

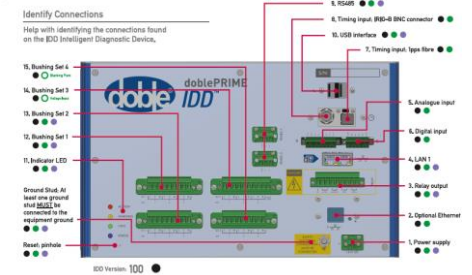
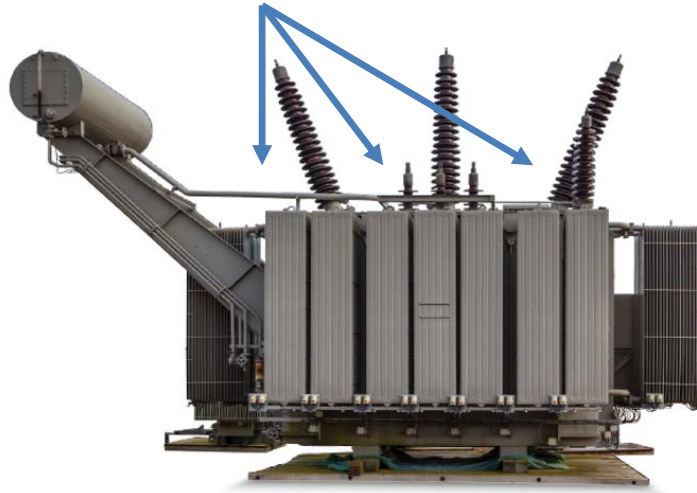


Manejo de activos
ARMS (Asset and Risk
management system)
Doble Engineering
Noviembre 2018

Ing. Claudio Olmedo
Gliston sa

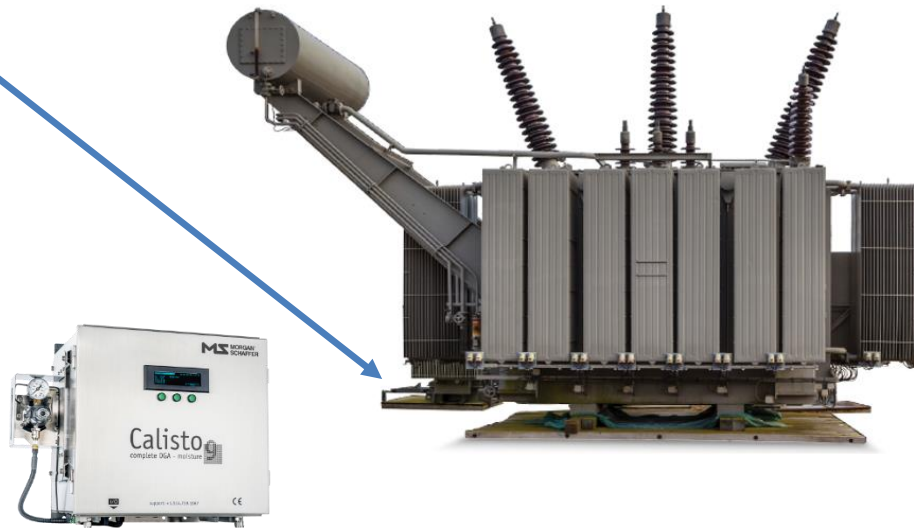
La medición: bushings

Bushings: dejan entrar conexiones al transformador
Corriente de fuga para cada bushing (AT & BT)
Necesita un 'adaptador de bushing' (BTA)



La medición: DGA

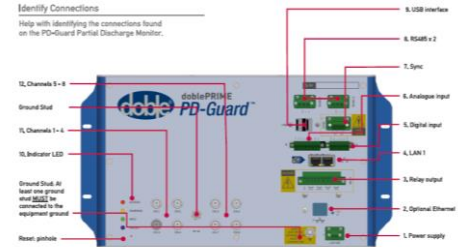
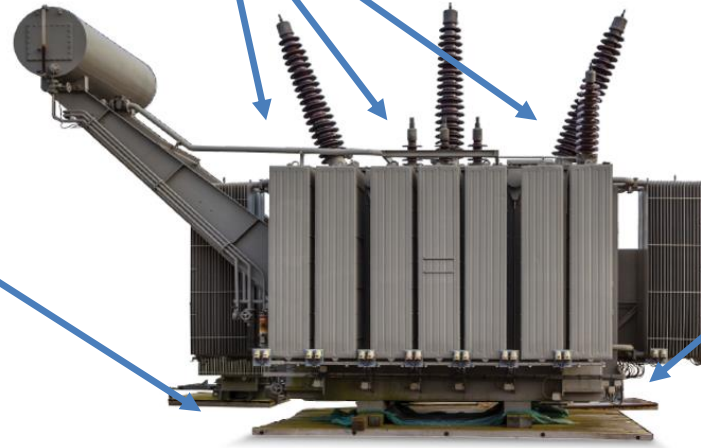
DGA para monitoreo continuo de aceite



La medición: descarga parcial

Descarga parcial en cada **bushing** on un adaptador BTA

Medición de DP en tanque principal por sonda UHF



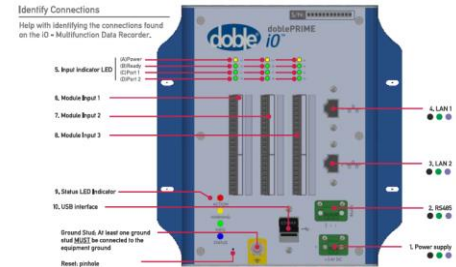
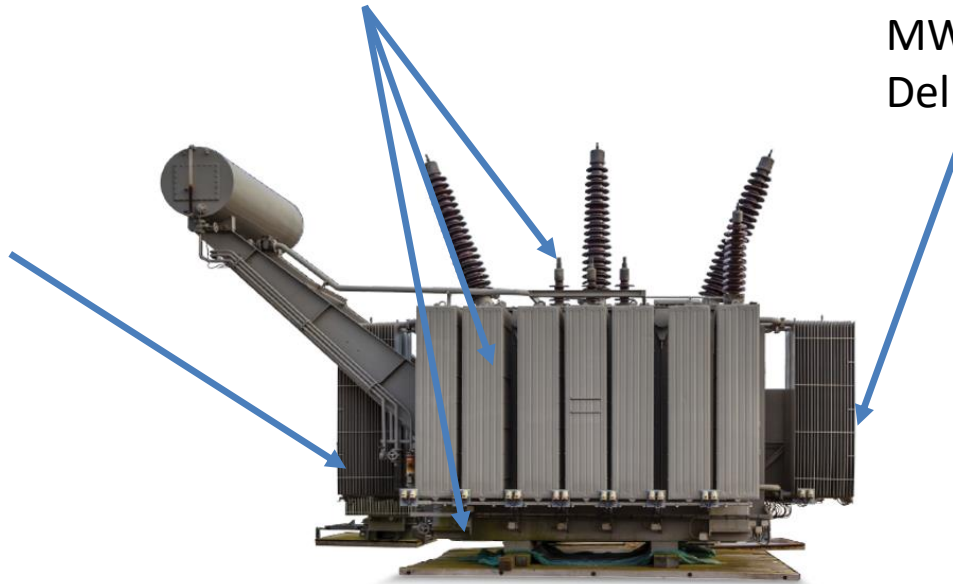
DP 'Total' via HFCT en conexión **Neutro**

La medición: datos operativos

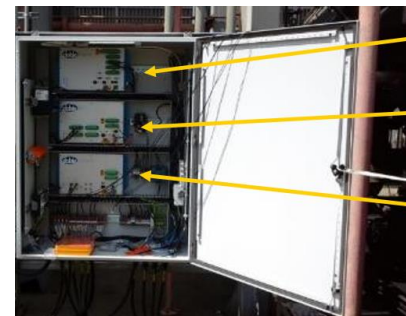
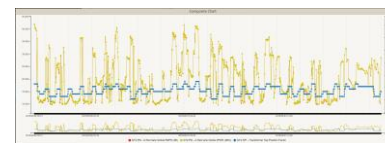
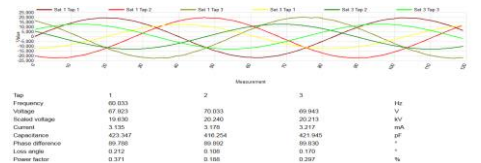
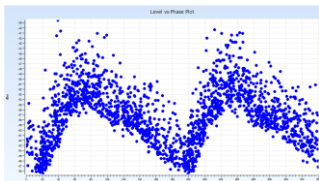
Temperatura de aceite: top oil, bottom oil, hot spot

