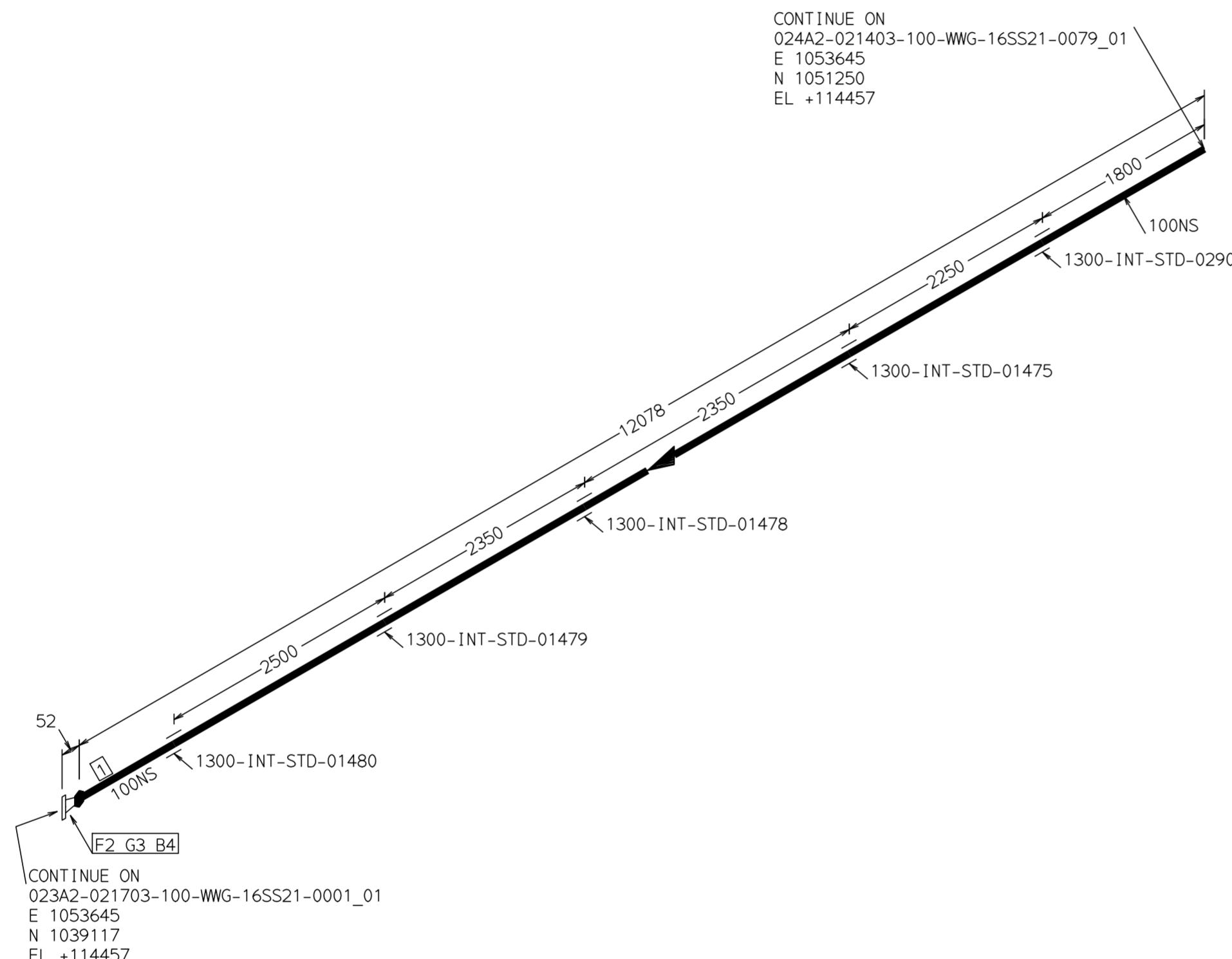


ISOMETRIC IFC - CHECK LIST

Line Number	001704WWG0002	Stress CN / Level	Nº --	Level: 1	Cargill TechnipFMC – Butterfly Project			
Isometric Number	13309001704WWG0002_01	Process Approval Required	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>				
		Intrumentation Approval Required (N/A)	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>				
Information to be attached:					HOLDS			
Master Copy of PID:	YES <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	Nº 800124-029-PID-0031-001	Rev.	Nº	SHORT DESCRIPTION	RESOLVED (✓)	
PID Modification Sheet:	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Nº	Rev.				
Equipment Vendor Dwg. :	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Nº	Rev.				
Instrument Dwg. :	YES <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	Nº	Rev.				
Project By-Pass ^[4] :	YES <input type="checkbox"/>	N/A <input checked="" 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:				
A VERIFICAR / TO BE CHECKED 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 APPLICABLE			
Revision By : (D) Designer / (LDG) Design Leader								
Iso Information	Nº de línea según PID y lista de líneas / Line Nbr. according to PID and line list							
	Datos de la linea según lista de líneas / Line data according to line list							
Equipment	Clase de tubería según PID y Lista de Líneas / Piping class according to PID and Line List							
	Vinculo E3D con Diagramas (Process Unit, Temp Operación, Numeracion TODAS válvulas manuales) / Link between E3D and Diagrams (Process Unit, Op Temp, ALL manual valves Tagged)							
Line Design	Diámetro de la linea indicado en número de linea en el cajetín / Line diameter indicated in the line number in the title block							
	Equipo modelado según plano Vendor válido para generar isométrica IFC / Equipment modelled according Vendor drawing valid for Isometric IFC generation							
Stress	Código / Code: 2 <input type="checkbox"/> 3 <input checked="" type="checkbox"/>							
	Nombre de tubuladuras según PID y plazo Vendor / Name of nozzle according to PID and Vendor drawing							
Supports	Rating y diámetro de tubuladuras según plano Vendor / Rating and diameter of nozzles according to vendor drawing							
	Posición y elevación de tubuladuras según plano Vendor / Position and elevation of nozzles according to Vendor drawing							
