

**DAELIM**

# CP-Chem Spool 대응 방안

2018. 12. 26

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Dream of Future Technology

# 목 차

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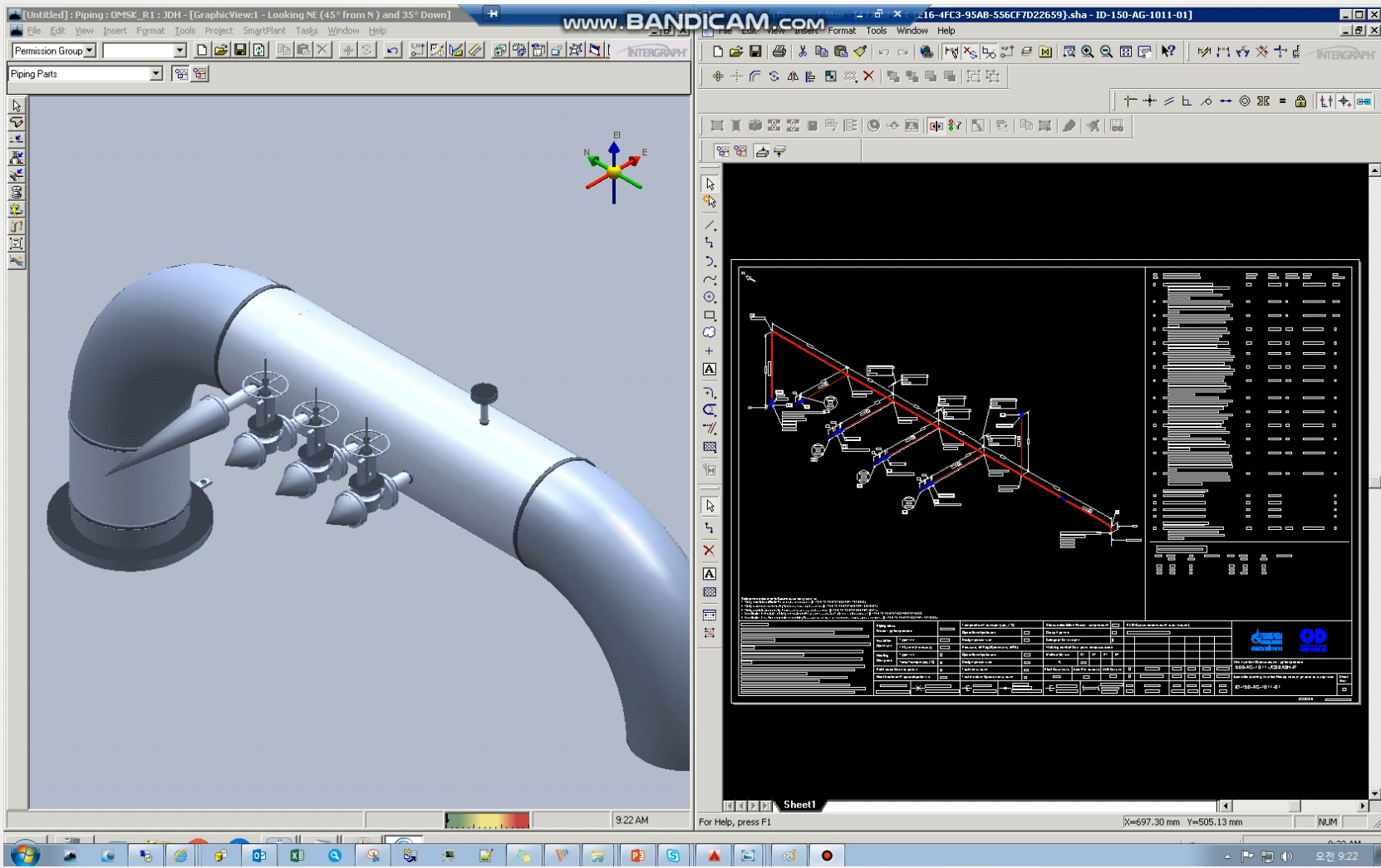
1. Interact with S3D and ISO Demo 영상
2. PSJG를 기반으로 ISO와 3D간의 작업 예상
3. Weld No., Type 속성 Update 가능성
4. Generate Spool Piece 에 의한 Data 생성
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APPENDIX A : PSJG 작업 진행 방식