Tap Changer
posicion del
cambiador de tap

MW, MVAR, V, I etc
Del gabinete de control



La medición : muchos datos



Analytics

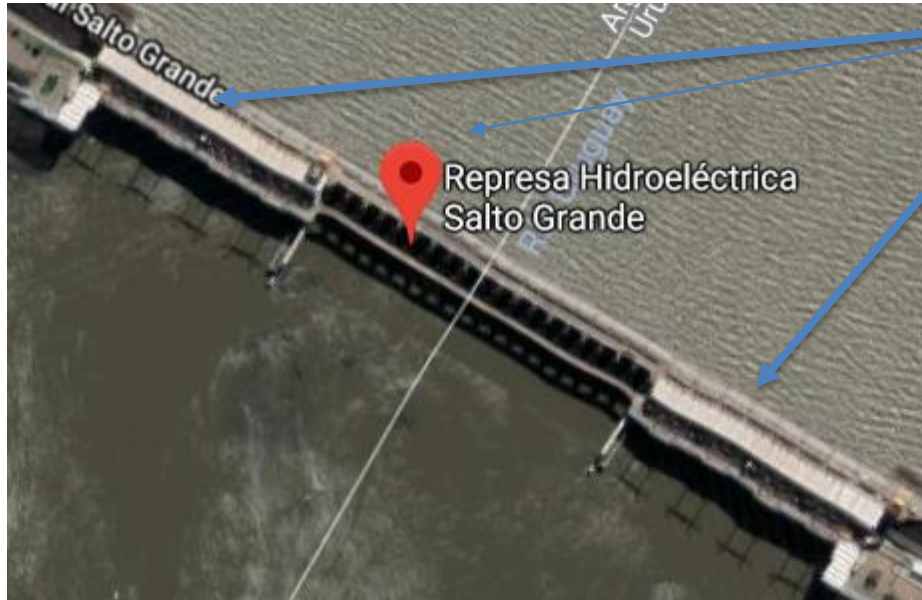
IDD

PD Guard

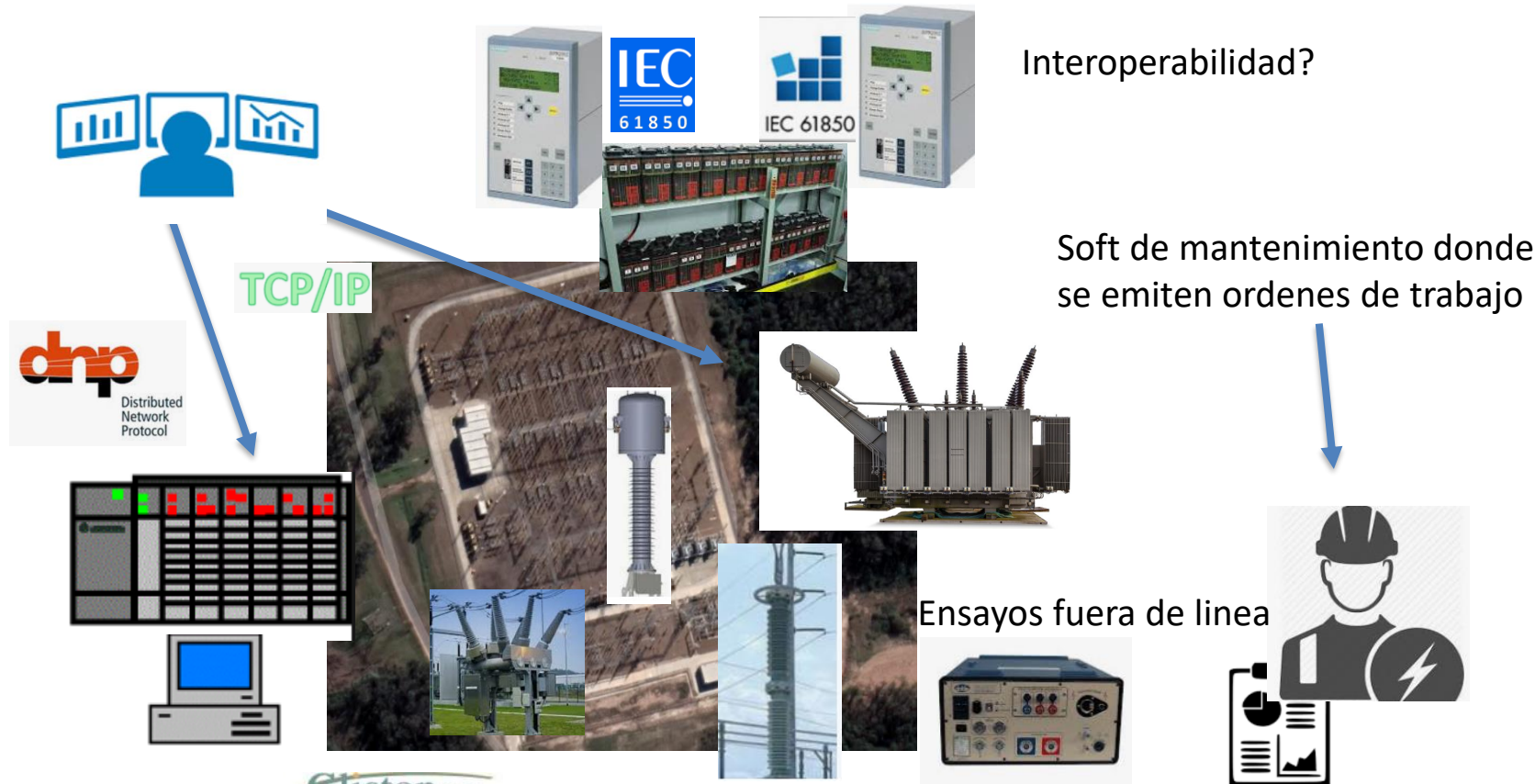
El desafío!



Pero no solo hay transformadores, sino interruptores, protecciones, banco de baterías. Y son todos activos a considerar



El desafío: protocolos, manejo datos y más



Interoperabilidad?

Soft de mantenimiento donde se emiten ordenes de trabajo

Ensayos fuera de línea

Reportes / inspecciones

El desafío: estándares

Estándares

➤ ISO

ISO 55000/1/2 (PAS 55) Asset Management

ISO 18095 Condition Monitoring of Power Transformers

ISO 13379 Failure Mode & Symptom Analysis (FMSA)

ISO 14971 Failure Mode & Effects Analysis

➤ IEEE

IEEE DGA Key Gas Analysis

IEEE Bushing serviceability limits for electrical testing (power factor and capacitance variation)

IEEE Power Transform limits for electrical testing

IEEE Thermal loss of life

IEEE DGA Arcing Analysis

IEEE Moisture limits

➤ IEC

IEC DGA Key Gas Analysis

IEC Moisture limits

IEC 61970 Common Information Model

➤ CIGRE

WG A2.44 Transformer Intelligent Condition Monitoring

➤ OTROS (Técnicas analíticas)

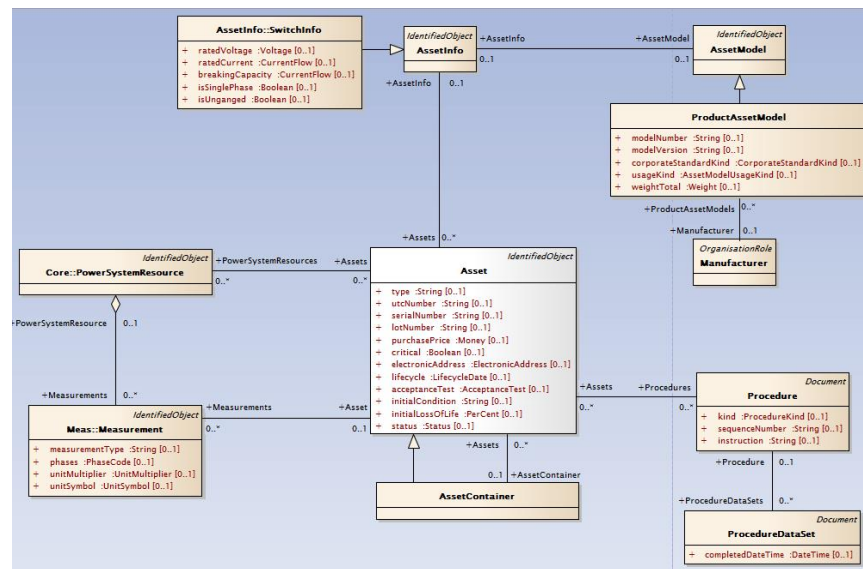
Rogers Ration Analysis

Duval Triangle

Organizaciones

➤ Institute of Asset Management

➤ Smart Grid Maturity Model



Qué es ARMS?

- ✓ Salud del activo (asset health)

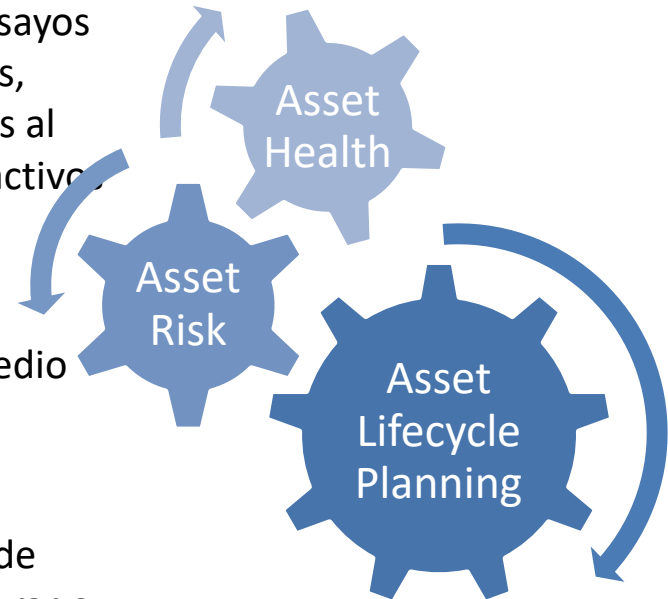
Se juntan datos de la base de datos Doble, ensayos fuera de línea, ensayos en línea, operacionales, inspecciones, mantenimiento y presenta datos al personal de mantenimiento, responsable de activos y a línea gerencial para decisión

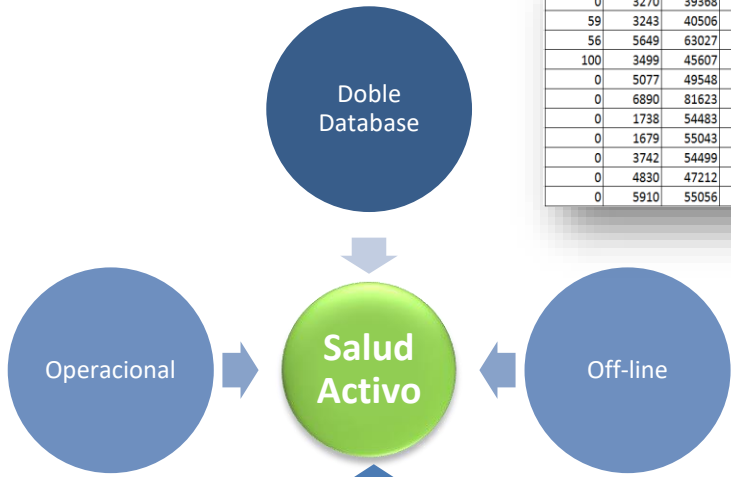
- ✓ Riesgo de activo

Construye costo real asociado a seguridad, medio ambiente y otros factores de riesgo

- ✓ Planificación del ciclo de vida

Construye índices de riesgo de activo Y salud de activo permite decidir si diferir, reparar, restaurar o reemplazar sus activos



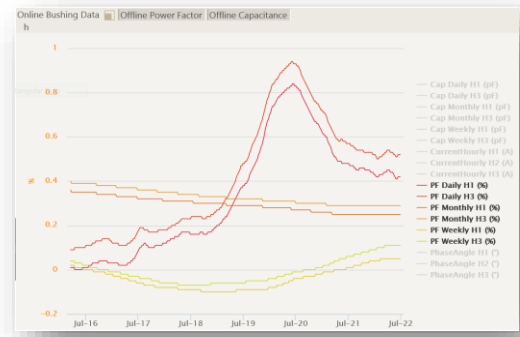
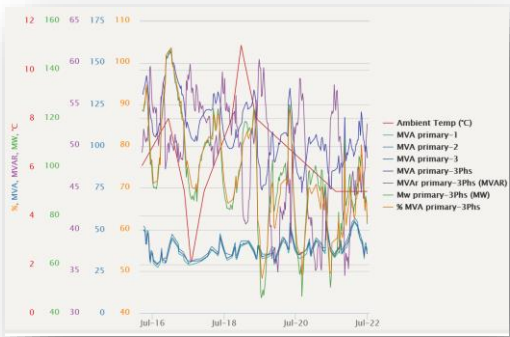


