REVIEW		M.A.	F.S.	M.SH
		-	-	PWHT: NO	REV.	DATE	DESCRIPTION		PREP'D	CHK'D	APP'D
		ELEC. TRACING YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>	PHASE: G		REF. P&ID DWG. No.: BU-20-D-900-PR-PID-908					
6-ISOMETRIC DRAWING FOR 11/2" AND SMALLER PIPINGS ARE JUST FOR INFORMATION. PIPING ROUTING, DIMENSIONS AND ELEVATIONS TO BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.											

CLIENT:	MC:	PROJECT:	CONTRACTOR:		
	 	BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	 Chagalesh-Enerchimil-Steam Joint Venture BUIC-MEG PLANT PROJECT		
LINE No:			LINE CLASS:	AREA No.:	
2"-NL-1002-511C(N)			511C		
PROJECT DOCUMENT No:		ISO DRAWING No:	REV:	SHT.NO.	DOC. CLASS
BU-20-D-100-PI-ISO-010		NL-1002	01	1 OF 2	2



FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
PIPE				
1	PIPE SMLS PE API 5L GR.B B36.10 S-XS	2	PPSP1508PZXS#2	8433MM
2	PIPE SMLS PE API 5L GR.B B36.10 S-XS	3/4	PPSP1508PZXS#3/4	294MM
FITTINGS				
3	REDUCING TEE 3000# SW A105 ASME B16.11	2 x 3/4	PJTRFS1801JZL3#2#3/4	2
4	90 ELBOW 3000# SW A105 ASME B16.11	2	PJEQFS1801JZL3#2	4
5	CAP 3000# FT A105 ASME B16.11	3/4	PJKFFN1801JZL3#3/4	2
FLANGES				
6	WELD NECK FLANGE 150# RF BE 125-250AARH A105 B16.5 S-XS	2	PFFW62R1801NZXS#2	2
VALVES / IN-LINE ITEMS				
7	BALL CHECK VALVE 800# SW A105 1-F6 BC B7/2H NS HORIZONTAL API 602	2	PVVC68S0101QCAD0Z#2	1
8	GATE VALVE 800# SW A105 1-F6 BB-OS&Y B7/2H SOW HW API 602	2	PVVC68S0101QCAD0Z#2	1
9	GATE VALVE 800# SW A105 1-F6 BB-OS&Y B7/2H SOW HW API 602	3/4	PVVC68S0101QCAD0Z#3/4	1

ERECTION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
GASKETS				
10	FLAT RING GASKET 150# RF NON-ASB SYNT FIBER WITH NBR BINDER B16.21 B16.5 THK.3mm	2	PGGPR6207YCZ#2	2
BOLTS				
11	85 STUD BOLTS & 2 HEAVY HEX NUTS A193-B7/A194-2H ASME B18.2.1/2 (DACROMET COATED)	5/8	PLLS33MD#5/8#85	8

CUT PIPE LENGTH							
PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<13>	100	2		<14>	100	2	
<15>	100	3/4		<16>	94	3/4	
<17>	200	2		<18>	573	2	
<19>	2227	2		<20>	100	2	
<21>	100	3/4		<22>	2959	2	
<23>	1548	2		<24>	626	2	

NOTE

- 1-200 mm EXTRA PIPE SHALL BE CONSIDERED FOR FIELD WELD ADJUSTMENT ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.
- 2-ALL CUTTING PIPE LENGTHS ARE FOR INFORMATION ONLY AND SHALL BE ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.
- 3-FOR 11/2" AND SMALLER PIPINGS, SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.
- 4-ACTUAL SIZE OF ALL INSTRUMENT ITEMS AND PIPING SPECIAL ITEMS SHALL BE CHECKED BEFORE ANY SPOOL FABRICATION ACTIVITIES.
- 5-ROOT GAPS OF BUTT-WELDING FITTINGS ARE NOT INCLUDED IN DIMENSIONS.
- 6-ISOMETRIC DRAWING FOR 11/2" AND SMALLER PIPINGS ARE JUST FOR INFORMATION. PIPING ROUTING, DIMENSIONS AND ELEVATIONS TO BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.