Revision By : (D) Designer / (LDG) Design Leader								
Materials	Línea sin colisión (verificación incluyendo la nube de puntos) / Line is clash free (checked including points cloud)							
	Comentarios de SPO a líneas críticas recibidos e implementados antes de extracción final para emisión / Process comments to critical lines received and implemented before final extraction for issuance							
Final Check	Verificación contra P&ID y Lista de Lineas / Check Iso vs P&ID and Line List : Correcta referencia de la continuidad de la isométrica en líneas nuevas, líneas existentes u otra hoja de la isométrica en los extremos de linea y sus ramales, incluyendo elevaciones y coordenadas / Correct continuity isometric reference to new lines, existing lines or other isometric sheet in each end of the line and its branches including elevations and coordinates							
	Verificación contra P&ID / Check Iso vs P&ID : Elementos en linea incluidos, secuencia de picajes, pendiente, sentido de flujo, numeración de instrumentos, cambios de especificación, cumplimiento de notas / in-line components included, branch sequence, slope, flow direction, instrument numbering, pipe class breaks, notes accomplishment							
Revision By : (ST) Stress Specialist / (LST) Stress Leader								
Revision By : (SP) Supports Specialist / (LSP) Supports leader								
Revision By : (M) Materials								
Revision By : (CHK) Issuer								
SIGNATURES (Name and date)								
DESIGN LEADER (LD)	REVIEWED By Laura Parra at 4:13 pm, Sep 08, 2020	SUPPORTS LEADER (LSP)	REVIEWED By Sergio Zamora at 5:00 pm, Sep 08, 2020	ISSUER (CHK)	REVIEWED By Laura Parra at 4:06 pm, Sep 10, 2020			
STRESS LEADER (LST)		MATERIALS (M)	REVIEWED By Jesus G. Suarez at 11:15 am, Sep 09, 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
1 100		Pipes (Length), EN 10220, BE, EFW + 100% RT, -, /2.6MM EN 10217-7 Gr.X2CrNi19-11,	C1KV25CN	12.1M
2 100		WN Flg, EN 1092-1, RF/BW End, PN 16, -, /3.6MM EN 10222-5 Gr.X2CrNi18-9,	C1KU0MMW	1

MATERIAL LIST - ERECTION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
3 100		NM Flat Gk, EN 1514-1, RF as per EN 1092-1, PN 16, IBC Type, Thk=3mm, Gore-Gr style R, TA-Luft & EC1935 (D.S. 5103)/ Modified PTFE,	C1NKU6DG	1
4 16		95 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,	C3JHBDAT	8

