

## ISOMETRIC IFC - CHECK LIST

Line Number	021463WWG0001	Stress CN / Level	Nº --	Level: I	<b>Cargill®</b> TechnipFMC – Butterfly Project				
Isometric Number	023A1021403WWG0001_01	Process Approval Required	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>					
		Intrumentation Approval Required (N/A)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>					
<b>Information to be attached:</b>					HOLDS				
Master Copy of PID:	YES <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	Nº 800124-024-PID-0021-008	Rev. 1	Nº	SHORT DESCRIPTION	RESOLVED (✓)		
PID Modification Sheet:	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Nº	Rev.					
Equipment Vendor Dwg. :	YES <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	Nº	Rev.					
Instrument Dwg. :	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Nº	Rev.					
Project By-Pass <sup>(4)</sup> :	YES <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	Nº	Rev.					
SPO Approved Isometric:	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Rev.	Extraction Date:					
SIT Approved Isometric:	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Rev.	Extraction Date:					
<b>A VERIFICAR / TO BE CHECKED</b> Revision By : (D) Designer / (LDG) Design Leader / (ST) Stress Specialist / (LST) Stress Leader / (SP) Supports Specialist / (LSP) Supports leader / (M) Materials / (SL) Spooler / (CHK) Issuer / (L) Discipline Lead					"N/A" NO APPLICA / NOT APPLICABLE				
Revision By : (D) Designer / (LDG) Design Leader						IFC	REV 0	REV 1	REV 2
Iso Information						✓	X <sup>(1)</sup>	1st-Chk <sup>(2)</sup>	2nd-Chk <sup>(3)</sup>
						By: D	By: LDG		
Equipment						✓	✓	✓	✓
						✓	✓	✓	✓
Line Design						✓	✓	✓	✓
						✓	✓	✓	✓
Stress						✓	✓	✓	✓
						✓	✓	✓	✓
Supports						✓	✓	✓	✓
						✓	✓	✓	✓
Materials						✓	✓	✓	✓
						✓	✓	✓	✓
Final Check						✓	X	✓	X
						✓	✓	✓	✓
<b>SIGNATURES (Name and date)</b>									
DESIGN LEADER (LD)	REVIEWED By Andrea Ferranti at 6:20 pm, Nov 25, 2020		SUPPORTS LEADER (LSP)	REVIEWED By Sergio Zamora at 10:10 am, Dec 03, 2020		ISSUER (CHK)	REVIEWED By Emilio at 5:06 pm, Dec 04, 2020		
STRESS LEADER (LST)			MATERIALS (M)	REVIEWED By Jose G. Suarez at 1:46 pm, Dec 04, 2020		DISCIPLINE LEAD (L)			
NOTES:									
[1] If "X" marked, a "HOLD" note should be included in the Holds area for justification.									
[2] 1st checking round: Checker to place a (✓) or a (X) confirming or not Designer verification. A (✓) or a (X) should also be placed to confirm or reject any (X) mark placed by the Designer confirming or not the implicit HOLD.									
[3] 2nd checking round: Checker to place a (✓) to validate the points that were not confirmed in the 1st round and were corrected by respective Specialist.									
[4] If an isometric with HOLD is approved by IFC Leader for issuance, the correspondent By-Pass should be attached.									