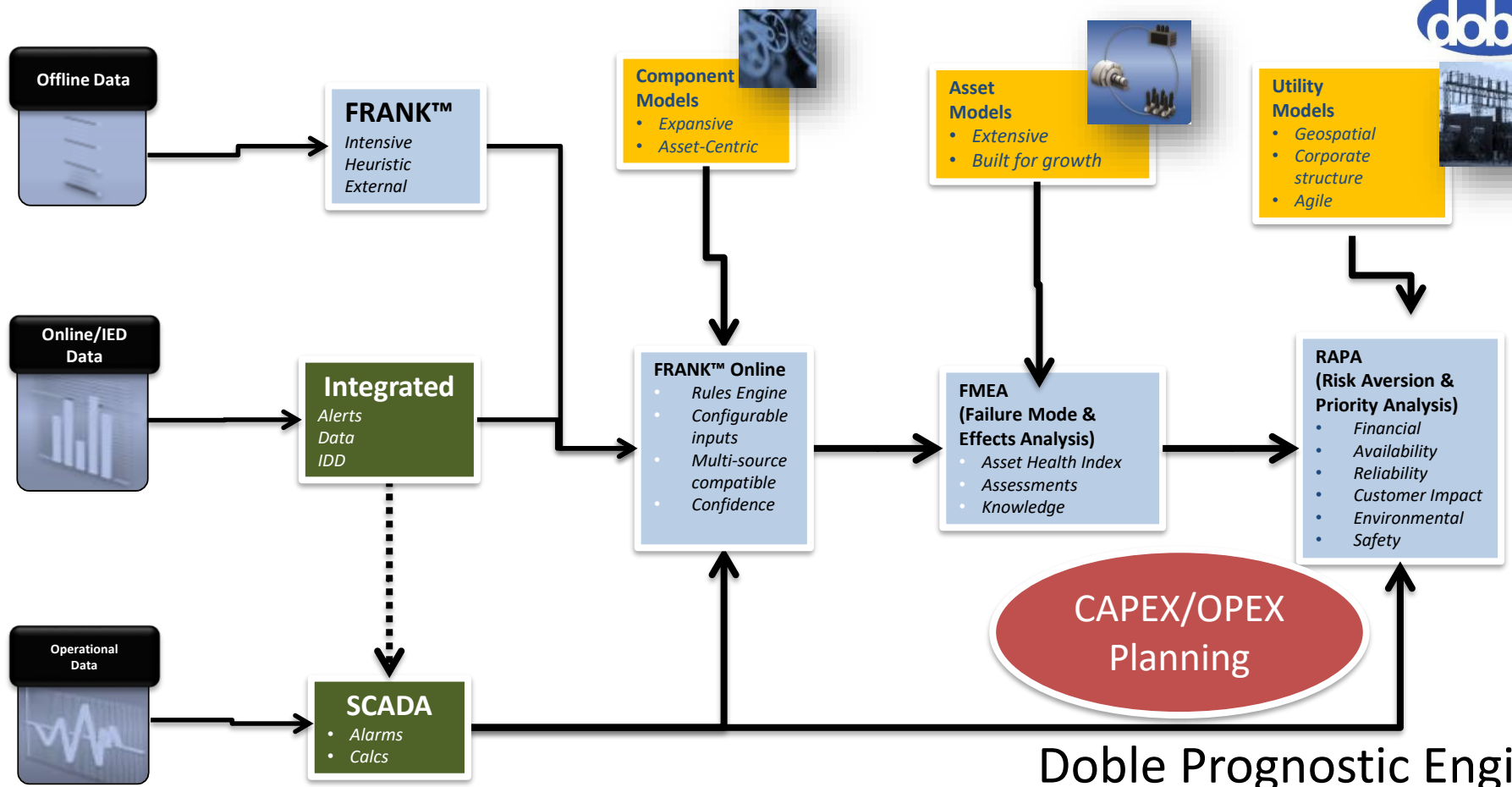
| h2 | o2 | n2 | ch4 | co | co2 | c2h4 | c2h6 | c2h2 | c3h8 | c3h6 | totalgas |
|-----|------|-------|-----|----|-----|------|------|------|------|------|----------|
| 0 | 3270 | 39368 | 0 | 28 | 547 | 0 | 0 | 0 | | | 43213 |
| 59 | 3243 | 40506 | 8 | | | | | | | | |
| 56 | 5649 | 63027 | 10 | | | | | | | | |
| 100 | 3499 | 45607 | 9 | | | | | | | | |
| 0 | 5077 | 49548 | | | | | | | | | |
| 0 | 6890 | 81623 | | | | | | | | | |
| 0 | 1738 | 54483 | | | | | | | | | |
| 0 | 1679 | 55043 | | | | | | | | | |
| 0 | 3742 | 54499 | | | | | | | | | |
| 0 | 4830 | 47212 | | | | | | | | | |
| 0 | 5910 | 55056 | | | | | | | | | |

Substation Yard Inspection

VISUAL INSPECTION

| | |
|----------------------------------|--|
| General Conditions of Yard | Fail |
| Why Fail? | back part of fence needs to be tied on bottom to the posts |
| Perimeter Fence Walked | Yes |
| Condition of Fence Grounding | Pass |
| Condition of Insulating Gravel | Fail |
| Why Fail? | needs to be graveled |
| Condition of Yard Lights | Pass |
| Condition of Warning Signs | Pass |
| Vault Drainage Pumps Operational | Yes |
| Weed Control required | No |







Salud Activo

100

Transformer 1 Cabinet Gorge HED

30

Transformer 1 Coyote Springs

10

Breaker 1 Stratford

3

Transformer 2 Ritzville

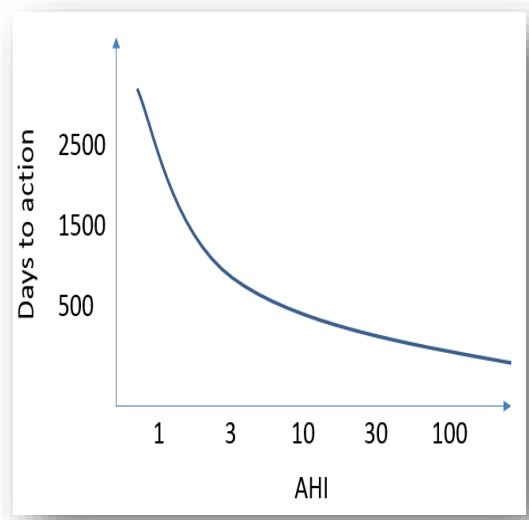
1

Breaker 1 Ritzville

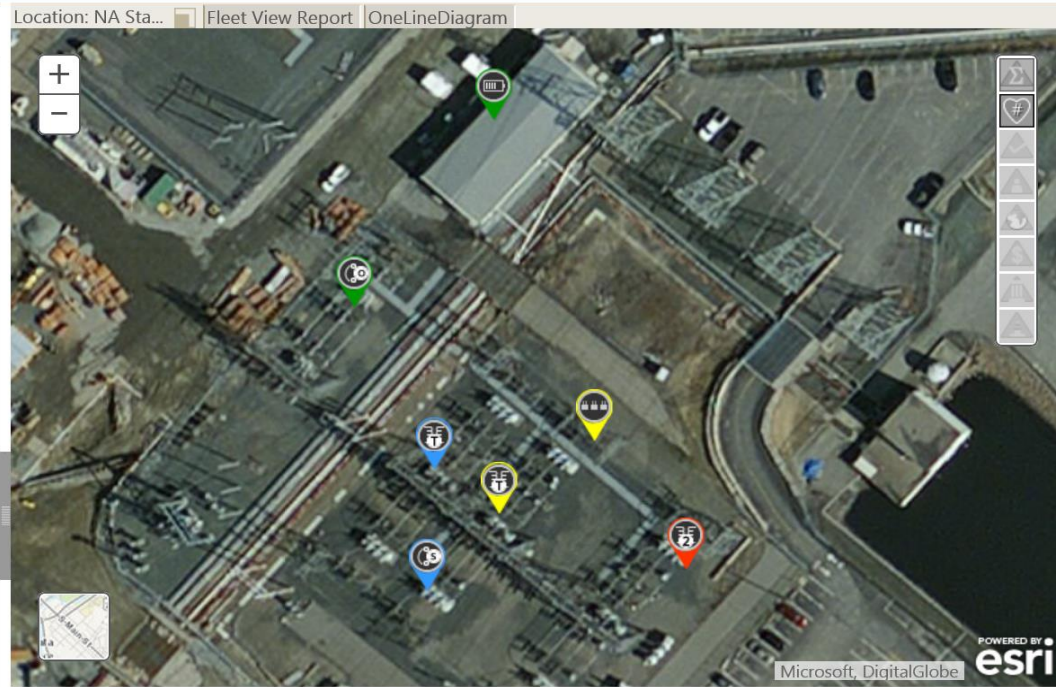


| | | Factor | Trf 1 | Trf 2 | Trf 3 | Trf1 | Trf2 | Trf3 |
|--|--|-----------------------------|-----------|-----------|-----------|-----------|-----------|------------|
| | | DGA Main Tank Score | 2 | 1 | 1 | 3 | 1 | 1 |
| | | Dielectric Score | 1 | 1 | 1 | 1 | 1 | 1 |
| | | Thermal Score | 2 | 1 | 1 | 3 | 1 | 1 |
| | | Mechanical Score | 3 | 1 | 1 | 10 | 30 | 1 |
| | | Oil Score | 1 | 1 | 1 | 1 | 1 | 1 |
| | | DGA LTC Tank Score | 3 | 1 | 5 | 10 | 1 | 100 |
| | | Operational Score | 2 | 3 | 3 | 3 | 10 | 10 |
| | | Design/manufacturer Score | 1 | 4 | 1 | 1 | 30 | 1 |
| | | Subject Matter Expert Score | 3 | 1 | 2 | 10 | 1 | 3 |
| | | Sum | 18 | 17 | 16 | 42 | 76 | 119 |
| | | Normalized Sum (%) | 40.0 | 37.8 | 35.6 | 4.7 | 8.4 | 13.2 |

| Lineal | Log |
|--------|-----|
| 0 | 0 |
| 1 | 1 |
| 2 | 3 |
| 3 | 10 |
| 4 | 30 |
| 5 | 100 |



- Search assets
- World Wide Energy
 - North America Grid
 - Northeast
 - NA Station 1**
 - TB
 - TR3
 - TR1
 - Bushings
 - Dielectric
 - IM
 - LTC
 - Operational
 - TR2
 - Main Battery
 - CB 1
 - CB 2
 - NA Station 2
 - NA Station 3
 - NA Station 5
 - NA Station 6
 - NA Station 7
 - NA Station 8
 - NA Station 9
 - NA Station 12
 - NA Station 13



Location Ranking | Site Integrity | Parallel OLTC

NA Station 1

Northeast

Average AHI: **11**

Highest AHI: **41**

Asset with Highest AHI: TR3

Asset with Highest Risk: TR1

Location Ranking (Total 98)

| AHI Range | # of Locations |
|-----------|----------------|
| 0 | 0 |
| 1-2 | 0 |
| 3-9 | 70 |
| 10-29 | 10 |
| 30-99 | 10 |
| 100 | 0 |

Weather: NA Station 1

33°F Clear

| Day | Tue | Wed | Thu | Fri | Sat |
|------|-----|-----|-----|-----|-----|
| High | 48 | 44 | 40 | 41 | 39 |
| Low | 37 | 23 | 30 | 28 | 34 |

Feels Like: 28°
Humidity: 55%
Wind Speed: 6 mph Northwest

5 Day Forecast

Last updated: 01/27/2016 15:15:00

Fleet Summary | Activity Log | IM Report | Source Event Monitor

| W... | Division | Location | Asset | Last Update | AHI | Aggrega... Risk | Safety Risk | Reliability Risk | Financial Risk | Environ... Risk | Custom... Risk | Availabil... Risk | Annual Revenue | Replace... Cost | Renew Cost | Mainten... Cost | Replace... Time | Renew Time |
|------|-----------|--------------|--------------------|-------------|-----|-----------------|-------------|------------------|----------------|-----------------|----------------|-------------------|----------------|-----------------|------------|-----------------|-----------------|------------|
| | Northeast | NA Statio... | <u>CB 1</u> | 03/12/20... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 37230 | 250 | 50 | 10 | 6 weeks | 12 weeks |
| | Northeast | NA Statio... | <u>CB 2</u> | 11/10/20... | 6 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 14892 | 150 | 50 | 10 | 12 weeks | 12 weeks |
| | Northeast | NA Statio... | <u>Main Batter</u> | 02/09/20... | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A |
| | Northeast | NA Statio... | <u>TR1</u> | 11/10/20... | 16 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10950 | 250 | 100 | 20 | 12 weeks | 26 weeks |
| | Northeast | NA Statio... | <u>TR2</u> | 11/10/20... | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 21900 | 500 | 250 | 30 | 12 weeks | 26 weeks |
| | Northeast | NA Statio... | <u>TR3</u> | 04/29/20... | 41 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 43800 | 750 | 375 | 40 | 12 weeks | 26 weeks |
| | Northeast | NA Statio... | <u>TRA</u> | 11/10/20... | 7 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 65700 | 1000 | 500 | 40 | 12 weeks | 26 weeks |
| | Northeast | NA Statio... | <u>TRB</u> | 11/10/20... | 17 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 10950 | 250 | 100 | 20 | 12 weeks | 26 weeks |

Qué pasa con mi transformador?

