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# E3D Piping Operation in Project Execution

AVEVA Everything 3D Piping Administration Automation

Presented by H.S.KIM

04 Dec. 2024 | Version 1.0

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# Agenda

Introduction

– SC (Spec Converter)

SmartAdmin™ – SM (Spec Manager)

Demo Images

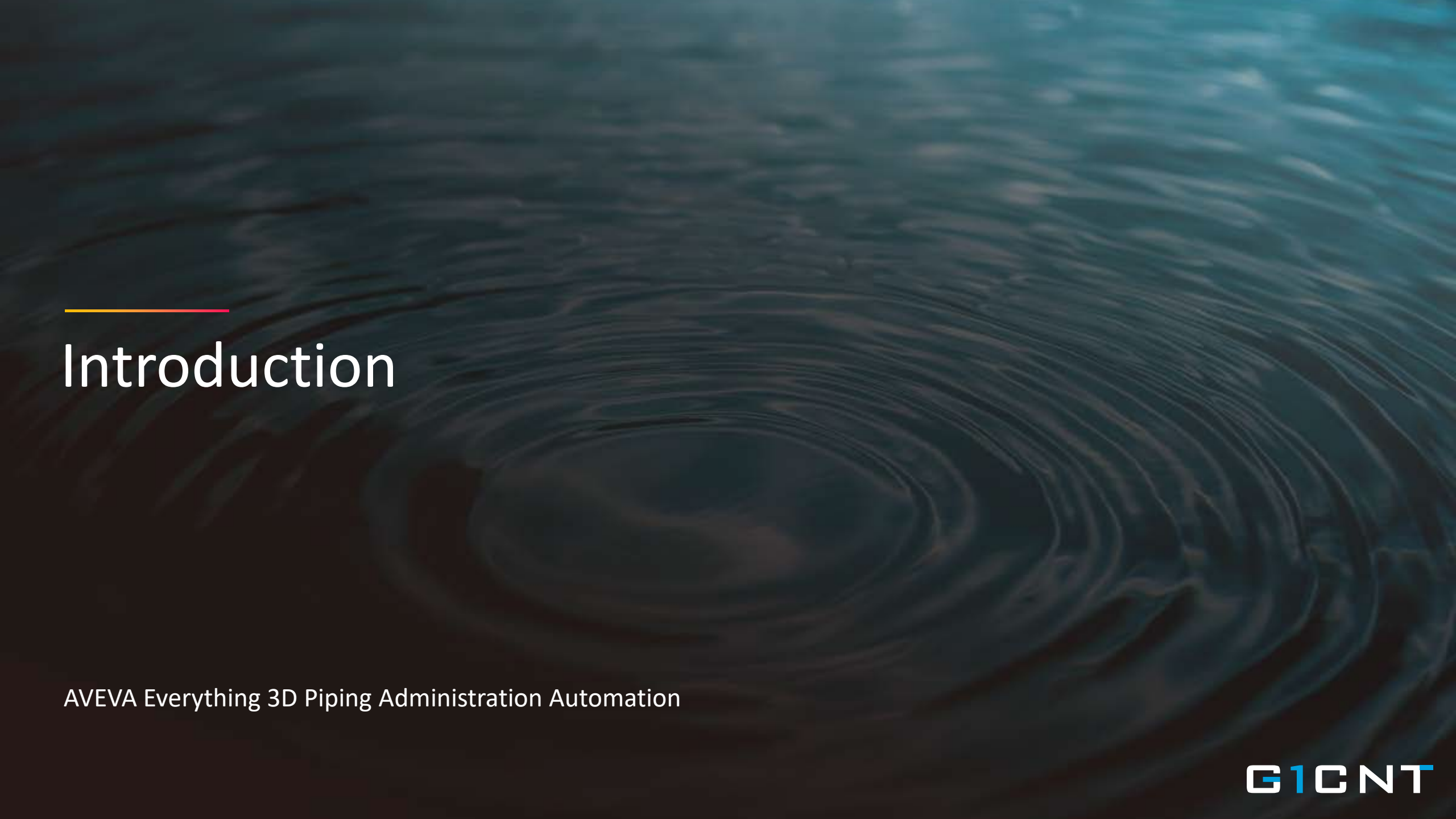
SmartModel™ – IG (ISOGEN)

SmartAdmin™ – MTO (Material Take Off)

SmartAdmin™ – LM (License Monitor)

SmartModel™ – AI (Attribute Import)

SmartModel™ – REPORT



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# Introduction

AVEVA Everything 3D Piping Administration Automation

## What we get from 3D system

- **3D model review**
- **Clash(Interference) check**
- **Piping isometric drawing generation**
- **Material take off ( piping )**
- **Layout drawing generation**
- **Material take off ( other discipline )**
- **Construction Management**
- **Others**

## Efficient operation with minimal effort

- **Standardized Procedure ( administration, modeling, ... )**
- **Professional Operation Staff**
- **Efficient Program**

# Standardization

- **Clearly-Defined Modeling Scope.**
- **Consistent Administration Method.**
- **Consistent Modeling Hierarchy & Name Rule**
- **Consistent Modeling Method for Same Modeling Item.**
- **Well-Organized Master Database ( Catalogue & Dictionary )**
- **Standardized Operation.**

## 3D Admin Workflow for Piping Department

- **Piping Catalogue Management**
- **Modeling Specification Management**
- **Modeling Rule Define ( Hierarchy & Name )**
- **Isometric Drawing Setup**
- **Material Take Off**

## 3D Admin Workflow for Piping Department

- Piping Catalogue Management
  - > Initial piping catalogue
- Modeling Specification Management
  - > SmartAdmin™ - SC (Specification Converter)
  - > SmartAdmin™ - SM(Specification Manager)
- Modeling Rule Define ( Hierarchy & Name )
- Isometric Drawing Setup
  - > SmartModel™ – IG (IsoGen)
- Material Take Off
  - > SmartAdmin™ – MTO (Material Take Off)



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# SmartAdmin™ – SC (Specification Converter)

AVEVA Everything 3D Piping Admin. Automation

# SmartAdmin™ – SC (Specification Converter)

- Convert Piping Material Specification files in various formats to standardized text format.
- It should contain enough content to create an E3D piping modeling specification.

CLAS.	ITEM	SHORTCODE	SIZE1	SIZE2	BDDA	BLENGTH	CMDTCODE	STOCKCODE	DESCRIPTION	CODEER
AMR62	BLIND FLANGE	BF	0.5	0		0	FBAC20188	FBAC20188000E	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	0.75	0		0	FBAC20188	FBAC20188000G	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	0.875	0		0	FBAC20188	FBAC20188000H	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	1	0		0	FBAC20188	FBAC20188000I	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	1.25	0		0	FBAC20188	FBAC20188000J	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	1.5	0		0	FBAC20188	FBAC20188000K	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	2	0		0	FBAC20188	FBAC20188000L	BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	3	0		0	FBAC20188	FBAC20188000M	BLIND FLANGE 150 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	3.5	0		0	FBAC20188	FBAC20188000N	BLIND FLANGE 150 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	4	0		0	FBAC20188	FBAC20188000O	BLIND FLANGE 150 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	5	0		0	FBAC20188	FBAC20188000P	BLIND FLANGE 150 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	BLIND FLANGE	BF	6	0		0	FBAC20188	FBAC20188000Q	BLIND FLANGE 150 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	60	B1A180BA	B1A180BA:60	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	65	B1A180BA	B1A180BA:65	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	70	B1A180BA	B1A180BA:70	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	75	B1A180BA	B1A180BA:75	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	80	B1A180BA	B1A180BA:80	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	85	B1A180BA	B1A180BA:85	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	90	B1A180BA	B1A180BA:90	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	95	B1A180BA	B1A180BA:95	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	100	B1A180BA	B1A180BA:100	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	105	B1A180BA	B1A180BA:105	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	110	B1A180BA	B1A180BA:110	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
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AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	120	B1A180BA	B1A180BA:120	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	125	B1A180BA	B1A180BA:125	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	130	B1A180BA	B1A180BA:130	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	135	B1A180BA	B1A180BA:135	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	140	B1A180BA	B1A180BA:140	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	1/2	145	B1A180BA	B1A180BA:145	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	5/8	75	B1A180BA	B1A180BA:75	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	5/8	80	B1A180BA	B1A180BA:80	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	5/8	85	B1A180BA	B1A180BA:85	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	5/8	90	B1A180BA	B1A180BA:90	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	5/8	95	B1A180BA	B1A180BA:95	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	
AMR62	STUD BOLT W/2-NUT	BT	0	0	5/8	100	B1A180BA	B1A180BA:100	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2: A...	