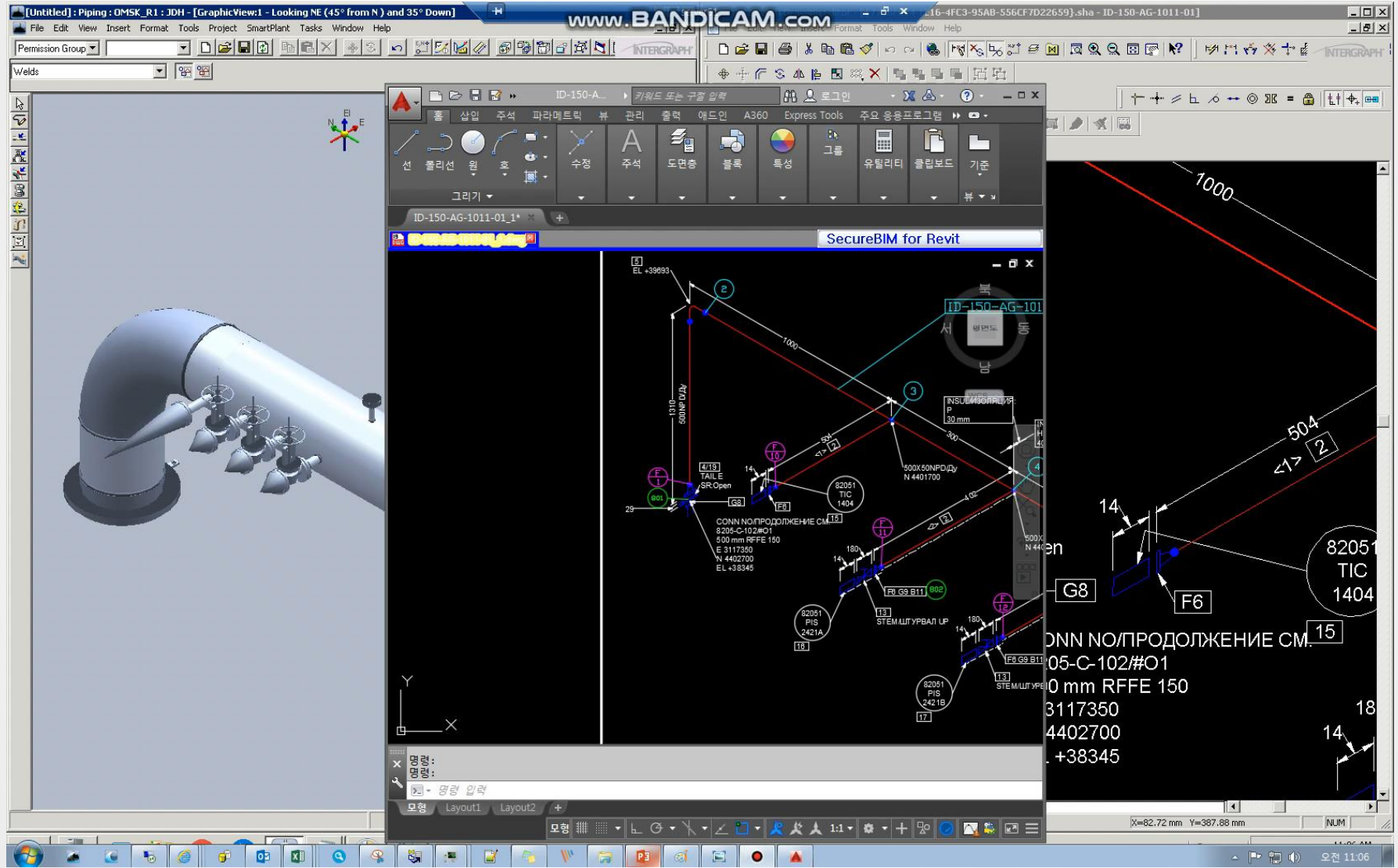
APPENDIX B : PSJG Revision

APPENDIX C : PSJG 와 CIMS, isP-Gen 연계

# 1. Interact with S3D and ISO Demo 영상



# 2. PSJG Data를 기반으로 한 ISO 와 3D 간의 작업 예



# 3. Weld No, Type 속성 Update 예

The screenshot displays a CAD environment with a 3D model of a pipe assembly on the left. A pink circle highlights a specific weld joint. The 'Workspace Explorer' on the right shows a hierarchical tree of components, with '500-AG-1011-JC03A0H-P1' selected. The 'Pipe Weld Properties' dialog box is open, showing the following details:

Property	Value
Name	500-AG-1011-JC03A0H-P1
Type	Shop weld
Welding Procedure Specification	Shop weld at job site fabrication shop
Materials Category	Automatic shop weld
Materials Grade	Miter weld
Gap	Thermal fusion shop weld at job site fabrication shop
Pass Length	1500 mm
Thickness	25 mm
Height	6 mm
Owning Part	UNNAME
Reporting Requirement	
Reporting Type	
Sequence Id	1
Weld Size	<Undefined>

Additional text in the bottom right corner of the image includes: 'CONN NO/ПРОД', '8205-C-102/#01', and '500 mm REEF 150'.

# 4. Generate Spool 기능에 의한 S3D Data 생성 & update 예상

The screenshot displays a 3D CAD environment with a pipe assembly model. Red circles highlight specific components on the model. On the left toolbar, the 'Generate Spools' button is highlighted with a red box. Two 'Pipe Component Properties' windows are open, showing a table of components and their relationships.

Name	Type
Pipe Turn Feature	Feature
500-AG-1011-JC03A0H-P	Run
Welded Joint	Connection
Welded Joint	Connection
ID-150-AG-1011-01	WBS Parent
WBS	WBS Parent
ID-150-AG-1011-01_01	Pipe Spool

# 5. SPR interface

The screenshot displays the SmartPlant Review software interface. On the left, a 3D model of a piping system is shown. Below the model is a 'Common Views' panel with a 'Custom' button. The main area is divided into three sections: 'Main View' (top left), 'Properties' (top right), and 'Object Data' (bottom left).

**Properties Panel:**

Property	Value
<b>Graphic Data</b>	
File	Piping
Level	3
Color	115
Type	Symbol
Object	111
Level Name	Piping component
Aspects	Simple Physical, Insulation, Maintenance
Linkages	6666 27298 23197 3519
Display Set 8	Auto-Define -- Spool No.#ID-810-AM-1020-02_Spool1
<b>Label Data (GAF)</b>	
Name	GAF
OID	0001388500000000A1AA26A9D5ABF0D
PipeRun	50-AM-1020-GC05A4K-HW
Pipeline	50-AM-1020-GC05A4K-HW5
ISO no	ID-810-AM-1020-02
Spool No.	ID-810-AM-1020-02_Spool1
Tag	GAF
System Path	OMSK_NEW#8121#810#810_PIPING#PR-PIPERACK PIPING#R1#PROCESS LL...
NPD	50mm x 50mm
Commodity Code	VAZCOB4P0000
Description	GATE VALVE; FLGD-RF; PN40; Steel 20L; 08X18H10T ?????????? ?????????? ?...
Insulation Thickness	0.05 m
Insulation Purpose	Undefined
Insulation Material	Undefined
Location	E 2478620 mm    N 4124425 mm    EL+ 12128 mm
ShortCode	Gate ValveGAF
Commodity Option	GAF
Design Max Temperature	
Design Max Pressure	
Flow Direction	In

