

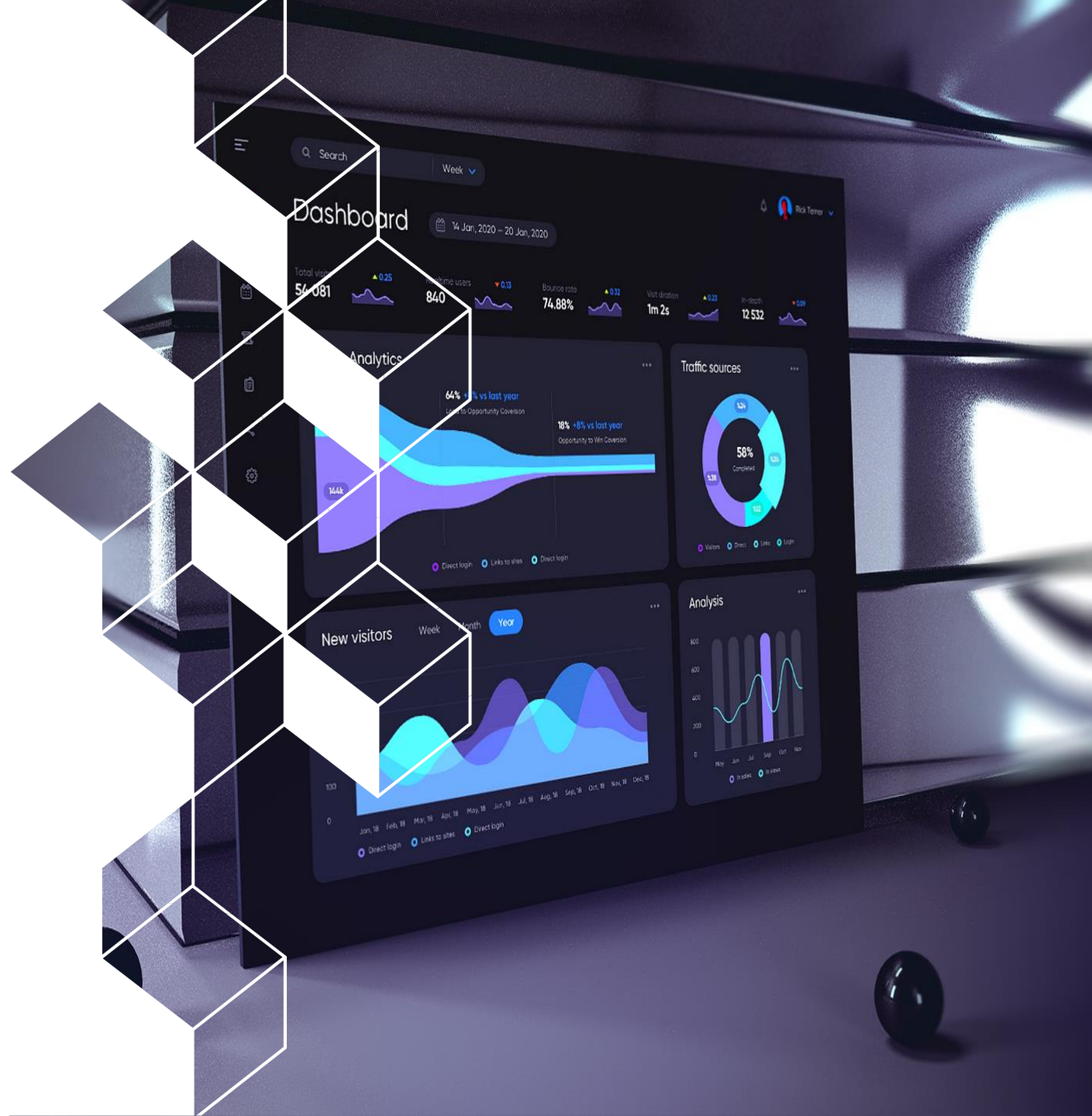


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CSS Phoebus For MUSCADE

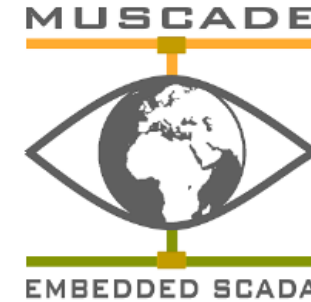
Katy SAINTIN
IRFU, CEA, France

EPICS Collaboration Meeting - April 7th - 11th 2025
ISIS Neutron and Muon Source



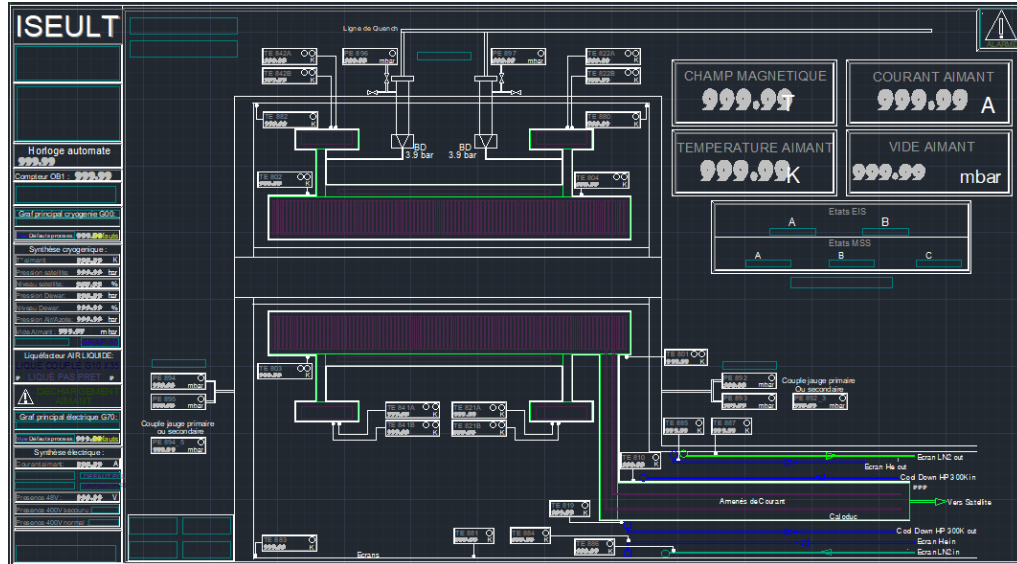