145	E4	K4AA2N1L0	K4AA2N1L0000E	1/2
146	45	ELBOW(LR) CL 3000 A105N SW	ASME B16.11 (for LUMMUS SPEC)	
147	E4	K4AA2N1L0	K4AA2N1L0000G	3/4
148	45	ELBOW(LR) CL 3000 A105N SW	ASME B16.11 (for LUMMUS SPEC)	
149	E4	K4AA2N1L0	K4AA2N1L0000I	1
150	45	ELBOW(LR) CL 3000 A105N SW	ASME B16.11 (for LUMMUS SPEC)	
151	E4	K4AA2N1L0	K4AA2N1L0000J	1.1/4
152	45	ELBOW(LR) CL 3000 A105N SW	ASME B16.11 (for LUMMUS SPEC)	
153	E4	K4AA2N1L0	K4AA2N1L0000K	1.1/2
154	45	ELBOW(LR) CL 3000 A105N SW	ASME B16.11 (for LUMMUS SPEC)	
155	E4	K4ABSB2L6AB	K4ABSB2L6AB02	2
156	45	ELBOW(LR) SMLS A234-WPB BW	ASME B16.9 (for LUMMUS SPEC) STD	
157	E4	K4ABSB2L6AB	K4ABSB2L6AB2E	2.1/2
158	45	ELBOW(LR) SMLS A234-WPB BW	ASME B16.9 (for LUMMUS SPEC) STD	
159	E4	K4ABSB2L6AB	K4ABSB2L6AB03	3
160	45	ELBOW(LR) SMLS A234-WPB BW	ASME B16.9 (for LUMMUS SPEC) STD	
161	E4	K4ABSB2L6AB	K4ABSB2L6AB3E	3.1/2
162	45	ELBOW(LR) SMLS A234-WPB BW	ASME B16.9 (for LUMMUS SPEC) STD	
163	E4	K4ABSB2L6AB	K4ABSB2L6AB04	4
164	45	ELBOW(LR) SMLS A234-WPB BW	ASME B16.9 (for LUMMUS SPEC) STD	
165	E4	K4ABSB2L6AB	K4ABSB2L6AB05	5
166	45	ELBOW(LR) SMLS A234-WPB BW	ASME B16.9 (for LUMMUS SPEC) STD	
167	E4	K4ABSB2L6AB	K4ABSB2L6AB06	6

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# SmartAdmin™ – SM (Specification Manager)

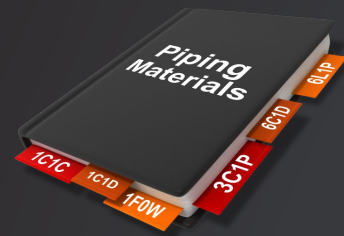
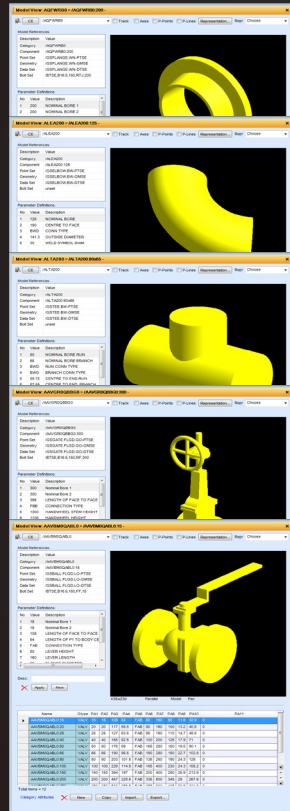
AVEVA Everything 3D Piping Admin. Automation

## SmartAdmin™ - SM Main Function

- **Piping 3D modeling specification Automatic Creation**
- **Piping material description library Automatic Creation**
- **Bolt length table / Bolt-list table Automatic Creation**
- **Piping itemcode (commodity / ident) Automatic import**
- **Automatic Comparison of added/modified/deleted items for revised piping specification**
- **Effective 3D Catalog shape selection for each piping item**
- **Fast processing speed (less than 10 min. based on 65,000 piping specification items, including comparison, creation and modification)**

# AVEVA Typical workflow for 3D specification ( Rev. 0 )

## 3D Catalog Preparation

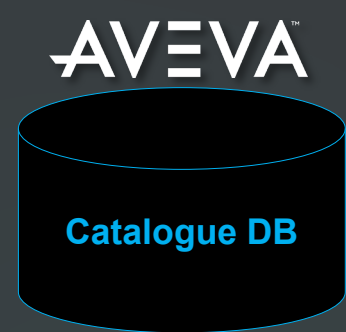


Rev. 0

Write Text Files (for Added item)

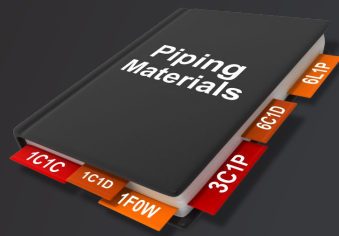
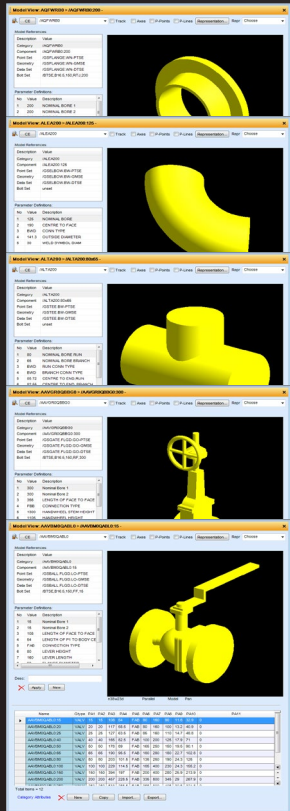
ITEM	NAME	DESCRIPTION	UNIT	STATUS	DATE	USER	VERSION
1C1C	1C1C	1C1C					
1C1D	1C1D	1C1D					
1F0W	1F0W	1F0W					
3C1P	3C1P	3C1P					
6C1D	6C1D	6C1D					
6B1P	6B1P	6B1P					

Upload to 3D



# AVEVA Typical workflow for 3D specification ( Rev. 1 ~ )

## 3D Catalog Preparation



Specification Revision

Specification Comparison

- Compare piping specification with the current 3D modeling specification
- Categorize each piping item into added / modified / deleted

Write Text Files (for Added item)

ITEM	ITEM NO	ITEM NAME	ITEM CODE	ITEM UNIT	ITEM QTY	ITEM PRICE	ITEM TOTAL
10001	10001	10001	10001	10001	10001	10001	10001
10002	10002	10002	10002	10002	10002	10002	10002
10003	10003	10003	10003	10003	10003	10003	10003
10004	10004	10004	10004	10004	10004	10004	10004
10005	10005	10005	10005	10005	10005	10005	10005
10006	10006	10006	10006	10006	10006	10006	10006
10007	10007	10007	10007	10007	10007	10007	10007
10008	10008	10008	10008	10008	10008	10008	10008
10009	10009	10009	10009	10009	10009	10009	10009
10010	10010	10010	10010	10010	10010	10010	10010