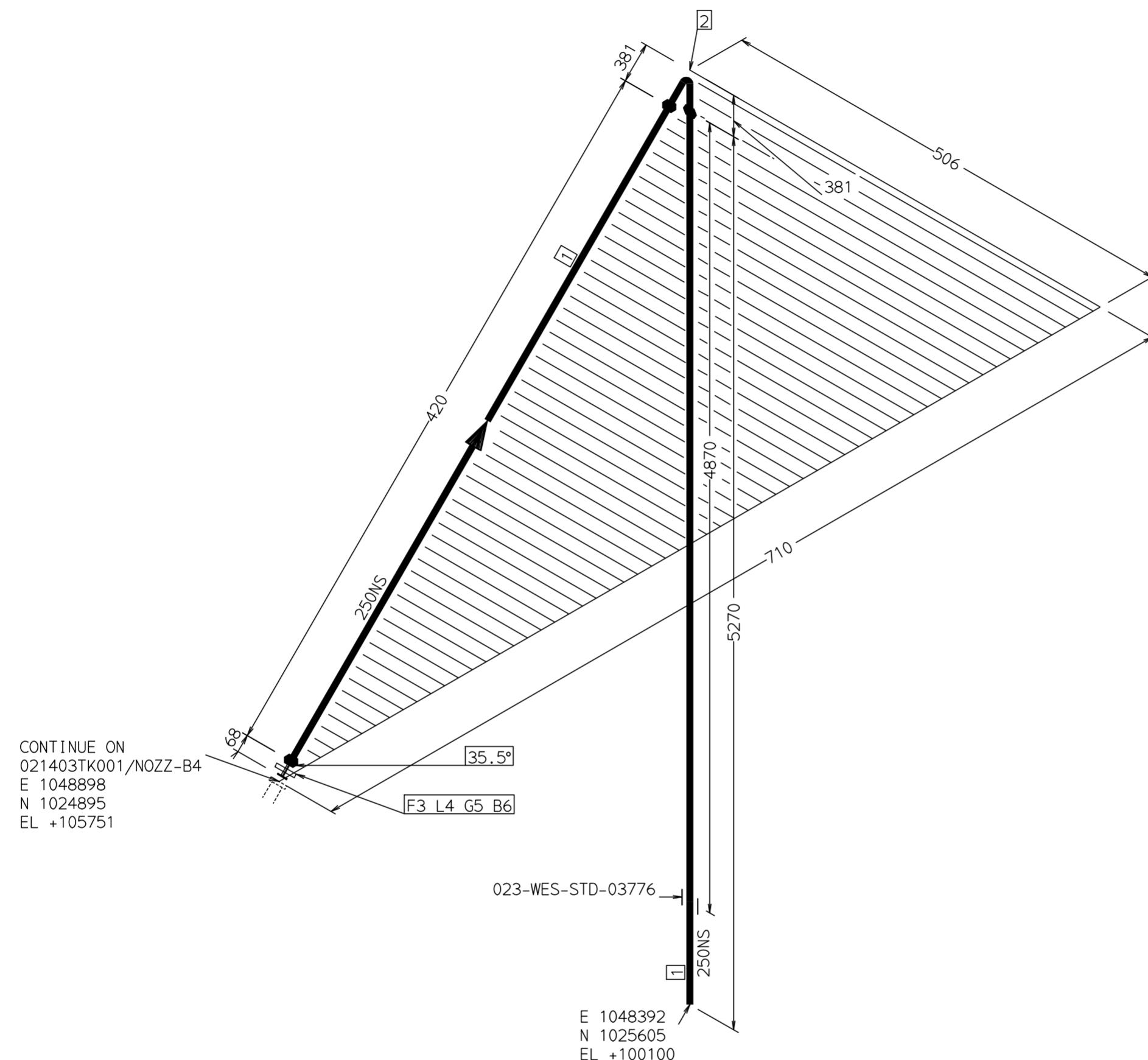
N

## MATERIAL LIST - FABRICATION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
1	250	Pipes (Length), EN 10220, BE, EFW + 100% RT, -, /2MM EN 10217-7 Gr. X2CrNi19-11,	C1P0FP1U	5.7M
2	250	90° Elb LR, EN 10253-4 Type A, BW Ends, Welded + 100% RT, C1KXKEK5	1	
3	250	M.3D, Serie 1, /2MM EN 10253-4 Gr. X2CrNi19-11,	C1KXSGY1	1
4	250	LJ Flg, EN 1092-1 Type 02, FF, PN 10, -, / EN 10222-2 Gr. P245GH Galv. as per EN 10240,	C3J5USZ8	1
		Stub LP, EN 1092-1 Type 36, BW Ends, Seamless, PN10 Flgs, /3.2MM EN 10216-5 Gr. X2CrNi19-11,		

## MATERIAL LIST - ERECTION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
5	250	NM Flat Gk, EN 1514-1, RF as per EN 1092-1, PN 10, IBC Type, Thk=3.2mm, Klingsil C-4430, TA-Luft & EC1935 (D.S. 5101)/ CNAF,	C1MSERAS	1
6	20	140 SBlt 2 HHx N&2W, ISO 261/ISO 4032, Full Length Threaded, F.Wash. EN ISO 887, A2, EN ISO 7089 ISO 3506-1 Gr.A2-70,	C3JHBDB2	12



