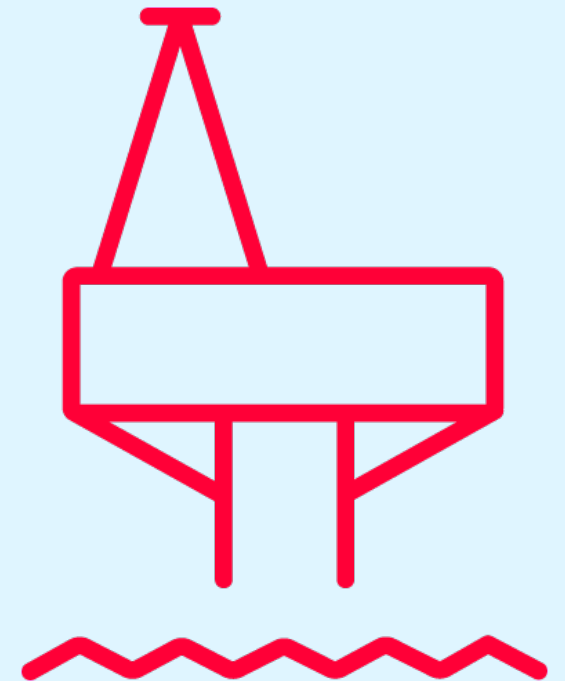


Building the digital asset

THTH Autumn webinar 2025





Bent S Lund
Team Lead LCI Solution

- 25 years in Equinor in Facility Life Cycle Information
 - LCI in projects
 - Requirements Management
 - Application Portfolio Development
- Located in Trondheim, Norway



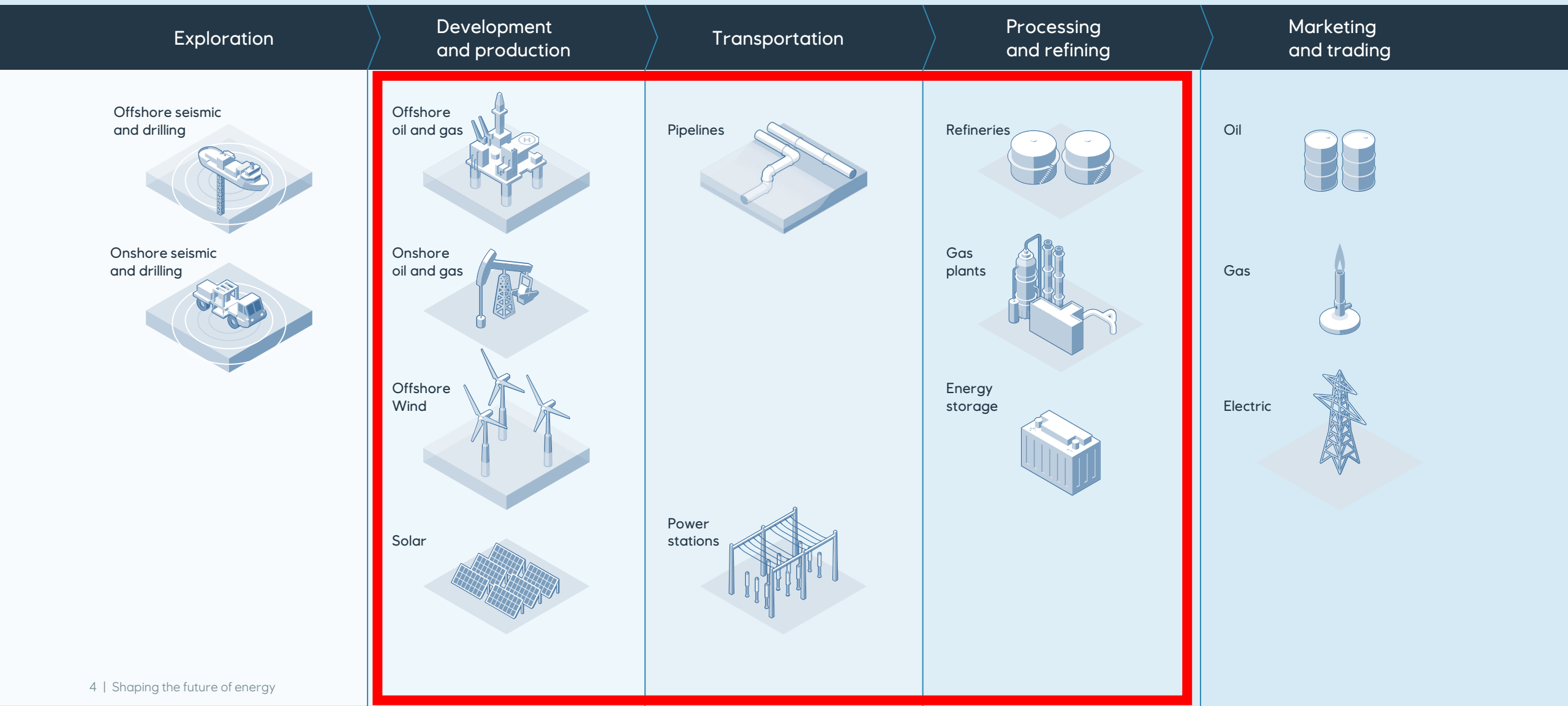
equinor

Energy for people.
Progress for society.
Searching for better.

Equinor corporate presentation

Published 01 APRIL 2025

Our value chain is mainly focused from development and until processing



wood.

