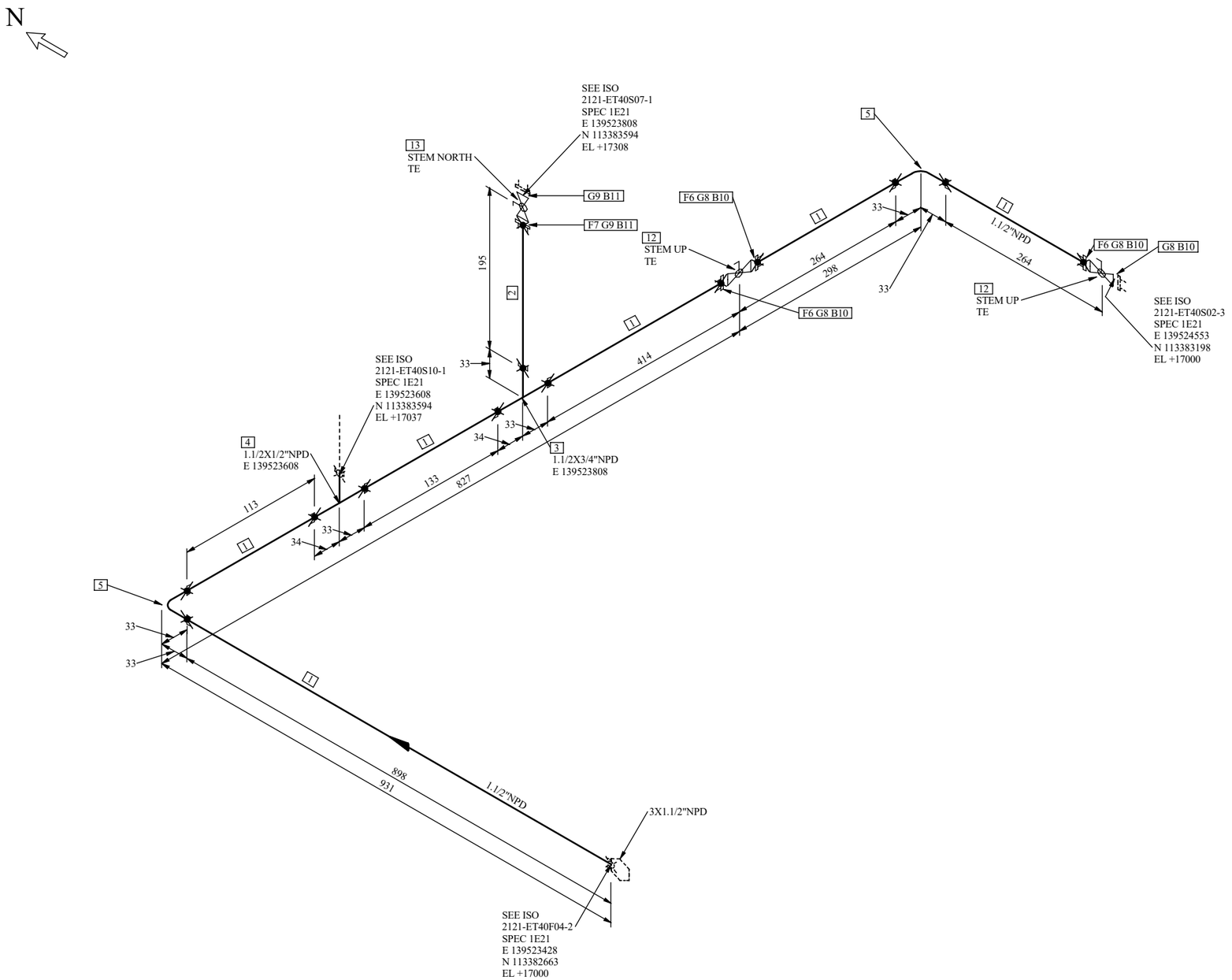

BILL OF MATERIAL

PT NO	COMPONENT DESCRIPTION	N.S. (IN)	ITEM CODE	QTY	HOLD STATUS
	PIPE				
1	PIPE - A106-B PE SMLS T01AC03Z02 S-XS <PIPA010A111/2XS> (L-6679).	1.1/2	I132809	1.8 M	
2	PIPE - A106-B PE SMLS T01AC03Z02 S-XS <PIPA010A13/4XS> (L-6679).	3/4	I132785	0.1 M	
	FITTINGS				
3	REDUCING TEE ASME B16.11 3000# A105N SWE SWE - R12FNC441101 NREQD <RTEA300KBK11/23/4> (L-RTE15).	1.1/2X3/4	I1651306	1	
4	REDUCING TEE ASME B16.11 3000# A105N SWE SWE - R12FNC441101 NREQD <RTEA300KBK11/21/2> (L-RTE15)	1.1/2X1/2	I1651308	1	
5	90 ELBOW ASME B16.11 3000# A105N SWE SWE - R31FNC441103 NREQD <90FA300LBK11/2> (L-178).	1.1/2	I1651297	2	
	FLANGES				
6	SW FLANGE ASME B16.5 300# A105N RFFE SWE 125 - 250 AARH F02CFC44B105 S-XS <SWFA300R3511/2XS> (L-375).	1.1/2	I9762192	3	
7	SW FLANGE ASME B16.5 300# A105N RFFE SWE 125 - 250 AARH F02CFC44B105 S-XS <SWFA300R353/4XS> (L-375).	3/4	I9762190	1	
	GASKETS				