DisplayName
Search assets

Image Map Nameplate

TR1

OLTC Activity Performance
20

Diagnostics Summary: TR1 AHI

| TR1 Asset | |
|---------------------------|----|
| Asset Health Index | 60 |
| Manual Asset Health Index | 55 |

Assessment

| Bushings | | |
|---------------------|---------------|---------------|
| aScore | Manual aScore | |
| 56* | | |
| Bushing Assessment | | |
| Mode | mScore | Manual mScore |
| H1bushingDielectric | 55* | |
| H2bushingDielectric | 55* | |
| H3bushingDielectric | 14* | |
| X1bushingDielectric | 77* | |
| X2bushingDielectric | 77* | |
| X3bushingDielectric | 77* | |
| Y1bushingDielectric | 77* | |
| Y2bushingDielectric | 77* | |
| Y3bushingDielectric | 1 | |



Manually Score

Manually Score

- World Wide Energy
- North America Grid
- Northeast
- NA Station
- TR1
- TR2
- TR3
- TR4
- TR5
- TR6
- TR7
- TR8
- TR9
- TR10
- TR11
- TR12
- TR13
- TR14
- TR15
- TR16
- TR17
- TR18
- TR19
- TR20
- TR21
- TR22
- TR23
- TR24
- TR25
- TR26
- TR27
- TR28
- TR29
- TR30
- TR31
- TR32
- TR33
- TR34
- TR35
- TR36
- TR37
- TR38
- TR39
- TR40
- TR41
- TR42
- TR43
- TR44
- TR45
- TR46
- TR47
- TR48
- TR49
- TR50

Diagnostics Summary: TR1 AHI

TR1 Asset

Asset Health Index: 30*

Assessment

Bushings: 4

Dielectric: 13*

IM: 40*

LTC: 4

Operational: 4

Diagnostics Summary: TR2 AHI

Asset Health Index: 30*

Assessment

Bushings: 4

Dielectric: 13*

IM: 40*

LTC: 4

Operational: 4

Diagnostics Summary: TR2 AHI

TR2 Asset

Asset Health Index: 7*

Assessment

Bushings: 7*

Dielectric: 13*

IM: 7*

LTC: 4

Operational: 4

Diagnostics Summary: TR3 AHI

Asset Health Index: 7*

Assessment

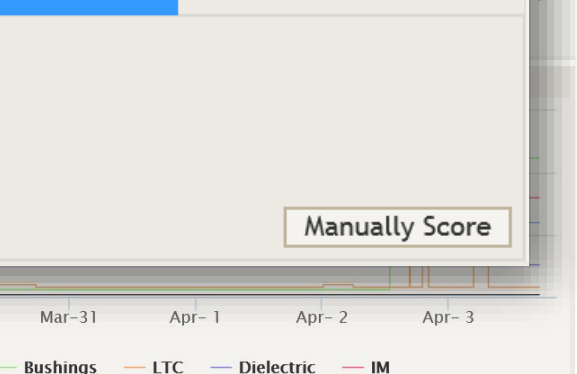
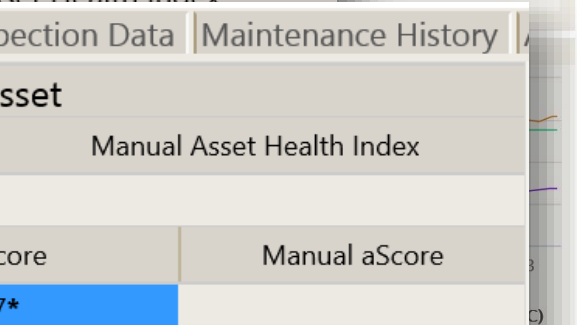
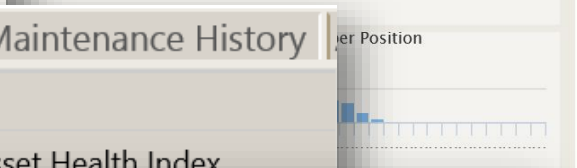
Bushings: 7*

Dielectric: 13*

IM: 7*

LTC: 4

Operational: 4



Manually Score



Integra datos de múltiples fuentes:

- Laboratorios
- Monitores en línea
- Analizadores de gas portátiles

Realiza 3 tipos de análisis y genera reportes detallados sobre:

- AGD extendido
- Calidad del aceite
- Degradación del papel

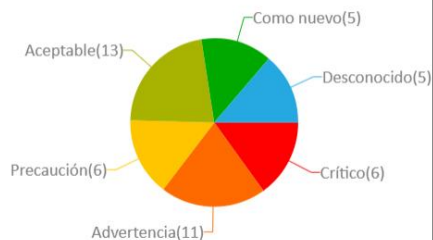
Califica la condición del equipo usando un índice de salud de 5 niveles.



Basic Dashboard

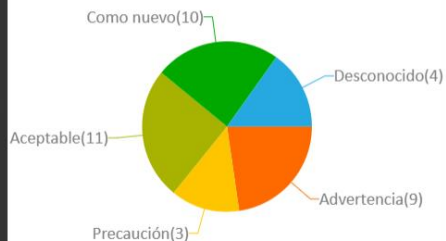
ESTADO GENERAL

Fleet Status



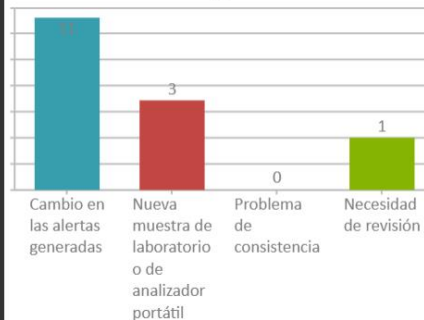
ESTADO DE LA PROPIEDAD

Oil Quality Status (Main Tanks)



ESTADO DE ACCIÓN

Pending actions



Equipos para Fleet Status tener estado global = Crítico(6)

Panel de información

Cerrar

| IV LAB ASSET 1 | MS DEMO INDEX EVALUATION EXAMF | MS DEMO4 - PAPER DEGRADATION | MS DEMOSC LAB DATA LTC TW | TRANSFO-001-LTC | TRANSFO-021-LTC |
|---|---|--|--|---|---|
| <p>Tags Ninguno(a) Muestras: 10</p> | <p>Tags Ninguno(a) Muestras: 2</p> | <p>Tags Ninguno(a) Muestras: 1085</p> | <p>Tags Ninguno(a) Muestras: 4</p> | <p>Tags Ninguno(a) Muestras: 5</p> | <p>Tags Ninguno(a) Muestras: 15</p> |
| <p>N.º serie: SRN-12345 N.º Equip.: EQN-64321 Nom. subestación: Habs sub 1 KV: 17 MVA: 10 Año: 1972</p> | <p>N.º serie: N.º Equip.: Nom. subestación: KV: MVA: Año:</p> | <p>N.º serie: 435673 N.º Equip.: TRF-26 Nom. subestación: MS Sub A KV: 13,8 MVA: 0,5 Año: 2001</p> | <p>N.º serie: S1 N.º Equip.: E1 Nom. subestación: TW KV: MVA: Año:</p> | <p>N.º serie: 787303 N.º Equip.: Transfo-001 Nom. subestación: Sub No38 KV: MVA: Año:</p> | <p>N.º serie: 487079 N.º Equip.: Transfo-021 Nom. subestación: Sub No51 KV: MVA: Año:</p> |

Analizar

Atrás

Equipos

Informes

Analista AGD

Muestras

Eventos

Acciones

| | | | | | |
|--|--|--|---|--|--|
| IV LAB ASSET 1 | IV LAB ASSET 2 | IV LAB ASSET 3 | IV LAB ASSET 4 | IV LAB ASSET 5 | IV LAB ASSET 6 |
| Tags Ninguno(a) Muestras: 19 N.º serie: SRN-12345 N.º Equip: EGN-54321 Nomb. subestación: Hias sub 1 KV: 17 MVA: 10 Año: 1972 | Tags Ninguno(a) Muestras: 1 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 1 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 0 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 0 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 0 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: |
| MS DEMO INDEX EVALUATION EXAMI | MS DEMO1 - MIXED DATA LESS 69 KV | MS DEMO2 - LTC WITH C9 | MS DEMO4 - PAPER DEGRADATION | MS DEMO6A - LAB DATA 10 | MS DEMO6C - LAB DATA LTC TW |
| Tags Ninguno(a) Muestras: 2 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 2033 N.º serie: Ser10221 N.º Equip: Equip1002 Nomb. subestación: Sub KV: 68 MVA: 10 Año: 2000 | Tags Ninguno(a) Muestras: 654 N.º serie: Ser-LTC1234 N.º Equip: Equip24356 Nomb. subestación: Montreal - Site B KV: 70 MVA: Año: 2007 | Tags Ninguno(a) Muestras: 1065 N.º serie: 435673 N.º Equip: TRF-26 Nomb. subestación: MS Sub A KV: 13,8 MVA: 0,5 Año: 2001 | Tags Ninguno(a) Muestras: 27 N.º serie: 57852 N.º Equip: TRF-09 Nomb. subestación: MS Sub D KV: 12,5 MVA: 1 Año: 1947 | Tags Ninguno(a) Muestras: 4 N.º serie: S1 N.º Equip: E1 Nomb. subestación: TW KV: MVA: Año: |
| MS DEMO6D - LAB NORMAL | TRANSFO-001-LTC | TRANSFO-001-TRN | TRANSFO-002-TRN | TRANSFO-003-TRN | TRANSFO-004-TRN |
| Tags Ninguno(a) Muestras: 10 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 0 N.º serie: 787303 N.º Equip: Transfo-001 Nomb. subestación: Sub No3 | Tags Ninguno(a) Muestras: 45 N.º serie: 848416 N.º Equip: Transfo-001 Nomb. subestación: Sub No3 | Tags Ninguno(a) Muestras: 0 N.º serie: 530455 N.º Equip: Transfo-002 Nomb. subestación: Sub No17 | Tags Ninguno(a) Muestras: 7 N.º serie: 939908 N.º Equip: Transfo-003 Nomb. subestación: Sub No17 | Tags Ninguno(a) Muestras: 29 N.º serie: 700576 N.º Equip: Transfo-004 Nomb. subestación: Sub No4 |
| TRANSFO-005-TRN | TRANSFO-006-TRN | TRANSFO-007-TRN | TRANSFO-008-TRN | TRANSFO-009-TRN | TRANSFO-010-TRN |
| Tags Ninguno(a) Muestras: 30 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 29 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 29 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 21 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 29 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: | Tags Ninguno(a) Muestras: 4 N.º serie: N.º Equip: Nomb. subestación: KV: MVA: Año: |

Analizar

Atrás

Equipos

Informes

Análisis AGD

Muestras

Eventos

Acciones

insideview

Analizar los equipos

Gestionar los equipos Restablecer Filtro: Tags Informe del seguimiento

IV LAB ASSET 1

Tags Ninguno(a)
Muestras: 19

N.º serie: SRN-12345
N.º Equip.: EDN-94321
Nomb. subestación: Habs sub 1
KV: 17 | MVA: 10 | Año: 1972

IV LAB ASSET 2

Tags Ninguno(a)
Muestras: 1

N.º serie:
N.º Equip.:
Nomb. subestación:
KV: | MVA: | Año:

IV LAB ASSET 3

Tags Ninguno(a)
Muestras: 45

N.º serie: 848416
N.º Equip.: Transfo-001
Nomb. subestación: Sub No38
KV: | MVA: | Año:

IV LAB ASSET 4

Tags Ninguno(a)
Muestras: 6

N.º serie: 530455
N.º Equip.: Transfo-002
Nomb. subestación: Sub No17
KV: | MVA: | Año:

IV LAB ASSET 5

Tags Ninguno(a)
Muestras: 7

N.º serie: 939908
N.º Equip.: Transfo-003
Nomb. subestación: Sub No17
KV: | MVA: | Año:

IV LAB ASSET 6

Tags Ninguno(a)
Muestras: 0

N.º serie:
N.º Equip.:
Nomb. subestación:
KV: | MVA: | Año:

MS DEMO INDEX EVALUATION EXAMF

Tags Ninguno(a)
Muestras: 2

N.º serie:
N.º Equip.:
Nomb. subestación:
KV: | MVA: | Año:

MS DEMO1 - MIXED DATA LESS 69 KV

Tags Ninguno(a)
Muestras: 2933

N.º serie: Ser10221
N.º Equip.: Equip1002
Nomb. subestación: Sub
KV: 68 | MVA: 10 | Año: 2000

MS DEMO6D - LAB NORMAL

Tags Ninguno(a)
Muestras: 10

N.º serie:
N.º Equip.:
Nomb. subestación:
KV: | MVA: | Año:

TRANSFO-001-LTC

Tags Ninguno(a)
Muestras: 5

N.º serie: 787303
N.º Equip.: Transfo-001
Nomb. subestación: Sub No38
KV: | MVA: | Año:

MS DEMO6C LAB DATA LTC TW

Tags Ninguno(a)
Muestras: 4

N.º serie: S1
N.º Equip.: E1
Nomb. subestación: TW
KV: | MVA: | Año:

TRANSFO-004-TRN

Tags Ninguno(a)
Muestras: 29

N.º serie: 700576
N.º Equip.: Transfo-004
Nomb. subestación: Sub No48
KV: | MVA: | Año:

Estado

Estado del seguimiento

Normal

Maintenance on monitor
Maintenance on monitor - shutdown data acquisition

Notificaciones de cambio en el equipo

- Nueva muestra de laboratorio o de analizador portátil
- Cambio en las alertas generadas

Acciones

| Fecha | Título | Mensaje |
|------------|-------------------------------------|---|
| 2016-08-04 | Perform a Termo Scan on this unit | Need to locate the hot spot on this unit. Upload pictures when done |
| 2019-10-06 | Next Resampling Date Recommendation | A resampling action is recommended for this date, based on the gas levels and the recommended sampling interval (automatic action). |

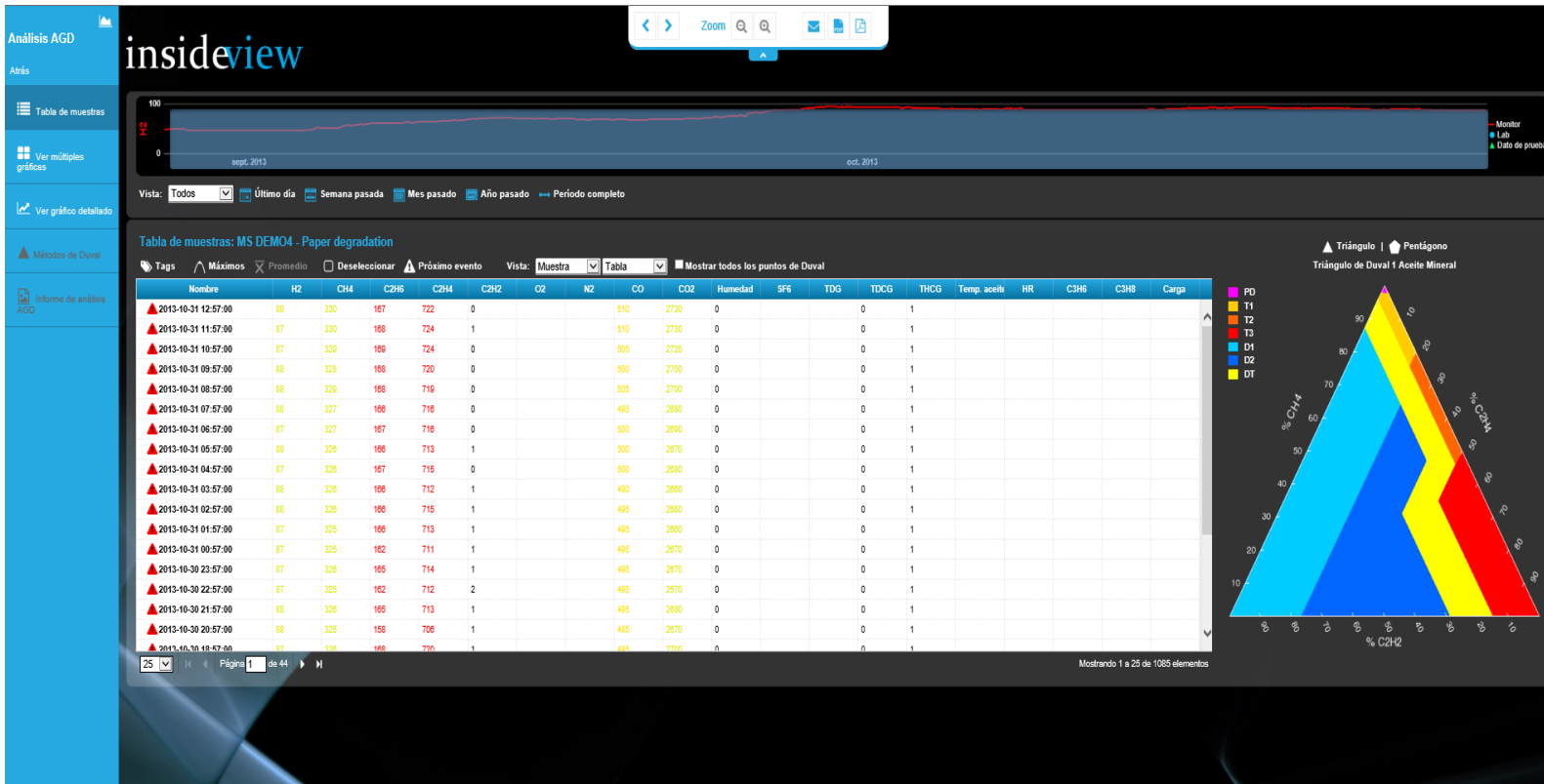


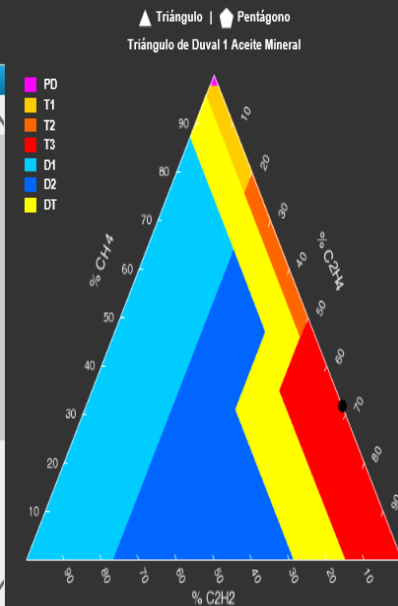
Tabla de muestras: MS DEMO4 - Paper degradation

Tags Máximos Promedio Deseleccionar Próximo evento Vista: Mostrar todos los puntos de Duval

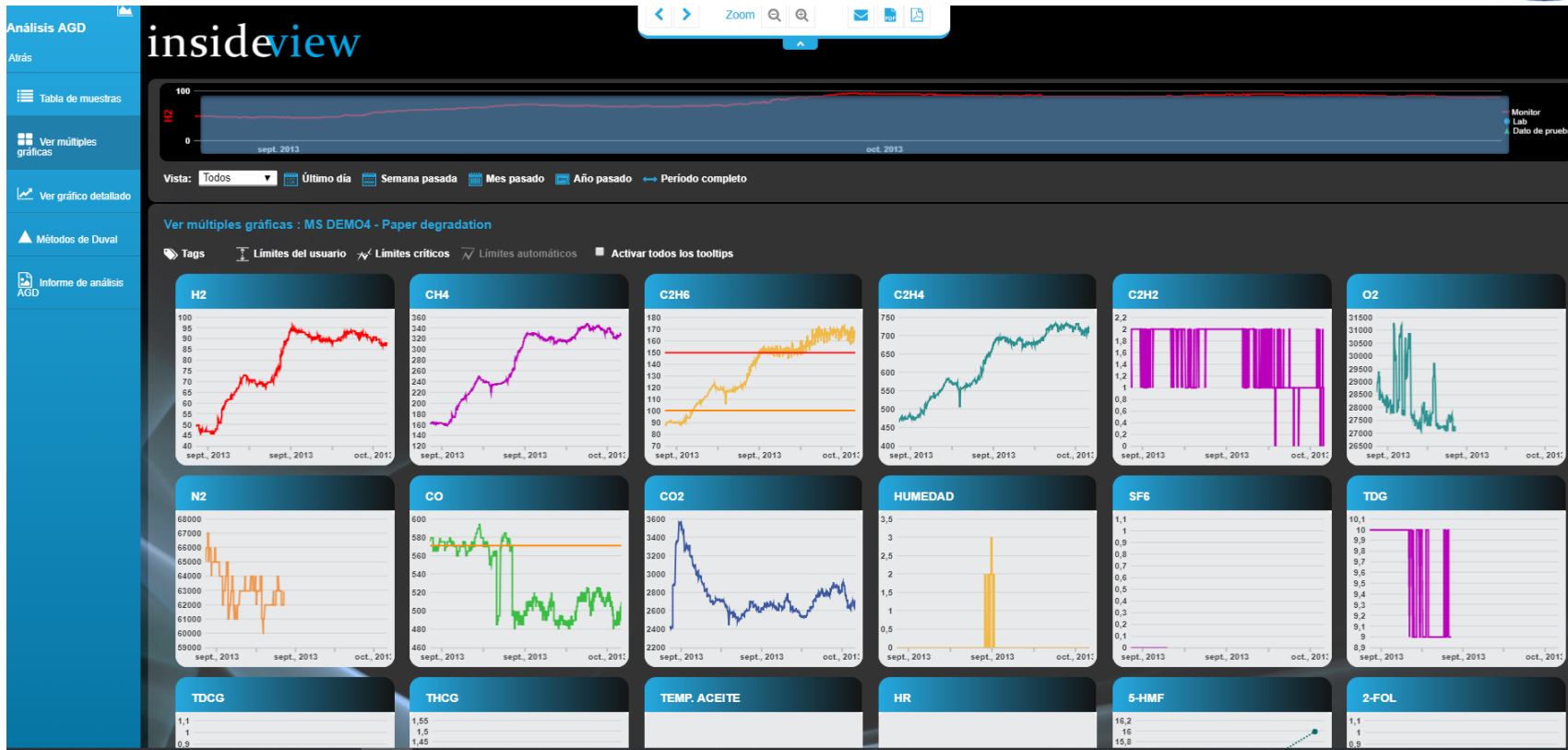
| Nombre | H2 | CH4 | C2H6 | C2H4 | C2H2 | O2 | N2 | CO | CO2 | Humedad | SF6 | TDG | TDCG | THCG | Temp. aceite | HR | C3H6 | C3H8 | Carga | |
|-----------------------|----|-----|------|------|------|----|----|-----|------|---------|-----|-----|------|------|--------------|----|------|------|-------|--|
| ▲ 2013-10-31 12:57:00 | 88 | 330 | 167 | 722 | 0 | | | 910 | 2730 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 11:57:00 | 87 | 330 | 168 | 724 | 1 | | | 510 | 2730 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 10:57:00 | 87 | 329 | 169 | 724 | 0 | | | 505 | 2720 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 09:57:00 | 88 | 328 | 168 | 720 | 0 | | | 500 | 2700 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 08:57:00 | 88 | 329 | 168 | 719 | 0 | | | 505 | 2700 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 07:57:00 | 88 | 327 | 166 | 716 | 0 | | | 495 | 2680 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 06:57:00 | 87 | 327 | 167 | 716 | 0 | | | 500 | 2690 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 05:57:00 | 88 | 326 | 166 | 713 | 1 | | | 500 | 2670 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 04:57:00 | 87 | 326 | 167 | 715 | 0 | | | 500 | 2690 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 03:57:00 | 88 | 326 | 168 | 712 | 1 | | | 490 | 2690 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 02:57:00 | 88 | 326 | 168 | 715 | 1 | | | 495 | 2680 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 01:57:00 | 87 | 325 | 166 | 713 | 1 | | | 495 | 2660 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-31 00:57:00 | 87 | 325 | 162 | 711 | 1 | | | 495 | 2670 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-30 23:57:00 | 87 | 326 | 165 | 714 | 1 | | | 495 | 2670 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-30 22:57:00 | 87 | 325 | 162 | 712 | 2 | | | 495 | 2670 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-30 21:57:00 | 88 | 326 | 165 | 713 | 1 | | | 495 | 2690 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-30 20:57:00 | 88 | 325 | 158 | 708 | 1 | | | 485 | 2670 | 0 | | 0 | 1 | | | | | | | |
| ▲ 2013-10-30 18:57:00 | 87 | 326 | 168 | 720 | 1 | | | 495 | 2700 | 0 | | 0 | 1 | | | | | | | |