## PIPING DPT.

## ISSUER

## CHECKED

0	24/11/20	MMP	LPD	OMC	IFC - ISSUED FOR CONSTRUCTION
REV	DATE	DWN	CHK	APP	DESCRIPTION

ALL dimensions to be checked in field prior to construction. Dimensions and routing shall be field adjusted, it is the piping contractors responsibility to check and verify all closing dimensions to equipment and make adjustments as required in field. All dimensions, elevations and coordinates are in millimeter unless noted otherwise. Fieldwelds and overlengths to be determined by piping contractor. Bolt holes to straddle horizontal and vertical centerline unless shown otherwise. Contractor will provide all necessary pipe supports.

## NOTES:

For pipes < dn50 supporting to be studied and defined by construction contractor before line fabrication and installation.

## REFERENCES / DOCUMENTS

## SPEC

## 10SS21

## SYMBOLIC

LINE LIST 30201-042-001000-001

ISOMETRIC INDEX 30303-042-023000-200

PIPING SUPPORT 30207-042-021300-001

## Insulated Pipe

## Insulated and Traced Pipe

## PROJECT DESCRIPTION/LOCATION

## BUTTERFLY PROJECT/KREFELD



## PROCESS UNIT

## DESIGN AREA

## LINE NUMBER

## TRAIN

## SHEET

## REV

024 023A1 021403-250-WWG-10SS21-0001

01

1 OF 1

0

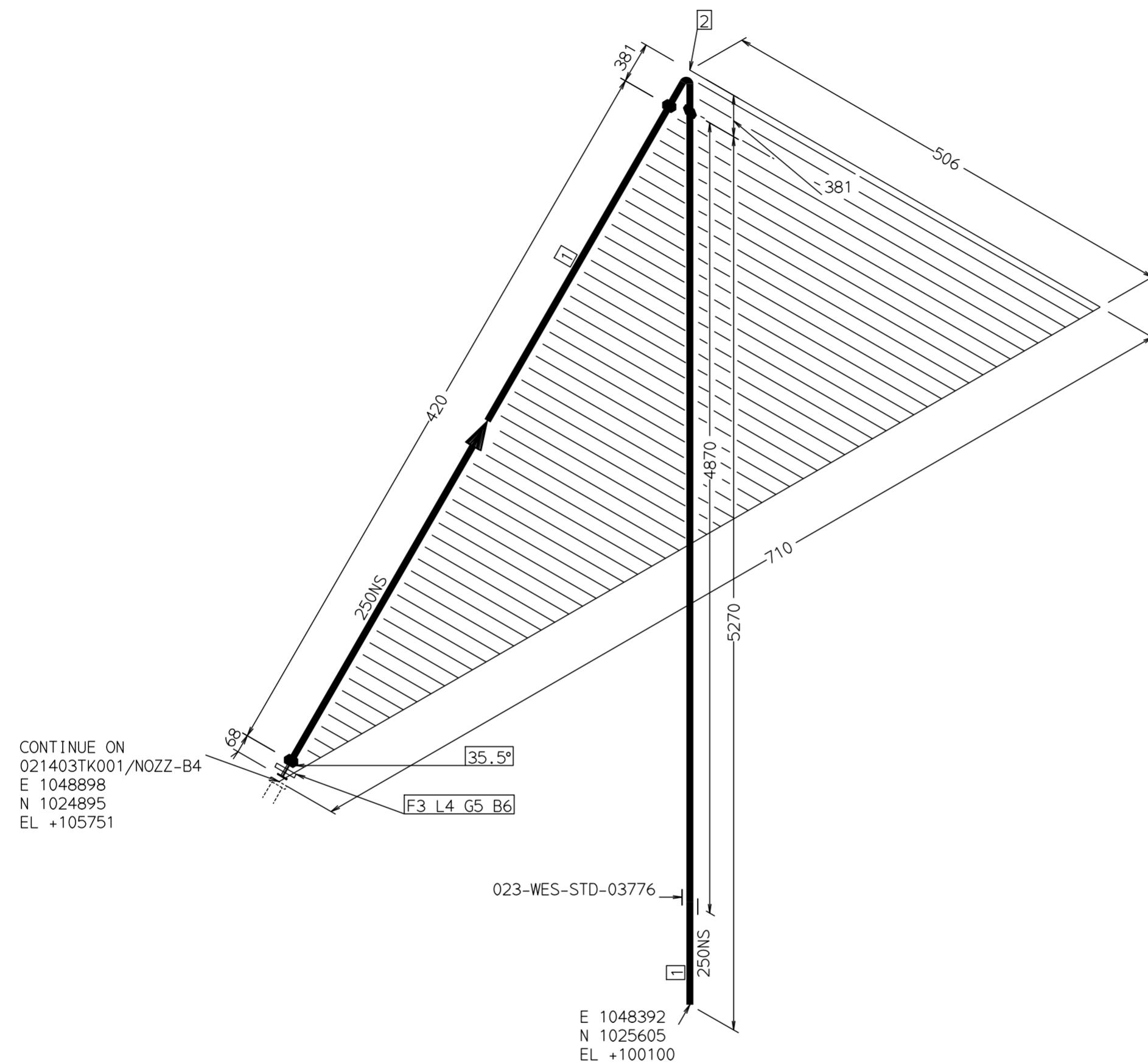
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## MATERIAL LIST - FABRICATION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
1	250	Pipes (Length), EN 10220, BE, EFW + 100% RT, -, /2MM EN 10217-7 Gr. X2CrNi19-11,	C1P0FP1U	5.7M
2	250	90° Elb LR, EN 10253-4 Type A, BW Ends, Welded + 100% RT, C1KXKEK5	1	
3	250	M.3D, Serie 1, /2MM EN 10253-4 Gr. X2CrNi19-11,	C1KXSGY1	1
4	250	LJ Flg, EN 1092-1 Type 02, FF, PN 10, -, / EN 10222-2 Gr. P245GH Galv. as per EN 10240,	C3J5USZ8	1
		Stub LP, EN 1092-1 Type 36, BW Ends, Seamless, PN10 Flgs, /3.2MM EN 10216-5 Gr. X2CrNi19-11,		