**Object Data Panel:**

File: Piping, Level: 3, Color: 115, Type: Symbol, Object: 111  
 Level Name: Piping component  
 Aspects: Simple Physical, Insulation, Maintenance  
 Linkages: 6666 27298 23197 3519  
 Display Set 8: Auto-Define -- Spool No.#ID-810-AM-1020-02\_Spool1

Name: GAF  
 OID: 0001388500000000A1AA26A9D5ABF0D

For Help, press F1



# 6. Naviswork interface

The screenshot displays the Autodesk Navisworks Manage 2017 interface. The main window shows a 3D model of a pipe system. On the left, the 'Select Tree' (선택 트리) panel is open, showing a hierarchical tree structure. The 'Piping' folder is expanded, and the '50-AM-1020-GC05A4K-HW' pipe is selected. The 'Properties' (특성) panel on the right shows the details for the selected pipe. The 'SmartPlant 3D' tab is active, displaying various properties such as Name, User Created, Date Created, and ISO no. The 'ISO no.' and 'Spool No.' fields are highlighted with a red box.

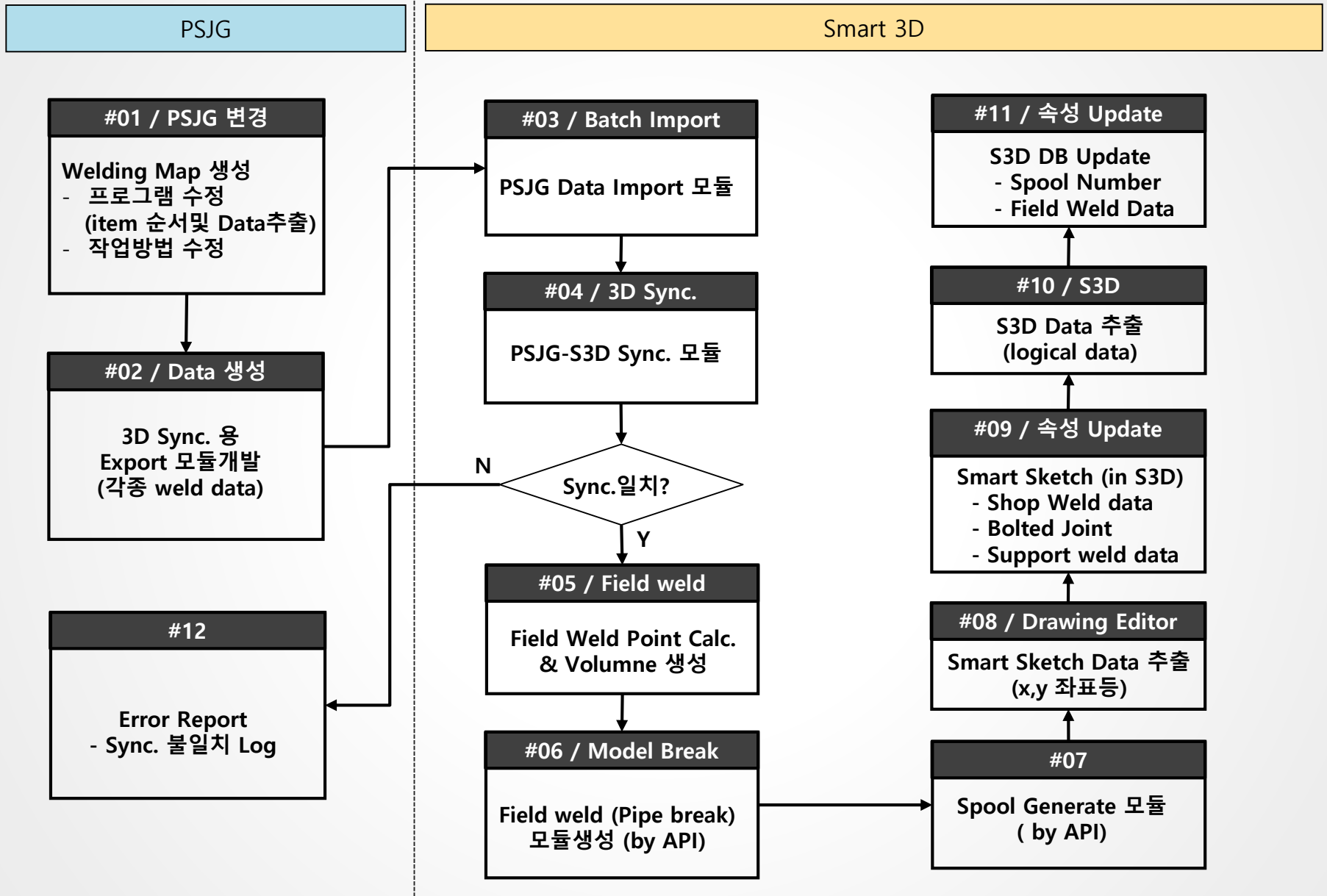
항목	TimeLiner	SmartPlant 3D
특성		값
SP3d Moniker		@a=0027!180005#990610075190172170
Name		GAF
User Created		DAELIM\WSP3DADMIN1
Date Created		3/6/2018 1:10:06 AM
User Last Modified		DAELIM\WPJTUSER414
Date Last Modified		6/21/2018 2:37:45 PM
Status		Working
OID		00013685000000000A1AA26A9D5ABF0D
PipeRun		50-AM-1020-GC05A4K-HW
Pipeline		50-AM-1020-GC05A4K-HW5
ISO no.		ID-810-AM-1020-02
Spool No.		ID-810-AM-1020-02_Spool1
Tag		GAF
System Path		OMSK_NEW\W8121W810W810_PIPING\WPR-PIPERACK_PIPING\WR1\WPROCESS LINES\W50-AM-1020-G...
NPD		50mm x 50mm
Commodity Code		VAZC084P0000
Description		GATE VALVE; FLGD-RF; PN40; Steel 20L; 08X18H10T ?????????? ?????????? ??????????; BB OS&Y: H...
Insulation Thickness		0,05 m
Insulation Purpose		Undefined
Insulation Material		Undefined
Location		E 2478620 mm      N 4124425 mm      EL+ 12128 mm
ShortCode		Gate ValveGAF
Commodity Option		GAF
Design Max Temperature		
Design Max Pressure		
Flow Direction		In