MUSCADE : μ Embedded SCADA

- ✓ Embedded in one device
- ✓ In-house solution @CEA
- ✓ Only 2 developers

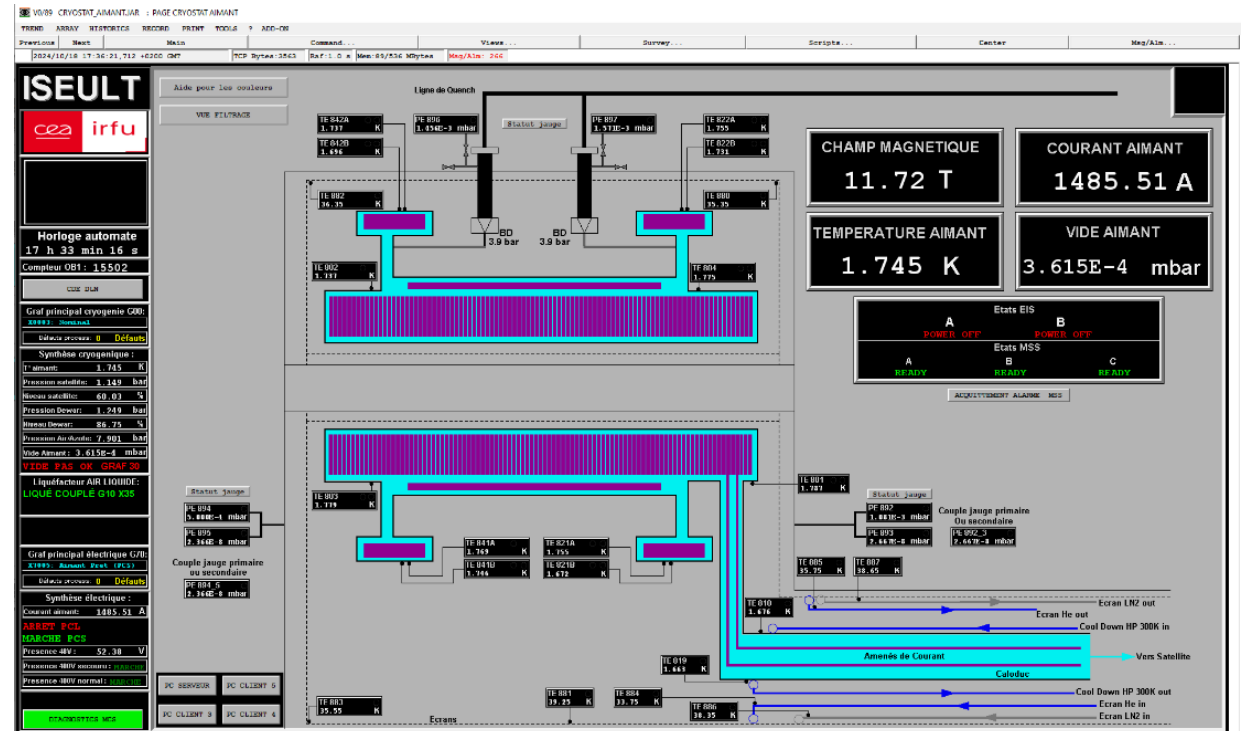


- ✓ Full Java solution
- ✓ Windows OS
- ✓ SIEMENS PLC
- ✓ Optimized archiving system
- ✓ Advanced alarms management system
- ✓ Secured remote access with certificates