25 1

Mostrando 1 a 25 de 1085 elementos



2013-10-31 12:57:00 se ha trazado.



INFORME DE ANÁLISIS AGD

CARACTERÍSTICAS DEL TRANSFORMADOR

| Nombre | Numero de serie | Numero de equipo | Ubicación | Nombre de la subsección | Epo de equipo | Palenque de equipo | Descripción | Epo de aceite | Volumen de aceite (l) | Epo de banco | KV | MVA | Año de fabricación |
|---------------------------|-----------------|------------------|---------------------|-------------------------|--------------------|--------------------|-------------|--------------------------|-----------------------|----------------------|------|-----|--------------------|
| MS DEICH - Pape degradado | 435873 | TTF-26 | Montevideo - Bta.A4 | MS Sub.A | Transformador (TR) | Windgrasse | XFO-G4 | Acido mineral (ASTM 312) | 82 | Reservorio principal | 13,8 | 0,5 | 2011 |

GRUPO DE ALARMA: DEMO - ALARM SET FOR TRN

| Nombre | H2 | CH4 | C2H6 | C2H4 | C2H2 | O2 | N2 | CO2 | CO | Humedad | SF6 | UDC | UDCC | HCCG |
|--------------|-----|-----|------|------|------|----|----|------|------|---------|-----|-----|------|------|
| Nivel alto 4 | 180 | 100 | 10 | 20 | 80 | | | | 1400 | 25 | | | | 400 |
| Nivel alto 3 | 701 | 750 | 101 | 101 | 51 | | | 1000 | 571 | | | | | 1021 |
| Nivel alto 2 | 101 | 800 | 86 | 86 | 36 | | | 1000 | 361 | 20 | | | | 721 |
| Nivel alto 1 | 50 | 60 | 33 | 20 | 18 | | | 1800 | 176 | | | | | 380 |

MEDICIONES (PPM)

| Fecha | H2 | CH4 | C2H6 | C2H4 | C2H2 | O2 | N2 | CO2 | CO | Humedad | SF6 | UDC | UDCC | HCCG |
|---------------------|----|-----|------|------|------|----|----|------|-----|---------|-----|-----|------|------|
| 2013-10-31 12:57:00 | 86 | 236 | 87 | 750 | 0 | | | 2730 | 616 | 0 | | | 0 | 1 |

ANÁLISIS DE TASA DE GASES

| Fecha | H2 | CH4 | C2H6 | C2H4 | C2H2 | O2 | N2 | CO2 | CO | Humedad | SF6 | UDC | UDCC | HCCG |
|---------------------|--------|-------------|-------------|-------------|----------|-----|-----|--------------|-------------|----------|-----|-----|----------|----------|
| 2013-10-31 12:57:00 | Estado | -2,2 Estado | -0,7 Estado | -2,2 Estado | 0 Estado | N/A | N/A | -26,5 Estado | -3,5 Estado | 0 Estado | N/A | N/A | 0 Estado | 0 Estado |

ANÁLISIS AGD

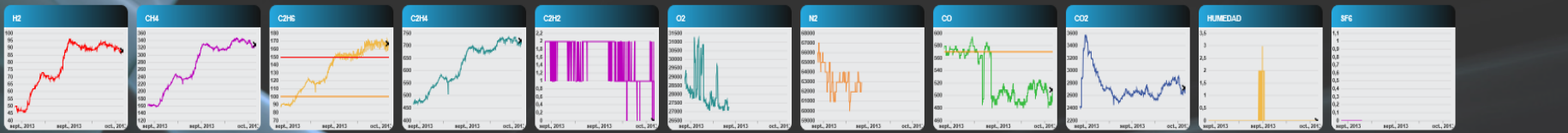
| Fecha | Índice de Doble | Índice de gas H2/CH4 | Índice de gas H2/CO2 | Downenburg | Gas clave |
|---------------------|--|-------------------------------------|-------------------------------------|--------------------------------------|-------------------|
| 2013-10-31 12:57:00 | Índice de Fugas Falla temperatura superior a 700 °C | Falla temperatura superior a 700 °C | Falla temperatura superior a 700 °C | Downenburg Descomposición térmica | Falla desconocida |

RECOMENDACIONES IEEB 57.104-2008

| Fecha | Condiciones del transformador basadas en gas clave | UDC (ppm) | Tasa de UDCC (ppm/año) | Condiciones de acción basadas en UDCC | Intervalo de observación | Procedimiento de operación |
|---------------------|--|-----------|------------------------|---------------------------------------|--------------------------|--|
| 2013-10-31 12:57:00 | Condición 1 (C2H6/C2H4) | 1817 | 2,624 | Condición 2 | Trimestral | Tenga cuidado: Análisis reduccionales de gases para encontrar la causa. Determinar la dependencia de la carga. |

ÍNDICE

| Fecha | %CH4 | Índice de Doble | %C2H6 | CH2/CH4 (H1) | C2H2/C2H4 (H2) | Índice de IEEB | C2H2/C2H4 (H3) | C2H6/C2H4 (H4) | UDC/UDC0 | C2H2/C2H4 (H5) | Índice acorrelado | H2/C2H6 | C2H2 |
|---------------------|-------|-----------------|-------|--------------|----------------|----------------|----------------|----------------|----------|----------------|-------------------|---------|------|
| 2013-10-31 12:57:00 | 31,36 | 0,04 | 65,61 | 3,77 | 0 | 0 | 417,5 | 4,32 | 5,35 | 0 | 0,02 | | N/A |



Cual es el historial de mi bushing?



DisplayName
Search assets

- World Wide Energy
- North America Grid
- North America Grid > Northeast
- North America Grid > Northeast > NA Station 1
- North America Grid > Northeast > NA Station 1 > TB
- North America Grid > Northeast > NA Station 1 > TR3
- North America Grid > Northeast > NA Station 1 > TR1
- North America Grid > Northeast > NA Station 1 > TR1 > Bushing
- North America Grid > Northeast > NA Station 1 > TR1 > Dielectric
- North America Grid > Northeast > NA Station 1 > TR1 > IM
- North America Grid > Northeast > NA Station 1 > TR1 > LTC
- North America Grid > Northeast > NA Station 1 > TR1 > Mechanical
- North America Grid > Northeast > NA Station 1 > TR1 > Operational
- North America Grid > Northeast > NA Station 1 > TR2
- North America Grid > Northeast > NA Station 1 > TR2 > Bushing
- North America Grid > Northeast > NA Station 1 > TR2 > Dielectric
- North America Grid > Northeast > NA Station 1 > TR2 > IM
- North America Grid > Northeast > NA Station 1 > TR2 > LTC
- North America Grid > Northeast > NA Station 1 > TR2 > Mechanical
- North America Grid > Northeast > NA Station 1 > TR2 > Operational
- Main Battery
- CB 1

Online Bushing Data Offline Power Factor Offline Capacitance

Bushing Test Results Bushing Monitor

Bushing Test Results

| Date/Time (UTC) | Designation | Bh Serial # | Insulation | mA | W | % TCPF | Capacitance | Frank Auto | Frank Manual | Np PF | Np Cap |
|---------------------|-------------|-------------|------------|-------|------|--------|-------------|------------|--------------|--------|--------|
| 08/10/2012 10:31:07 | H1 | 123 | C1 | 1.22 | 0.05 | 0.5 | 324.41 | G | | 0.49 | 330 |
| 08/10/2012 10:31:07 | H1 | 123 | C2 | 15.24 | 0.55 | 0.36 | 4042.2 | G | | (none) | 4070 |
| 08/10/2012 10:31:07 | H2 | 123 | C1 | 1.22 | 0.05 | 0.49 | 322.59 | G | | 0.48 | 327 |
| 08/10/2012 10:31:07 | H2 | 123 | C2 | 14.82 | 0.52 | 0.35 | 3932.1 | G | | (none) | 3993 |
| 08/10/2012 10:31:07 | H3 | 123 | C1 | 1.22 | 0.05 | 0.49 | 322.19 | G | | 0.48 | 329 |
| 08/10/2012 10:31:07 | H3 | 123 | C2 | 14.73 | 0.52 | 0.35 | 3906 | G | | (none) | 3921 |
| 08/10/2012 10:31:07 | N | 123 | C1 | 2.4 | 0.08 | 0.31 | 636.8 | G | | 0.27 | 642 |
| 08/10/2012 10:31:07 | N | 123 | C2 | 1.91 | 0.04 | 0.19 | 505.58 | G | | (none) | (none) |
| 08/10/2012 10:31:07 | X1 | 123 | C1 | 1.66 | 0.07 | 0.53 | 439.06 | D | | 0.48 | 446 |
| 08/10/2012 10:31:07 | X1 | 123 | C2 | 12.63 | 0.52 | 0.41 | 3349.6 | G | | (none) | 3250 |
| 08/10/2012 10:31:07 | X2 | 123 | C1 | 1.58 | 0.07 | 0.54 | 418.67 | D | | 0.51 | 426 |
| 08/10/2012 10:31:07 | X2 | 123 | C2 | 11.92 | 0.5 | 0.42 | 3161.3 | G | | (none) | 3284 |
| 08/10/2012 10:31:07 | X3 | 123 | C1 | 1.65 | 0.07 | 0.55 | 438.43 | D | | 0.49 | 446 |
| 08/10/2012 10:31:07 | X3 | 123 | C2 | 12.41 | 0.51 | 0.41 | 3292.6 | G | | (none) | 3454 |
| 08/10/2012 10:31:07 | Y1 | 123 | C1 | 2.43 | 0.14 | 0.54 | 643.52 | D | | 0.28 | 642 |
| 08/10/2012 10:31:07 | Y1 | 123 | C2 | 1.96 | 0.05 | 0.27 | 519.51 | G | | (none) | (none) |
| 08/10/2012 10:31:07 | Y2 | 123 | C1 | 2.4 | 0.14 | 0.57 | 636.92 | D | | 0.27 | 635 |
| 08/10/2012 10:31:07 | Y2 | 123 | C2 | 2.03 | 0.06 | 0.32 | 537.73 | G | | (none) | (none) |
| 08/10/2012 10:31:07 | Y3 | 123 | C1 | 2.44 | 0.11 | 0.43 | 645.87 | G | | 0.27 | 649 |
| 08/10/2012 10:31:07 | Y3 | 123 | C2 | 1.91 | 0.04 | 0.23 | 505.73 | G | | (none) | (none) |
| 09/20/2005 07:59:28 | H1 | 123 | C1 | 1.22 | 0.05 | 0.52 | 324.4 | G | | 0.49 | 330 |
| 09/20/2005 07:59:28 | H1 | 123 | C2 | 15.21 | 0.66 | 0.43 | 4036 | G | | (none) | 4070 |
| 09/20/2005 07:59:28 | H2 | 123 | C1 | 1.21 | 0.05 | 0.51 | 322 | G | | 0.48 | 327 |
| 09/20/2005 07:59:28 | H2 | 123 | C2 | 14.8 | 0.61 | 0.41 | 3926 | G | | (none) | 3993 |
| 09/20/2005 07:59:28 | H3 | 123 | C1 | 1.21 | 0.05 | 0.51 | 320.8 | G | | 0.48 | 329 |
| 09/20/2005 07:59:28 | H3 | 123 | C2 | 14.7 | 0.61 | 0.42 | 3899 | G | | (none) | 3921 |