# 7. PSJG Export Data Sample

ISO - Drawing Name								
ID-130-BFW-1003-002-03								
1	Pipe	1	100	100	Shop	10"	2700	E 3002050
		2	110	100	Shop			N 4415511
2	90EL	2	110	100	Shop	10"	-	EL +9204
		3	120	100	Shop			
3	Pipe	3	120	100	Shop	10"	1302	
		4	130	100	Shop			
ID-130-BFW-1003-002-04								
1	Pipe	4	100	100	Field	8"	5850	
		5	110	100	Field			
2	Tee	5	110	100	Field	8"	-	
		6	120	100	Field			
3	Pipe	6	120	100	Field	8"	4742	E 3002050
		7	130	100	Field			N 4415511
...								EL +9204

# 8. Process Map



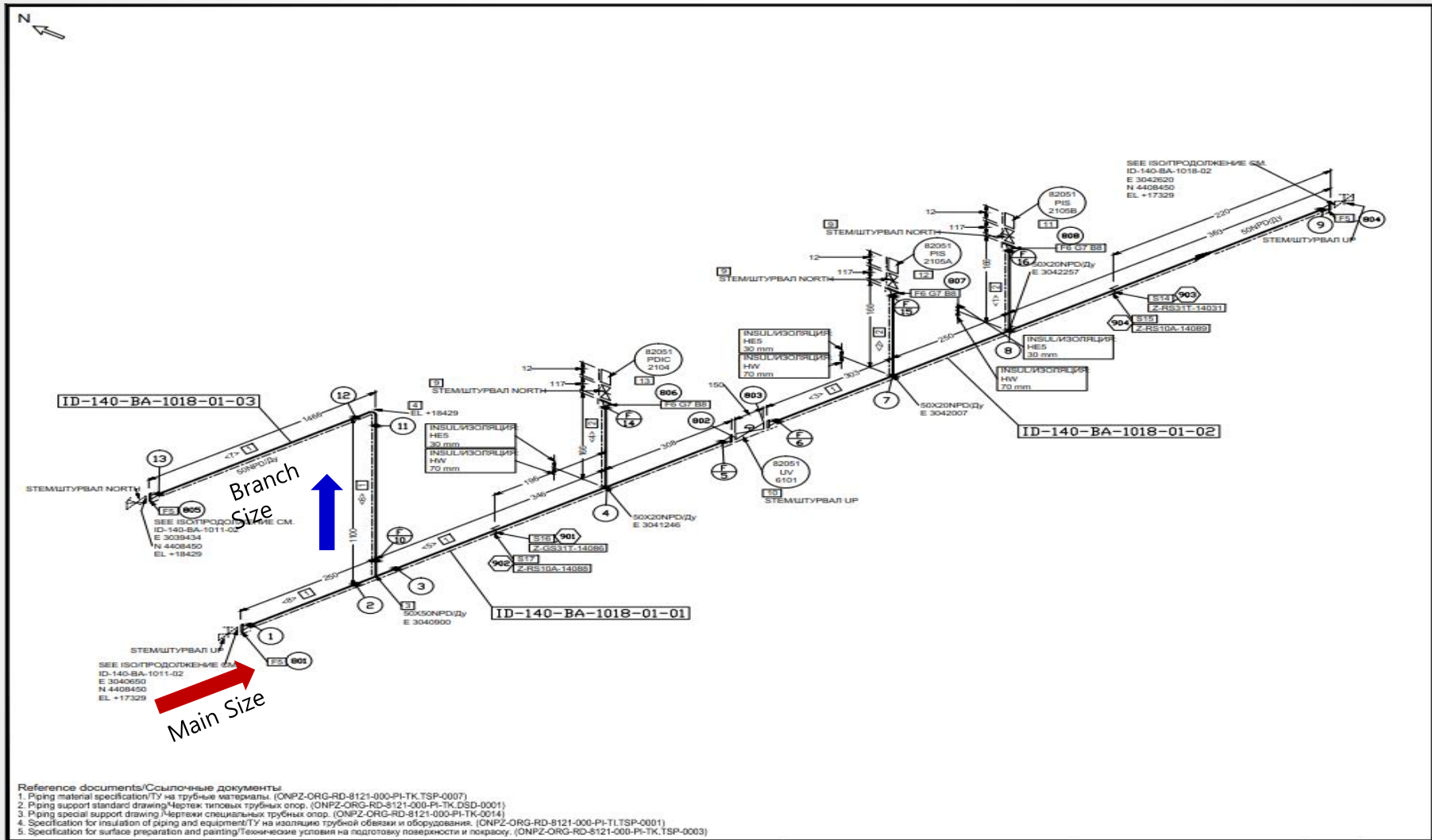
## 9. 개발 예상 공수

개발 항목		기간 (M/M)
<b>1. PSJG 추가 개발 기능</b>		<b>2</b>
#01	Welding Map 프로그램 수정	1
#02	Welding Data Export Module	1