PIPING DPT.
ISSUER
CHECKED

By Laura Parra at 4:06 pm, Sep 10, 2020

0	04/09/20	APN	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:

REFERENCES / DOCUMENTS

SPEC 16SS21

SYMBOLIC

PROJECT DESCRIPTION/LOCATION

BUTTERFLY PROJECT/KREFELD

LINE LIST 30201-042-001000-001

ISOMETRIC INDEX 30015-042-000000-001

PIPING SUPPORT 30207-042-001000-001

Insulated Pipe

Insulated and Traced Pipe

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— — — —

PROCESS UNIT

DESIGN AREA

LINE NUMBER

TRAIN

SHEET

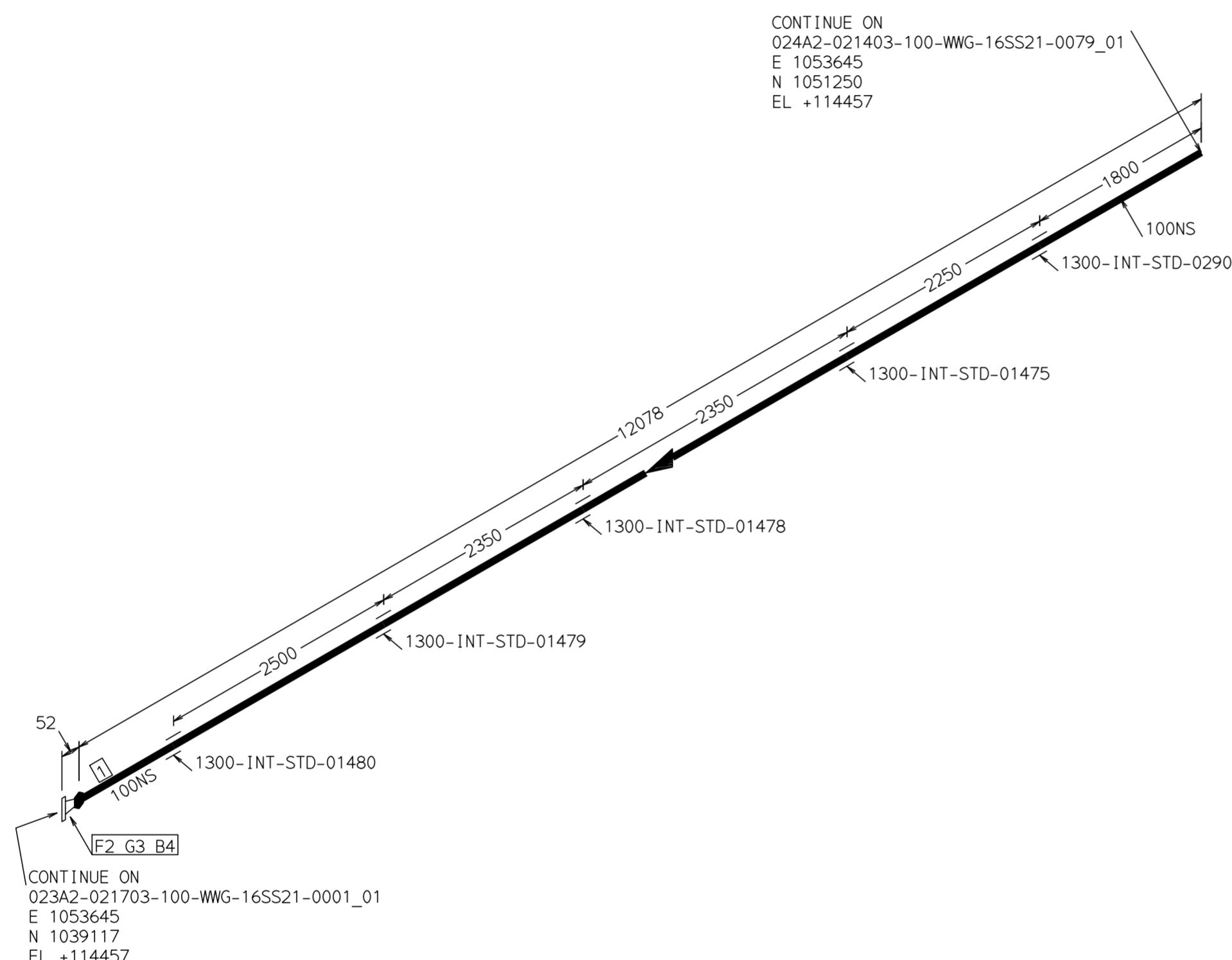
REV

000 13309 001704-100-WWG-16SS21-0002

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MATERIAL LIST - FABRICATION

<u>PT NO</u>	<u>N.S. (MM)</u>	<u>DESCRIPTION</u>	<u>IDENT</u>	<u>QTY</u>
1	100	Pipes (Length), EN 10220, BE, EFW + 100% RT, - ,/2.6MM EN 10217-7 Gr.X2CrNi19-11,	C1KV25CN	12.1M
2	100	WN Flg, EN 1092-1, RF/BW End, PN 16, - ,/3.6MM EN 10222-5 Gr.X2CrNi18-9,	C1KU0MMW	1

MATERIAL LIST - ERECTION

<u>PT NO</u>	<u>N.S. (MM)</u>	<u>DESCRIPTION</u>	<u>IDENT</u>	<u>QTY</u>
3	100	NM Flat Gk, EN 1514-1, RF as per EN 1092-1, PN 16, IBC Type, Thk=3mm, Gore-Gr style R, TA-Luft & EC1935 (D.S. 5103)/ Modified PTFE,	C1NKU6DG	1
4	16	95 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,	C3JHBDAT	8