Write Text Files (for Modified item)

ITEM	ITEM NO	ITEM NAME	ITEM CODE	ITEM UNIT	ITEM QTY	ITEM PRICE	ITEM TOTAL
10001	10001	10001	10001	10001	10001	10001	10001
10002	10002	10002	10002	10002	10002	10002	10002
10003	10003	10003	10003	10003	10003	10003	10003
10004	10004	10004	10004	10004	10004	10004	10004
10005	10005	10005	10005	10005	10005	10005	10005
10006	10006	10006	10006	10006	10006	10006	10006
10007	10007	10007	10007	10007	10007	10007	10007
10008	10008	10008	10008	10008	10008	10008	10008
10009	10009	10009	10009	10009	10009	10009	10009
10010	10010	10010	10010	10010	10010	10010	10010

Manual Delete

Upload to 3D

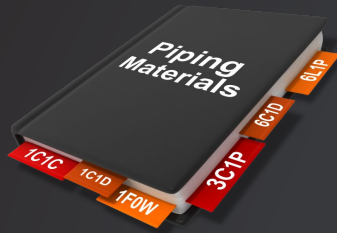
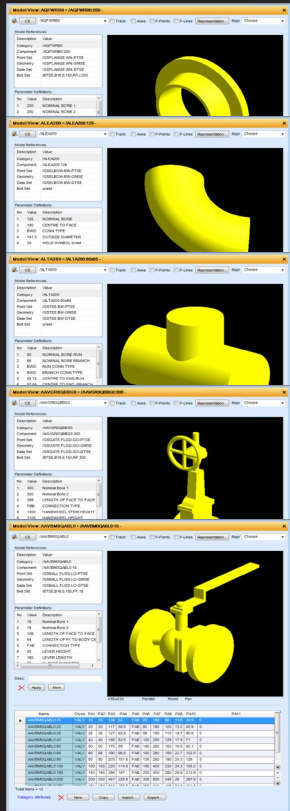
Upload to 3D

AVEVA™

Catalogue DB

# SmartAdmin™ - SM workflow for 3D specification

## 3D Catalog Preparation

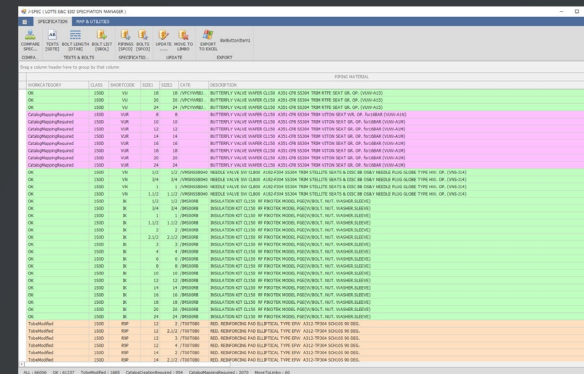


1st Issue



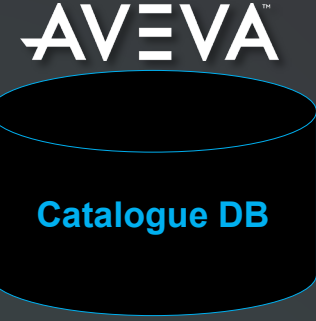
Specification Revision

## SmartAdmin™ - SM



ID	CLASS	UNITS	UNITS	DESCRIPTION
1500	UP	10	10	6" SCH40 A106B
1500	UP	12	12	6" SCH40 A106B
1500	UP	14	14	6" SCH40 A106B
1500	UP	16	16	6" SCH40 A106B
1500	UP	18	18	6" SCH40 A106B
1500	UP	20	20	6" SCH40 A106B
1500	UP	24	24	6" SCH40 A106B
1500	UP	30	30	6" SCH40 A106B
1500	UP	36	36	6" SCH40 A106B
1500	UP	42	42	6" SCH40 A106B
1500	UP	48	48	6" SCH40 A106B
1500	UP	60	60	6" SCH40 A106B
1500	UP	72	72	6" SCH40 A106B
1500	UP	84	84	6" SCH40 A106B
1500	UP	96	96	6" SCH40 A106B
1500	UP	108	108	6" SCH40 A106B
1500	UP	120	120	6" SCH40 A106B
1500	UP	144	144	6" SCH40 A106B
1500	UP	168	168	6" SCH40 A106B
1500	UP	192	192	6" SCH40 A106B
1500	UP	216	216	6" SCH40 A106B
1500	UP	240	240	6" SCH40 A106B
1500	UP	288	288	6" SCH40 A106B
1500	UP	336	336	6" SCH40 A106B
1500	UP	384	384	6" SCH40 A106B
1500	UP	432	432	6" SCH40 A106B
1500	UP	480	480	6" SCH40 A106B
1500	UP	576	576	6" SCH40 A106B
1500	UP	672	672	6" SCH40 A106B
1500	UP	768	768	6" SCH40 A106B
1500	UP	864	864	6" SCH40 A106B
1500	UP	960	960	6" SCH40 A106B

Direct Write  
To Database



- Automatic Comparison between current 3D modeling specification & piping material specification
- Categorize comparison results to show users what actions to take place. (Comparison results can be created as an excel file)
- Direct 3D database manipulation without intermediate text file creation
- Modifications can be reverted to before modification using the AVEVA basic function

## Benefits of SmartAdmin™ - SM

- **Accelerate the initial schedule by creating the piping 3D modeling specification early in the project without delay.**
- **Eliminate BOM errors caused by human input errors (item code, description)**
- **Avoid different specification writing methods based on the habits of each Admin, Use a quick and standardized specification writing method.**
- **Save 3D Administration M/H or OutSourcing Cost.**



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# Demo Images

AVEVA Everything 3D Piping Specification Automation Program

# Specification Creation & modification

- Powerful change management capabilities
- Takes only 2 minutes to process over 30,000 specification components