CONDITION

DESIGN

OPERATING

PRESS. (barg)

11

7

TEMP.(°C)

85

AMB

TEST FLUID:

16.5

PRESS. TEST(barg)FRESH WATER

INSULATION TYPE:

N

INSULATION THK.: -

PAINT CODE:

2

FIRE PROOFING: NO

STRESS ANALYSIS:

DENSITY(kg/m³): 9.1

01

01/13/2021

APPROVED FOR CONSTRUCTION

M.A.

F.S.

M.SH.

TRACING

STEAM TRACING QTY.

-

TRACING SIZE

-

NDT: 10% RT

PWHT: NO

REV. DATE

ISSUED FOR REVIEW

M.A.

F.S.

M.SH.

DESCRIPTION

PREP'D

CHK'D

APP'D

REF. P&ID DWG. No.: BU-20-D-900-PR-PID-908

CLIENT:



MC:



PROJECT:

BUSHEHR PETROCHEMICAL COMPANY
MEG PLANT

CONTRACTOR:



LINE No:

2"-NL-1002-511C(N)

PROJECT DOCUMENT No:

BU-20-D-100-PI-ISO-010

ISO DRAWING No:

NL-1002

REV:

01

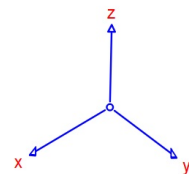
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2 OF 2