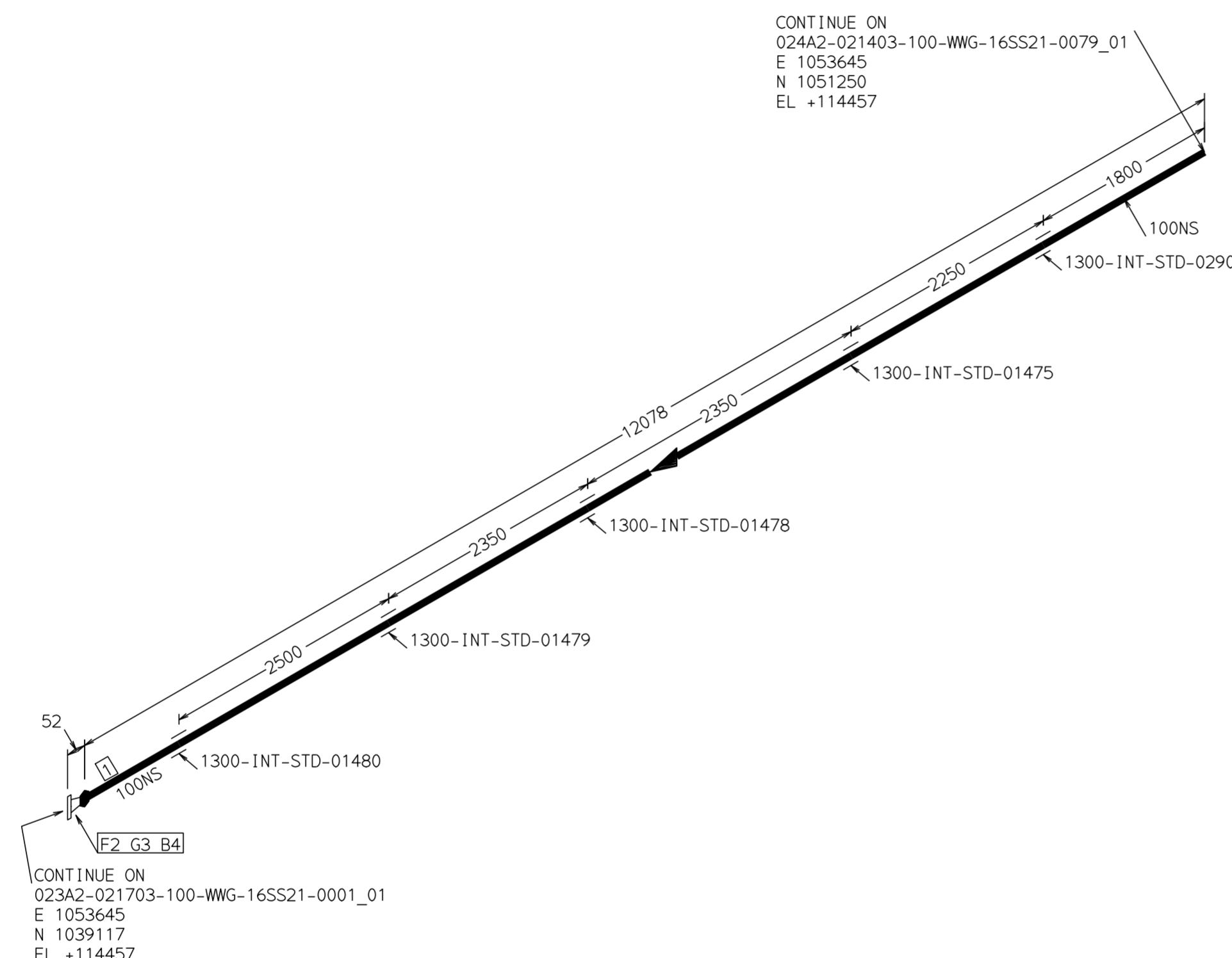
PIPING DPT.
MATERIALS
CHECKED

By: Jose G. Suarez at 11:16 am, Sep 29, 2020

0	04/09/20	APN	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:	REFERENCES / DOCUMENTS	SPEC	16SS21	horizontal and vertical centerline unless shown otherwise. Contractor will provide all necessary pipe supports.										
		SYMBOLS		PROJECT DESCRIPTION/LOCATION										
		BUTTERFLY PROJECT/KREFELD		TechnipFMC										
		LINE LIST	30201-042-001000-001	Insulated Pipe	Insulated and Traced Pipe	PROCESS UNIT		DESIGN AREA	LINE NUMBER	TRAIN	SHEET	REV		
		ISOMETRIC INDEX	30015-042-000000-001			— — — —	— — — —	— — — —	000	13309	001704-100-WWG-16SS21-0002	01	1 OF 1	0
		PIPING SUPPORT	30207-042-001000-001			— — — —	— — — —	— — — —						


MATERIAL LIST - FABRICATION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
1 100		Pipes (Length), EN 10220, BE, EFW + 100% RT, -, /2.6MM EN 10217-7 Gr.X2CrNi19-11,	C1KV25CN	12.1M
2 100		WN Flg, EN 1092-1, RF/BW End, PN 16, -, /3.6MM EN 10222-5 Gr.X2CrNi18-9,	C1KU0MMW	1