SMART ADMIN - SPECIFICATION MANAGER

SPECIFICATION MAP & UTILITIES

Drag a column header here to group by that column

WORKCATEGORY	CLASS	SHORTCODE	SIZE1	SIZE2	CATE	DESCRIPTION
OK	TAAR61	GA	38	38	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
OK	TAAR61	GA	40	40	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
OK	TAAR61	GA	42	42	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
CatalogCreationRequired	TAAR61	GA	44	44	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
CatalogCreationRequired	TAAR61	GA	46	46	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
OK	TAAR61	GA	48	48	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
OK	TAAR61	GA1	2	2	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH SOLID-WEDGE TYPE FLG-RF BB OS&Y, HW.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
OK	TAAR61	GA3	3	3	/VAVGARDJ...	GATE VALVE 300 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, HW.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
OK	TAAR61	GAC	1/2	1/2	/VMSGAS80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW BB OS&Y, HW.OP, CSO/CSC DESIGN: API602; END: B16.11; DIM: MFR STD; TEST: API598
OK	TAAR61	GAC	3/4	3/4	/VMSGAS80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW BB OS&Y, HW.OP, CSO/CSC DESIGN: API602; END: B16.11; DIM: MFR STD; TEST: API598
OK	TAAR61	GAC	1	1	/VMSGAS80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW BB OS&Y, HW.OP, CSO/CSC DESIGN: API602; END: B16.11; DIM: MFR STD; TEST: API598
CatalogCreationRequired	TAAR61	GAC	1.1/4	1.1/4	/VMSGAS80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW BB OS&Y, HW.OP, CSO/CSC DESIGN: API602; END: B16.11; DIM: MFR STD; TEST: API598
OK	TAAR61	GAC	1.1/2	1.1/2	/VMSGAS80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW BB OS&Y, HW.OP, CSO/CSC DESIGN: API602; END: B16.11; DIM: MFR STD; TEST: API598
OK	TAAR61	GAC	2	2	/VAVGARDJ...	GATE VALVE 300 LB A216-WCB TRIM : 13CR+HFH SOLID-WEDGE TYPE FLG-RF BB OS&Y, HW.OP, CSO/CSC DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
OK	TAAR61	GAC	6	6	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, HW.OP, CSO/CSC DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
TobeModified	TAAR61	GAC	14	14	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
TobeModified	TAAR61	GAC	16	16	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
TobeModified	TAAR61	GAC	18	18	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
TobeModified	TAAR61	GAC	20	20	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
TobeModified	TAAR61	GAC	22	22	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
TobeModified	TAAR61	GAC	24	24	/VAVGARBJ...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP DESIGN: API600; END: B16.5; DIM: B16.10; TEST: API598
OK	TAAR61	GAC	28	28	/VAVGARBK...	GATE VALVE 150 LB A216-WCB TRIM : 13CR+HFH FLEXIBLE-WEDGE TYPE FLG-RF BB OS&Y, GR.OP, CSO/CSC DESIGN: API600; END: B16.47 SER.A; DIM: B16.10; TEST: API598
OK	TAAR61	GAD	1/2	1/2	/VMSGAT80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW*SCRD(NPT) BB OS&Y, HW.OP DESIGN: API602; END: B16.11, B1.20.1; DIM: MFR STD; TEST: API598
OK	TAAR61	GAD	3/4	3/4	/VMSGAT80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW*SCRD(NPT) BB OS&Y, HW.OP DESIGN: API602; END: B16.11, B1.20.1; DIM: MFR STD; TEST: API598
OK	TAAR61	GAD	1	1	/VMSGAT80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW*SCRD(NPT) BB OS&Y, HW.OP DESIGN: API602; END: B16.11, B1.20.1; DIM: MFR STD; TEST: API598
CatalogCreationRequired	TAAR61	GAD	1.1/4	1.1/4	/VMSGAT80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW*SCRD(NPT) BB OS&Y, HW.OP DESIGN: API602; END: B16.11, B1.20.1; DIM: MFR STD; TEST: API598
OK	TAAR61	GAD	1.1/2	1.1/2	/VMSGAT80...	GATE VALVE 800 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE SW*SCRD(NPT) BB OS&Y, HW.OP DESIGN: API602; END: B16.11, B1.20.1; DIM: MFR STD; TEST: API598
OK	TAAR61	GAF	1/2	1/2	/VAVGARDJ...	GATE VALVE 300 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE FLG-RF BB OS&Y, HW.OP DESIGN: API602; END: B16.5; DIM: B16.10; TEST: API598
OK	TAAR61	GAF	3/4	3/4	/VAVGARDJ...	GATE VALVE 300 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE FLG-RF BB OS&Y, HW.OP DESIGN: API602; END: B16.5; DIM: B16.10; TEST: API598
OK	TAAR61	GAF	1	1	/VAVGARDJ...	GATE VALVE 300 LB A105 TRIM : 13CR+HFH SOLID-WEDGE TYPE FLG-RF BB OS&Y, HW.OP DESIGN: API602; END: B16.5; DIM: B16.10; TEST: API598

ALL : 30497 OK : 28576 TobeModified : 6 CatalogCreationRequired : 1628 CatalogMappingRequired : 25 MoveToLimbo : 262

Catalogue Explorer

AMR62.E4.1.1

- SPEC AMR62
  - SELE AMR62.BOLT
  - SELE AMR62.CAP
  - SELE AMR62.ELBO
    - SELE AMR62.ELBO.0.5
    - SELE AMR62.ELBO.0.75
    - SELE AMR62.ELBO.1
      - SELE AMR62.ELBO.1.1
        - SELE AMR62.ELBO.1.1.45
        - SELE AMR62.ELBO.1.1.45.FALSE
        - SPCO AMR62.E4.1.1
        - SELE AMR62.ELBO.1.1.90
        - SELE AMR62.ELBO.1.1.90.FALSE
        - SPCO AMR62.E9.1.1
      - SELE AMR62.ELBO.1.25
      - SELE AMR62.ELBO.1.5
      - SELE AMR62.ELBO.2
      - SELE AMR62.ELBO.2.5
      - SELE AMR62.ELBO.3
      - SELE AMR62.ELBO.3.5
      - SELE AMR62.ELBO.4
      - SELE AMR62.ELBO.4.5
      - SELE AMR62.ELBO.5
      - SELE AMR62.ELBO.6
      - SELE AMR62.ELBO.8
    - SELE AMR62.FBLI
    - SELE AMR62.FLAN
    - SELE AMR62.FTUB
    - SELE AMR62.GASK
    - SELE AMR62.OLET
    - SELE AMR62.PCOM
    - SELE AMR62.REDU
    - SELE AMR62.TEE
    - SELE AMR62.TUBE
    - SELE AMR62.VALV
    - SELE AMR62.WELD
    - TEXT 1

Attributes

AMR62.E4.1.1

Track CE

Attribute	Value
RefNo	=16486/124866
Name	AMR62.E4.1.1
Type	SPCO
Lock	<input type="checkbox"/>
Owner	AMR62.ELBO.1.1.45.FALSE
MatPurpose	unset
Matref	Nulref
Answer	0.0000
Maxanswer	0.0000
Catref	EADC080.25
Detref	K4ADSH2BEAH-D
Matbt	K4ADSH2BEAH-M
Cmpref	Nulref
Eltrf	Nulref
Ptref	Nulref
Trpref	Nulref
Pdref	Nulref
Icon	unset
Tanswer	E4
Comment	unset
Dpfname	unset
Symgroup	unset
Symname	unset
-SGCSPEC	AMR62
-SGCSTYP	E4
-CMDT	K4ADSH2BEAH
-IDENT	K4ADSH2BEAH01
-MR_GROUP	WROUGHT FITTING
-MATLCATEGORY	unset
-IPWTHICK	0.0000
-PUWEIGHT	0.0000

# Mappings between catalog – material description

- Convenient Catalogue mapping task using keyword search

The screenshot shows the SMART ADMIN - SPECIFICATION MANAGER application. The main window displays a list of specifications with columns for CATEGORY, MASTER, COMMODITY, and DESCRIPTION. The list includes various flange specifications such as 'BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: ALKALINE / CAUSTIC SERVICE LS 129-30 Part3-1 / LS 129 Part 01' and 'BLIND FLANGE 300 LB A350-LF2 CL1 RF 125-250 AARH ASME B16.47 SR.A Impact test -50°C'.

Below the list, a detailed view of a specification is shown for 'FLANGE BLIND B16.5 CL.300 RF'. This view includes a table with columns for CATE, DESCRIPTION, GTYP, SKEY, SIZE FROM, and SIZE TO.

CATE	DESCRIPTION	GTYP	SKEY	SIZE FROM	SIZE TO
/FAJBORD	ASME B16.5, FLANGE, BLIND, RF, CL.300	FBLI	FLBL	1/2	24
/FAJBTRD	ASME B16.5, FLANGE, BLIND, RF, CL.300 - WITH TAP (OFFSET)	FBLI	FLRE	1/2	24

# Material description library creation & modification

- Eliminates human error completely. ( including symbol key )

The screenshot displays the SMART ADMIN - SPECIFICATION MANAGER interface. The main window is divided into several panes:

- Specification Table:** A table with columns: CATEGORY, MASTER, COMMODITY, and DESCRIPTION. It lists various flange specifications such as "BLIND FLANGE 300 LB A182-F316/316L RF STABILIZED, 125-250 AARH ASME B16.5: ALKALINE / CAUSTIC SERVICE LS 129-30 Part3-1 / LS 129 Part 01".
- Specification Detail:** A detailed view of a selected specification, showing fields like CATE, DESCRIPTION, GTPY, and SKEY.
- Catalogue Explorer:** A tree view showing a hierarchy of materials, with "FBAA221L0-D" selected.
- Attributes Panel:** A table showing the attributes for the selected material "FBAA221L0-D".