subsea 7

aibel®



KONGSBERG

KVÆRNER™

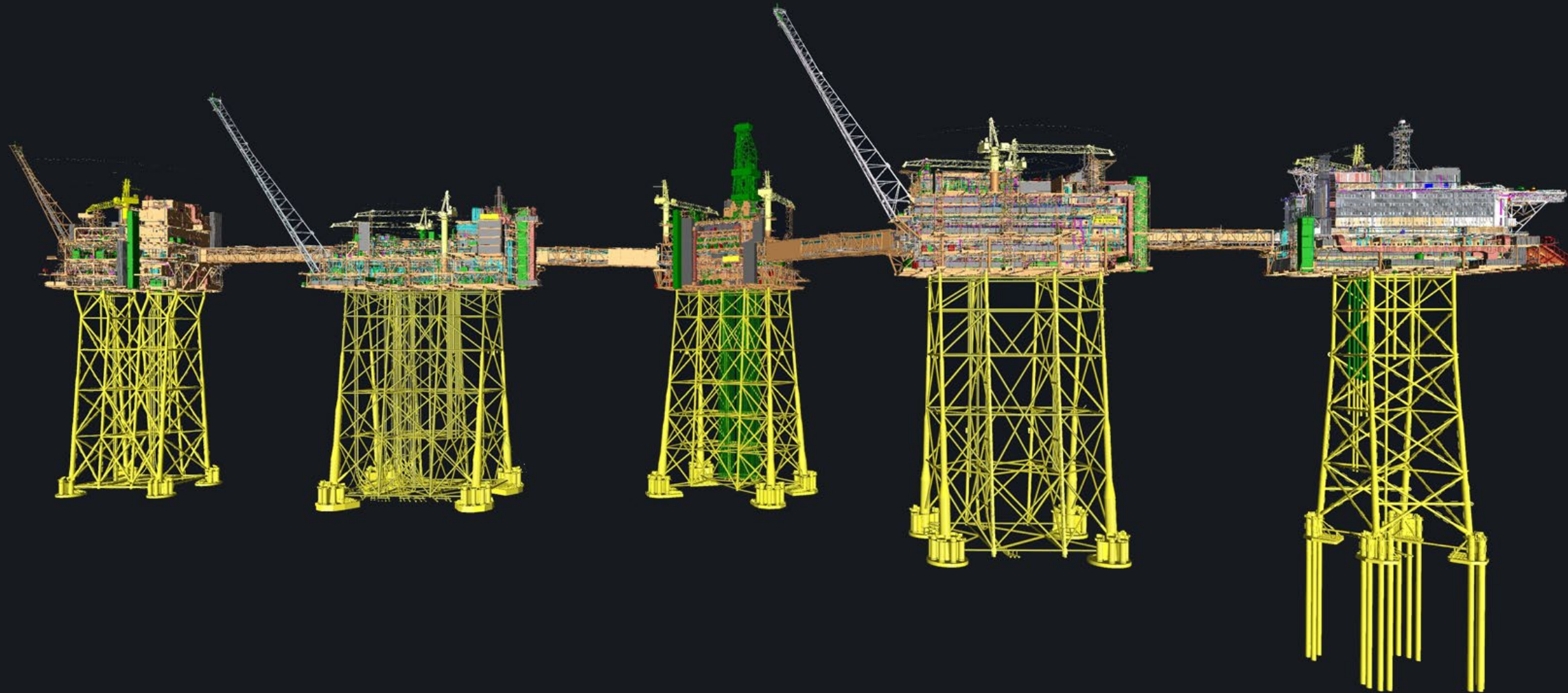


SIEMENS

SAMSUNG

ABB





Equinor Global Master 3D models

3D ECOSYSTEM

Control Center

Global control center

System reports

Configuration

Legend + Add plant

| Daamen enabled | Daamen status | Name | Plant code | STD | Responsible | Locations |
|--------------------------|-------------------------------------|---|------------|-----|------------------------------------|--|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Aspnes S&S | AAA | STD | Helen Koemelund Skår (Bouvet A...) | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> MS <input checked="" type="checkbox"/> VAB <input checked="" type="checkbox"/> WGN |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Aspnes Licensas | AHA | STD | Sven Erik Høgsrovd | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> AXN <input checked="" type="checkbox"/> VAC <input checked="" type="checkbox"/> DMG <input checked="" type="checkbox"/> WAO |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | AVEVA Plant Somsle | APS | | Jonas Faltstad | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> AMS <input checked="" type="checkbox"/> VAB |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Aspnes Subsea | ASC | STD | Helen Koemelund Skår (Bouvet A...) | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> AMO |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | ASG | ASG | STD | Helen Koemelund Skår (Bouvet A...) | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> AMS <input checked="" type="checkbox"/> VAB |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bahr S | BAA | STD | Sven Erik Høgsrovd | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> SHI |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bahr SII | BAH | STD | Sven Erik Høgsrovd | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> SHI |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bahr IESQ | BAC | STD | Siv Karin Steurland | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> MOH <input checked="" type="checkbox"/> IMOS <input checked="" type="checkbox"/> BOM <input checked="" type="checkbox"/> BOM |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Rato Onshore Facility | BOF | STD | Srinivas Dnyu | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> CAM <input checked="" type="checkbox"/> ECR <input checked="" type="checkbox"/> BRB <input checked="" type="checkbox"/> DRD |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bahr II Onshore Substation | BQA | STD | Sven Erik Høgsrovd | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> EPK |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bahr III Onshore Substation | BQB | STD | Sven Erik Høgsrovd | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> EPK |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | CAJ J-Aspnes | CAJ | STD | Sven Erik Høgsrovd | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> PFS |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | Bacohou FFSQ | CAB | STD | Siv Karin Steurland | <input checked="" type="checkbox"/> HUB <input checked="" type="checkbox"/> GDP <input checked="" type="checkbox"/> MOH <input checked="" type="checkbox"/> IMOS <input checked="" type="checkbox"/> BOM |

100

Control center

System reports

Configuration

Global control center

Legend + Add plant

Start Stop Kill Refresh Renew

Search...

| <input type="checkbox"/> | Daemon enabled | Daemon status | Name | Plant code | STID | Responsible | Locations |
|--------------------------|----------------|---------------|---|------------|------|-------------|---|
| <input type="checkbox"/> | ✓ | ✓ | Aasgard A | AAA | STID | | ■ HUB ■ ▲ AKS ■ VAB ■ ▲ WGN |
| <input type="checkbox"/> | ✓ | ✓ | Aasta Hansteen | AHA | STID | | ■ HUB ■ ASN ■ VAC ■ (VAH) ■ ▲ VAO ■ (VAG) ■ (VAS) ■ (VAT) |
| <input type="checkbox"/> | ✗ | ✗ | AVEVA Plant Sample | APS | | | |
| <input type="checkbox"/> | ✓ | ✓ | Aasgard Subsea | ASC | STID | | ■ HUB ■ AKO |
| <input type="checkbox"/> | ✓ | ✓ | | ASG | STID | | ■ HUB ■ AKS ■ VAB |
| <input type="checkbox"/> | ✓ | ✓ | Baltyk II | BAA | STID | | ■ HUB ■ ▲ SMU |
| <input type="checkbox"/> | ✓ | ✓ | Baltyk III | BAB | STID | | ■ HUB ■ ▲ SMU |
| <input type="checkbox"/> | ✓ | ✓ | Raia FPSO | BMC | STID | | ■ ▲ HUB ■ ▲ MOH ■ (MOS) ■ ▲ (BOM) ■ ▲ (BOU) ■ ▲ (CAM) ■ ▲ (COS) ■ ▲ (EBR) ■ ▲ (SID) |
| <input type="checkbox"/> | ✓ | ✓ | Raia Onshore Facility | BOF | STID | | ■ HUB ■ ▲ WPN ■ (WPB) |
| <input type="checkbox"/> | ✓ | ✓ | Baltyk II Onshore Substation | BSA | STID | | ■ HUB ■ ▲ EPK |
| <input type="checkbox"/> | ✓ | ✓ | Baltyk III Onshore Substation | BSB | STID | | ■ HUB ■ ▲ EPK |
| <input type="checkbox"/> | ✓ | ✓ | CAJ J Askepott | CAJ | STID | | ■ HUB ■ PRS |
| <input type="checkbox"/> | ✓ | ✓ | Bacalhau FPSO | CAR | STID | | ■ ▲ HUB ■ GDP ■ MOH ■ (MOS) ■ ▲ (BOM) ■ ▲ (SID) ■ ▲ (SUB) |

Columns Filters

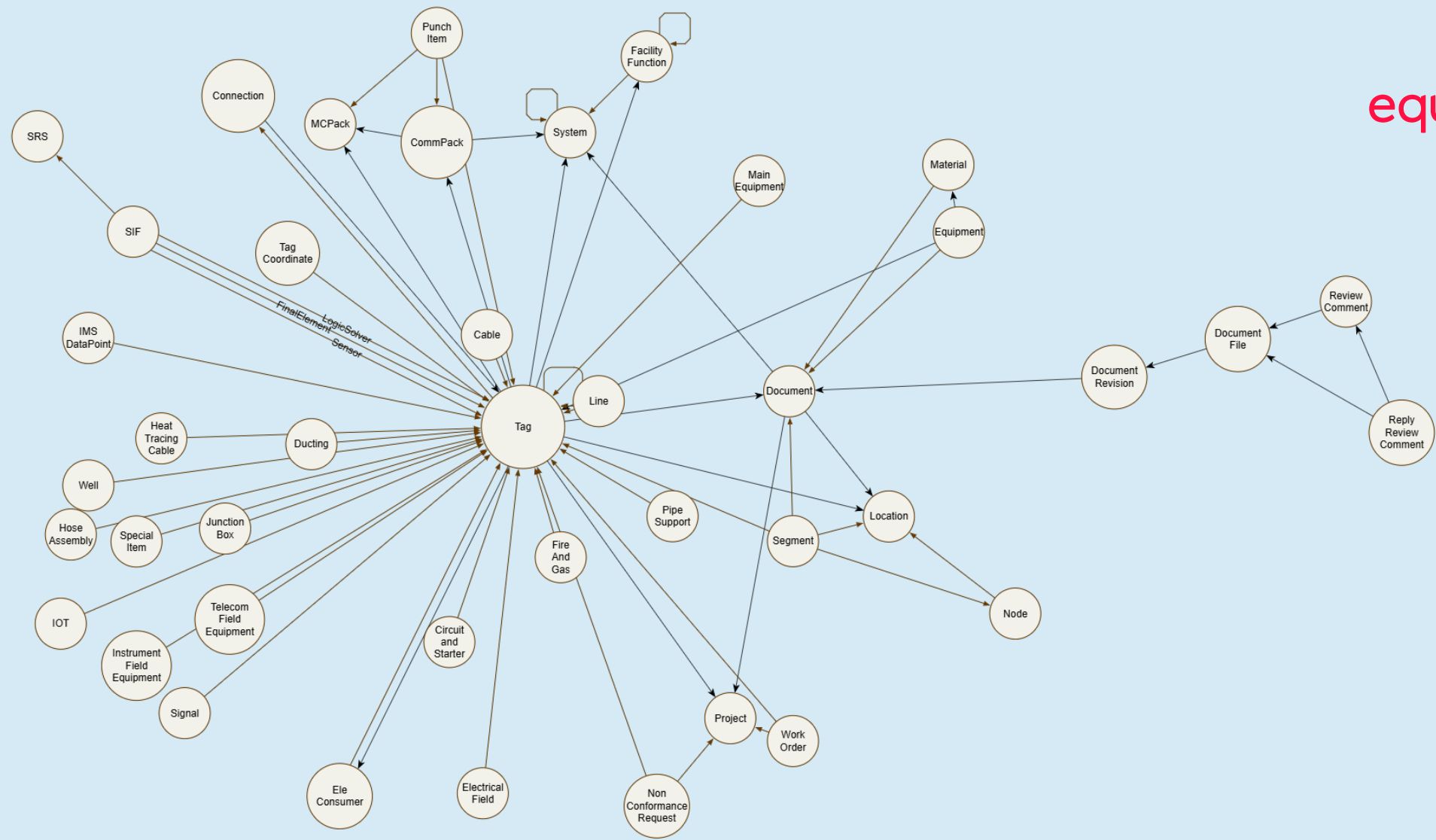
Collapse



Rows: 103



equinor



Spec

Transport

Primary systems

Consume, enrich, combine, visualize, analyze



TR2231

TR2381

TR0052

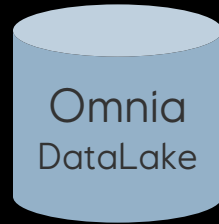
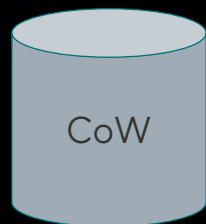
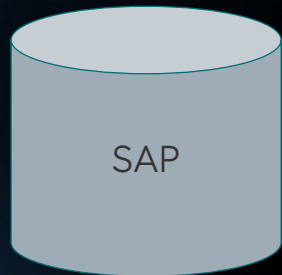
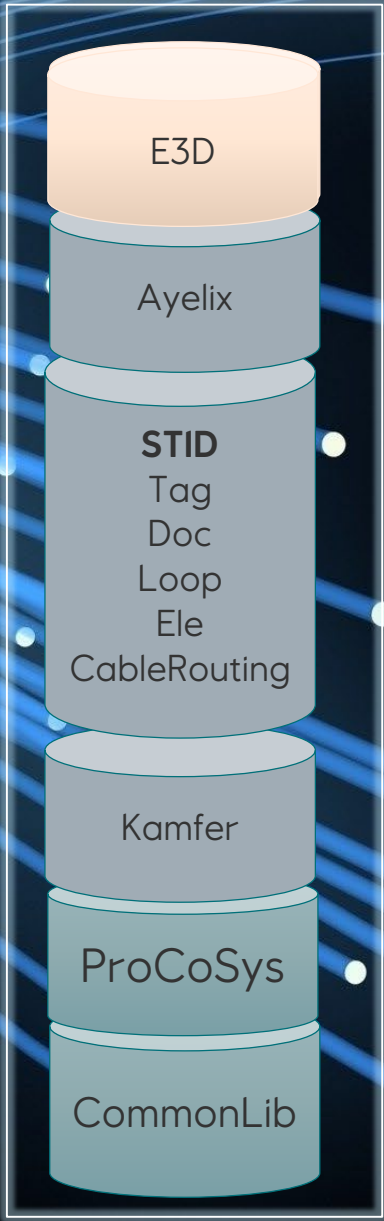
TR1970