MATERIAL LIST - ERECTION

PT NO	N.S. (MM)	DESCRIPTION	IDENT	QTY
3 100		NM Flat Gk, EN 1514-1, RF as per EN 1092-1, PN 16, IBC Type, Thk=3mm, Gore-Gr style R, TA-Luft & EC1935 (D.S. 5103)/ Modified PTFE,	C1NKU6DG	1
4 16		95 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,	C3JHBDAT	8

**PIPING DPT.
SUPPORTED**

By mfernandez1 at 4:39 pm, Sep 08, 2020

**PIPING DPT.
SUPPORTS
CHECKED**

By Sergio Zamora at 5:00 pm, Sep 08, 2020

**PIPING DPT.
DESIGNED**

By apereznune at 11:45 am, Sep 04, 2020

**PIPING DPT.
DESIGN
CHECKED**

By Laura Parra at 4:13 pm, Sep 08, 2020

0	04/09/20	APN	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:

REFERENCES / DOCUMENTS

SPEC
SYMBOLIC

PROJECT DESCRIPTION/LOCATION
BUTTERFLY PROJECT/KREFELD

TechnipFMC

Cargill

LINE LIST 30201-042-001000-001

Insulated Pipe

DESIGN AREA LINE NUMBER

TRAIN SHEET REV

ISOMETRIC INDEX 30015-042-000000-001

Insulated and Traced Pipe

000 13309 001704-100-WWG-16SS21-0002

01 1 OF 1 0

PIPING SUPPORT 30207-042-001000-001