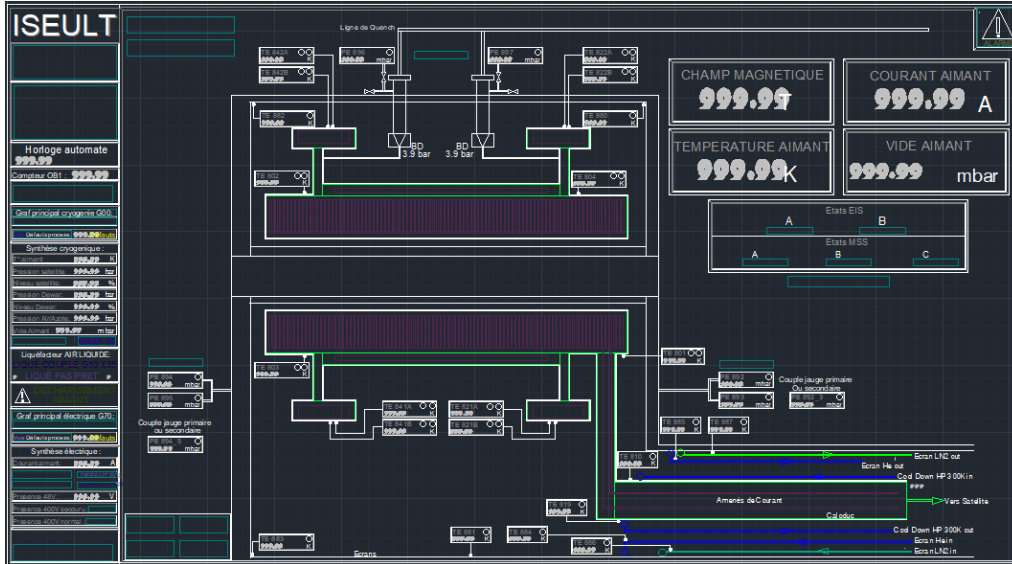
TOOLKITS TO BUILD SUPERVISION GUI



AUTOCAD



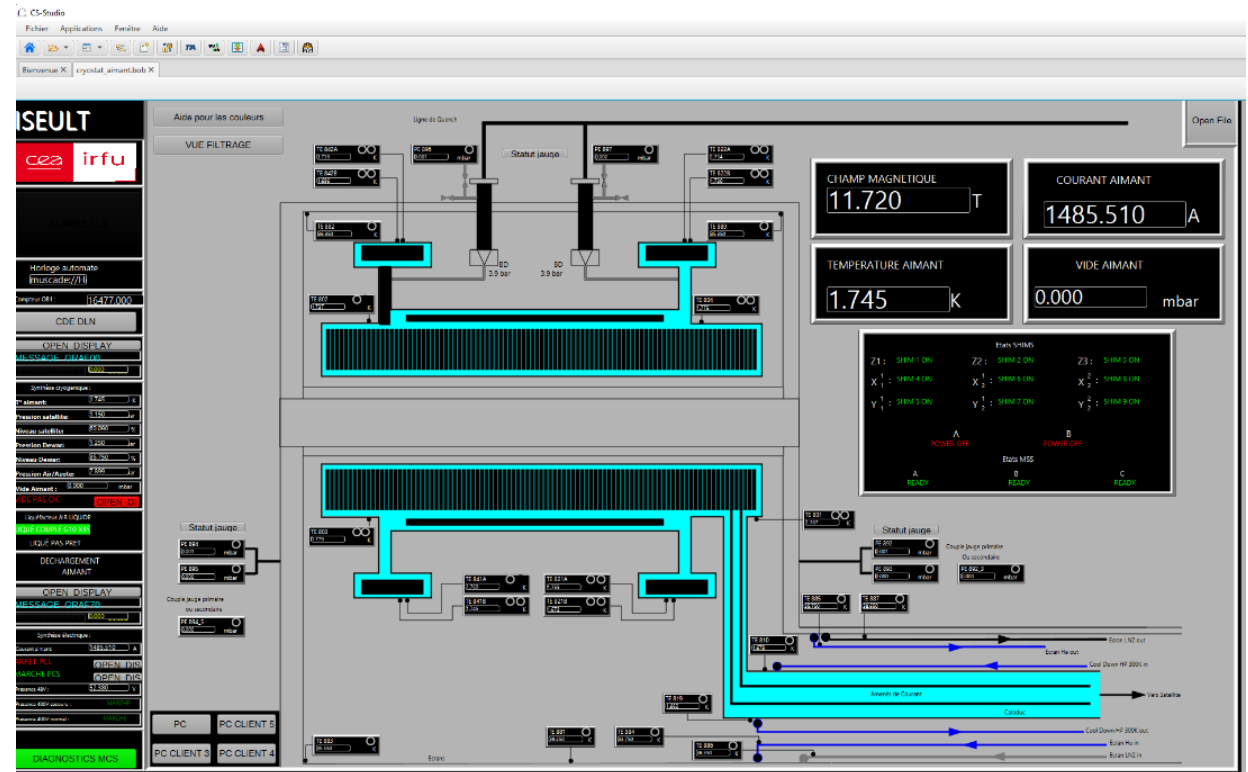
DXF2BOB CONVERTOR DEVELOPMENT



AUTOCAD



cs|studio



Prefill rules, widgets name

The screenshot displays the CS-Studio interface for editing a process diagram. On the left, a 'Widgets' list is visible, containing various text symbols and action buttons. A red box highlights this list, with the text 'Widget naming' written next to it. The main area shows a process diagram with components like 'COMPRESSEUR', 'PT 218', 'PV 223', 'FV 701', 'PT 801', 'PT 802', 'FV 814', 'GDP1', 'LCV 7201', 'LCV 1005', 'LCV 1006', 'LCV 2005', and 'LCV 2006'. Two 'Règles' (Rules) dialog boxes are open, both for the widget 'TextSymbol_FV701'. The top dialog shows rules for 'foreground_color' with color expressions. The bottom dialog shows rules for 'symbols[0]' with text expressions.

Widget naming

Règles (Top): Modifier les règles pour le widget: text-symbol TextSymbol_FV701

Règle	Ajouter	Supprimer	Vers le haut	Vers le bas	Dupliquer	Afficher le scr...
rule_foreground_color						
rule_text						

Property ID: foreground_color, {foreground_color=Text...}

#	Nom du...	Déclench...	Ajouter	Supprimer	Vers le h...	Vers le bas
0	FV701	✓				

Expression booléenne	Expression de valeur	Ajouter	Supprimer	Vers le haut	Vers le bas
pv0	RGB(0,240,0)				
!(pv0)	RGB(240,0,0)				

OK Annuler

Règles (Bottom): Modifier les règles pour le widget: text-symbol TextSymbol_FV701

Règle	Ajouter	Supprimer	Vers le haut	Vers le bas	Dupliquer	Afficher le scr...
rule_foreground_color						
rule_text						

