Industrial Data Ontology

IDO Based Industry Standards

ISO 184 SC4 WG26 meeting Stavanger

October 2024

POSC Caesar Association

aibel

DNV

equinor

AkerSolutions

THE UNIVERSITY OF WESTERN AUSTRALIA

AkerBP

Industrial challenge

PDF DOCUMENTS
Design codes
Industry standards
Design standards
Specifications

TR2000

Manual Interpretation

SmartPlant

E3D

Comos

SAP

Manual design validation

VDS
Valve data sheet

PDS
Piping detail standard

PCS
Piping class sheet

MDS
Material data sheet

PLANT LIFE CYCLE

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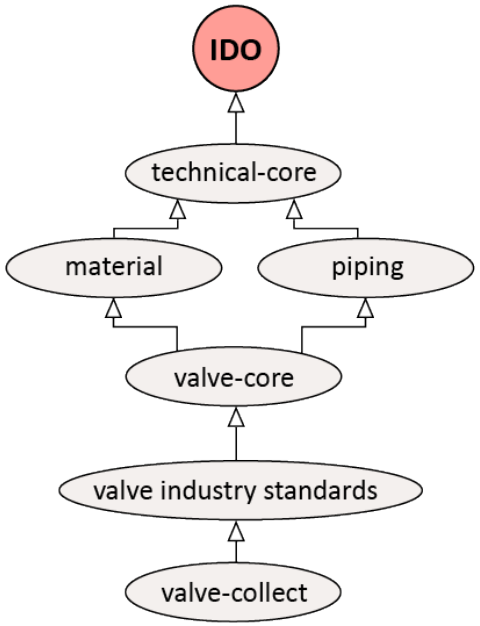
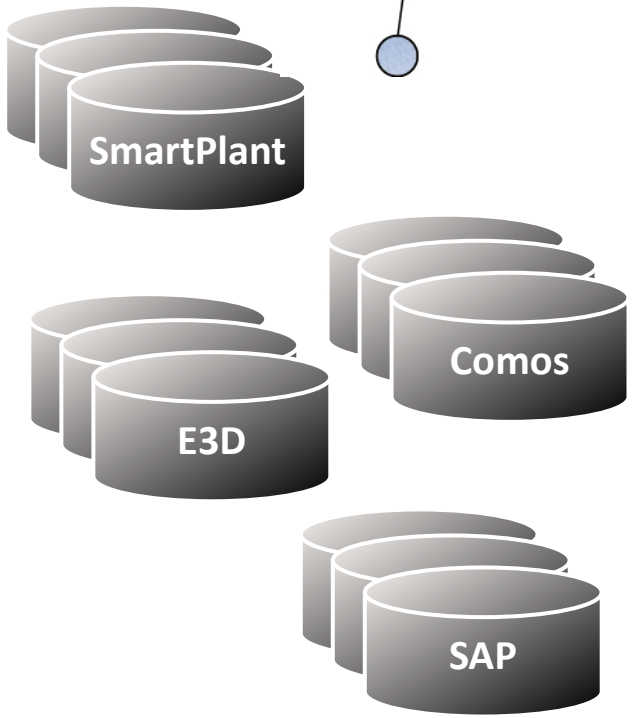
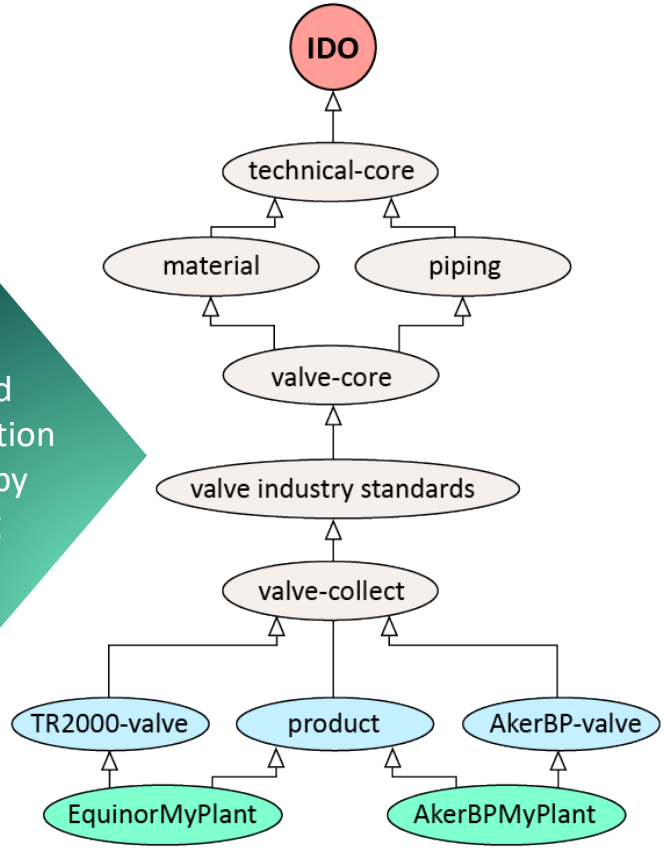
IDO based approach