TR1033

TR3111

E3D
Global

Technical Information Exchange - TIE



Business data products



Echo



Alarm



Permit Vision



Power BI



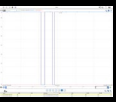
eCm



Holo Lens



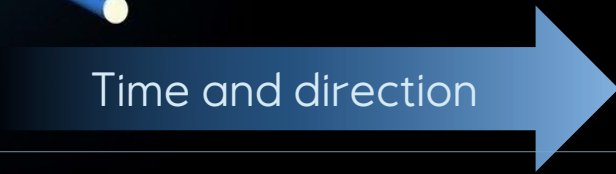
fusion



IMS



PMATE



| | |
|--------|---|
| TR2231 | LCI requirements – 3D CAD model |
| TR2381 | LCI Requirements |
| TR0052 | Equinor Engineering Numbering System |
| TR1970 | 2D CAD standards and symbols |
| TR1033 | Quality requirements for master data for technical objects in SAP |
| TR3111 | LCI Requirements - Data Content and Transfer |

Time and direction





LogViewer

DropPoint 1.0

DropPoint 1.5

Subscriptions

Code Tables

News

Learn More

About





Help

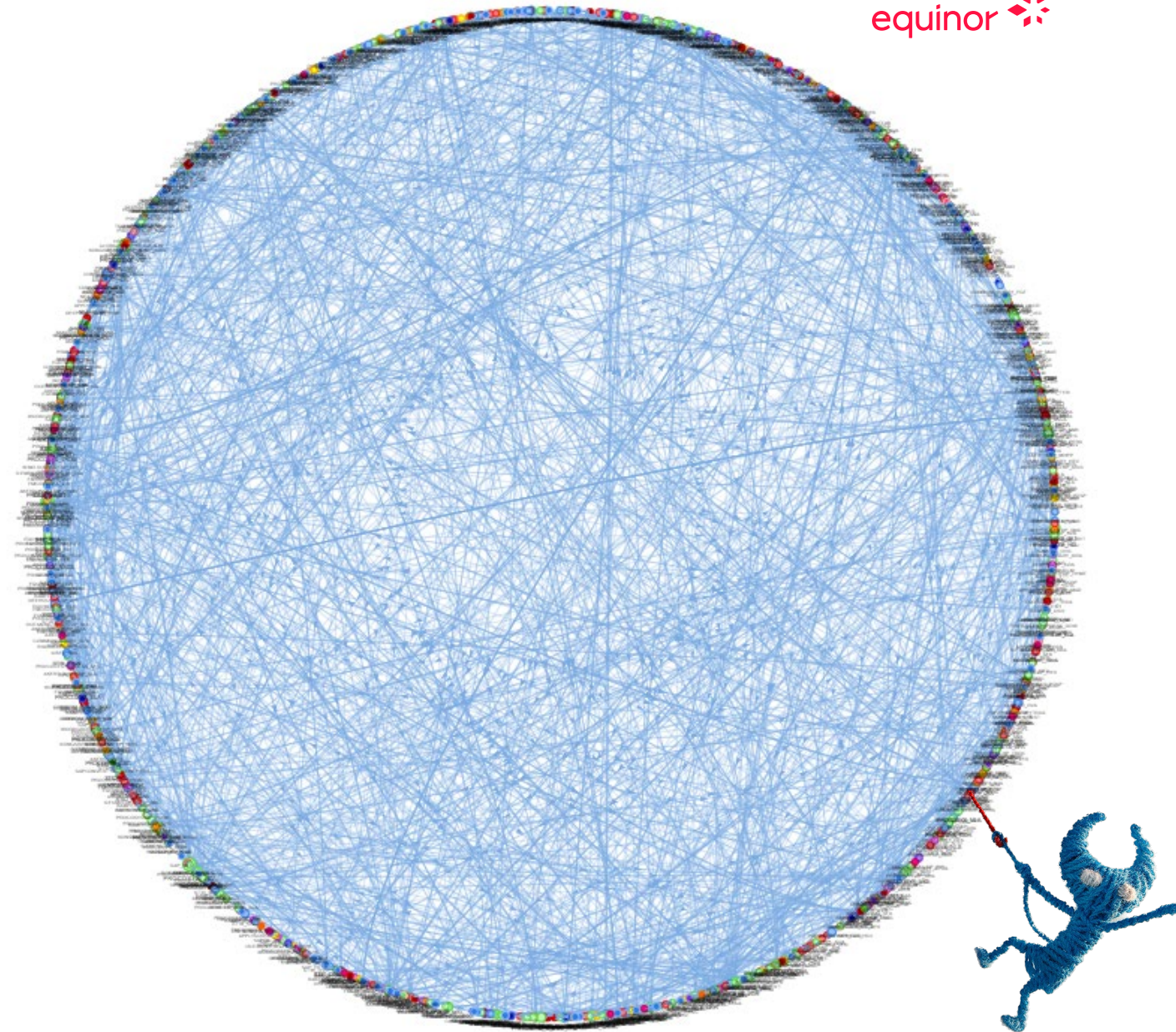
LogViewer Search

Retrieved 1000 messages with 853 receipts for a total of 1000 rows in 9678 ms *(click header to change sorting)*

| Links | Class | Classification | Object Name | Facility | Project | Source Application | Message Timestamp | Behavior | Receipt Status | Receipt TimeStamp |
|-------------------------------------|--------------|----------------|------------------|----------|--------------------|--------------------|----------------------|----------|----------------|----------------------|
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 11IB005-G01 | JSV | LO265C.001 | PROCOSYS | 13 Jun 2025 14:26:46 | Update | Failed | 13 Jun 2025 14:28:10 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 302A1-JB001-C01 | JSV | 4590385976 | PROCOSYS | 1 Aug 2025 14:17:27 | Update | Successful | 1 Aug 2025 14:17:50 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 302A1-XT001-C01 | JSV | 4590385976 | PROCOSYS | 1 Aug 2025 14:17:24 | Update | Successful | 1 Aug 2025 14:17:44 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 302A1-XT002-C01 | JSV | 4590385976 | PROCOSYS | 1 Aug 2025 14:17:25 | Update | Successful | 1 Aug 2025 14:17:47 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 302A1-XT003-C01 | JSV | 4590385976 | PROCOSYS | 1 Aug 2025 14:17:28 | Update | Successful | 1 Aug 2025 14:17:52 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 302A1-XT004-C01 | JSV | 4590385976 | PROCOSYS | 1 Aug 2025 14:17:29 | Update | Successful | 1 Aug 2025 14:17:54 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 303A1-XT001-C01 | JSV | 4590385976 | PROCOSYS | 5 Aug 2025 07:22:41 | Update | Successful | 5 Aug 2025 07:26:12 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 303A1-XT002-C01 | JSV | 4590385976 | PROCOSYS | 5 Aug 2025 07:22:42 | Update | Successful | 5 Aug 2025 07:26:13 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 311A1-EX002G-P01 | JSV | M.O265C.22.A.00... | PROCOSYS | 25 Jun 2025 12:31:18 | Update | | Invalid date |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 311A1-EX002H-P01 | JSV | M.O265C.22.A.00... | PROCOSYS | 25 Jun 2025 12:31:19 | Update | Successful | 25 Jun 2025 12:32:01 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 311C1-JB001-F05 | JSV | TO265C.DG.00119 | PROCOSYS | 17 Jul 2025 06:55:18 | Update | Failed | 17 Jul 2025 06:56:05 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 311D1-IB001-C01 | JSV | TO265C.DG.00119 | PROCOSYS | 17 Jul 2025 06:57:17 | Update | Successful | 17 Jul 2025 06:58:14 |
| <input checked="" type="checkbox"/> | CABLEROUTING | CABLE | 311D1-IB002-C01 | JSV | TO265C.DG.00119 | PROCOSYS | 17 Jul 2025 06:57:18 | Update | Successful | 17 Jul 2025 06:58:15 |

TIE endpoints

-  150 external and internal application endpoints
-  1092 subscriptions
-  Average of 250.000 messages/day
-  Rule based processing of messages