Property ID: symbols[0], {symbol= }

#	Nom du...	Déclench...	Ajouter	Supprimer	Vers le h...	Vers le bas
0	FV701	✓				

Expression booléenne	Expression de valeur	Ajouter	Supprimer	Vers le haut	Vers le bas
pv0	OUVERTE				
!(pv0)	FERMEE				

OK Annuler

MuscadePV Factory development

MUSCADE settings for Phoebus

```
muscadsettings.ini
1 # Default datasource
2 # org.phoebus.pv/default=ca
3 org.phoebus.pv/default=muscade
4
5 # Muscade server host
6 heps.phoebus.pv.muscade/muscade.host=X.X.X.XX
7
8 # Muscade read SSL port
9 heps.phoebus.pv.muscade/muscade.readport=XXXX
10 # Muscade write SSL port
11 heps.phoebus.pv.muscade/muscade.writeport=XXXX
12 # Badge INCA or pl2 alias certificat
13 # heps.phoebus.pv.muscade/muscade.certificate=SAINTIN Katy
14 heps.phoebus.pv.muscade/muscade.certificate=CertificatAlias
15
```

CS-Studio

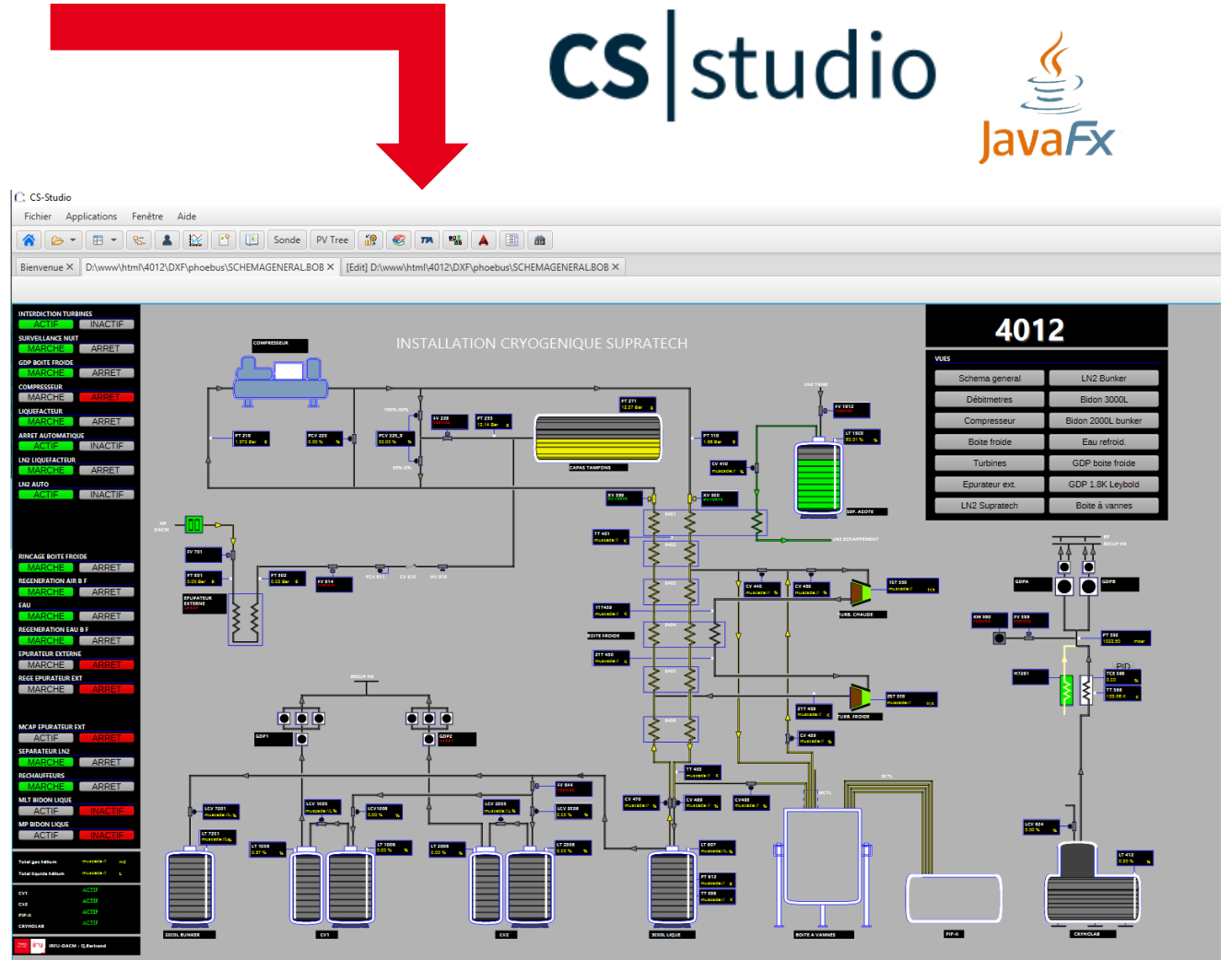
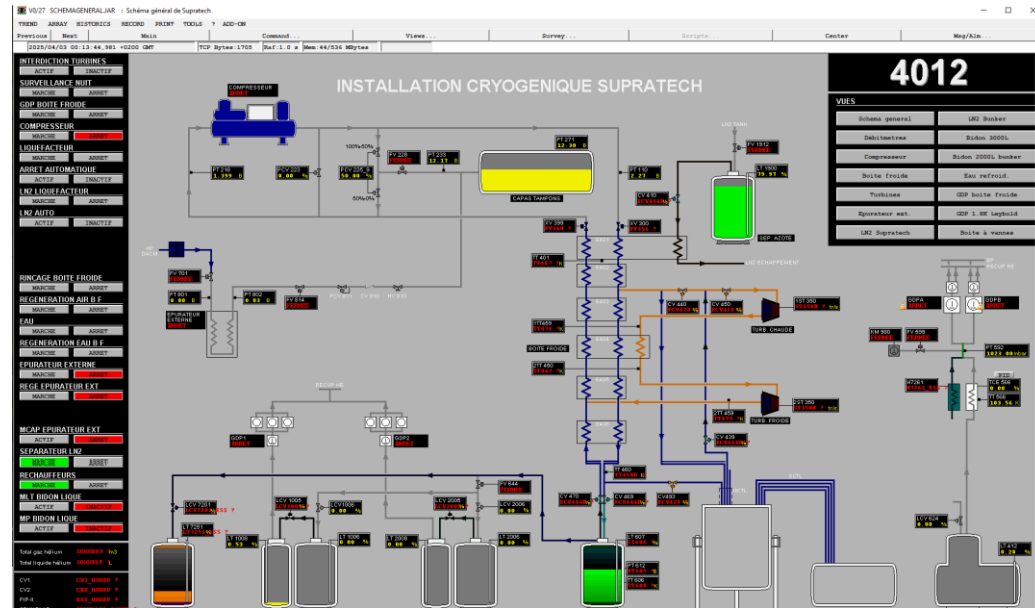
Fichier Applications Fenêtre Aide