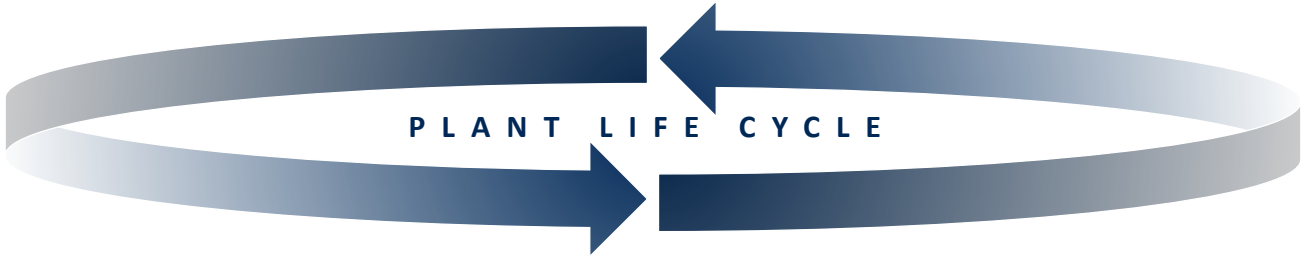


Project setup supported by reasoning



Automated design validation supported by reasoning





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Machine readable content

Semantic enrichment of content for selective access

Receive content of multiple standards for a given purpose.

XML

Machine readable document

Structured content of standard documents. Content can be processed by software.

PDF

Open digital format

Read and search on screen.

Paper

Standards available in paper

No machine interactions available.

Evolution of standards

Machine interpretable content

Self-learning analysis and validation cycles

Information modeling that expresses content and relation between elements.