Agenda

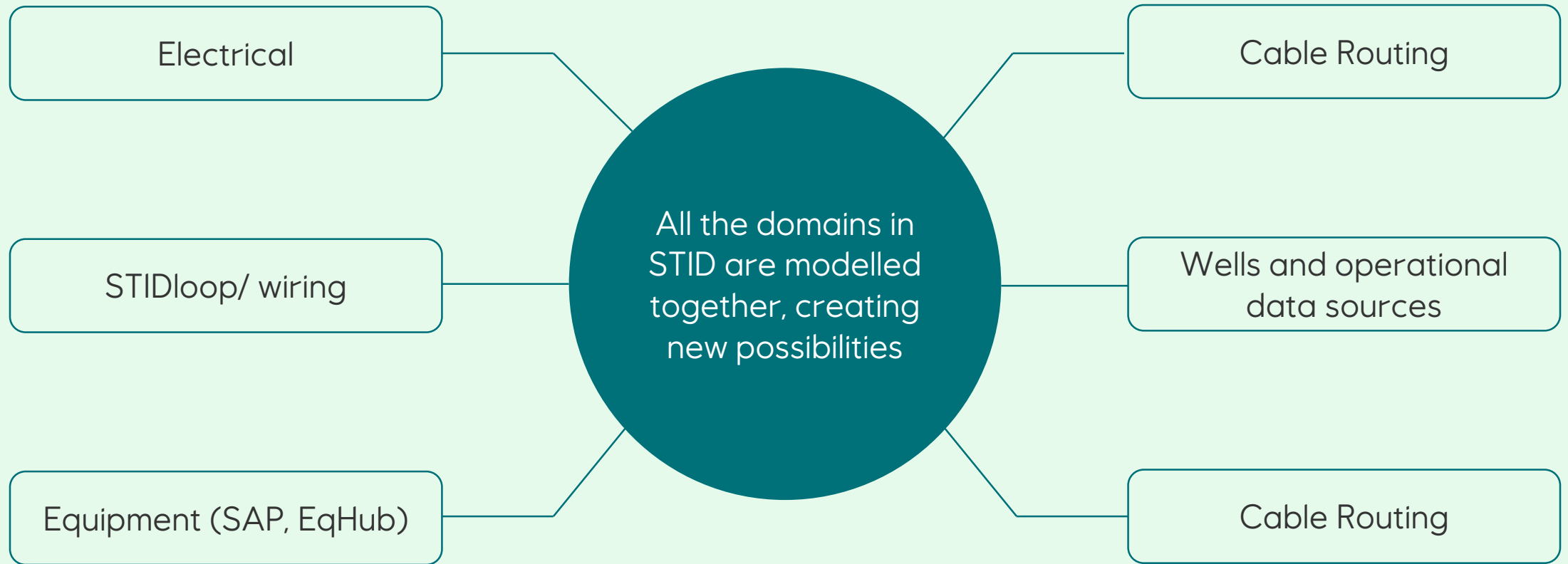
Part 1

Building the digital asset

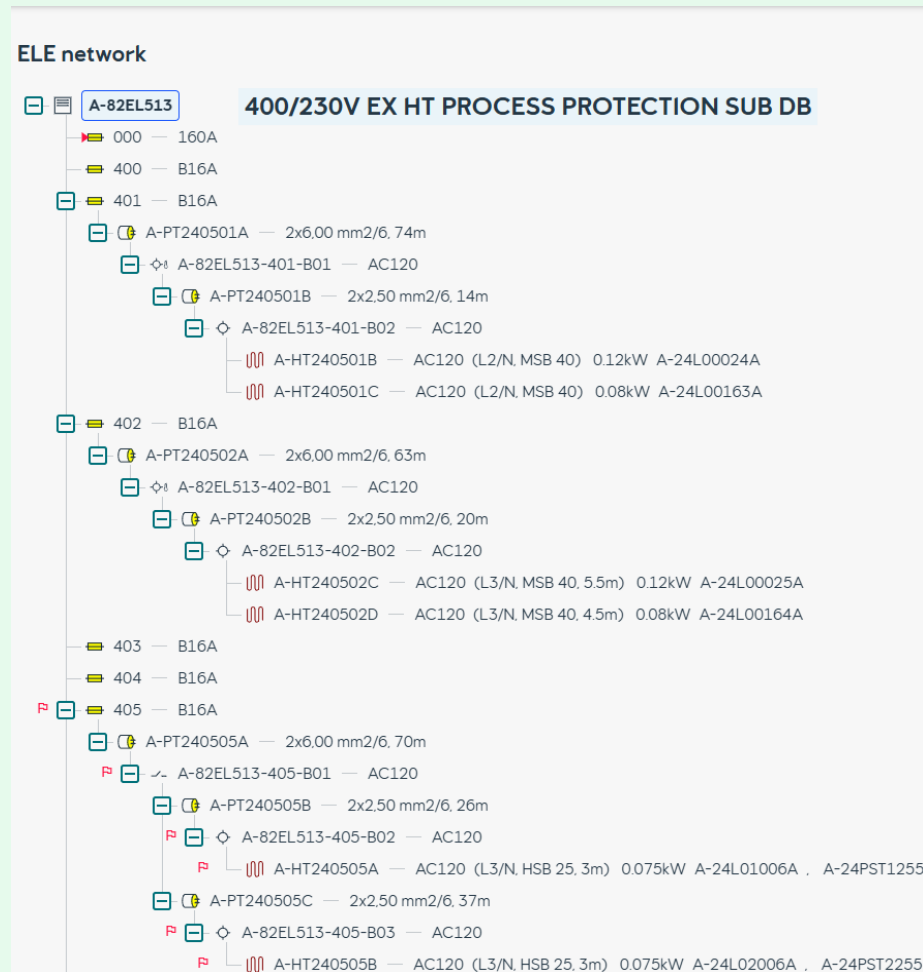
Part 2

Detailed examples in STID (Technical Information & Documentation)

Detailed examples in STID (Technical Information & Documentation)



There is a possibility to identify and review the data source information



| 405 | Feeder | In Use | ^ |
|---------------------|---|--------|---|
| Circuit tag | A-82EL513-405 | | |
| Description | A-82EL513-405-B01, WALL MOUNTED SWITCH JB HEAT TRACE, SYSTEM 24 | | |
| Busbar | K | | |
| Voltage | 230V | | |
| Type | RCBO RCBO | | |
| Branch | XD2 | | |
| Phases | L3: 405 N: 405 | | |
| Circuit criticality | Group 1 & High (from HT) | | |
| Fuse size | B16A (In) | | |
| Rated Voltage | 230V (Un) | | |
| Shutdown Level | 1A | | |
| Measured load | 0.59A | | |
| Calculated load | 0.66A | | |

Distribution board report

| FEED FROM: | | | | FEED TO: | | | | | | | |
|------------|-------|-------------|-----------------|---|-------------------------------|------|----------------|-------------------|-------|-------------|--------------|
| TAG NO | FIELD | CABLE | CABLE SIZE | BUS | | | | | | | |
| A-82EL510 | 014 | A-PL820020 | 4x120,00 mm2/60 | J | | | | | | | |
| BUS | FIELD | CIRC. CRIT. | SHUTD. LEVEL | CIRCUIT DESCRIPTION | TERMINAL | FUSE | CONSUMER COUNT | CONSUMER TAG | AREA | CABLE | X-SECT |
| J | 000 | Group 1 | 1A | MCCB TO SUB DB A-82EL513, FED FROM DB A-82EL510-014 | XD1: L1:L1, L2:L2, L3:L3, N:N | 160A | | | | | |
| K | 400 | Group 1 | 1A | SPARE | XD2: L1:400, N:400 | B16A | | | | | |
| K | 401 | Group 1 | 1A | A-82EL513-401-B01, PIPE MOUNTED THERMOSTAT JB HEAT TRACE, SYSTEM 24 | XD2: L2:401, N:401 | B16A | B*2,HT*2 | A-82EL513-401-B01 | AC120 | A-PT240501A | 2x6,00 mm2/6 |
| K | 402 | Group 1 | 1A | A-82EL513-402-B01, PIPE MOUNTED THERMOSTAT JB HEAT TRACE, SYSTEM 24 | XD2: L3:402, N:402 | B16A | B*2,HT*2 | A-82EL513-402-B01 | AC120 | A-PT240502A | 2x6,00 mm2/6 |
| K | 403 | Group 1 | 1A | SPARE | XD2: L1:403, N:403 | B16A | | | | | |
| K | 404 | Group 1 | 1A | SPARE | XD2: L2:404, N:404 | B16A | | | | | |
| K | 405 | Group 1 | 1A | A-82EL513-405-B01, WALL MOUNTED SWITCH JB HEAT TRACE, SYSTEM 24 | XD2: L3:405, N:405 | B16A | B*3,HT*2 | A-82EL513-405-B01 | AC120 | A-PT240505A | 2x6,00 mm2/6 |
| K | 406 | Group 1 | 1A | A-82EL513-406-B01, WALL MOUNTED LARGE JB HEAT TRACE, SYSTEM 21 | XD2: L1:406, N:406 | B16A | B*4,HT*4 | A-82EL513-406-B01 | AP320 | A-PT210506A | 2x6,00 mm2/6 |
| K | 407 | Group 1 | 1A | A-82EL513-407-B01, WALL MOUNTED SWITCH JB HEAT TRACE, SYSTEM 21 | XD2: L2:407, N:407 | B16A | B*3,HT*2 | A-82EL513-407-B01 | AP320 | A-PT210507A | 2x6,00 mm2/6 |
| K | 408 | Group 1 | 1A | A-82EL513-408-B01, WALL MOUNTED LARGE JB HEAT TRACE, SYSTEM 21 | XD2: L3:408, N:408 | B16A | B*4,HT*6 | A-82EL513-408-B01 | AC120 | A-PT210508A | 2x6,00 mm2/6 |
| K | 409 | Group 1 | 1A | A-82EL513-409-B01, MARSHALLING JB HEAT TRACE, SYSTEM 21 | XD2: L1:409, N:409 | B16A | B*10,HT*10 | A-82EL513-409-B01 | AC120 | A-PT210509A | 2x6,00 mm2/6 |
| K | 410 | Group 1 | 1A | A-82EL513-410-B01, WALL MOUNTED LARGE JB HEAT TRACE, SYSTEM 21 | XD2: L2:410, N:410 | B16A | B*5,HT*4 | A-82EL513-410-B01 | AC120 | A-PT210510A | 2x6,00 mm2/6 |
| K | 411 | Group 1 | 1A | SPARE | XD2: L3:411, N:411 | B16A | | | | | |
| K | 412 | Group 1 | 1A | SPARE | XD2: L1:412, N:412 | B16A | | | | | |