<b>2. S3D 관련 기능</b>		<b>8</b>
#03	PSJG Data Import 모듈 & Overall 설정 기능 & Error Report & Batch running	2
#04	PSJG-S3D Synchronization 모듈	1
#05	Field Weld Point Calc. & Volumn 생성기능	1
#06	Field weld (Pipe break) 모듈생성 (by API) or Weld insert 기능(API)	1
#07	Spool Generate 모듈( by API)	0.5
#08	Smart Sketch Data(Drawing Editor) 추출 (x,y 좌표등)	1
#09	Smart Sketch (in S3D) update 기능 - Shop Weld, Bolted joint, Support weld,..	0.5
#10	S3D Data 추출 (logical data)	0.5
#11	S3D DB Update - Spool Number(work PKG), field weld data,..	0.5

Aveva E3D : 4 M/M 별도

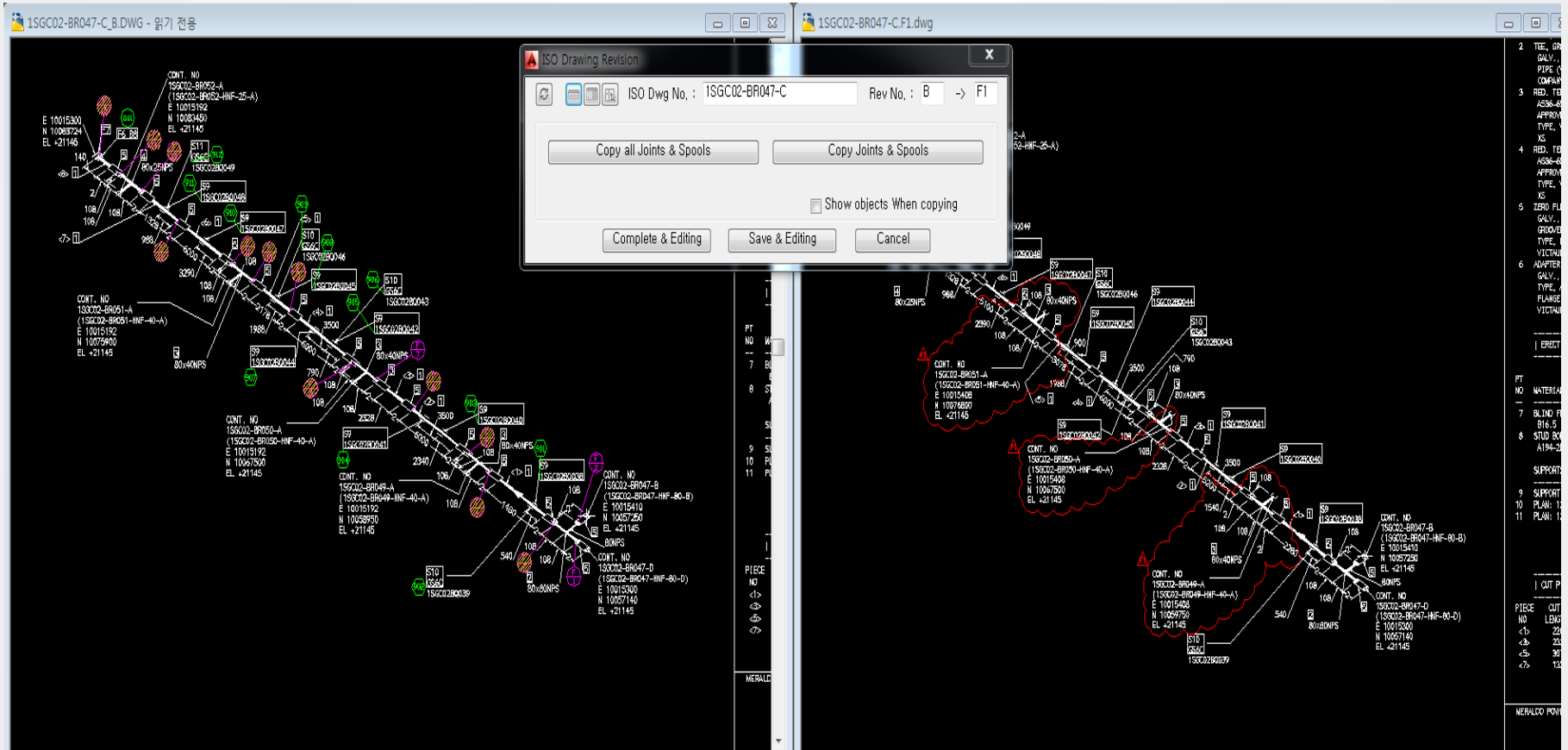
# APPENDIX A : PSJG 작업 진행 방식

■ Project 별 Welding Map 작성 규칙 반영 (numbering, 범위, 기타)