## MATERIAL LIST - ERECTION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
5	250	NM Flat Gk, EN 1514-1, RF as per EN 1092-1, PN 10, IBC Type, Thk=3.2mm, Klingsil C-4430, TA-Luft & EC1935 (D.S. 5101)/ CNAF,	C1MSERAS	1
6	20	140 SBlt 2 HHx N&2W, ISO 261/ISO 4032, Full Length Threaded, F.Wash. EN ISO 887, A2, EN ISO 7089 ISO 3506-1 Gr.A2-70,	C3JHBDB2	12



PIPING DPT.  
**MATERIALS  
CHECKED**

By Jose G. Suarez at 1:45 pm, Dec 04, 2020

0	24/11/20	MMP	LPD	OMC	IFC -ISSUED FOR CONSTRUCTION
REV	DATE	DWN	CHK	APP	DESCRIPTION

ALL dimensions to be checked in field prior to construction. Dimensions and routing shall be field adjusted, it is the piping contractors responsibility to check and verify all closing dimensions to equipment and make adjustments as required in field. All dimensions, elevations and coordinates are in millimeter unless noted otherwise. Fieldwelds and overlengths to be determined by piping contractor. Bolt holes to straddle horizontal and vertical centerline unless shown otherwise. Contractor will provide all necessary pipe supports.