Load list report

| LOAD DESCRIPTION | | LOAD CATEGORY | | | | | LOAD CHARACTERISTICS | | | | LOAD DETAIL | | |
|------------------|------------------------|---------------|---------|--------|--------------|-------------------|----------------------|-----------------------|-------------------|-------------------|-------------|-------------------------|--------------|
| CIRCUIT TAG NO. | CIRCUIT DESCRIPTION | BUS | CUBICLE | BRANCH | CIRCUIT TYPE | RATED VOLTAGE (V) | FUSE SIZE (A) | CURRENT RATING In (A) | ACTIVE POWER (kW) | LOAD TAG NO. | CABLE NO. | CABLE TYPE | CABLE SIZE |
| A-82EL513-401 | A-82EL513-401-B01, PIF | K | 401 | 1 | RCBO | 230 | B16 | | | A-82EL513-401-B01 | A-PT240501A | P5/P12/BFOU 0,6/1kV | 2x6,00 mm2/6 |
| | | | | | | | | 0.52 | 0.12 | A-82EL513-401-B02 | A-PT240501B | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 0.35 | 0.08 | A-HT240501B | | | |
| | | | | | | | | | | A-HT240501C | | | |
| A-82EL513-402 | A-82EL513-402-B01, PIF | K | 402 | 1 | RCBO | 230 | B16 | | | A-82EL513-402-B01 | A-PT240502A | P5/P12/BFOU 0,6/1kV | 2x6,00 mm2/6 |
| | | | | | | | | 0.52 | 0.12 | A-82EL513-402-B02 | A-PT240502B | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 0.35 | 0.08 | A-HT240502C | | | |
| | | | | | | | | | | A-HT240502D | | | |
| A-82EL513-405 | A-82EL513-405-B01, WA | K | 405 | 1 | RCBO | 230 | B16 | | | A-82EL513-405-B01 | A-PT240505A | P5/P12/BFOU 0,6/1kV | 2x6,00 mm2/6 |
| | | | | | | | | | | A-82EL513-405-B02 | A-PT240505B | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 0.33 | 0.075 | A-82EL513-405-B03 | A-PT240505C | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 0.33 | 0.075 | A-HT240505A | | | |
| A-82EL513-406 | A-82EL513-406-B01, WA | K | 406 | 1 | RCBO | 230 | B16 | | | A-82EL513-406-B01 | A-PT210506A | P5/P12/BFOU 0,6/1kV | 2x6,00 mm2/6 |
| | | | | | | | | | | A-82EL513-406-B02 | A-PT210506B | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | | | A-82EL513-406-B03 | A-PT210506C | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | | | A-82EL513-406-B04 | A-PT210506D | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 1.74 | 0.4 | A-HT210506A | | | |
| | | | | | | | | 1.39 | 0.32 | A-HT210506B | | | |
| A-82EL513-407 | A-82EL513-407-B01, WA | K | 407 | 1 | RCBO | 230 | B16 | | | A-82EL513-407-B01 | A-PT210507A | P5/P12/BFOU 0,6/1kV | 2x6,00 mm2/6 |
| | | | | | | | | | | A-82EL513-407-B02 | A-PT210507B | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 1.74 | 0.4 | A-82EL513-407-B03 | A-PT210507C | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 1.74 | 0.4 | A-HT210507A | | | |
| A-82EL513-408 | A-82EL513-408-B01, WA | K | 408 | 1 | RCBO | 230 | B16 | | | A-82EL513-408-B01 | A-PT210508A | P5/P12/BFOU 0,6/1kV | 2x6,00 mm2/6 |
| | | | | | | | | | | A-82EL513-408-B02 | A-PT210508B | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | | | A-82EL513-408-B03 | A-PT210508C | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | | | A-82EL513-408-B04 | A-PT210508D | P5/P12/TMC BFOU 0,6/1kV | 2x2,50 mm2/6 |
| | | | | | | | | 1.22 | 0.28 | A-HT210508A | | | |
| | | | | | | | | 2.09 | 0.48 | A-HT210508B | | | |
| | | | | | | | | 0.87 | 0.2 | A-HT210508C | | | |
| | | | | | | | | 1.22 | 0.28 | A-HT210508D | | | |
| 2.09 | 0.48 | A-HT210508E | | | | | | | | | | | |
| 0.87 | 0.2 | A-HT210508F | | | | | | | | | | | |

Heat Trace Load List

| TRACE HEATING BOARD A-82EL513 - LOAD LIST | | | | | | | | | | | | |
|---|------------------------|-----------|--------------|-----------------------------|-----------------------------------|-----------------------------|-------------|---------------|----------------|----------|----------|----------|
| Fed From A-82EL513 | Description | Fuse Size | Circuit Type | Heater Type No. | Junction Box No. | Cable No. | Heater Type | Heater Length | Phase L1/L2/L3 | Watts L1 | Watts L2 | Watts L3 |
| 400 | SPARE | B16A | RCBO | | | | | | 1 | 0 | 0 | 0 |
| 401 | DESCRIPTION NA FOR HTC | B16A | RCBO | A-HT240501B | A-82EL513-401-B02 | A-PT240501B | MSB 40 | 7 | 2 | | 120 | |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT240501C | | | MSB 40 | 6 | 2 | | 80 | |
| | | | | | | | | | | 0 | 200 | 0 |
| 402 | DESCRIPTION NA FOR HTC | B16A | RCBO | A-HT240502C | A-82EL513-402-B02 | A-PT240502B | MSB 40 | 5.5 | 3 | | | 120 |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT240502D | | | MSB 40 | 4.5 | 3 | | | 80 |
| | | | | | | | | | | 0 | 0 | 200 |
| 403 | SPARE | B16A | RCBO | | | | | | 1 | 0 | 0 | 0 |
| 404 | SPARE | B16A | RCBO | | | | | | 2 | 0 | 0 | 0 |
| 405 | DESCRIPTION NA FOR HTC | B16A | RCBO | A-HT240505A | A-82EL513-405-B02 | A-PT240505B | HSB 25 | 3 | 3 | | | 75 |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT240505B | A-82EL513-405-B03 | A-PT240505C | HSB 25 | 3 | 3 | | | 75 |
| | | | | | | | | | | 0 | 0 | 150 |
| 406 | DESCRIPTION NA FOR HTC | B16A | RCBO | A-HT210506A | A-82EL513-406-B01 | A-PT210506A | MSB 40 | 10 | 1 | 400 | | |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT210506B | | | MSB 40 | 8 | 1 | 320 | | |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT210506C | A-82EL513-406-B03 | A-PT210506C | MSB 40 | 12 | 1 | 480 | | |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT210506D | A-82EL513-406-B04 | A-PT210506D | MSB 40 | 12 | 1 | 480 | | |
| | | | | | | | | | | 1680 | 0 | 0 |
| 407 | DESCRIPTION NA FOR HTC | B16A | RCBO | A-HT210507A | A-82EL513-407-B02 | A-PT210507B | MSB 40 | 10 | 2 | | 400 | |
| | DESCRIPTION NA FOR HTC | | RCBO | A-HT210507B | A-82EL513-407-B03 | A-PT210507C | MSB 40 | 10 | 2 | | 400 | |
| | | | | | | | | | | 0 | 800 | 0 |

By combining data from the tag and doc modules we experience several benefits and savings

Generated heat trace inspection reports

- 43 min for Johan Castberg – 1165 reports
- 15 min for Johan Sverdrup P2 – 454 reports

One report per heat trace circuit

- Electrical network
- ISO drawings for each heat trace cable

B-82EL314-405 Heat Trace System 47 in Area BC510

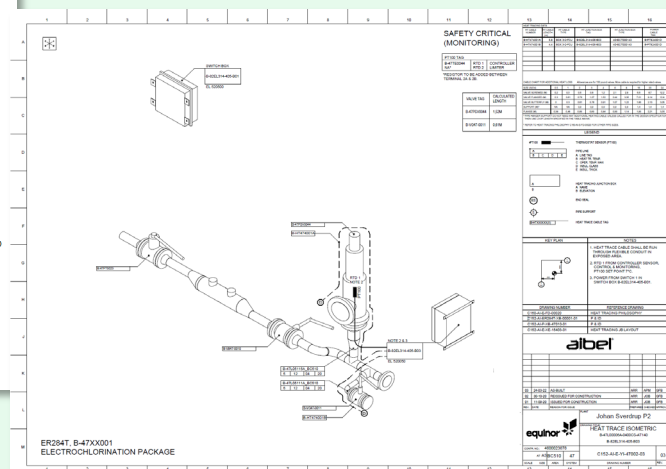
Heat trace inspection, generated from STID 2022-10-26 00:25