| Date | Desig | Bh | Insulc | mA | W | % | Capa | Frank | Frank | Np | Np |
|------|-------|----|--------|----|---|---|------|-------|-------|--------|------|
| | | | | | | | | | | 0.49 | 330 |
| | | | | | | | | | | (no... | 4070 |
| | | | | | | | | | | 0.48 | 327 |
| | | | | | | | | | | (no... | 3993 |
| | | | | | | | | | | 0.48 | 329 |
| | | | | | | | | | | (no... | 3921 |
| | | | | | | | | | | 0.27 | 642 |
| | | | | | | | | | | | |
| | | | | | | | | | | 123 | |
| | | | | | | | | | | 1971 | |
| | | | | | | | | | | 800 | |
| | | | | | | | | | | | |
| | | | | | | | | | | 123 | |
| | | | | | | | | | | 1971 | |
| | | | | | | | | | | 800 | |
| | | | | | | | | | | | |
| | | | | | | | | | | 123 | |
| | | | | | | | | | | 1074 | |

| | |
|---------------------|-----|
| H3bushingDielectric | 14* |
| X1bushingDielectric | 77* |

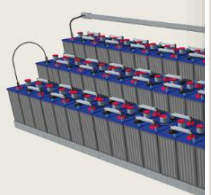
- Bushings
- H1bushingDielectric
- H2bushingDielectric
- H3bushingDielectric
- X1bushingDielectric
- X2bushingDielectric
- X3bushingDielectric
- Y1bushingDielectric
- Y2bushingDielectric
- Y3bushingDielectric

Apr-3

Qué pasa con el banco de baterías?

- Search assets
- World Wide Energy
 - North America Grid
 - Northeast
 - NA Station 1
 - TB
 - TR3
 - TR1
 - Bushings
 - Dielectric
 - IM
 - LTC
 - Operational
 - TR2
 - Main Battery**
 - CB 1
 - CB 2
 - NA Station 2
 - NA Station 3
 - NA Station 5
 - NA Station 6
 - NA Station 7
 - NA Station 8
 - NA Station 9
 - NA Station 12
 - NA Station 13

Image Map Nameplate



Battery 111

Image Map Nameplate

Battery 111

Manufacturer Exide

Year

Serial Number

Special ID

Cell Type

Input VAC

DC Load

DC Wire Size

AmpHours

Installed Date

Charger 1

Mfr

Year

Serial Number

Charger Voltage

Installed Date

Manufacturer

Serial Number

Special ID

Asset Health Index

Main Battery

Image Map Nameplate

Battery 111

Image Map Nameplate

Battery 111

Manufacturer Exide

Year

Serial Number

Special ID

Cell Type

Input VAC

DC Load

DC Wire Size

AmpHours

Installed Date

Charger 1

Mfr


Year

Serial Number

Charger Voltage

Installed Date

Bank Status



AC Voltage 133.30V

DC Voltage 130.30V

Battery SG N/A

DC Alarm ●

AC Alarm ●

GND Alarm ●

Diagnostics Summary: Mechanical

Mechanical Assessment 2

| aScore | Annotated |
|--------|-----------|
| 1 | |

| Method | mScore | Annotated |
|-----------------------|--------|-----------|
| positiveGridCorrosion | 1 | |
| sedimentBuildUp | 1 | |
| softShort | | |
| sulphation | | |
| terminalCorrosion | | |
| thermalRunaway | | |

Diagnostics Summary: Mechanical

positiveGridCorrosion Method

| mScore | Annotated |
|--------|-----------|
| 1 | |

| Analytic | fScore | Annotated |
|--------------------------------|--------|-----------|
| impedanceLimit.ismi | 1 | |
| internalResistanceLimit.ins... | 1 | |
| temperatureLimit.inspection | 1 | |
| temperatureLimit.ismi | 1 | |

Diagnostics Summary: Main Battery AHI

Main Battery Asset

Asset Health Index

1

| Assessment | aScore | Annotated | Score |
|------------|--------|-----------|-------|
| Mechanical | 1 | | 1 |

0

Como hago seguimiento a los activos críticos?

DisplayName
Search assets

Smart Watchlist

Filter: AHI >= 10 Apply

All Watch Only

| Watch | Division | Location | Asset | Last Update (UTC -07:00) | AHI | Aggregated Risk |
|-------|------------|-----------------|-------|--------------------------|-----|-----------------|
| 👁️ | Africa | EMEA Station 66 | TR 1 | 04/08/2012 17:00:00 | 1 | 1 |
| 👁️ | Africa | EMEA Station 54 | TR 2 | 02/28/2013 16:00:00 | 1 | 10 |
| 👁️ | Africa | EMEA Station 54 | TR 1 | 02/28/2013 16:00:00 | 1 | 2 |
| 👁️ | Africa | EMEA Station 66 | TR 3 | 04/08/2012 17:00:00 | 3* | 14 |
| 👁️ | Brasil | SA Station 1 | CB 5 | 11/15/2016 14:33:04 | 6* | 7 |
| 👁️ | Northeast | NA Station 1 | TR3 | 04/29/2009 17:00:00 | 7* | 22 |
| 👁️ | Europe | EMEA Station 1 | CB 5 | 06/16/2016 09:09:14 | 12 | 9 |
| 👁️ | Northeast | NA Station 8 | TR 1 | 08/01/2012 17:00:00 | 13 | 22 |
| 👁️ | Northeast | NA Station 1 | TRB | 03/06/2017 14:25:21 | 17 | 8 |
| 👁️ | Northeast | NA Station 1 | TR1 | 04/03/2017 16:41:21 | 30* | 69 |
| 👁️ | Northeast | NA Station 1 | TRC | 03/06/2017 14:23:50 | 10 | 39 |
| 👁️ | West | NA Station 54 | TR 4 | 05/14/2013 17:00:00 | 12 | 9 |
| 👁️ | China | AsiaPac 1 | CB 5 | 06/16/2016 09:09:12 | 12 | 9 |
| 👁️ | Europe | EMEA Station 52 | TR 1 | 11/07/2012 16:00:00 | 13 | 24 |
| 👁️ | China | AsiaPac 5 | TR 2 | 12/12/2012 16:00:00 | 13 | 23 |
| 👁️ | Europe | EMEA Station 2 | TR 4 | 01/29/2013 16:00:00 | 13 | 27 |
| 👁️ | Europe | EMEA Station 24 | TR 2 | 02/03/2013 16:00:00 | 13 | 26 |
| 👁️ | West | NA Station 89 | TR 4 | 03/24/2013 17:00:00 | 13 | 23 |
| 👁️ | Europe | EMEA Station 42 | TR 6 | 05/14/2013 17:00:00 | 13 | 52 |
| 👁️ | Europe | EMEA Station 38 | TR 3 | 10/03/2012 17:00:00 | 14 | 26 |
| 👁️ | Northeast | NA Station 3 | TR 1 | 04/07/2013 17:00:00 | 14* | 27 |
| 👁️ | SE & Korea | AsiaPac 8 | TR 3 | 02/25/2013 16:00:00 | 16 | 8 |
| 👁️ | SE & Korea | AsiaPac 7 | TR 8 | 02/03/2002 16:00:00 | 17 | 29 |
| 👁️ | Europe | EMEA Station 34 | TR 2 | 01/24/2012 16:00:00 | 18 | 26 |
| 👁️ | West | NA Station 54 | TR 7 | 05/14/2013 17:00:00 | 20 | 29 |

**Cual es la salud (Asset Health) y Riesgo (Asset Risk)
de TODOS mis activos?**

- Search assets
- World Wide Energy
 - North America Grid
 - Northeast
 - Central
 - West
 - Mexico
 - EMEA Energy
 - Europe
 - Middle East
 - Africa
 - South America Transco
 - Brasil
 - Colombia
 - Peru
 - Asia Pacific Power
 - China
 - SE & Korea
 - Australia

Organization: World ... | Fleet View | Utility KPI | Asset Lifecycle Planner

Location: All Location

Asset Types: All Asset Types

Functions: All Functions

Manufacturers: All Manufacturers

Age: x 40 to 50 years

Voltage Classes: All Voltage Classes

MVA Ratings: All MVA Ratings

Filter: AHI >= 10 Apply All Watch Only

AHI

ARI

| | Availability | Customer Impact | Environmental | Financial | Reliability | Safety |
|--|---|---|---|---|---|---|
| | | | | | | |
| | No Score Good Deteriorated Investigate Bad Urgent N/A | No Score Good Deteriorated Investigate Bad Urgent N/A | No Score Good Deteriorated Investigate Bad Urgent N/A | No Score Good Deteriorated Investigate Bad Urgent N/A | No Score Good Deteriorated Investigate Bad Urgent N/A | No Score Good Deteriorated Investigate Bad Urgent N/A |
| | ▲ 1/2 ▼ | ▲ 1/2 ▼ | ▲ 1/2 ▼ | ▲ 1/2 ▼ | ▲ 1/2 ▼ | ▲ 1/2 ▼ |

| Asset | Last Update | AHI |
|-------|---------------|-----|
| | 02/28/2013... | 1 |
| | 02/28/2013... | 1 |
| | 04/08/2012... | 1 |
| | 04/08/2012... | 1 |
| | 04/08/2012... | 1 |
| | 11/10/2015... | 14 |
| | 12/11/2008... | 20 |