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## REFERENCES / DOCUMENTS

## SPEC

## 10SS21

## SYMBOLIC

LINE LIST 30201-042-001000-001

ISOMETRIC INDEX 30303-042-023000-200

PIPING SUPPORT 30207-042-021300-001

Insulated Pipe

Insulated and Traced Pipe

## PROJECT DESCRIPTION/LOCATION

## BUTTERFLY PROJECT/KREFELD



PROCESS UNIT	DESIGN AREA	LINE NUMBER	TRAIN	SHEET	REV
024	023A1	021403-250-WWG-10SS21-0001	01	1 OF 1	0

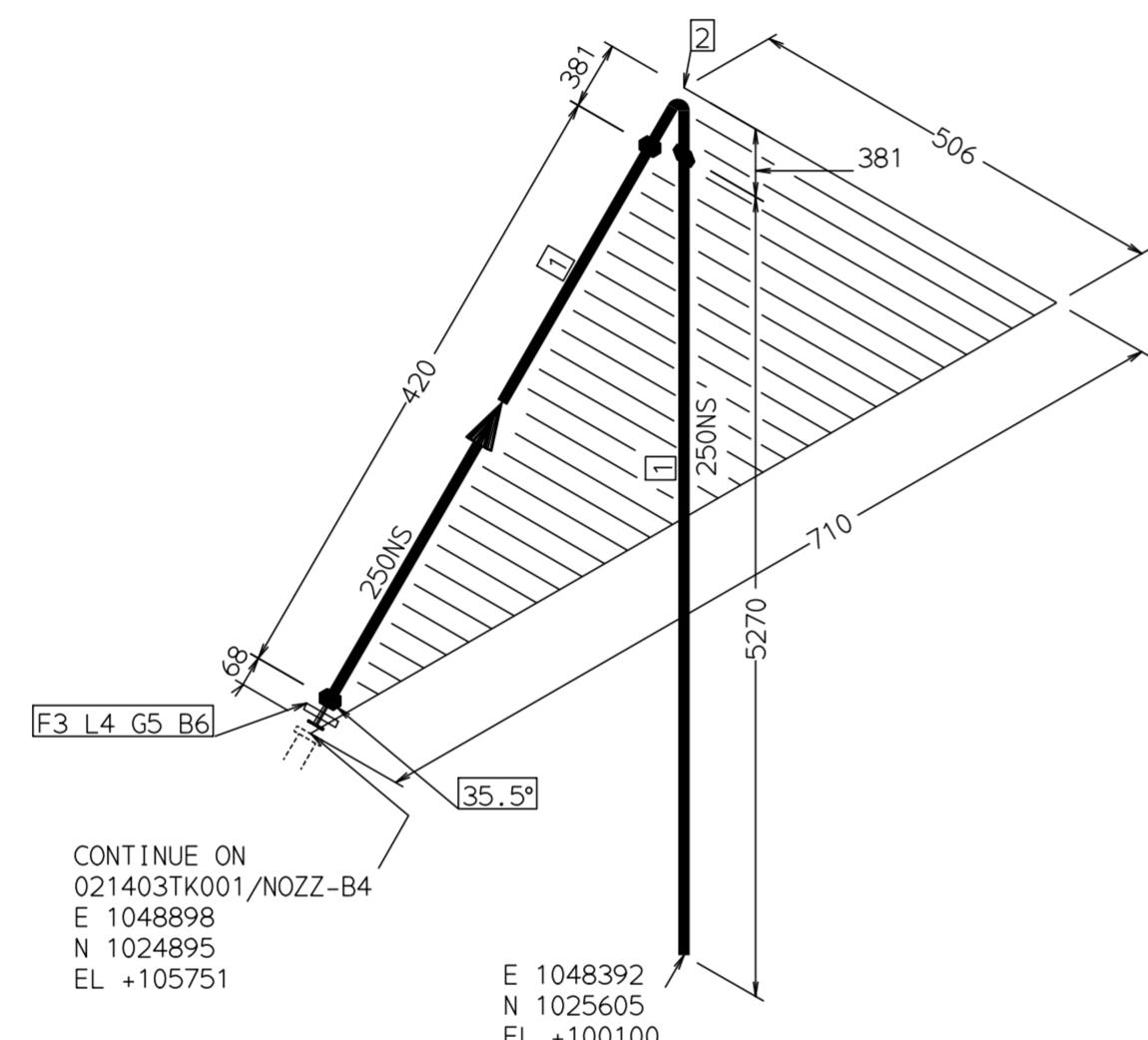
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## MATERIAL LIST - FABRICATION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
1	250	Pipes (Length), EN 10220, BE, EFW + 100% RT, -, /2MM EN 10217-7 Gr. X2CrNi19-11,	C1P0FP1U	5.7M
2	250	90° Elb LR, EN 10253-4 Type A, BW Ends, Welded + 100% RT, M.3D, Serie 1./2MM EN 10253-4 Gr. X2CrNi19-11,	C1KXKEK5	1
3	250	LJ Flg, EN 1092-1 Type 02, FF, PN 10, -, / EN 10222-2 Gr. P245GH Galv. as per EN 10240,	C1KXSGY1	1
4	250	Stub LP, EN 1092-1 Type 36, BW Ends, Seamless, PN10 Flgs, /3.2MM EN 10216-5 Gr. X2CrNi19-11,	C3J5USZ8	1