Drawings

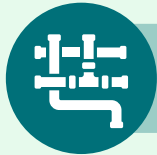
| Drawing | Title | Revision | Status |
|-----------------------|--|----------|--------|
| ELE_NET-B-82EL314-405 | STIDele Network Report | | |
| C152-AI-E-YI-47002-03 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B03 | 03 | OF-P |
| C152-AI-E-YI-47002-04 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B04 | 03 | OF-P |
| C152-AI-E-YI-47002-05 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B05 | 02 | OF-P |
| C152-AI-E-YI-47002-06 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B06 | 02 | OF-P |
| C152-AI-E-YI-47002-07 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B07 | 03 | OF-P |
| C152-AI-E-YI-47002-08 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B08 | 02 | OF-P |
| C152-AI-E-YI-47002-09 | HEAT TRACE ISOMETRIC B-47L0006A-0400CS-AT140 B-82EL314-405-B09 | 03 | OF-P |

Report content includes:

- B-82EL314-405-B01 BC510
- B-47900011-001 BC510
- B-PF824001B
- B-82EL314-405-B02 BC510
- B-PF824001D
- B-82EL314-405-B03 BC510
- B-82EL314-405-B03 BC510 (L2, BXX 3-2-POJ, 5.0m, B-47L05115A, B-47900044)
- B-82EL314-405-B04 BC510 (L2, BXX 3-2-POJ, 4.0m, B-47L05111A, B-V047-0011)
- B-82EL314-405-B05 BC510
- B-82EL314-405-B05 BC510 (L2, BXX 3-2-POJ, 6m, B-47L05114A, B-47900014)
- B-82EL314-405-B06 BC510 (L2, BXX 3-2-POJ, 4.7m, B-47L05111A, B-V047-0009)
- B-82EL314-405-B07 BC510
- B-82EL314-405-B07 BC510 (L2, BXX 3-2-POJ, 7m, B-47L05111A, B-47900012, B-V047-0005)
- B-82EL314-405-B08 BC510 (L2, BXX 3-2-POJ, 5m, B-47L05111A, B-47900012)
- B-82EL314-405-B09 BC510
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 4.5m, B-47L05101A, B-47900012, B-V047-0002)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 4.9m, B-47L05101A, B-47900012, B-V047-0003)
- B-82EL314-405-B09 BC510
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 5.7m, B-47L00051, B-479A001, B-V047-0115, B-V047-0117, B-V047-0118)
- B-82EL314-405-B09 BC510
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 5.9m, B-47L05041, B-479A001, B-V047-0114)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 6.2m, B-47L05041, B-479A001, B-V047-0114)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 6.3m, B-47L05046, B-479A001, B-V047-0113)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 7.3m, B-47L05046, B-479A001, B-V047-0113)
- B-82EL314-405-B09 BC510
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 7.3m, B-47L05210A, B-479A001, B-V047-0112)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 6.7m, B-47L05208A, B-V047-0104)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 6.8m, B-47L05208A, B-4790002)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 3.3m, B-47L05208A, B-V047-0109)
- B-82EL314-405-B09 BC510 (L2, BXX 3-2-POJ, 2.7m, B-47L05208A, B-4790002)



Data can be used within mapping of Cable routing



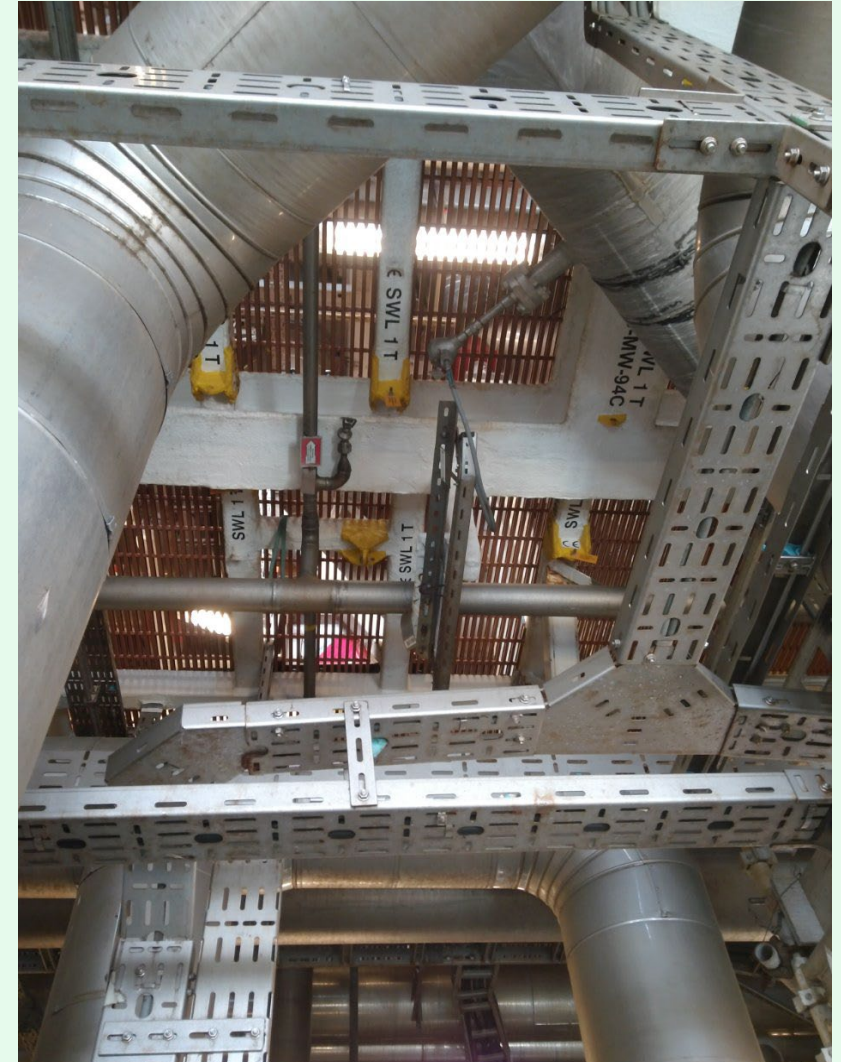
There are usually 3 segregation levels for cables