Attribute	Value
RefNo	=16486/60572
Name	FBAA221L0-D
Type	SDTE
Lock	<input type="checkbox"/>
Owner	TASPROJ-SDTE:F
Skey	FLBL
SkeyScale	100
MtoLength	0
MtoQuantity	0
Rtext	BLIND FLANGE 150 LB A105N RF ASME B16.5 (for LUMMUS SPEC)
Stext	unset
Ttext	unset
Scode	unset
Cspc	unset
Dpfname	unset
:JU_MD_CODE	-
:JU_MD_DESC	-
:JU_MD_DET	-

# Bolt length table creation & modification

- Automatically grouped by material and bolt diameter and sorted by length.

SMART ADMIN - SPECIFICATION MANAGER

MAP & UTILITIES

COMPARISON    TEXTS & BOLTS    SPECIFICATION...    UPDATE    EXPORT

Drag a column header here to group by that column

DESCRIPTION	DIAME...	55	60	65	70	75	80	85	90
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2; ALKALINE /...	1/2	ERROR:55	B1A1BDBA:60	B1A1BDBA:65	B1A1BDBA:70	B1A1BDBA:75	B1A1BDBA:80	B1A1BDBA:85	B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2; ALKALINE /...	5/8				ERROR:70	B1A1BDBA:75	B1A1BDBA:80	B1A1BDBA:85	B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-88M CL.2 A194-8MA B18.2.1/B18.2.2; ALKALINE /...	3/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1/2	ERROR:55	B1A12206:60	B1A12206:65	B1A12206:70	B1A12206:75	B1A12206:80	B1A12206:85	B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	5/8				ERROR:70	B1A12206:75	B1A12206:80	B1A12206:85	B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	3/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	7/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1.1/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1.1/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1.1/2								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1.3/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1.5/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2	1.7/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	2								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	2.1/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	1.1/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	1.3/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	1.1/2								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	1.5/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	1.7/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	2.1/2								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	2.3/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Additional one nut s...	3								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Hydrogen Service	1/2	ERROR:55	B1A122HA:60	B1A122HA:65	B1A122HA:70	B1A122HA:75	B1A122HA:80	B1A122HA:85	B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Hydrogen Service	5/8				ERROR:70	B1A122HA:75	B1A122HA:80	B1A122HA:85	B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Hydrogen Service	3/4								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Hydrogen Service	7/8								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Hydrogen Service	1								B
STUD BOLT W/2-NUT HEAVY HEX.NUT A193-87 A194-2H B18.2.1/B18.2.2; Hydrogen Service	1.1/8								B

PIPING

PROJECT HOME TOOLS MANAGE CATALOGUE SPECIFICATION DEVELOPER

Copy Element Create    Catalogue Copy    Storage Areas    Modify Lock    Reverse Reorder    Material Properties    Delete Delete    Checker Check    Search Search    Collections    Attributes Display    Graphics Settings View    SPEC MANAGER PSPEC

Catalogue Explorer

TASPROJ.B1A1BDBA-U1/2

Attributes

TASPROJ.B1A1BDBA-U1/2

Track CE

Attribute	Value
RefNo	=16485/148043
Name	TASPROJ.B1A1BDBA-U1/2
Type	DTAB
Lock	<input type="checkbox"/>
Owner	TASPROJ.B1A1BDBA-LTAB
Blenght	55mm 60mm 65mm 70mm 75mm 80mm 85mm 90mm
Bweight	unset
-IDENT1	ERROR:55 B1A1BDBA:60 B1A1BDBA:65 B1A1BDBA:70
-IDENT2	B1A1BDBA:96 B1A1BDBA:100 B1A1BDBA:105 B1A1BDBA:110
-IDENT3	B1A1BDBA:135 B1A1BDBA:140 B1A1BDBA:145
-IDENT4	unset
-IDENT5	unset
-IDENT6	unset
-IDENT7	unset
-IDENT8	unset
-IDENT9	unset
-IDENT10	unset
-IDENT11	unset
-IDENT12	unset
-IDENT13	unset
-IDENT14	unset
-IDENT15	unset
-IDENT16	unset
-IDENT17	unset
-IDENT18	unset
-IDENT19	unset
-IDENT20	unset
-IDENT21	unset
-IDENT22	unset

# Bolt list library creation & modification

- Automatically grouped by material and bolt diameter.

SMART ADMIN - SPECIFICATION MANAGER

SPECIFICATION MAP & UTILITIES

SPEC COMPARE SPEC CONVERTER TEXTS [SDTE] BOLT LENGTH [DTAB] BOLT LIST [SBOL] PIPINGS [SPCO] BOLTS [SPCO] UPDATE ..... MOVE TO LIMBO EXPORT TO EXCEL EXPORT

COMPARISON TEXTS & BOLTS SPECIFICATION... UPDATE EXPORT

Drag a column header here to group by that column

WorkCategory	BLIS	SBOL	Exists	COMMODITY	Description
OK	/TASPROJ,B1A1BDBA-BLIS	/TASPROJ,B1A1BDBA,U1/2	<input checked="" type="checkbox"/>	B1A1BDBA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B8M CL.2 A194-8MA B18.2.1/818.2.2: ALKALINE / CAUSTIC SERVICE LS 129-30 Part3-1
OK	/TASPROJ,B1A1BDBA-BLIS	/TASPROJ,B1A1BDBA,U5/8	<input checked="" type="checkbox"/>	B1A1BDBA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B8M CL.2 A194-8MA B18.2.1/818.2.2: ALKALINE / CAUSTIC SERVICE LS 129-30 Part3-1
OK	/TASPROJ,B1A1BDBA-BLIS	/TASPROJ,B1A1BDBA,U3/4	<input checked="" type="checkbox"/>	B1A1BDBA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B8M CL.2 A194-8MA B18.2.1/818.2.2: ALKALINE / CAUSTIC SERVICE LS 129-30 Part3-1
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1/2	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U5/8	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U3/4	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U7/8	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1.1/8	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1.1/4	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1.1/2	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1.3/4	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1.5/8	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12206-BLIS	/TASPROJ,B1A12206,U1.7/8	<input checked="" type="checkbox"/>	B1A12206	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U2	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U2.1/4	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U1.1/4	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U1.3/8	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U1.1/2	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U1.5/8	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U1.7/8	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U2.1/2	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U2.3/4	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A12228-BLIS	/TASPROJ,B1A12228,U3	<input checked="" type="checkbox"/>	B1A12228	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2; Additional one nut shall be supplied. (3 nuts for one bolt)
OK	/TASPROJ,B1A122HA-BLIS	/TASPROJ,B1A122HA,U1/2	<input checked="" type="checkbox"/>	B1A122HA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2, Hydrogen Service
OK	/TASPROJ,B1A122HA-BLIS	/TASPROJ,B1A122HA,U5/8	<input checked="" type="checkbox"/>	B1A122HA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2, Hydrogen Service
OK	/TASPROJ,B1A122HA-BLIS	/TASPROJ,B1A122HA,U3/4	<input checked="" type="checkbox"/>	B1A122HA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2, Hydrogen Service
OK	/TASPROJ,B1A122HA-BLIS	/TASPROJ,B1A122HA,U7/8	<input checked="" type="checkbox"/>	B1A122HA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2, Hydrogen Service
OK	/TASPROJ,B1A122HA-BLIS	/TASPROJ,B1A122HA,U1	<input checked="" type="checkbox"/>	B1A122HA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2, Hydrogen Service
OK	/TASPROJ,B1A122HA-BLIS	/TASPROJ,B1A122HA,U1.1/8	<input checked="" type="checkbox"/>	B1A122HA	STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H B18.2.1/818.2.2, Hydrogen Service