Bienvenue X [Edit] VALUES.BOB X VALUES.BOB X D:\www\html\4012\DXF\phoebus\SCHEMAGENERAL.BOB X [Edit] D:\www\html\4012\DXF\phoebus\SCHEMAGENERAL.BOB X * PV Table >

Type to filter PVs...

Sélectionné	PV	Valeur	Description	Horodatag
☒	muscade://FV1912	0 = 0	VALEUR RÔELLE CDE FV 702 ALIMENTATION HE ♦PURATEUR INTERNE	2025-04-05 23:03:48.121124600
☒	muscade://FV228	0 = 0	Vanne d'isolement circuit capa tampon	2025-04-05 23:00:23.887910300
☒	muscade://FV599	0 = 0	VALEUR RÔELLE CDE FV 599 VANNE RIN♦AGE CRYOLAB	2025-04-05 23:03:47.620828300
☒	muscade://FV644	0 = 0	VALEUR RÔELLE CDE FV 644 VANNE ALIMENTATION LHE CV1 CV2	2025-04-05 23:03:48.143115600
☒	muscade://FV701	0 = 0	VALEUR RÔELLE CDE FV 701 ALIMENTATION HE ♦PURATEUR EXTERNE	2025-04-05 23:00:23.833910100
☒	muscade://FV814	0 = 0	VALEUR RÔELLE CDE FV 814 SORTIE HE VERS CAPA	2025-04-05 23:03:43.758352700
☒	muscade://FV990A	0 = 0	Vanne de refoulement ♦ la r♦cup	2025-04-05 23:00:32.747946300
☒	muscade://FV990B	0 = 0	Vanne de refoulement ♦ la r♦cup	2025-04-05 23:03:48.122123400
☒	muscade://FV991A	0 = 0	Vanne de refoulement ♦ la BP	2025-04-05 23:03:48.130932800
☒	muscade://FV991B	0 = 0	Vanne de refoulement ♦ la BP	2025-04-05 23:03:47.678846900
☒	muscade://KA100	0 = 0	Retour de marche moteur compresseur	2025-04-05 23:00:33.113559400
☒	muscade://KM980	0 = 0	KM980;Addr=@FipAddress(TS,0xb2a);Dev=S2(2);Format=0/1;Type=TS	2025-04-05 23:03:47.608871000
☒	muscade://LCV1006	0,00 %	LCV1006;Addr=@FipAddress(AS,0x377);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:03:46.317651100
☒	muscade://LCV2006	0,00 %	LCV2006;Addr=@FipAddress(AS,0x2b9);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:03:46.724678600
☒	muscade://LCV624	0,00 %	LCV624;Addr=@FipAddress(AS,0x2af);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:00:23.869912200
☒	muscade://LT1006	0,00 %	LT1006;Addr=@FipAddress(AS,0x2b3);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:00:23.723911200
☒	muscade://LT1008	0,00 %	LT1008;Addr=@FipAddress(AS,0x2cd);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:03:45.666099200
☒	muscade://LT1900	0,00 %	VALEUR RÔELLE NIVEAU S♦PARATEUR N2	2025-04-05 23:00:23.887910300
☒	muscade://LT2008	0,00 %	LT2008;Addr=@FipAddress(AS,0x2cf);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:00:23.849910900
☒	muscade://LT412	0,00 %	LT412;Addr=@FipAddress(AS,0x2b5);Dev=S2(2);Format=#0.00;Type=FS	2025-04-05 23:00:23.713909600
☒	muscade://MCAP	0 = 0	MARCHE ♦PURATEUR EXTERNE VERS CAPA	2025-04-05 23:03:47.203692200
☒	muscade://MCH	0 = 0	M♦MOIRE MARCHE R♦CHAUFFEUR	2025-04-05 23:03:48.101965800
☒	muscade://MCP	0 = 0	variable interne (♦ calculer!)	2025-04-05 23:03:45.608088100
☒	muscade://MEPU	0 = 0	MARCHE ♦PURATEUR EXTERNE	2025-04-05 23:03:48.119125600
☒	muscade://MGDP	0 = 0	MARCHE GROUPE DE POMPAGE INFO DE S4	2025-04-05 23:03:47.133827100
☒	muscade://MGDP1	0 = 0	MGDP1;Addr=@FipAddress(TS,0xb4a);Dev=S2(2);Format=0/1;Type=TS	2025-04-05 23:00:23.939908200
☒	muscade://MGDP2	0 = 0	MGDP2;Addr=@FipAddress(TS,0xb4b);Dev=S2(2);Format=0/1;Type=TS	2025-04-05 23:00:23.906908600
☒	muscade://MGDPA	0 = 0	Commande marche GDPA	2025-04-05 23:03:48.144112500
☒	muscade://MGDPB	0 = 0	Commande marche GDPB	2025-04-05 23:03:47.619870000
☒	muscade://MLN1	0 = 0	MARCHE AZOTE S♦PARATEUR	2025-04-05 23:03:48.142116900
☒	muscade://MLT	0 = 0	BRIDAGE LIQU♦ SUR NIVEAU 2000 LITRES	2025-04-05 23:03:48.108974600
☒	muscade://MP	0 = 0	R♦GULATION PRESSION DU 2000 LITRES	2025-04-05 23:03:48.080893800
☒	muscade://PCV223	0,00 %	Vanne de r♦gulation by-pass	2025-04-05 23:03:44.127031400
☒	muscade://PCV225_9	0,00 %	Vanne en split range HP/9	2025-04-05 23:03:46.573828000

Results ...





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Any questions ?

Thank you for your attention

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