- High voltage > 1kV
- Small power < 1kV
- Instrument/telecom



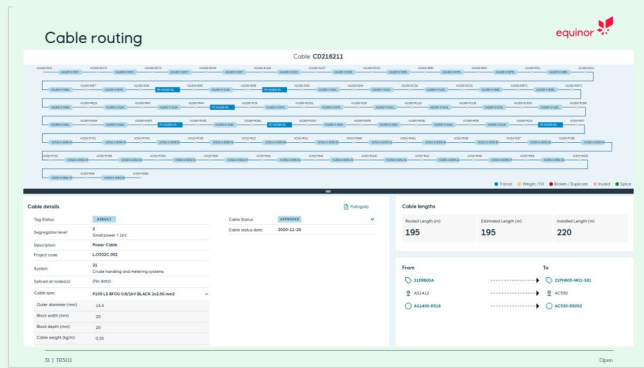
Segments and nodes define the network

- Details of size and weight
- Find shortest available path for cables

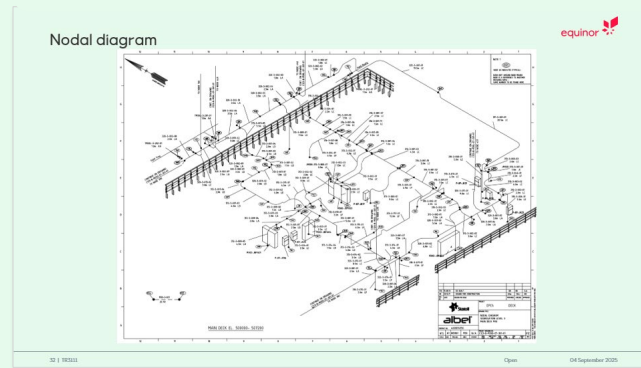


The mapping of the cables can be visualized through a series of data layers

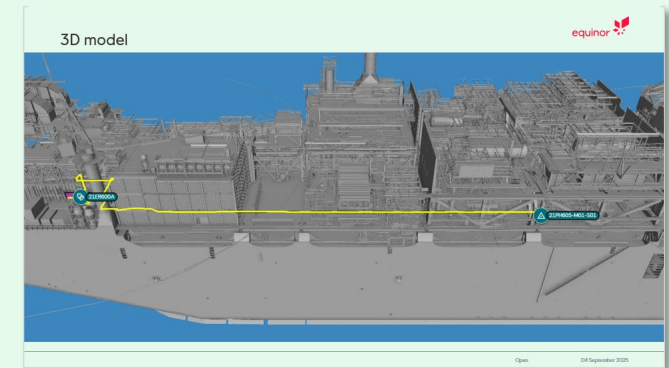
Cable routing



Nodal diagram



3D model



Ayelix: 360 images

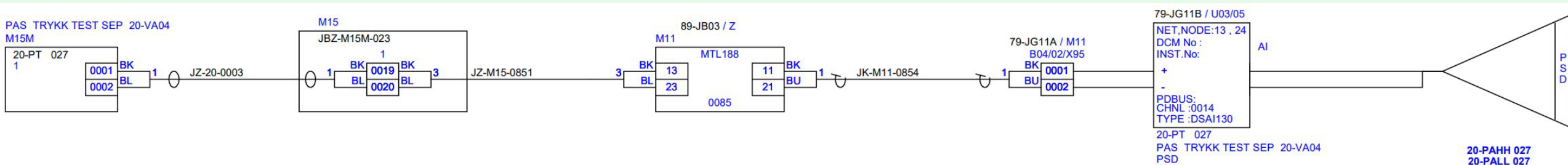
Tags have coordinates

Direct links to Ayelix

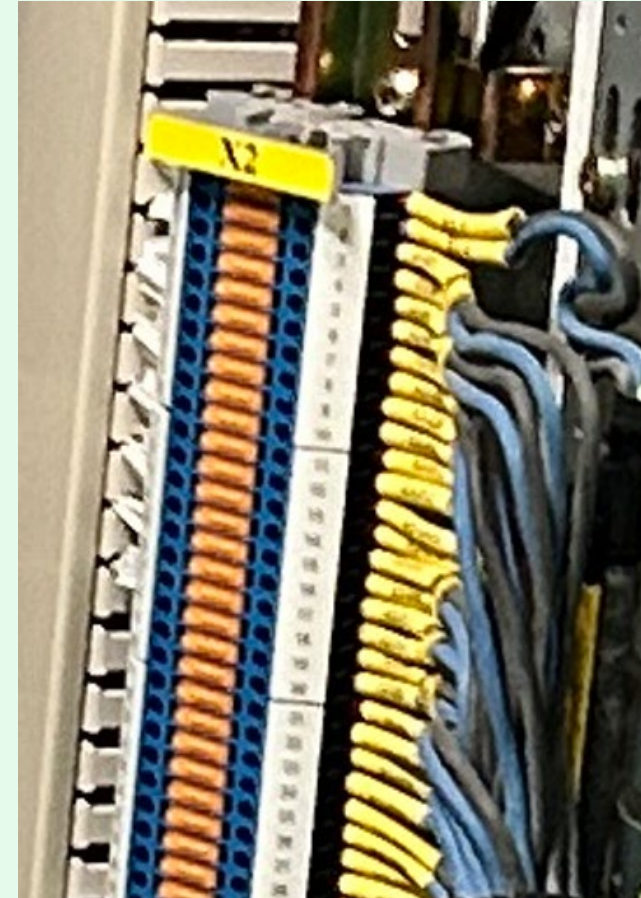
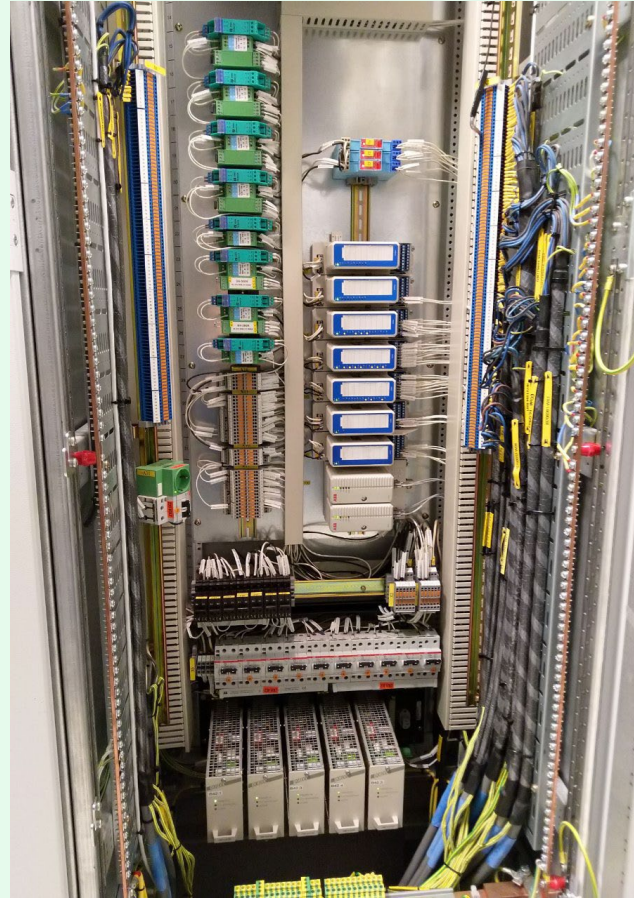
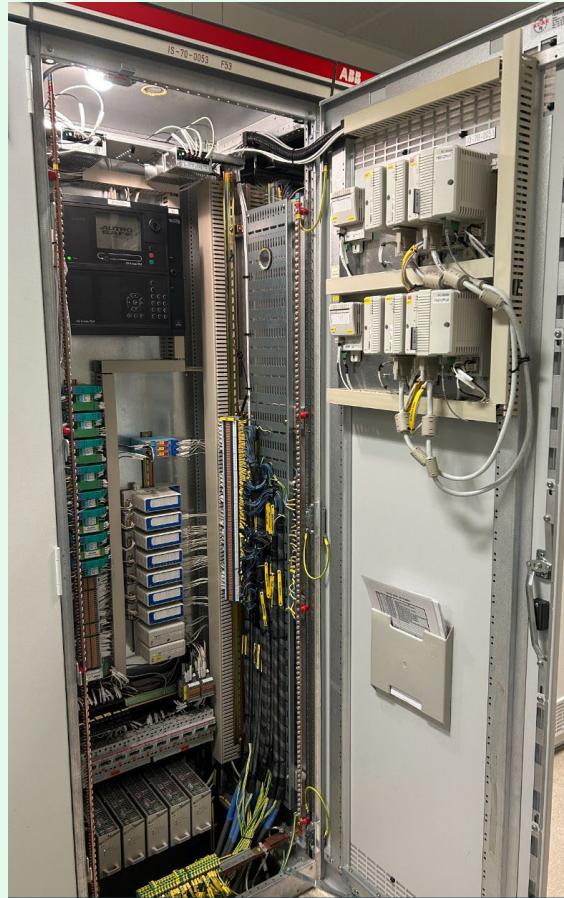


STIDloop

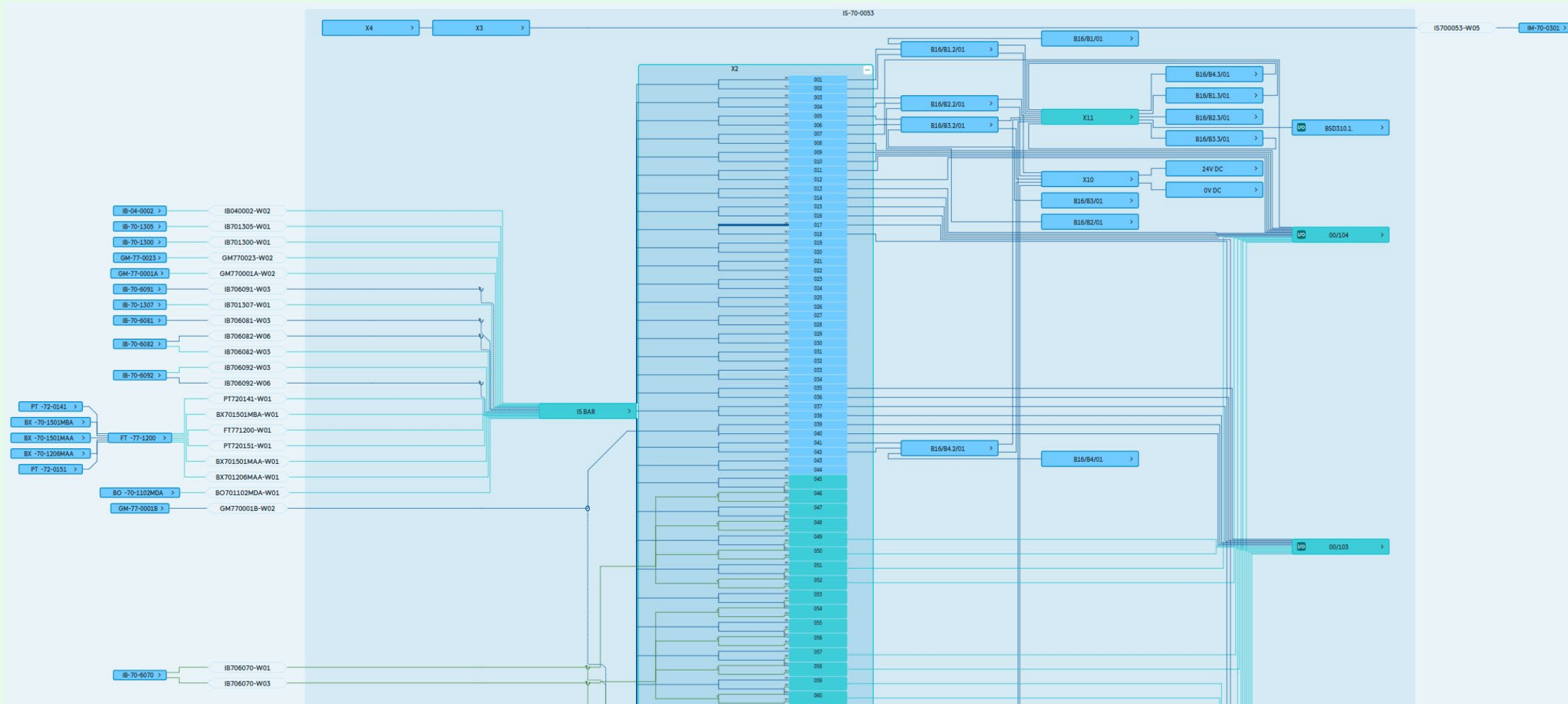
- Technical module for instrumentation, fire & gas and telecommunication loop information
- Master for loop and termination information (as-built and project)
- Used during project phase



Safety an Automation System (SAS) cabinet



Safety an Automation System (SAS) cabinet in 2D



Well with instruments

New data sources:

SMDA - Subsurface Master Data (wells)

PI Vision (IMS tags/operational data sources)

16/2-D-18
NO 16/2-D-18, FOR WELL INTEGRITY (SMDA UNIQUE WELL ID, STID SHORT NAME)

WELL ...