## MATERIAL LIST - ERECTION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
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6	20	140 SBlt 2 HHx N&2W, ISO 261/ISO 4032, Full Length Threaded, F.Wash. EN ISO 887, A2, EN ISO 7089 ISO 3506-1 Gr.A2-70,	C3JHBDB2	12



VOID

PIPING DPT.  
**DESIGNED**  
By mimportero at 11:46 am, Nov 24, 2020

PIPING DPT.  
**DESIGN  
CHECKED**  
By Andrea Ferranti at 6:20 pm, Nov 25, 2020

0	24/11/20	MMP	LPD	OMC	IFC -ISSUED FOR CONSTRUCTION
REV	DATE	DWN	CHK	APP	DESCRIPTION

All dimensions to be checked in field prior to construction. Dimensions and routing shall be field adjusted, it is the piping contractors responsibility to check and verify all closing dimensions to equipment and make adjustments as required in field. All dimensions, elevations and coordinates are in millimeter unless noted otherwise. Fieldwelds and overlengths to be determined by piping contractor. Bolt holes to straddle horizontal and vertical centerline unless shown otherwise. Contractor will provide all necessary pipe supports.

## NOTES:

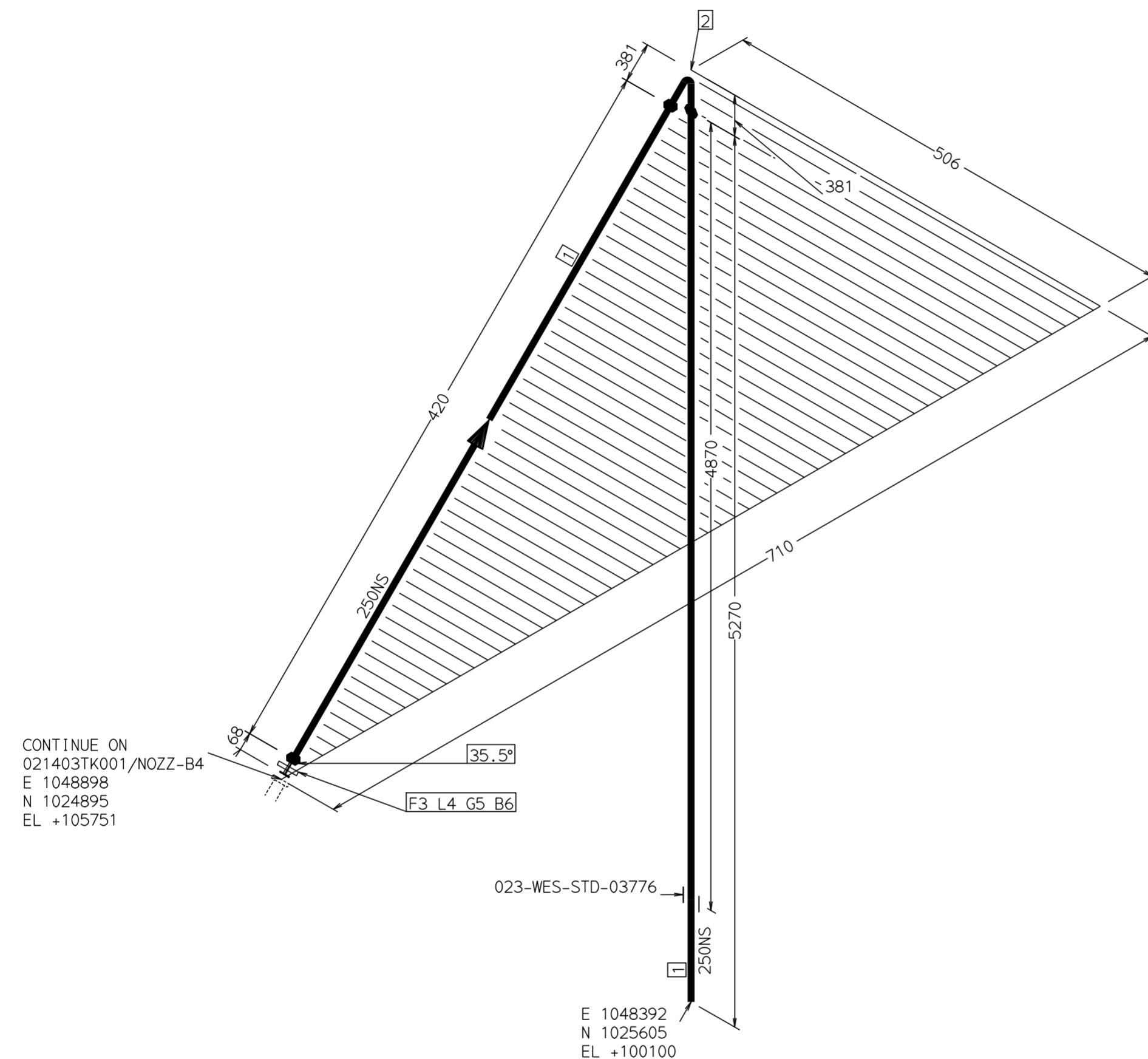
For pipes < dn50 supporting to be studied and defined by construction contractor before line fabrication and installation.