ALL : 171 OK : 171

Catalogue Explorer

TASPROJ,B1A11P28-BLIS

- BLTA TASPROJ-BOLTLIST
  - BLIS TASPROJ,B1A11P06-BLIS
    - SBOL TASPROJ,B1A11P06,U1
    - SBOL TASPROJ,B1A11P06,U1.1/2
    - SBOL TASPROJ,B1A11P06,U1.1/4
    - SBOL TASPROJ,B1A11P06,U1.1/8
    - SBOL TASPROJ,B1A11P06,U1/2
    - SBOL TASPROJ,B1A11P06,U3/4
    - SBOL TASPROJ,B1A11P06,U5/8
    - SBOL TASPROJ,B1A11P06,U7/8
  - BLIS TASPROJ,B1A11P28-BLIS
    - SBOL TASPROJ,B1A11P28,U1.1/2
    - SBOL TASPROJ,B1A11P28,U1.1/4
    - SBOL TASPROJ,B1A11P28,U1.3/8
    - SBOL TASPROJ,B1A11P28,U1.5/8
    - SBOL TASPROJ,B1A11P28,U1.7/8
  - BLIS TASPROJ,B1A11PHA-BLIS
    - BLIS TASPROJ,B1A11PHB-BLIS
      - SBOL TASPROJ,B1A11PHB,U1.1/2
      - SBOL TASPROJ,B1A11PHB,U1.1/4
      - SBOL TASPROJ,B1A11PHB,U1.3/8
      - SBOL TASPROJ,B1A11PHB,U1.5/8
      - SBOL TASPROJ,B1A11PHB,U1.7/8
  - BLIS TASPROJ,B1A12206-BLIS
  - BLIS TASPROJ,B1A12207-BLIS
  - BLIS TASPROJ,B1A12228-BLIS
  - BLIS TASPROJ,B1A122BA-BLIS
  - BLIS TASPROJ,B1A122BB-BLIS
  - BLIS TASPROJ,B1A122HA-BLIS

Attributes

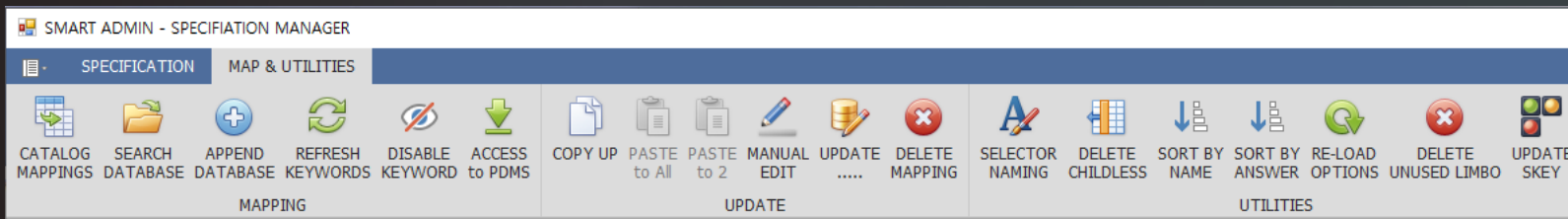
TASPROJ,B1A11P28-BLIS

Track CE

Attribute	Value
RefNo	=16485/146333
Name	TASPROJ,B1A11P28-BLIS
Type	BLIS
Lock	<input type="checkbox"/>
Owner	TASPROJ-BOLTLIST

## Additional Functions

- Customizing keywords for convenient mapping.
- Automatic selection naming
- Remove unnecessary selections
- Sorting specification components by answer
- Deletes unused limbo specification components
- Automatic symbol key input



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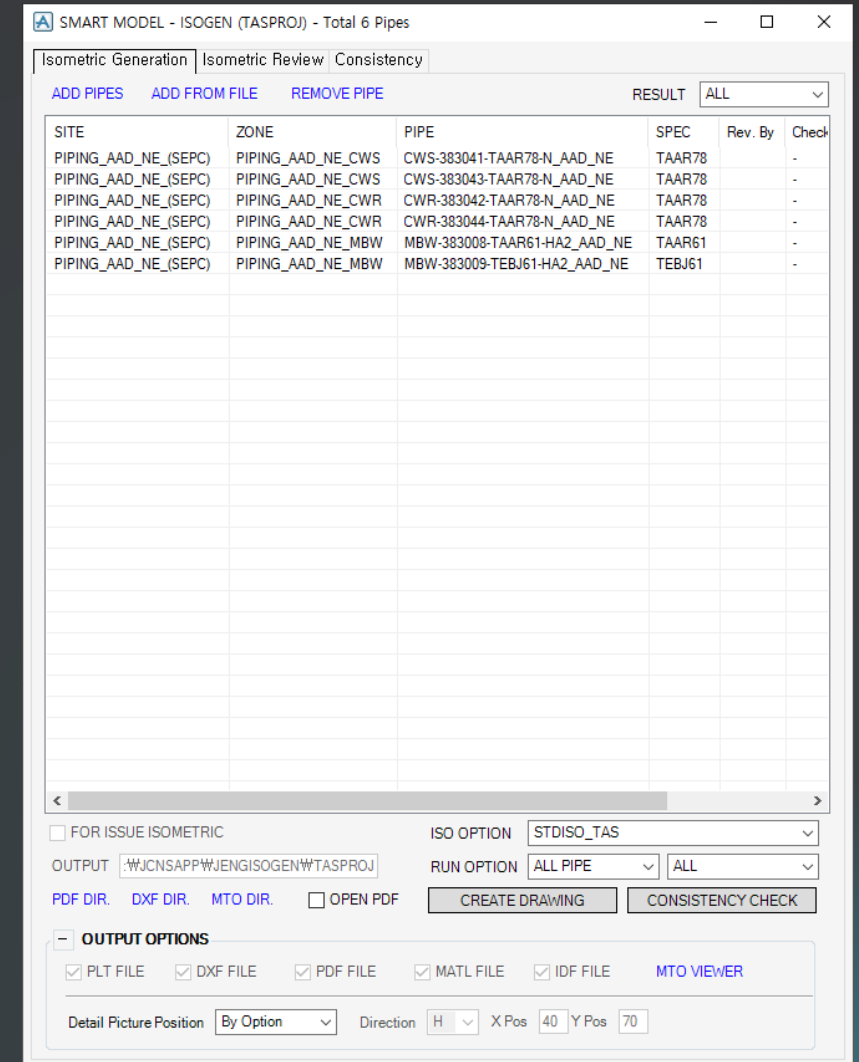
# SmartModel™ – IG (Isogen)

AVEVA Everything 3D Piping Admin. Automation



# SmartModel™ – IG (isometric generation)

- Customizes easily isometric format using xml option.
- Supports center alignment of text
- Consistency-check within program
- PDF/DXF/IDF/PLT file creation
- Creating mto-files for the mto-program



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# SmartAdmin™ – MTO (Material Take-Off)

AVEVA Everything 3D Piping Admin. Automation

# SmartAdmin™ – MTO (Material Take Off)

- Reads the mto-file generated with the isometric.
- Calculates the total by material & sizes.
- Supports Excel-export.