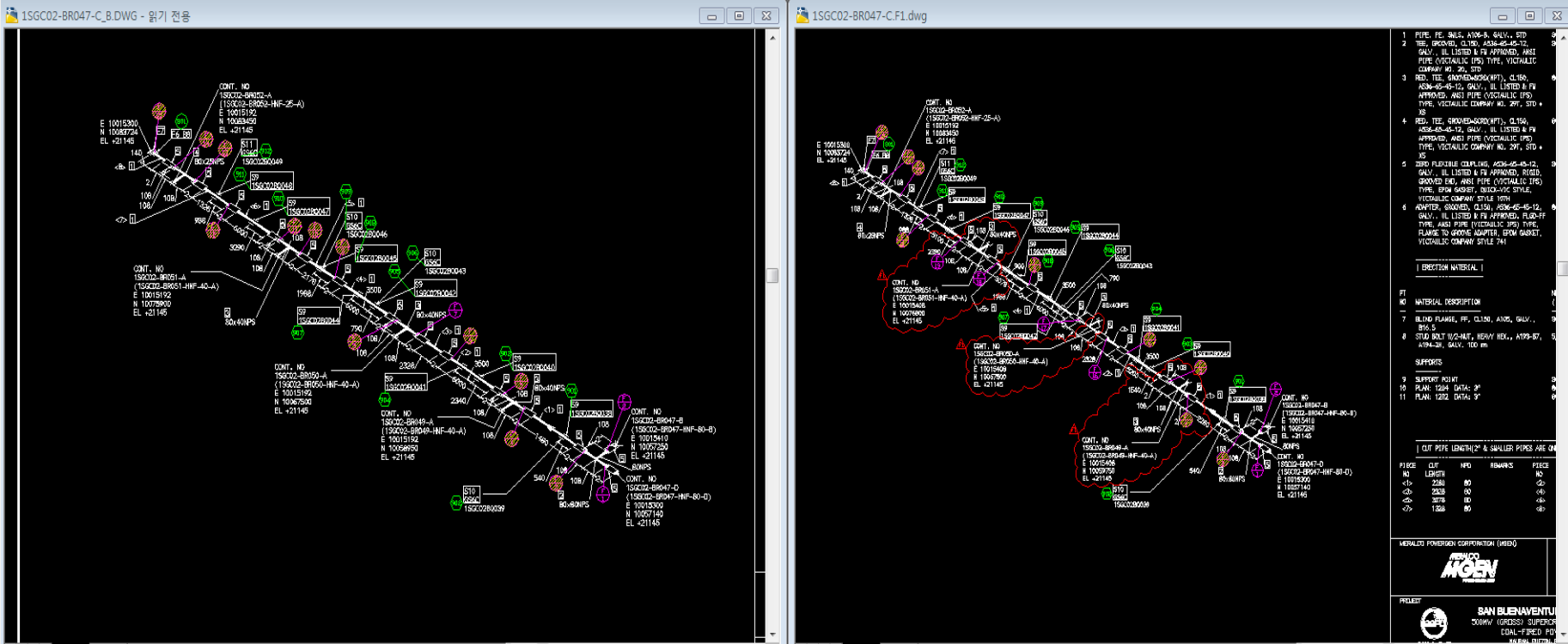


## ■ Iso Dwg Revision 작업 시 Joint의 Welding 여부를 확인 하면서 작업 가능(Before Revision)

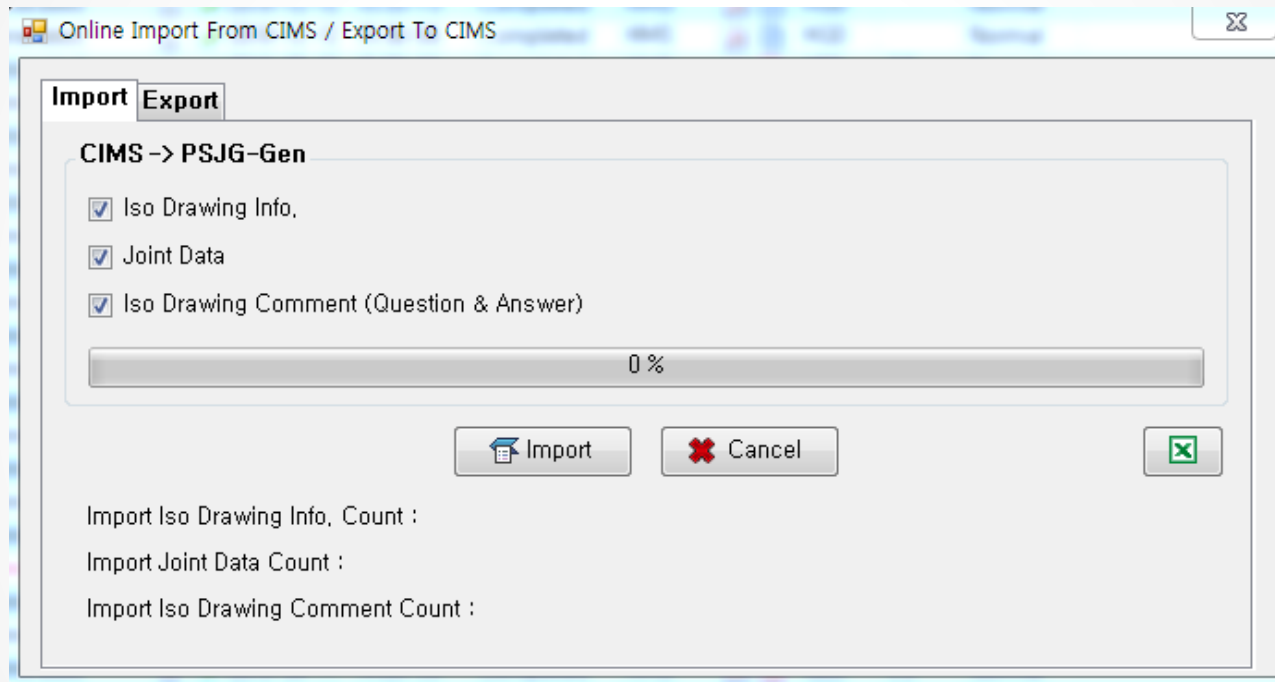
- 현장에서 작업된 Weld Data 는 weld number 에 빗금이 쳐짐.
- Nde 처리 된 weld 는 다른 색깔로 빗금이 쳐짐. (Field point 선정을 위함)