## REFERENCES / DOCUMENTS

## SPEC

## SYMBOLIC

PROCESS UNIT	DESIGN AREA	PROJECT DESCRIPTION/LOCATION			TechnipFMC	Cargill
		BUTTERFLY PROJECT/KREFELD				
024	023A1	021403-250-WWG-10SS21-0001	LINE NUMBER	TRAIN	SHEET	REV


**MATERIAL LIST - FABRICATION**

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
1	250	Pipes (Length), EN 10220, BE, EFW + 100% RT, -, /2MM EN 10217-7 Gr. X2CrNi19-11,	C1P0FP1U	5.7M
2	250	90° Elb LR, EN 10253-4 Type A, BW Ends, Welded + 100% RT, C1KXKEK5	1	
3	250	M.3D, Serie 1, /2MM EN 10253-4 Gr. X2CrNi19-11,	C1KXSGY1	1
4	250	LJ Flg, EN 1092-1 Type 02, FF, PN 10, -, / EN 10222-2 Gr. P245GH Galv. as per EN 10240, Stub LP, EN 1092-1 Type 36, BW Ends, Seamless, PN10 Flgs, /3.2MM EN 10216-5 Gr. X2CrNi19-11,	C3J5USZ8	1

**MATERIAL LIST - ERECTION**

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
5	250	NM Flat Gk, EN 1514-1, RF as per EN 1092-1, PN 10, IBC Type, Thk=3.2mm, Klingsil C-4430, TA-Luft & EC1935 (D.S. 5101)/ CNAF,	C1MSERAS	1
6	20	140 SBlt 2 HHx N&2W, ISO 261/ISO 4032, Full Length Threaded, F.Wash. EN ISO 887, A2, EN ISO 7089 ISO 3506-1 Gr.A2-70,	C3JHBDB2	12

**PIPING DPT.  
SUPPORTED**

By Fernando Perez Iacono at 11:09 am, Nov 30, 2020

**PIPING DPT.  
SUPPORTS  
CHECKED**

By Sergio Zamora at 10:11 am, Dec 03, 2020

0	24/11/20	MMP	LPD	OMC	IFC -ISSUED FOR CONSTRUCTION
REV	DATE	DWN	CHK	APP	DESCRIPTION

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**NOTES:**

For pipes < dn50 supporting to be studied and defined by construction contractor before line fabrication and installation.

**REFERENCES / DOCUMENTS**

LINE LIST	30201-042-001000-001
ISOMETRIC INDEX	30303-042-023000-200
PIPING SUPPORT	30207-042-021300-001

**SPEC**
**SYMBOLS**
**10SS21**
**BUTTERFLY PROJECT/KREFELD**
**TechnipFMC**
**Cargill**

PROCESS UNIT	DESIGN AREA	LINE NUMBER	TRAIN	SHEET	REV
024	023A1	021403-250-WWG-10SS21-0001	01	1 OF 1	0