Individually

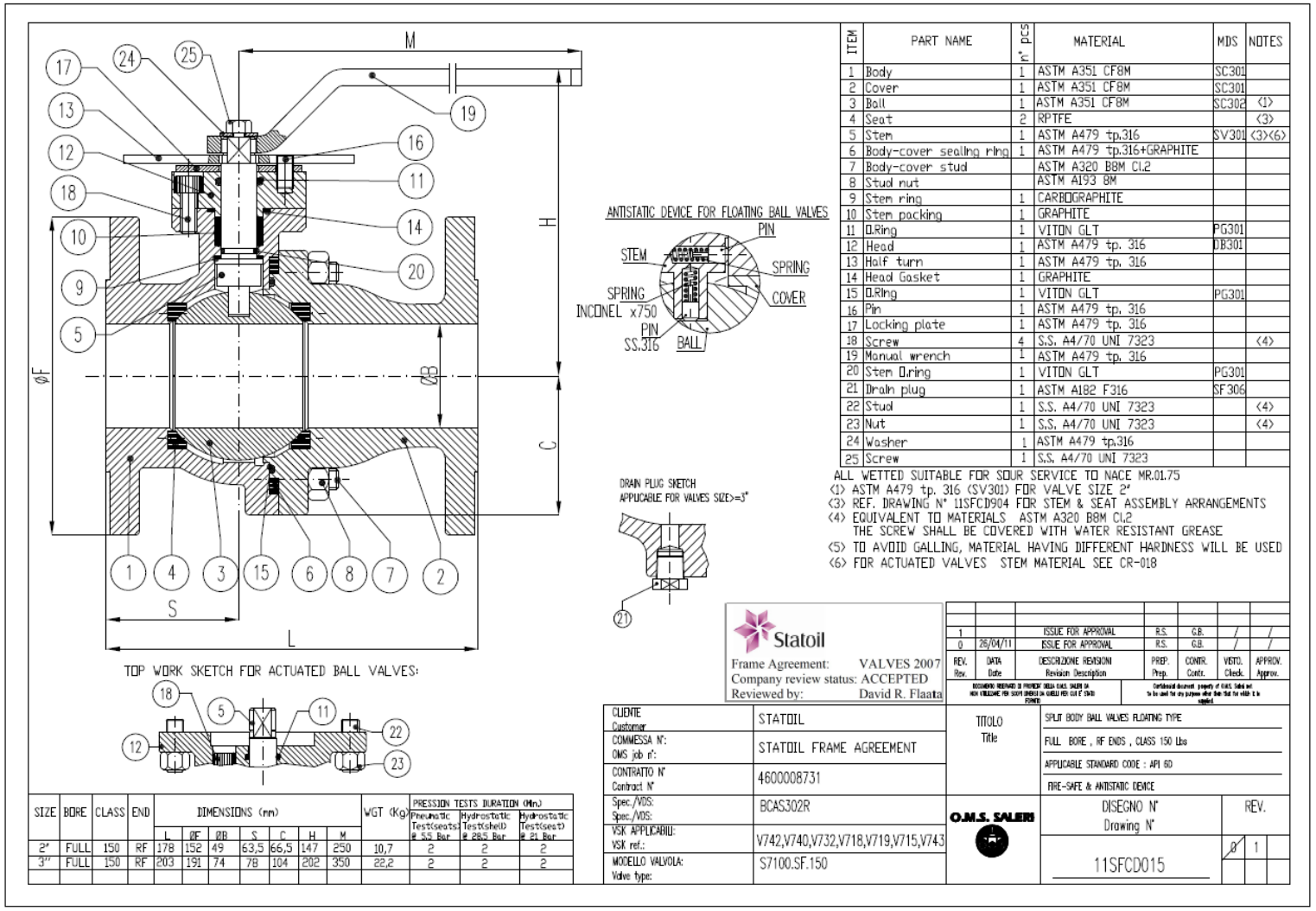
Standards as a service

Provides dynamic deliverables that can adapt to user needs.

Future extensions

Ontologies and semantic reasoning

Product compliant with specification – live demo



ITEM	PART NAME	n° pcs	MATERIAL	MDS	NOTES
1	Body	1	ASTM A351 CF8M	SC301	
2	Cover	1	ASTM A351 CF8M	SC301	
3	Ball	1	ASTM A351 CF8M	SC302	<1>
4	Seat	2	RPTFE		<3>
5	Stem	1	ASTM A479 tp.316	SV301	<3><6>
6	Body-cover sealing ring	1	ASTM A479 tp.316+GRAPHITE		
7	Body-cover stud		ASTM A320 B8M Cl.2		
8	Stud nut		ASTM A193 8M		
9	Stem ring	1	CARBOGRAPHITE		
10	Stem packing	1	GRAPHITE		
11	O.Ring	1	VITON GLT	PG301	
12	Head	1	ASTM A479 tp. 316	DB301	
13	Half turn	1	ASTM A479 tp. 316		
14	Head Gasket	1	GRAPHITE		
15	O.Ring	1	VITON GLT	PG301	
16	Pin	1	ASTM A479 tp. 316		
17	Locking plate	1	ASTM A479 tp. 316		
18	Screw	4	S.S. A4/70 UNI 7323		<4>
19	Manual wrench	1	ASTM A479 tp. 316		
20	Stem O.ring	1	VITON GLT	PG301	
21	Drain plug	1	ASTM A182 F316	SF306	
22	Stud	1	S.S. A4/70 UNI 7323		<4>
23	Nut	1	S.S. A4/70 UNI 7323		<4>
24	Washer	1	ASTM A479 tp.316		
25	Screw	1	S.S. A4/70 UNI 7323		