## ■ Iso Dwg Revision 작업 시 Joint의 Welding 여부를 확인 하면서 작업 가능(After Revision)



- CIMS와 연계 되어 Online Import & Export 가능





## ■ PSJG 관련 모든 Data 및 PDF isP-Gen에 import

ISO List																				
Database > ISO List																				
F	D	ISO No.	Rev	P	Line No.	Class	Unit	Size	Area	ISO Type	A&U	Group Area	SubCon	D_Press.	T_Medi.	T_Press.	O_Press.	Total Dia	Length	P&ID No.(ISO)
<b>Total : 6920</b>																				
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
P	N	0EGD10-BR020-A	B		0EGD10-BR0...	HBD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	4	W	6	1	55.75	2.40	SBPL-M-EGO-PID-0001
P	N	0EGD10-BR030-A	B		0EGD10-BR0...	HBD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	4	W	6	1	55.75	2.40	SBPL-M-EGO-PID-0001
P	N	0EGD10-BR610-A	F1		0EGD10-BR6...	HBD		1		DPI BOP	DAELIM DWG	A/G BOP	SEBO	4	V	-	1	19	3.70	SBPL-M-EGO-PID-0001
P	N	0EGD10-BR620-A	A		0EGD10-BR6...	HBD		1		DPI BOP	DAELIM DWG	A/G BOP	SEBO	4	V	-	1	2	0.10	SBPL-M-EGO-PID-0001
P	N	0EGD10-BR630-A	F1		0EGD10-BR6...	HBD		1		DPI BOP	DAELIM DWG	A/G BOP	SEBO	4	V	-	1	10	1.50	SBPL-M-EGO-PID-0001
P	N	0EGD10-BR640-A	F1		0EGD10-BR6...	HBD		1		DPI BOP	DAELIM DWG	A/G BOP	SEBO	4	V	-	1	2	0.10	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR010-A	A		0EGD20-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	51.75	2.30	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR020-A	A		0EGD20-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	61.75	5	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR030-A	B		0EGD20-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	150.75	111.20	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR030-B	A		0EGD20-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	60	35.60	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR030-C	B		0EGD20-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	61	31.50	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR030-D	A		0EGD20-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	62	42.90	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR040-A	F1		0EGD20-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	54	34.50	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR040-B	A		0EGD20-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	67.50	6.80	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR050-A	A		0EGD20-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	40	45.50	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR050-B	B		0EGD20-BR0...	GBD		2		STG ARO...	DAELIM DWG	A/G STGA	SEBO	31	W	46.5	22.3	102	102.80	SBPL-M-EGO-PID-0001
P	N	0EGD20-BR050-C	B		0EGD20-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	32	22.80	SBPL-M-EGO-PID-0001
P	N	0EGD30-BR010-A	A		0EGD30-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	76	5.10	SBPL-M-EGO-PID-0001
P	N	0EGD30-BR010-B	A		0EGD30-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	62	14.30	SBPL-M-EGO-PID-0001
P	N	0EGD30-BR010-C	B		0EGD30-BR0...	GBD		4		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	63.50	6.80	SBPL-M-EGO-PID-0001
P	N	0EGD30-BR310-A	A		0EGD30-BR3...	GBD		1.50		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	3	0.20	SBPL-M-EGO-PID-0001
P	N	0EGD30-BR320-A	A		0EGD30-BR3...	GBD		3		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	12	0.40	SBPL-M-EGO-PID-0001
P	N	0EGD40-BR010-A	A		0EGD40-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	84	68.80	SBPL-M-EGO-PID-0001
P	N	0EGD40-BR010-B	B		0EGD40-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	100	115.70	SBPL-M-EGO-PID-0001
P	N	0EGD40-BR010-C	B		0EGD40-BR0...	GBD		2		DPI BOP	DAELIM DWG	A/G BOP	SEBO	31	W	46.5	22.3	88	50.20	SBPL-M-EGO-PID-0001
P	N	0GCK20-BR010-A	B		0GCK20-BR0...	HCD		1.50		DPI BOP	DAELIM DWG	A/G BOP	SEBO	2	W	5	0	37.50	29.70	SBPL-M-GCO-PID-0001
P	N	0GDK10-BR010-A	B		0GDK10-BR0...	HKD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	5	W	7.5	3	90	5	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-B	F1		0GDK10-BR0...	HKD		6		UG DPI BOP	UG LINE	U/G BOP	SEBO	5	W	7.5	3	88	0	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-C	F2		0GDK10-BR0...	HKD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	5	W	7.5	3	71	45.60	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-D	F2		0GDK10-BR0...	HKD		6		UG DPI BOP	UG LINE	U/G BOP	SEBO	5	W	7.5	3	12	12	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-E	F3		0GDK10-BR0...	HKD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	5	W	7.5	3	24	26.50	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-F	F4		0GDK10-BR0...	HKD		6		UG DPI BOP	UG LINE	U/G BOP	SEBO	5	W	7.5	3	82	0	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-G	B		0GDK10-BR0...	HKD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	5	W	7.5	3	137	5	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-H	A		0GDK10-BR0...	HKD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	5	W	7.5	3	45.75	5	SBPL-M-GDO-PID-0001
P	N	0GDK10-BR010-I	B		0GDK10-BR0...	HKD		6		DPI BOP	DAELIM DWG	A/G BOP	SEBO	5	W	7.5	3	65	5	SBPL-M-GDO-PID-0001
P	N	0GDK90-BR010-A	B		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	41	0.80	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR010-B	F1		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	80	1.90	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR015-A	F2		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	232	27	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR020-A	B		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	41	0.80	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR020-B	F1		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	110	7.60	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR030-A	A		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	190	22.30	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR030-B	B		0GDK90-BR0...	HID		10		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	184	14.40	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR040-A	A		0GDK90-BR0...	HID		8		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	52	1.60	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR040-B	A		0GDK90-BR0...	HID		8		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	168	34.50	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR040-C	B		0GDK90-BR0...	HID		8		DPI BOP	VENDOR ISO(SAJ)	A/G BOP	SEBO	4	W	6	2.5	194	42.10	SBPL-M-PA0-PID-0001
P	N	0GDK90-BR040-D	A		0GDK90-BR0...	HID		8		UG DPI BOP	VENDOR ISO(SAJ)	U/G BOP	SEBO	4	W	6	2.5	148	0	SBPL-M-PA0-PID-0001