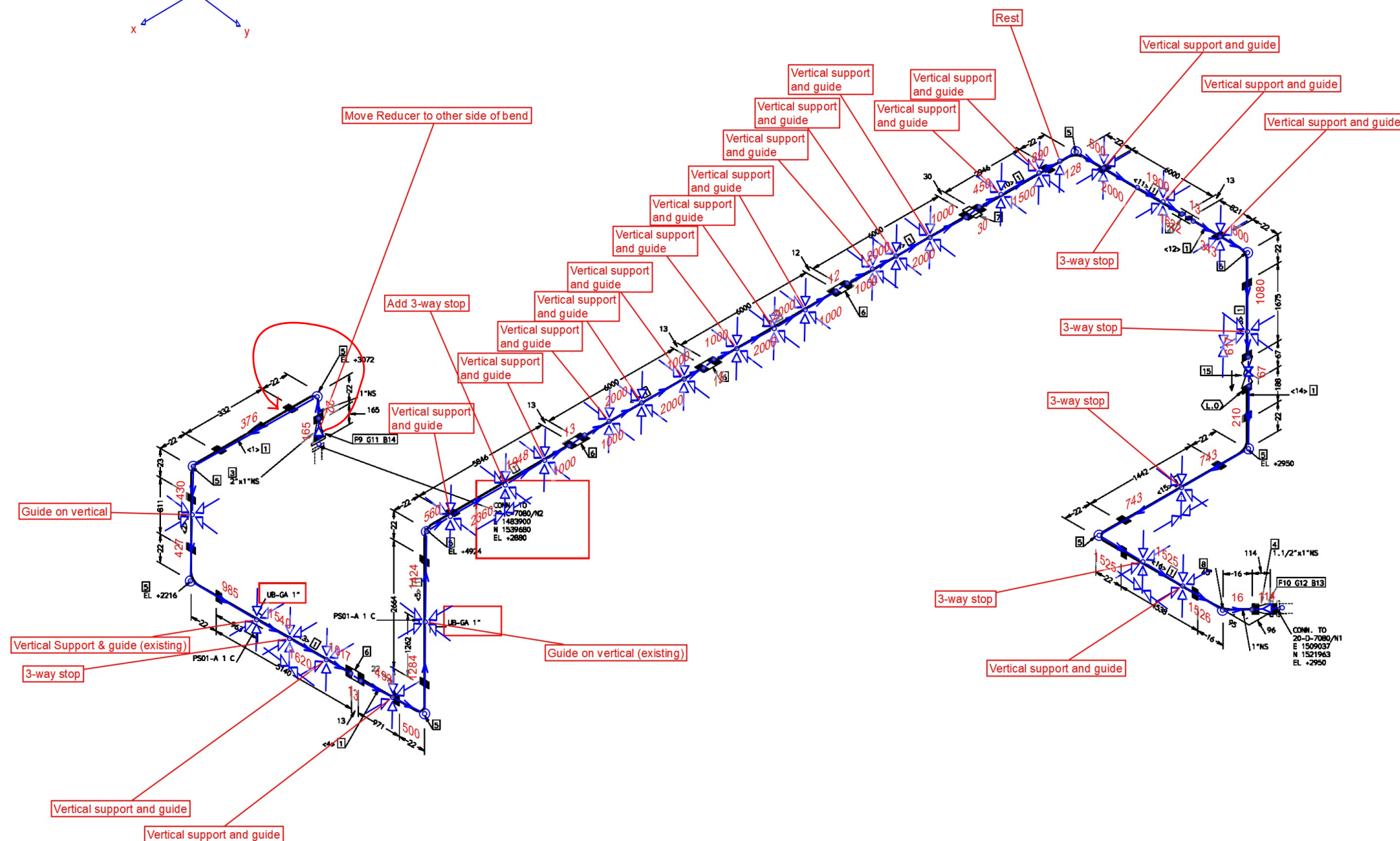
DOC. CLASS

2

EMERGENCY AIR COMPRESSOR SYSTEM 17811-03B



20-C-7080-DISCHARGE



FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
PIPE				
1	PIPE SMLS MT API 5L GR.B GALVANIZED B36.10 S-XS	1	PPPSM1508PZX\$1	51374MM
FITTINGS				
2	COUPLING 3000# FT A105 GALVANIZED ASME B16.11	1	PJCDFN1802JZL3\$1	1

ERECTION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
FITTINGS				
3	CONCENTRIC SWAGE MT/MT SMLS A234 GR.WPB GALVANIZED MSS-SP-95 S-XS x S-XS	2 x 1	PJSCSM1607SZXSXS\$2\$1	1
4	CONCENTRIC SWAGE MT/MT SMLS A234 GR.WPB GALVANIZED MSS-SP-95 S-XS x S-XS	1.1/2 x 1	PJSCSM1607SZXSXS\$11/2\$1	1
5	90 ELBOW 3000# FT A105 GALVANIZED ASME B16.11	1	PJEQFN1802JZL3\$1	9
6	COUPLING 3000# FT A105 GALVANIZED ASME B16.11	1	PJCDFN1802JZL3\$1	4
7	UNION 3000# FT ASTM A105 GALV. MSS-SP-83	1	PJUMFN1802UZL3\$1	1
8	45 ELBOW 3000# FT A105 GALV. ASME B16.11	1	PJEPFN1802JZL3\$1	1
FLANGES				
9	THREADED FLANGE 300# RF FT 125-250AARH A105 GALVANIZED B16.5 S-XS	2	PFFN63R1802NZXS\$2	1
10	THREADED FLANGE 300# RF FT 125-250AARH A105 GALVANIZED B16.5 S-XS	1.1/2	PFFN63R1802NZXS\$11/2	1
GASKETS				
11	SPIRAL WOUND GASKET 300# RF SS316/GRAHPITE SS316 OUTER RING:C.S B16.20 B16.5 THK.4.5mm	2	PGGSD63E4XDZ\$2	1
12	SPIRAL WOUND GASKET 300# RF SS316/GRAHPITE SS316 OUTER RING:C.S B16.20 B16.5 THK.4.5mm	1.1/2	PGGSD63E4XDZ\$11/2	1
BOLTS				
13	95 STUD BOLTS & 2 HEAVY HEX NUTS A193-B7/A194-2H ASME B18.2.1/2 (DACROMET COATED)	3/4	PLLS33MD\$3/4\$95	4
14	95 STUD BOLTS & 2 HEAVY HEX NUTS A193-B7/A194-2H ASME B18.2.1/2 (DACROMET COATED)	5/8	PLLS33MD\$5/8\$95	8
VALVES / IN-LINE ITEMS				
15	BALL VALVE 300# FT B62 B62/PTFE FB, FLOATING BALL LE L.D.	1	PVVA63N8694EEZTOX\$1	1