8	SPIRAL WOUND GASKET ASME B16.20 300# RFTBE 304/GRAFOIL CARBON STEEL SS 304 ASME B16.5 G03GFP1IS12 <N/A> (N/A)	1.1/2	I63508953	4	
9	SPIRAL WOUND GASKET ASME B16.20 300# RFTBE 304/GRAFOIL CARBON STEEL SS 304 ASME B16.5 G03GFP1IS12 <N/A> (N/A)	3/4	I63508950	2	
	BOLTS				
10	STUD BOLTS&NUTS ASME B18.31.2/ B18.2.2 A193-B7/A194-2H INCH SIZE I01OB0301 <SB2R51G3/431/2> - 2 NUTS PER BOLT - 90 mm Length	3/4	I53437635	16	
11	STUD BOLTS&NUTS ASME B18.31.2/ B18.2.2 A193-B7/A194-2H INCH SIZE I01OB0301 <SB2R51G5/831/4> - 2 NUTS PER BOLT - 80 mm Length	5/8	I53437418	8	
	VALVES / IN-LINE ITEMS				
12	BALL V-FLT-SS-FB API 608 300# A216-WCB RFFE 316/R-PTFE, GF B7/2H 125 - 250 AARH 2PSB-FULL BORE FLOATING BALL OHW TIGHT SHUT-OFF (TSO) ASME B16.5 V1FJFC29BZZH NREQD <N/A> (N/A).	1.1/2	I64812614	2	
13	BALL V-FLT-SS-FB API 608 300# A216-WCB RFFE 316/R-PTFE, GF B7/2H 125 - 250 AARH 2PSB-FULL BORE FLOATING BALL OHW TIGHT SHUT-OFF (TSO) ASME B16.5 V1FJFC29BZZH NREQD <N/A> (N/A).	3/4	I64812611	1	

REMARKS FOR MECHANICAL SUBCONTRACTOR:

1) LINES 1.1/2" AND SMALLER SHALL BE SUPPORTED IN FIELD IF NOT OTHERWISE INDICATED.
2) ALL DIMENSION AND PROPER CONFIGURATION FOR LINES NPS 1.1/2" AND SMALLER SHALL BE CHECKED IN FIELD BEFORE CONSTRUCTION.
3) FOR THE COMPONENTS MARKED AS FIELD WELDED WITH THIS SYMBOL ✕ , ONE WELD FOR ADJUSTMENT OF IN LINE COMPONENT MUST BE LEFT
4) FOR EXTRA PIPE LENGTH REFER TO 4274-LZ-PC-00000603.
5) GUSSETING TO BE IMPLEMENTED BY MECHANICAL SUBCONTRACTOR AS PER 45-L-45-000-2-00-80004 / 4274-XH-SG-00000002.
6) CROSSING BETWEEN WELDS ON PIPELINE SHALL NOT BE ADMITTED.
7) IN CASE OF DISCREPANCIES BETWEEN DATA SHOWN ON ISO AND IN LINE LIST (AS APPLICABLE, DATA SHOWN IN LINE LIST GOVERN.
8) ACTUAL CUT LENGTH OF PIPE AND FIELD WELDS SHALL BE DEFINED BY MECHANICAL SUBCONTRACTOR (REF.TO 4274-LZ-PC-00000603).
9) WHERE EARTHING BONDING IS REQUIRED, MECHANICAL SUBCONTRACTOR TO PERFORM IT BASED ON DOC. 45-P-000-7-06-00902/ 4274 -NN-DW-00000002 AND ASSEMBLY NO FEA005 AND FE019.

SUPPORTS LEGEND: [1] DENOTES PARTS LIST NO — PIPE SUPPORT — A=RESTING SUPPORT G=GUIDE F=AXIAL STOP B=ANCHOR M=SPRING S=TEFLON PAD
WHERE [A] WITHOUT NUMBERING IS INDICATED, THIS MEANS THAT THERE IS A REST DIRECTLY ON STEEL STRUCTURE.

REV.	DESCRIPTION	DATE	DRW. BY	CHECK BY	APPR. BY	APPR. CLIENT
01	ISSUED FOR REFERENCE	24-NOV-23	M.YADAV	P.VAZE	G.PAGANONI	
00	ISSUED FOR REFERENCE	14-APR-2023	M.YADAV	P.VAZE	G.PAGANONI	

STRESS CALC. Nº: -
P & ID: 19-A-19-000-1-01-00001 sheet 47
LINE LIST Nº: 19-L-19-000-2-00-80602
PIPE LAYOUT Nº: 19-L-19-000-2-00-86196 sheet 5

ISSUED FOR REFERENCE

Signature for construction is shown on Iso list of relevant CWA

TITLE

ISOMETRIC DRAWING LINE

1-1/2"-ET-40S02-1E21

PIPE MATERIAL: CS
HEAT TREATMENT (PWHT): N
PAINTING SCHEME (3): 1
PIPING CLASS: 1E21
WELDING CLASS (4): E
PED CATEGORY: II
INSULATION CODE / THK. (mm): N 0

NOTES:
1. FOR TECHNICAL DETAILS SEE LINE LIST.
2. FOR VENT, DRAIN OR INSTRUMENT CONNECTION DETAILS SEE 45-L-45-000-2-00-80102.
3. WELDING ACCORDING TO 45-L-45-000-2-00-80021.
4. PAINTING ACCORDING TO 45-A-45-000-1-00-20160.
5. CODE SHOWN IN BOM BETWEEN "<" & ">" DENOTES REPSOL UNICODE. "<N/A>" MEANS UNICODE IS "NOT AVAILABLE".

CONTRACTOR: Tecnimont
CONTRACTOR DRAWING NUMBER: 4274-XH-DL-2121ET40S02-4
PROJECT: 4001008

REPSOL
LOW LINEAL DENSITY POLYETHILENE (PEL) AND POLYPROPYLENE (PP) PLANTS FOR PROJECT - ALBA PROJECT
CLIENT / COMPLEX: REPSOL POLYMEROS/ SINES INDUSTRIAL COMPLEX

ANNEX: 19
SPEC.: L
DRAWING NUMBER: 19-000-2-02-00001 sheet 2121ET40S02-4
REV.: 01

FILENAME: 19-000-2-02-00001 sheet 2121ET40S02-4.dwg

EXTR. DATE: 08-12-2023 12:33:36 STREAM NO.:4005 STREAM REV. NO. : 10 REV. CAUSE ID: 23