# APPENDIX C : PSJG 와 isP-Gen 과 CIMS 연계

## ■ isP-Gen Hydro Package Iso mapping Data CIMS Import

PSJG에서 실시간 받은 Data 및 PDF 파일을 확인하여 Hydro Package에 Iso dwg을 구성하여 CIMS에 import

ISO Mapping - 130351 : Philippines SBPL 500MW CFPF

Display all rows Clear filter Mapped ISOs Unmapped ISOs All ISOs

F	ISO No.	Rev.	C	Line No.(ISO)	Class	Size	ISO Type	AG/UG	Area	D. Press	T. Med.	T. Press.	O. Press.	PDF	P&ID No.	Remark	Package Nos
Grand Summaries																	
Total : 6920, Made : 5970, Outstanding : 950																	
P	QF863-BR014-01	2	✓	QF863-BR014-HCD-DN15	HCD	0.50	VENDOR ISO(BD)	A/G	COAL HANDLING	11	A	12.1	8.80000...	Y	SBPL-VM-ECO-DSU-0001		ECO-02-HT-003
P	QF863-BR015-01	2	✓	QF863-BR015-HCD-DN15	HCD	0.50	VENDOR ISO(BD)	A/G	COAL HANDLING	11	A	12.1	8.80000...	Y	SBPL-VM-ECO-DSU-0001		ECO-02-HT-003
P	QF863-BR016-01	2	✓	QF863-BR016-HCD-DN15	HCD	0.50	VENDOR ISO(BD)	A/G	COAL HANDLING	11	A	12.1	8.80000...	Y	SBPL-VM-ECO-DSU-0001		ECO-02-HT-003
P	QF863-BR017-01	2	✓	QF863-BR017-HCD-DN15	HCD	0.50	VENDOR ISO(BD)	A/G	COAL HANDLING	11	A	12.1	8.80000...	Y	SBPL-VM-ECO-DSU-0001		ECO-02-HT-003
P	QF863-BR030-01	2	✓	QF863-BR030-HCD-DN20.QF863...	HCD	0.75	VENDOR ISO(BD)	A/G	COAL HANDLING	11	A	12.1	8.80000...	Y	SBPL-VM-ECO-DSU-0001		ECO-02-HT-003
P	QF863-BR070-01	2	✓	QF863-BR060-HCD-DN15.QF863...	HCD	0.50	VENDOR ISO(BD)	A/G	COAL HANDLING	11	A	12.1	8.80000...	Y	SBPL-VM-ECO-DSU-0001		ECO-02-HT-003
P	QF867-BR010-01	C	✓	QF867BR010-HCD25	HCD	1	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR010-02	C	✓	QF867BR010-HCD25	HCD	1	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR010-03	C	✓	QF867BR010-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR011-01	C	✓	QF867BR011-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR011-02	C	✓	QF867BR011-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR011-03	C	✓	QF867BR011-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-01	C	✓	QF867BR012-HCD25	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-02	C	✓	QF867BR012-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-03	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-04	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-05	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-06	C	✓	QF867BR012-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-07	C	✓	QF867BR012-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-08	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-09	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-10	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-11	C	✓	QF867BR012-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-12	C	✓	QF867BR012-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR012-13	C	✓	QF867BR012-HCD20	HCD	0.75	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	13.1	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF867-BR610-01	C	✓	QF867BR610-HCD15	HCD	0.50	VENDOR ISO(HWASUNG)	A/G	AUX. BOILER	12	A	17.5	8.8	Y	VP-130351-16-113-002-0122		QH0-01-HT-042
P	QF891-BR010-01	B	✓	QF891BR010	HCD	2	VENDOR ISO(GE)	A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
P	QF891-BR020-01	B	✓	QF891BR020	HCD	2	VENDOR ISO(GE)	A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	SBPL-VN-HTO-PID-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	W	10.5	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	V	-	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	V	-	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	V	-	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001
								A/G	FGD	11	V	-	8.8	Y	VP-130351-29-138-001-0242		HT0-04-HT-001

CIMS Hydro Package에 Iso Dwg 구성

Hydro Package No. & Drawing List

Package P&ID & Drawing No.	Rev.
HFC-01-HT-001	73.000
ISO Drawing List	
SBPL-VM-H00-PID-0002	6
VP-130351-16-101-001-22617	0
VP-130351-16-101-001-22618	0
VP-130351-16-101-001-22619	0