CUT PIPE LENGTH

PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<1>	332	1		<2>	811	1	
<3>	5140	1		<4>	971	1	
<5>	2664	1		<6>	5846	1	
<7>	6000	1		<8>	6000	1	
<9>	6000	1		<10>	2946	1	
<11>	6000	1		<12>	821	1	
<13>	1675	1		<14>	188	1	
<15>	1442	1		<16>	4538	1	

NOTE

- 1-200 mm EXTRA PIPE SHALL BE CONSIDERED FOR FIELD WELD ADJUSTMENT ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.
- 2-ALL CUTTING PIPE LENGTHS ARE FOR INFORMATION ONLY AND SHALL BE ON 3 DIRECTORY BY CONSTRUCTION CONTRACTOR.
- 3-FOR 11/2" AND SMALLER PIPINGS, SUPPORTS TO BE SELECTED BY CONSTRUCTION CONTRACTOR EXCEPT AS NOTED.
- 4-ACTUAL SIZE OF ALL INSTRUMENT ITEMS AND PIPING SPECIAL ITEMS SHALL BE CHECKED BEFORE ANY SPOOL FABRICATION ACTIVITIES.
- 5-ROOT GAPS OF BUTT-WELDING FITTINGS ARE NOT INCLUDED IN DIMENSIONS.
- 6-ISOMETRIC DRAWING FOR 11/2" AND SMALLER PIPINGS ARE JUST FOR INFORMATION. PIPING ROUTING, DIMENSIONS AND ELEVATIONS TO BE CHECKED BY CONSTRUCTION CONTRACTOR BEFORE INSTALLATION.

CONDITION		DESIGN	OPERATING						
PRESS. (barg)		22	20						
TEMP.(°C)		85	AMB						
TEST FLUID:		33	PRESS. TEST(barg)FRESH WATER						
INSULATION TYPE:		N	INSULATION THK.: -	03	10/17/2021	APPROVED FOR CONSTRUCTION	A.S	F.S.	M.SH
PAINT CODE:		4	FIRE PROOFING: NO	02	07/05/2021	APPROVED FOR CONSTRUCTION	A.S	F.S.	M.SH
STRESS ANALYSIS:		-	DENSITY(kg/m³): 8.54	01	02/16/2021	APPROVED FOR CONSTRUCTION	A.S	F.S.	M.SH.
TRACING	STEAM TRACING QTY.	TRACING SIZE	NDT: 10%RT-10%MT	00	06/20/2020	ISSUED FOR REVIEW	A.S	F.S.	M.SH.
	-	-	PWHT: NO	REV.	DATE	DESCRIPTION	PREP'D	CHK'D	APP'D
	ELEC. TRACING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PHASE: G	REF. P&ID DWG. No.: BU-20-D-700-PR-PID-711					

CLIENT:



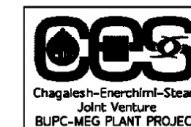
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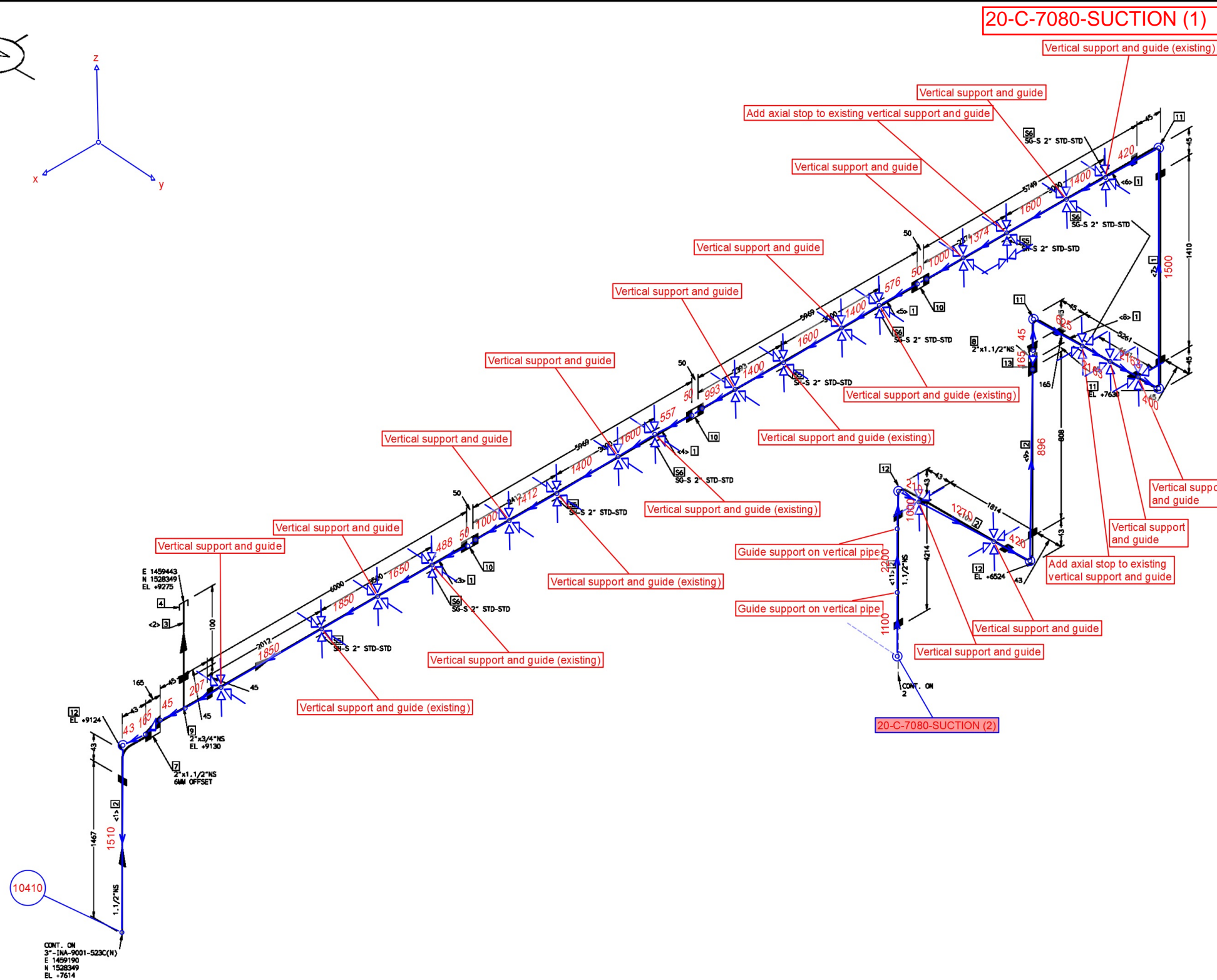
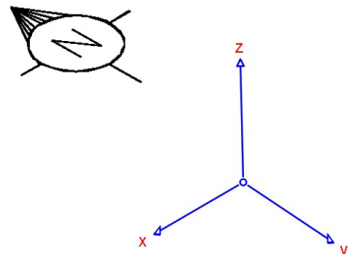
PROJECT:

BUSHEHR PETROCHEMICAL COMPANY
MEG PLANT

CONTRACTOR:



LINE No:		LINE CLASS:		AREA No.:	
1"-INA-7002-161D(N)		161D		700	
PROJECT DOCUMENT No:		ISO DRAWING No:		REV:	
BU-20-D-700-PI-ISO-016		INA-7002		03	
		SHT.NO.		DOC. CLASS	
		1 OF 1		2	