Tag Status: **ASBUILT** ▼

Type: **WELL**
Well No (SMDA well shortname)

Plant Id: **D**
Drilling Platform- DP/ pre-drilling spac

System: **13**
Riser and well systems topside

Discipline: **D**
Drilling

Superior tag: **13-ADMINISTRATIVE**
ADMINISTRATIVE (DUMMY FL) WITHOUT TAGHIERARCHY

Project: **WELL INTEGRITY**
Well integrity documentation

Doc refs (9) | Tag refs (79) | EIT reports (0) | Other refs (3)

Search by tagNo 🔍

Tag refers to (1) 📄

| Tag No. | Description | Ref type | Status | Category | Area |
|----------------------------|---|----------|----------------|----------------|------|
| 🔗 13-ADMINISTRATIVE | ADMINISTRATIVE (DUMMY FL) WITHOUT TAGHIE... | TTH | ASBUILT | Administrative | - |

Tag refers from (78) 📄

| Tag No. | Description | Ref type | Status | Category | Area |
|----------------------|---|----------|----------------|------------|-------|
| 🔗 D-13ESV1801 | PROD WELL E DOWNHOLE SAFETY VALVE. | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1804 | PROD WELL E UPPER MASTER VALVE | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1805 | PROD WELL E MEG INJECTION XT. | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1808 | PROD WELL E WING VALVE | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1812 | Prod well E Upstream choke blowdown | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1824 | PROD WELL E KILL VALVE | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1825 | PROD WELL E SCALE INHIBITOR INJECTION. | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1828 | PROD WELL E LIFT GAS TO WELLHEAD. | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1829 | PROD WELL E LIFT GAS ASV | WELL | ASBUILT | Instrument | DC232 |
| 🔗 D-13ESV1839 | PROD WELL E SCALE INHIBITOR INJECTION XT. | WELL | ASBUILT | Instrument | DC232 |

Operational data sources for a pressure transmitter

D-13PT1840
PROD WELL E ANNULUS A.

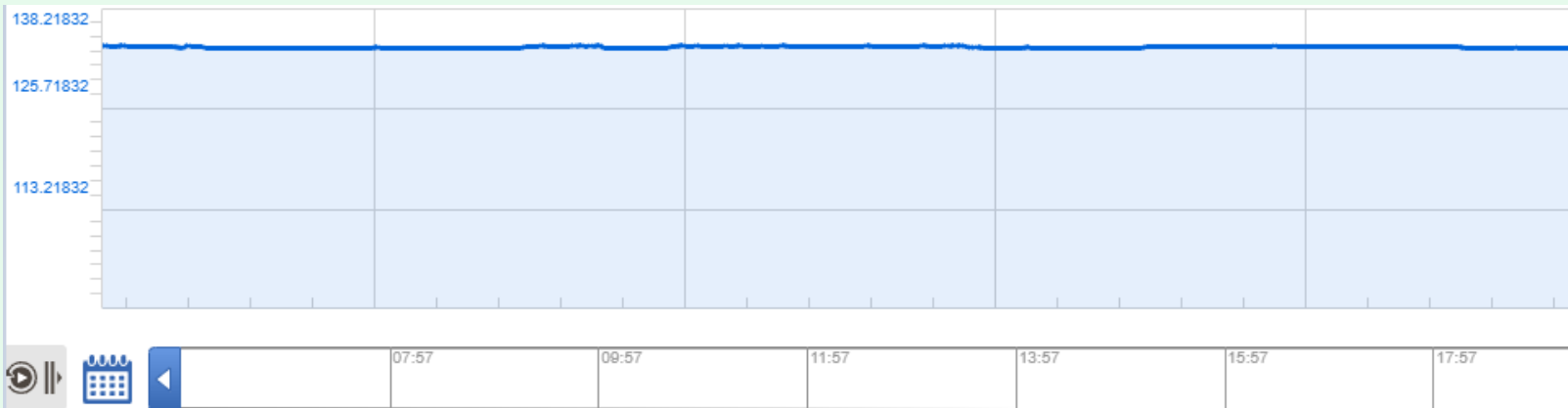
INSTRUMENT FIELD EQUIPMENT

| | |
|------------|---|
| Tag Status | ASBUILT |
| Type | PT Pressure, Transmitter |
| Plant Id | D Drilling Platform- DP/ pre-drilling spac |
| System | 13 Riser and well systems topside |
| Area | DC232 Wellbay Area Center Tree Deck |

Doc refs (34) Tag refs (6) EIT reports (12) Other refs (14)

Operational data sources / IMS tags (3)

| Identifier | Variable code | Description |
|-------------------------|--------------------|---|
| 1902.D-13PT1840.MA_PLWH | WH_ANN_A_P_PAH_LIM | Pressure Alarm High Limit in use within control system for the Primary annulus A pressure reading at the wellhead |
| 1902.D-13PT1840.MA_PLWL | WH_ANN_A_P_PAL_LIM | Pressure Alarm Low Limit in use within control system for the Primary annulus A pressure reading at the wellhead |
| 1902.D-13PT1840.MA_Y | WH_ANN_A_P | Primary annulus A pressure reading at the wellhead |



Response body

```
{
  "fireArea": null,
  "operWeight": null,
  "safetyIntegrityLevel": 3,
  "childTags": [],
  "imsTags": [
    {
      "imsTag": "1902.D-13ESV1808.SBV_BCH",
      "imsAttributeCode": "WV",
      "attributeName": "Wing",
      "attributeDescription": "Primary Wing Valve position reading",
      "freeDescription": null
    }
  ]
},
{
  "instCode": "JSV",
  "tagNo": "D-13ESV1812",
  "functionallocation": "1902-D-13ESV1812",
  "description": "Prod well E Upstream choke blowdown",
  "tagCategory": 1,
  "tagCategoryDescription": "INSTRUMENT FIELD EQUIPMENT",
  "tagType": "ESV",
  "tagTypeDescription": "Emergency, Safety, Valve (including Blow down valves)",
  "tagStatus": "AsBuilt",
}
```

Tags

| Name | Attribute | Data Source | Cursor Value | Value | Units | Description | Type | Scale |
|-------------------|-----------|-------------|--------------|-----------|-------|-------------------|------|-------|
| 1902.D-13PT184... | float64 | | 133.11350 | 133.11848 | bara | PROD WELL E ANNUL | | Auto |

Equipments and EqHub

Recently synced this data into STID

Equipments from SAP
EqHub information

| | A | B | C | D | E | F | G | H | I | J | K | L | M |
|----|--|---------------------------------------|-------|-----------------------------------|-------------------|---|---|---|--------------------------------------|-------|---------|---------|--------|
| 1 | Pos no | Item Manufacturer | | Type Ambient temp. Range | | | | Ex-Protection | Uo V | Io mA | Po mW | Lo mH | Co nF |
| 2 | 1 | | | STAHL_9468/32-08-11 | | | | Ex ia [ia Ga] IIC T4 Gb DEKRA 12 ATEX0173 X | 250 | 80 | -488 | 3,8 | 60,189 |
| 3 | | Stahl | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | |
| 6 | Pos no | Item Manufacturer | | Type Ambient temp. Range | | | | Ex-Protection | Uo V | Io mA | Po mW | Lo mH | Co nF |
| 7 | 2 | Cable A-64JBZ0303-Z04 | S8 | TMC BFOU(c) 250V GREY 8x2x0,75 mm | | | | Ex-Certification | | | | 0,02077 | 3,41 |
| 8 | | 31 m | | 0,67 mH/km | | | | | | | | | |
| 9 | 3 | Cable A-64LT0171-Z01 | S3/S7 | BFOU(i)250V GREY 1x2x0,75 mm2 | | | | | | | | 0,00134 | 0,22 |
| 10 | | 2 m | | 0,67 mH/km | | | | | | | | | |
| 11 | | | | | | | | | | | | | |
| 12 | 4 | 01 guided radar for level measurement | | ROSEMOUNT | 5301 | | | Ex ia IIC T4 Ga T6j NEMKO 04ATEX1073X | 31,7 | 130 | 1000 | 0,005 | 7,269 |
| 13 | | | | | -50 °C ... +70 °C | | | | | | | | |
| 14 | | | | | | | | | | | | | |
| 15 | S1 = Sum (pos no 1 to 1) | | | | | | | | 250 | 80 | -488 | 3,8 | 60,189 |
| 16 | S2 = Sum (pos no 2 to 4) | | | | | | | | 31,7 | 130 | 1000 | 0,02711 | 10,899 |
| 17 | | | | | | | | | | | | | |
| 18 | Criteria | | | | | | | | S1 ≤ S2 | | S1 ≥ S2 | | |
| 19 | | | | | | | | | | | | | |
| 20 | Result | | | | | | | | FAIL | OK | OK | OK | OK |
| 21 | | | | | | | | | | | | | |
| 22 | Protection level of the system (ref IIC) | | | | | | | | | | | | |
| 23 | | | | | | | | | | | | | |
| 24 | | | | | | | | | | | | | |
| 25 | IS entity calculation | | | | | | | | Level, Transmitter A-64LT0171 | | | | |
| 26 | | | | | | | | | | | | | |

Used in:

LCI QC Reports

Showing product typical information for tags

In Progress

Generate Intrinsic Safe calculation reports

Building the digital asset

Bent S. Lund

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