ALL WETTED SUITABLE FOR SOUR SERVICE TO NACE MR.01.75
<1> ASTM A479 tp. 316 <SV301> FOR VALVE SIZE 2"
<3> REF. DRAWING N° 11SFCD904 FOR STEM & SEAT ASSEMBLY ARRANGEMENTS
<4> EQUIVALENT TO MATERIALS ASTM A320 B8M Cl.2
THE SCREW SHALL BE COVERED WITH WATER RESISTANT GREASE
<5> TO AVOID GALLING, MATERIAL HAVING DIFFERENT HARDNESS WILL BE USED
<6> FOR ACTUATED VALVES STEM MATERIAL SEE CR-018

Statoil
Frame Agreement: VALVES 2007
Company review status: ACCEPTED
Reviewed by: David R. Flaata

REV. Rev.	DATA Date	DESCRIZIONE REVISIONI Revision Description	PREP. Prep.	CONTR. Contr.	VISTO. Check.	APPROV. Approv.
1		ISSUE FOR APPROVAL	R.S.	G.B.	/	/
0	26/04/11	ISSUE FOR APPROVAL	R.S.	G.B.	/	/

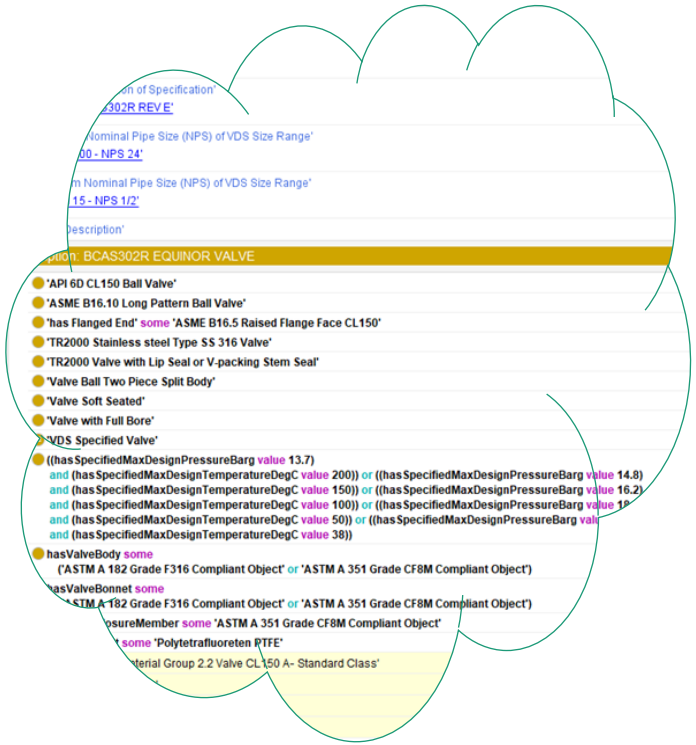
CLIENTE Customer	STATOIL
COMMESSA N°: OMS job n°:	STATOIL FRAME AGREEMENT
CONTRATTO N° Contract N°	4600008731
Spec./VDS: Spec./VDS:	BCAS302R
VSK APPLICABILI: VSK ref.:	V742,V740,V732,V718,V719,V715,V743
MODELLO VALVOLA: Valve type:	S7100.SF.150

TITOLO Title: SPLIT BODY BALL VALVES FLOATING TYPE
FULL BORE , RF ENDS , CLASS 150 Lbs
APPLICABLE STANDARD CODE : API 6D
FIRE-SAFE & ANTISTATIC DEVICE

O.M.S. SALERI

DISEGNO N° Drawing N°: 11SFCD015
REV.: 0 1

SIZE	BORE	CLASS	END	DIMENSIONS (mm) L	ØF	ØB	S	C	H	M	WGT (Kg)	PRESSION TESTS DURATION (Min.) Pneumatic Test(seats) # 5,5 Bar	Hydrostatic Test(shell) # 28,5 Bar	Hydrostatic Test(seat) # 21 Bar
2"	FULL	150	RF	178	152	49	63,5	66,5	147	250	10,7	2	2	2
3"	FULL	150	RF	203	191	74	78	104	202	350	22,2	2	2	2



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NORSOK – Standard Norge