FABRICATION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
PIPE				
1	PIPE SMLS MT API 5L GR.B GALVANIZED B36.10 S-XS	2	PPPSM1508PZX\$2	30358MM
2	PIPE SMLS MT API 5L GR.B GALVANIZED B36.10 S-XS	1.1/2	PPPSM1508PZX\$11/2	8303MM
3	PIPE SMLS MT API 5L GR.B GALVANIZED B36.10 S-XS	3/4	PPPSM1508PZX\$3/4	100MM
FITTINGS				
4	CAP 3000# FT A105 GALVANIZED ASME B16.11	3/4	PJKFFN1802JZL3\$3/4	1
SUPPORTS				
5	SUPPORT	2	SUPP	4
6	SUPPORT	2	SUPP	5

ERECTION MATERIALS				
PT NO	COMPONENT DESCRIPTION	N.S. (INS)	ITEM CODE	QTY
FITTINGS				
7	ECCENTRIC SWAGE MT/MT SMLS A234 GR.WPB GALVANIZED MSS-SP-95 S-XS x S-XS	2 x 1.1/2	PJSESM1607SZXSXS\$2\$11/2	1
8	CONCENTRIC SWAGE MT/MT SMLS A234 GR.WPB GALVANIZED MSS-SP-95 S-XS x S-XS	2 x 1.1/2	PJSCSM1607SZXSXS\$2\$11/2	1
9	REDUCING TEE 3000# FT A105 GALVANIZED ASME B16.11	2 x 3/4	PJTRFN1802JZL3\$2\$3/4	1
10	COUPLING 3000# FT A105 GALVANIZED ASME B16.11	2	PJCDFN1802JZL3\$2	3
11	90 ELBOW 3000# FT A105 GALVANIZED ASME B16.11	2	PJEOFN1802JZL3\$2	3
12	90 ELBOW 3000# FT A105 GALVANIZED ASME B16.11	1.1/2	PJEOFN1802JZL3\$11/2	3
13	COUPLING 3000# FT A105 GALVANIZED ASME B16.11	1.1/2	PJCDFN1802JZL3\$11/2	1

CUT PIPE LENGTH							
PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS	PIECE NO	CUT LENGTH	N.S. (INS)	REMARKS
<1>	1467	1.1/2		<2>	100	3/4	
<3>	6000	2		<4>	5969	2	
<5>	5969	2		<6>	5749	2	
<7>	1410	2		<8>	5261	2	
<9>	808	1.1/2		<10>	1814	1.1/2	
<11>	4214	1.1/2					

NOTE

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CONDITION		DESIGN		OPERATING								
PRESS. (barg)		10.5		8.5								
TEMP.(°C)		85		AMB								
TEST FLUID: 15.75		PRESS. TEST(barg)FRESH WATER										
INSULATION TYPE: N		INSULATION THK.: -		03	10/17/2021	APPROVED FOR CONSTRUCTION			A.S	F.S.	M.SH	
PAINT CODE: -		FIRE PROOFING: NO		02	07/05/2021	APPROVED FOR CONSTRUCTION			A.S	F.S.	M.SH	
STRESS ANALYSIS: -		DENSITY(kg/m³): 8.54		01	11/25/2020	APPROVED FOR CONSTRUCTION			A.S	F.S.	M.SH	
TRACING	STEAM TRACING QTY.	TRACING SIZE	NDT: 10%RT-10%MT		00	06/20/2020	ISSUED FOR REVIEW			A.S	F.S.	M.SH
	-	-	PWHT: NO		REV.	DATE	DESCRIPTION			PREP'D	CHK'D	APP'D
	ELEC. TRACING	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	PHASE: G		REF. P&ID DWG. No.: BU-20-D-700-PR-PID-711							

CLIENT:	MC:	PROJECT:	CONTRACTOR:
		BUSHEHR PETROCHEMICAL COMPANY MEG PLANT	
LINE No:		LINE CLASS:	AREA No.:
11/2"-INA-7001-523C(N)		523C	700
PROJECT DOCUMENT No:		ISO DRAWING No:	REV:
BU-20-D-700-PI-ISO-016		INA-7001	03
		SHT.NO.	DOC. CLASS
		1 OF 2	2