Area	WBS	Pipename	Revision	Sheetno	Classname	Shortcode	Itemcode	Size1	Size2	Description	Bo.	B.	Quantity	Qty ...
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	12	0	TUBE WELDED AND SEAMLESS WROUGHT STEEL PIPE - ANSI ...		0	5	M
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	12	8	REDUCER ECCENTRIC BUTT WELD - ANSI B16.9 NR BWD		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	8	4	REDUCER ECCENTRIC BUTT WELD - ANSI B16.9 NR BWD		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	12	0.5	OLET THREDOLET - ANSI B16.11 #3000 SCF		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	12	0	90 ELBOW LR VARIABLE ANGLE BUTT WELD - ANSI B16.9 NR B...		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	0.5	0	TUBE CONNECTOR F TYPE SOCKET WELD - TASNEE #3000 S...		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	4	0	FLANGE WELDING NECK - ANSI B16.5 #150 RF		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	4	0	GASKET 4.5MM - ANSI #150 RF		0	1	EA
AAA		AV-301068-AAR61-N_AAA_L	-1	1			*****	0.625	0	100 STUD BOLT CW HVY HEX NUTS		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	P	PPAA1P312C2AB18	18	0	PIPE ERW API 5L-B PSL.1 BE ASME B36.10M STD		0	1.8	M
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	ER	KEABW82R3A818...	18	10	ECC.REDUCER WELDED A234-WPB BW W/100% RT ASME B16...		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	SO	KVAA2A1C20018...	18	0.75	SOCKOLET CL 3000 A105 SW MSS SP-97		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	E9	K9ABW82R3A818	18	0	90 ELBOW(LR) WELDED A234-WPB BW W/100% RT ASME B16...		0	2	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	WF3	PWAA51137A810	10	0	WN FLANGE 300 LB A105 RF 125-250 AARH ASME B16.5 STD		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	P	PPAASB201C2AC0G	0.75	0	PIPE SMLS A106-B PE ASME B36.10M XS		0	19.5	M
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	E9	K9AA2A1C4000G	0.75	0	90 ELBOW(LR) CL 3000 A105 SW ASME B16.11		0	5	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	G3	G1A41133112800...	10	0	SPIRAL WOUND GASKET 300 LB HOOP: SS316 FILLER : GRAPH...		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1	TAAR61	BT	B1A12206:170	0	0	170 STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H ...	1	1	16	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1			*****	18	0	D502-18"-L100		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1			*****	18	0	U801-18"-G		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1			*****	18	0	G06-G3-18"-L931-E19538		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1			*****	18	0	ATTA PIPE END 45 DEG CUT		0	1	EA
AAB	WBS-2	AV-329088-TAAR61-H_AAB_NE...	-1	1			*****	0.75	0	General purpose ATTA		0	1	EA
AAC	WBS-2	AV-381055-AAR61-H_AAC_DE	-1	1			*****	8	0	TUBE WELDED AND SEAMLESS WROUGHT STEEL PIPE - ANSI ...		0	3.8	M
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1	TAAR61	P	PPAASB202C2AB08	8	0	PIPE SMLS A106-B BE ASME B36.10M STD		0	5.2	M
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1			*****	8	0	PIPE#SMLS,/WELDED, ASME B16.10/19/RSP		0	0.2	M
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1	TAAR61	E9	K9A8S82CIAB08	8	0	90 ELBOW(LR) SMLS A234-WPB BW ASME B16.9 STD		0	3	EA
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1	TAAR61	WF	PWAA21137A808	8	0	WN FLANGE 150 LB A105 RF 125-250 AARH ASME B16.5 STD		0	1	EA
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1	TAAR61	G	G1A21133112800...	8	0	SPIRAL WOUND GASKET 150 LB HOOP: SS316 FILLER : GRAPH...		0	1	EA
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1	TAAR61	BT	B1A12206:115	0	0	115 STUD BOLT W/2-NUT HEAVY HEX.NUT A193-B7 A194-2H ...	3/4	1	8	EA
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1			*****	8	0	PIPE TIE-IN POINT ATTA		0	1	EA
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1			*****	8	0	U801-8"-G		0	1	EA
ABC	WBS-4	AV-386038-TAAR61-H_ABC_NE	-1	1			*****	8	0	ATTA PIPE END 45 DEG CUT		0	1	EA

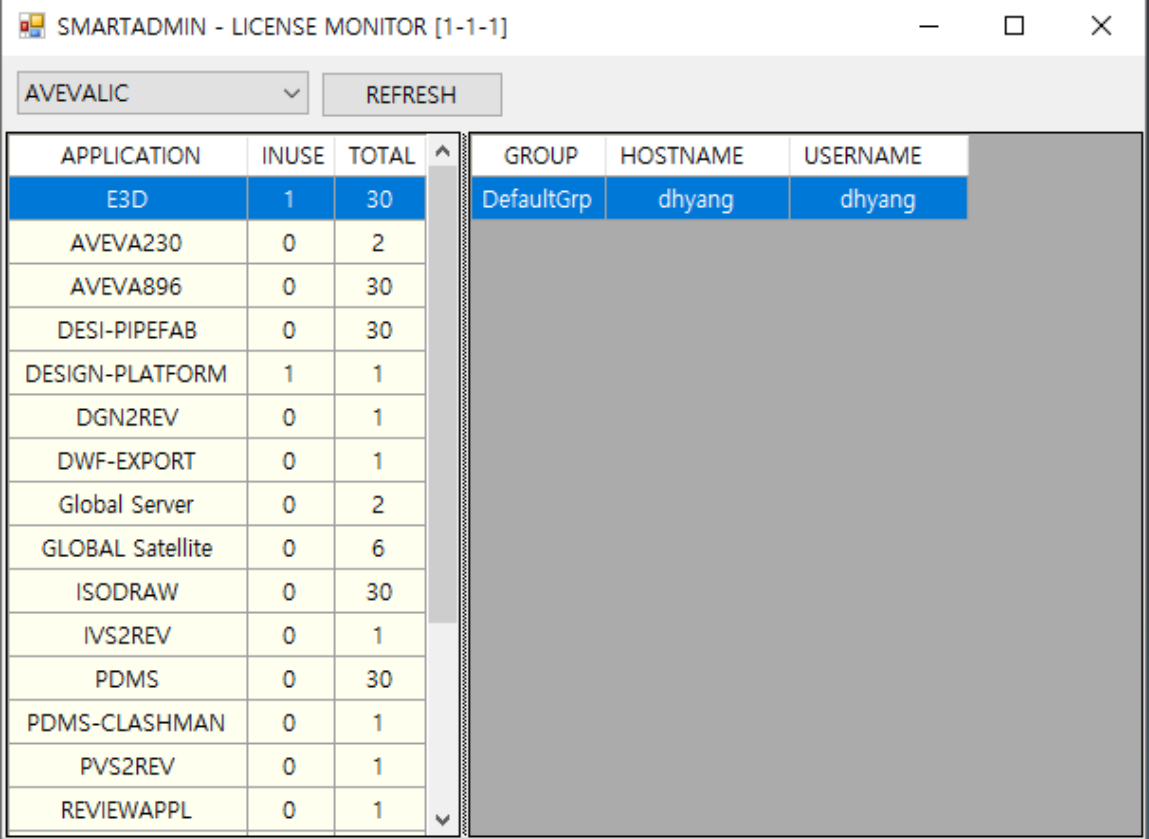
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# SmartAdmin™ / Samrt Model (Miscellaneous)

AVEVA Everything 3D Piping Admin. Automation

## SmartAdmin™ – LM (License Monitor)

- Real-time monitoring of AVEVA license holding status and usage.



SMARTADMIN - LICENSE MONITOR [1-1-1]

AVEVALIC ▼ REFRESH

APPLICATION	INUSE	TOTAL	GROUP	HOSTNAME	USERNAME
E3D	1	30	DefaultGrp	dhyang	dhyang
AVEVA230	0	2			
AVEVA896	0	30			
DESI-PIPEFAB	0	30			
DESIGN-PLATFORM	1	1			
DGN2REV	0	1			
DWF-EXPORT	0	1			
Global Server	0	2			
GLOBAL Satellite	0	6			
ISODRAW	0	30			
IVS2REV	0	1			
PDMS	0	30			
PDMS-CLASHMAN	0	1			
PVS2REV	0	1			
REVIEWAPPL	0	1			

Updated 2024-11-16 오후 9:37:33 0

# SmartModel™ – AI (Attribute Import)

- Automatically inputs data in Microsoft Excel format into user-defined properties of E3D system.
- Process Line Condition of piping Line-List can be imported easily.
- The content and properties being imported can be easily adjusted using E3D PML.

SMART MODEL - AI (ATTRIBUTE IMPORT)

IMPORT ATTRIBUTES

CATEGORY: PIPING REPORT: PIPING LINE CONDITION

ADD CONDITION

ID	LCTYPE	FLUID	SERIAL	HOLD	CLASS	SIZE1	SIZE2	FROM	TO	OPRES
▶	C..	A	CWR	383042	TAAR78	3			SA..	ATM
▶	C..	A	CWR	383044	TAAR78	2	3SI-08..		SA..	ATM
▶	C..	B	CWS	383041	TAAR78	2	3SI-08..		SA..	ATM
▶	H..	A	HBW	383005	TEBJ61	2	3SI-08..		SA..	ATM

Total Items = 4

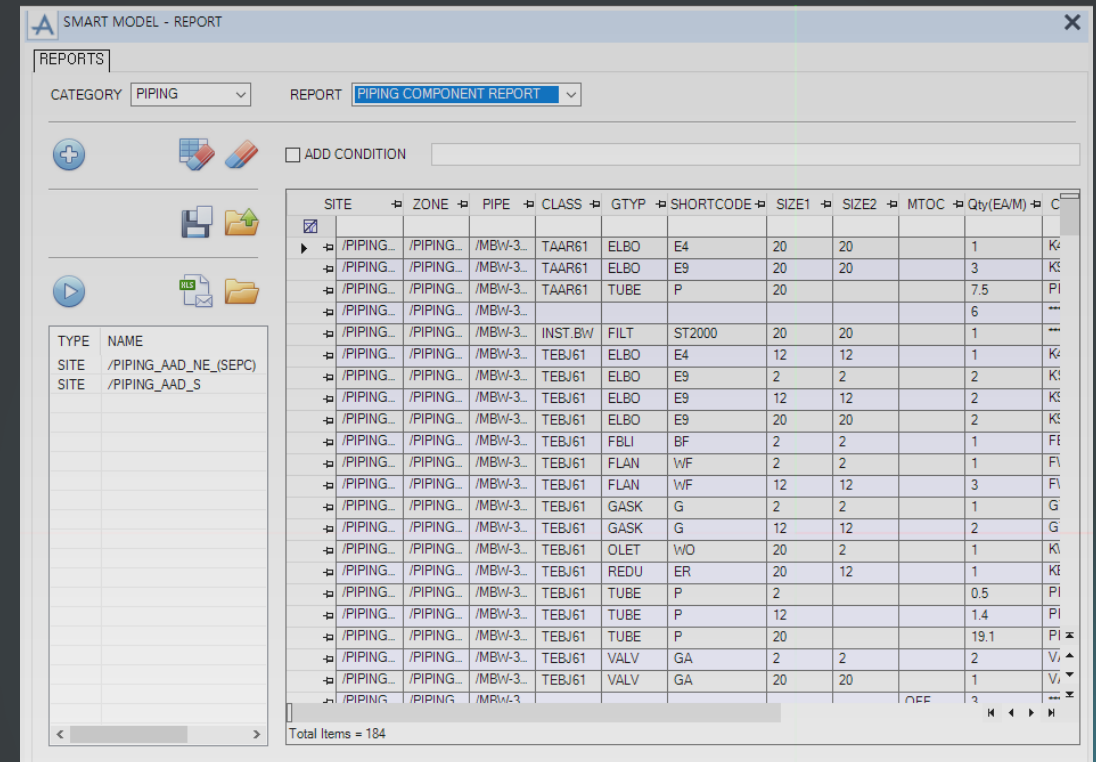
Drag a column header here to group by that column.

CHECK	SITE	ZONE	PIPE	SPEC	SGCLINEFR	SGCLINETO	SGCOPRES	SGCOTEMP	SGCDPRES	SGCDTEMP	SGCP	
▶	N	/PIPL..	/PIPIN..	/CW..	TAAR..	TP8981.1-04	3P-8371C	5	37.99999999..	9	65	L
▶	N	/PIPL..	/PIPIN..	/CW..	TAAR..	3P-8371C	TP8981.1-03	2	51	9	65	L
▶	N	/PIPL..	/PIPIN..	/CW..	TAAR..	3PI-8302C	TP8981.1-05	2	51	9	65	L
▶	N	/PIPL..	/PIPIN..	/CW..	TAAR..	TP8981.1-06	3PI-8302C	5	37.99999999..	9	65	L
▶	N	/PIPL..	/PIPIN..	/HB..	TEBJ..	-	-	-	-	-	-	-

Total Items = 5

# SmartModel™ – REPORT (Report Utility)

- Program that generates REPORT in the E3D system
- REPORT types can be added easily using E3D PML.
- For example, you can customize report like the below:
  - Piping Component Report
  - Instrument Report
  - Equipment Report



The screenshot displays the 'SMART MODEL - REPORT' application window. The 'REPORTS' section is active, with 'CATEGORY' set to 'PIPING' and 'REPORT' set to 'PIPING COMPONENT REPORT'. Below this, there are icons for adding conditions and a table for defining report columns. The main table lists various piping components with columns for SITE, ZONE, PIPE, CLASS, GTYP, SHORTCODE, SIZE1, SIZE2, MTOC, Qty(EA/M), and C. The table contains 184 items in total.

SITE	ZONE	PIPE	CLASS	GTYP	SHORTCODE	SIZE1	SIZE2	MTOC	Qty(EA/M)	C
/PIPING...	/PIPING...	/MBW-3...	TAAR61	ELBO	E4	20	20		1	K
/PIPING...	/PIPING...	/MBW-3...	TAAR61	ELBO	E9	20	20		3	K
/PIPING...	/PIPING...	/MBW-3...	TAAR61	TUBE	P	20			7.5	PI
/PIPING...	/PIPING...	/MBW-3...							6	---
/PIPING...	/PIPING...	/MBW-3...	INST.BW	FILT	ST2000	20	20		1	---
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	ELBO	E4	12	12		1	K
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	ELBO	E9	2	2		2	K
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	ELBO	E9	12	12		2	K
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	ELBO	E9	20	20		2	K
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	FBLI	BF	2	2		1	F
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	FLAN	WF	2	2		1	F
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	FLAN	WF	12	12		3	F
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	GASK	G	2	2		1	G
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	GASK	G	12	12		2	G
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	OLET	WO	20	2		1	K
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	REDU	ER	20	12		1	K
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	TUBE	P	2			0.5	PI
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	TUBE	P	12			1.4	PI
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	TUBE	P	20			19.1	PI
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	VALV	GA	2	2		2	V
/PIPING...	/PIPING...	/MBW-3...	TEBJ61	VALV	GA	20	20		1	V
/PIPING...	/PIPING...	/MBW-3...						OFF	3	---

This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by G1CNT to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.



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