Health Index 41

TR3

Two Winding Transformer

Northeast

NA Station 1

LAM123456

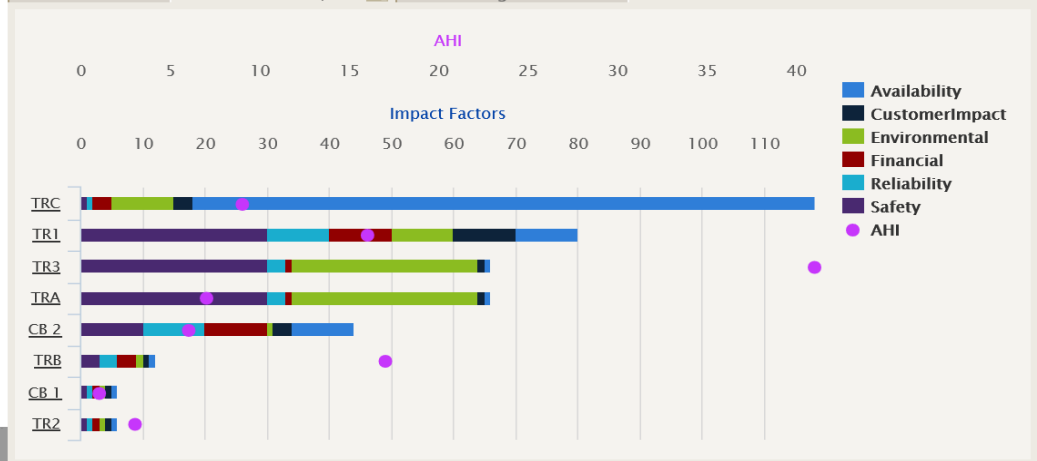
| Mainten... Cost | Replace... Time | Renew Time |
|-----------------|-----------------|------------|
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |
| 12 weeks | 26 weeks | |

| Location | Asset | Age | AHI | Customer Impact | Environmental | Financial | Reliability | Safety | Value | | | | | | | | | | |
|-----------|------------|------|-------------|-----------------|---------------|-----------|-------------|--------|-------|---|---|---|---|-------|------|------|----|----------|----------|
| Australia | AsiaPac 13 | TR 1 | 06/10/20... | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 87600 | 2000 | 1000 | 40 | 16 weeks | 26 weeks |
| Australia | AsiaPac 13 | TR 2 | 04/15/20... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 65700 | 1000 | 500 | 40 | 12 weeks | 26 weeks |
| Australia | AsiaPac 13 | TR 3 | 06/10/20... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 43800 | 750 | 375 | 40 | 12 weeks | 26 weeks |

Cuales activos contribuyen más al riesgo?

- Search assets
- World Wide Energy
 - North America Grid
 - Northeast
 - NA Station 1**
 - TB
 - TR3
 - TR1
 - Bushings
 - Dielectric
 - IM
 - LTC
 - Operational
 - TR2
 - Main Battery
 - CB 1
 - CB 2
 - NA Station 2
 - NA Station 3
 - NA Station 5
 - NA Station 6
 - NA Station 7
 - NA Station 8
 - NA Station 9
 - NA Station 12
 - NA Station 13

Location: NA Sta... Fleet View Report OneLineDiagram: NA Sta...



NA Station 1

Northeast

Location Ranking

Average AHI: **11**

Highest AHI: **41**

Asset with Highest AHI: TR3

Asset with Highest Risk: TR1

Weather: NA Station 1

33°F

Clear

| Day | Tue | Wed | Thu | Fri | Sat |
|------|-----|-----|-----|-----|-----|
| High | 48 | 44 | 40 | 41 | 39 |
| Low | 37 | 23 | 30 | 28 | 34 |

Feels Like: 28°
Humidity: 55%
Wind Speed: 6 mph Northwest

5 Day Forecast

Fleet Summary Activity Log IM Report Source Event Monitor

| W... | Division | Location | Asset | Last Update | AHI | Aggrega... Risk | Safety Risk | Reliability Risk | Financial Risk | Environ... Risk | Custom... Risk | Availabil... Risk | Annual Revenue | Replace... Cost | Renew Cost | Mainten... Cost | Replace... Time | Renew Time |
|------|-----------|--------------|-------------|-------------|-----|-----------------|-------------|------------------|----------------|-----------------|----------------|-------------------|----------------|-----------------|------------|-----------------|-----------------|------------|
| 👁 | Northeast | NA Statio... | CB 1 | 03/12/20... | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 37230 | 250 | 50 | 10 | 6 weeks | 12 weeks |
| 👁 | Northeast | NA Statio... | CB 2 | 11/10/20... | 6 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 14892 | 150 | 50 | 10 | 12 weeks | 12 weeks |
| 👁 | Northeast | NA Statio... | Main Batter | 02/09/20... | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | N/A | N/A |
| 👁 | Northeast | NA Statio... | TR1 | 11/10/20... | 16 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10950 | 250 | 100 | 20 | 12 weeks | 26 weeks |
| 👁 | Northeast | NA Statio... | TR2 | 11/10/20... | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 21900 | 500 | 250 | 30 | 12 weeks | 26 weeks |
| 👁 | Northeast | NA Statio... | TR3 | 04/29/20... | 41 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 43800 | 750 | 375 | 40 | 12 weeks | 26 weeks |
| 👁 | Northeast | NA Statio... | TRA | 11/10/20... | 7 | 3 | 3 | 3 | 1 | 3 | 1 | 1 | 65700 | 1000 | 500 | 40 | 12 weeks | 26 weeks |
| 👁 | Northeast | NA Statio... | TRB | 11/10/20... | 17 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 10950 | 250 | 100 | 20 | 12 weeks | 26 weeks |

Qué paso anoche?

DisplayName
Search assets

Image Map Nameplate

Activity Log

| Type | Source | Asset | Location | Division | Timestamp (UTC) | IP | Action |
|--------------|---------------------|-------|--------------|-----------|---------------------|---------------|------------------------|
| Notification | Asset | TR1 | NA Station 1 | Northeast | 04/03/2017 17:10:05 | | eferguson@doble.com |
| Information | mvaLimit.secondary | TR1 | NA Station 1 | Northeast | 04/03/2017 08:21:14 | | test_wwe@doblearms.com |
| Information | mvaLimit.secondary | TR1 | NA Station 1 | Northeast | 04/03/2017 06:22:36 | | lee@doble.com |
| Information | Asset | TR1 | NA Station 1 | Northeast | 04/03/2017 04:21:03 | | test_wwe@doblearms.com |
| Information | LTC | TR1 | NA Station 1 | Northeast | 04/03/2017 04:21:03 | | test_wwe@doblearms.com |
| Information | ltcMisoperation | TR1 | NA Station 1 | Northeast | 04/03/2017 04:21:03 | | test_wwe@doblearms.com |
| Information | parallelLtc.primary | TR1 | NA Station 1 | Northeast | 04/03/2017 04:21:03 | | test_wwe@doblearms.com |
| Information | Asset | TR2 | NA Station 1 | Northeast | 04/02/2017 19:50:32 | 73.119.94.241 | Login Successful |
| Information | LTC | TR2 | NA Station 1 | Northeast | 04/02/2017 17:36:40 | 73.119.94.241 | Login Successful |
| Information | ltcMisoperation | TR2 | NA Station 1 | Northeast | 04/02/2017 17:33:46 | 73.119.94.241 | Login Successful |
| Information | parallelLtc.primary | TR2 | NA Station 1 | Northeast | 04/02/2017 17:33:46 | 73.119.94.241 | Login Successful |
| Information | Asset | TR2 | NA Station 1 | Northeast | 04/02/2017 17:08:22 | 73.119.94.241 | Login Successful |
| Information | LTC | TR2 | NA Station 1 | Northeast | 04/02/2017 17:08:22 | 73.119.94.241 | Login Successful |
| Information | ltcMisoperation | TR2 | NA Station 1 | Northeast | 04/02/2017 13:41:36 | 73.119.94.241 | Login Successful |
| Information | parallelLtc.primary | TR2 | NA Station 1 | Northeast | 04/02/2017 13:41:36 | 73.119.94.241 | Login Successful |
| Information | Asset | TR2 | NA Station 1 | Northeast | 04/02/2017 07:20:00 | 73.119.94.241 | Login Successful |
| Alert | LTC | TR2 | NA Station 1 | Northeast | 04/02/2017 07:20:00 | 78.95.86.205 | Login Successful |

AT1 Analytic duvalThermalOil.ismi = 10

ARMS Notification

Alert: Location:
Name: AT1
SN: 20120871tke001
Analytic: duvalThermalOil.ismi
Score: 10

Asset: AT1

Source: Asset > Transformer > Analytic > duvalThermalOil.ismi

Time: Oct 3 2016 5:10AM Eastern Daylight Time

- World Wide Energy
- North America Grid
- Northeast
- NA Station 1
- TR3
- TR1**
- TR2
- Main Battery
- CB 1
- CB 2
- NA Station 2
- NA Station 3
- NA Station 5
- NA Station 6
- NA Station 7
- NA Station 8
- NA Station 9
- NA Station 12
- NA Station 13
- NA Station 14
- Central

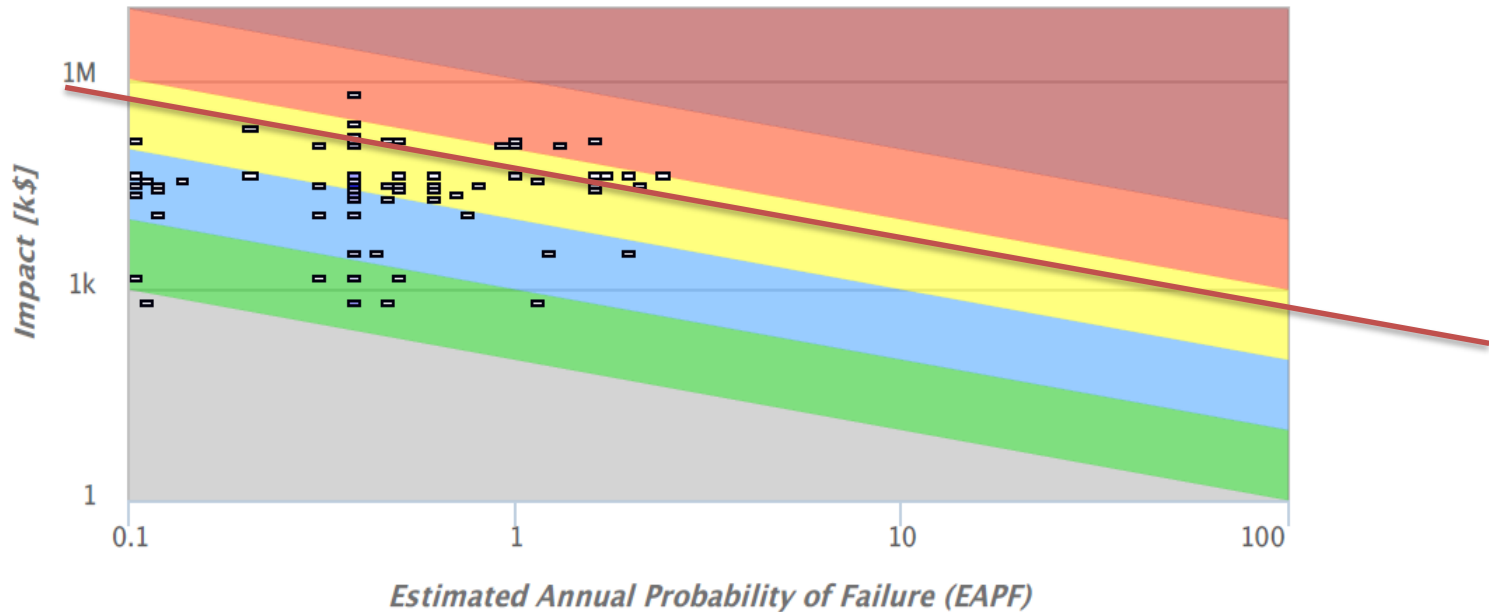
Navigation icons: back, forward, search

LTC 4
Operational 1
Manually Score

Legend: AHI Operational Dielectric LTC IM Bushings

Page 1 of 35 (25 results per page) May-19 May-20

Riesgo (\$/lapsodet tiempo) = Probabilidad de un riesgo/lapsodet tiempo *
Impacto de que ocurra el riesgo (\$)



ARI Range:

