A Presentation for





Kevin Turpin

- CEO and founder of PK Companies since 1997
- 15 years of asset Integrity Inspection in the Oil,
 Gas and Chemical Industry
- Performed Inspections On and Offshore using PK's patented mobile technology.
- Currently Working with BP and TOI to Create Mobile Technology for Offshore Data Collection.
- Member of NACE and O-CAT Certified #36068 (Offshore Corrosion Assessment Training)
- +5 Years Developing Mobile Inspection and Data Collection
 Solutions for Global Leaders in the Oil, Gas and Chemical Industry.





- PKI ONSITE
 PKI SHIPPED
 PK SAFETY
 PK TECHNOLOGY





Mission Statement: PK Technology Resolves Compliance Issues Into Technology Solutions.

- PK Technology Locations
 - Houston, Texas Aberdeen, United Kingdom
 - Wichita, Kansas Perth, Australia
- Currently Providing Fireproofing & Industrial Coating Inspections Services and Technology Programs for Onshore/Offshore Facilities.
- Employs All Software Development In-House and Technical Experts in the Oil and Gas Industry.
- First to Industry in the Oil and Gas Markets, with a Cloud-Based Intelligent Corrosion Integrity Management System.
- Specializing in Corrosion Compliance Regulations and Safety within the Oil and Gas Industry.



Why Go Mobile?

Reduce Paperwork?



Organized?



- or Do You Have Your Own Systematic Method in Place?

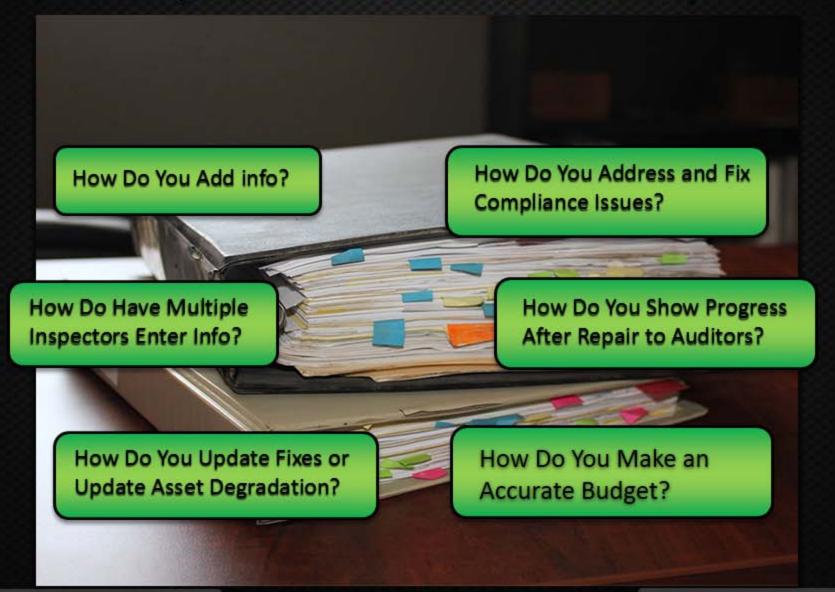
Reduce Data Entry?



How Do You Use this Inspection Information...Effectively?



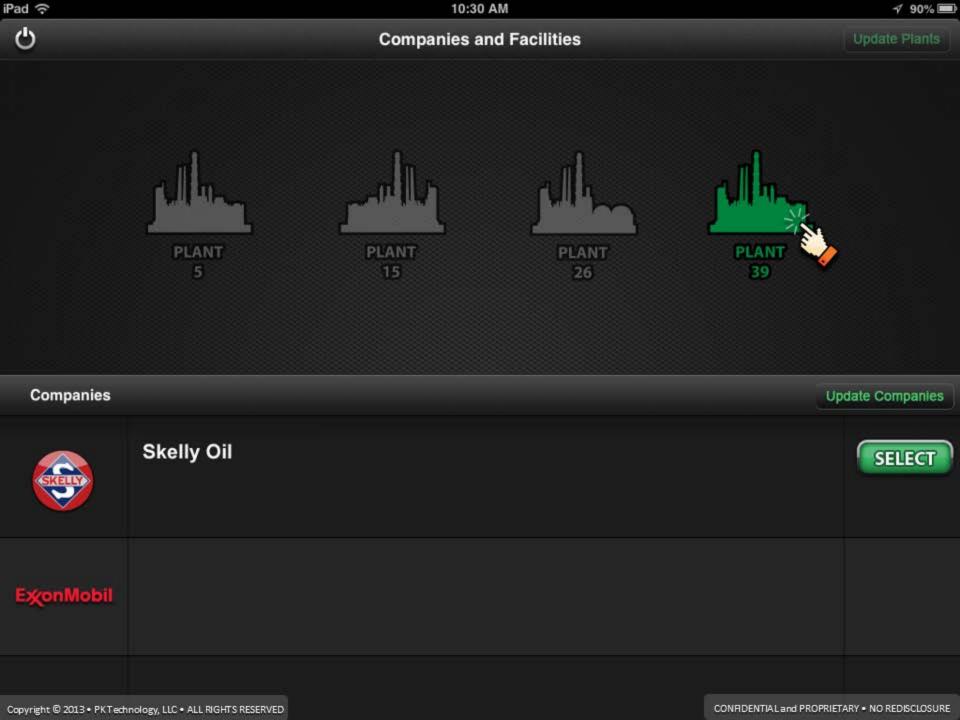
How Do You Use this Inspection Information...Effectively?

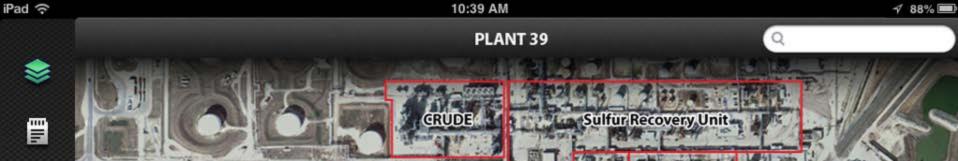




The Mobile Coating Integrity Management Solution.









	UNIT	BLOCKS	ASSETS
	CRUDE	12	288
	SRU	16	462
	GOFINER	4	186
	FCCU	8	438
ð	CRU	9	326

17

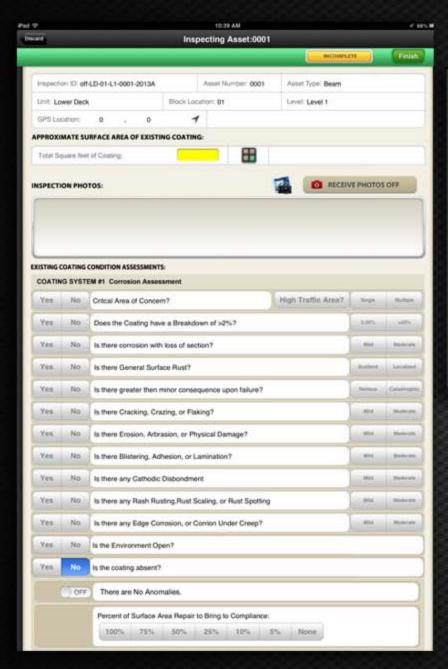
238

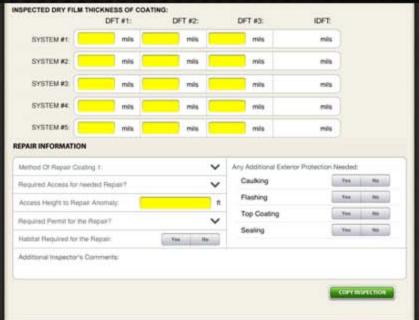
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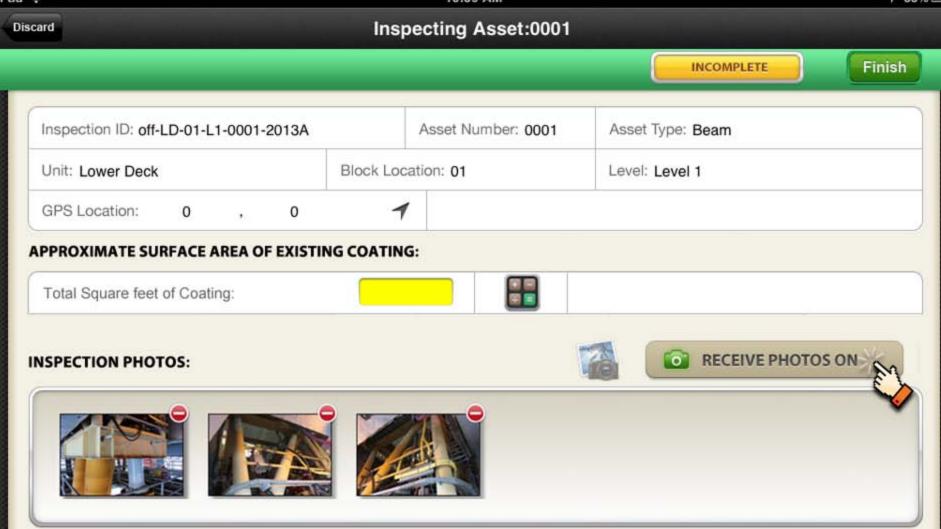






 Expanded View of the Check Sheet on the iPad in the Field.



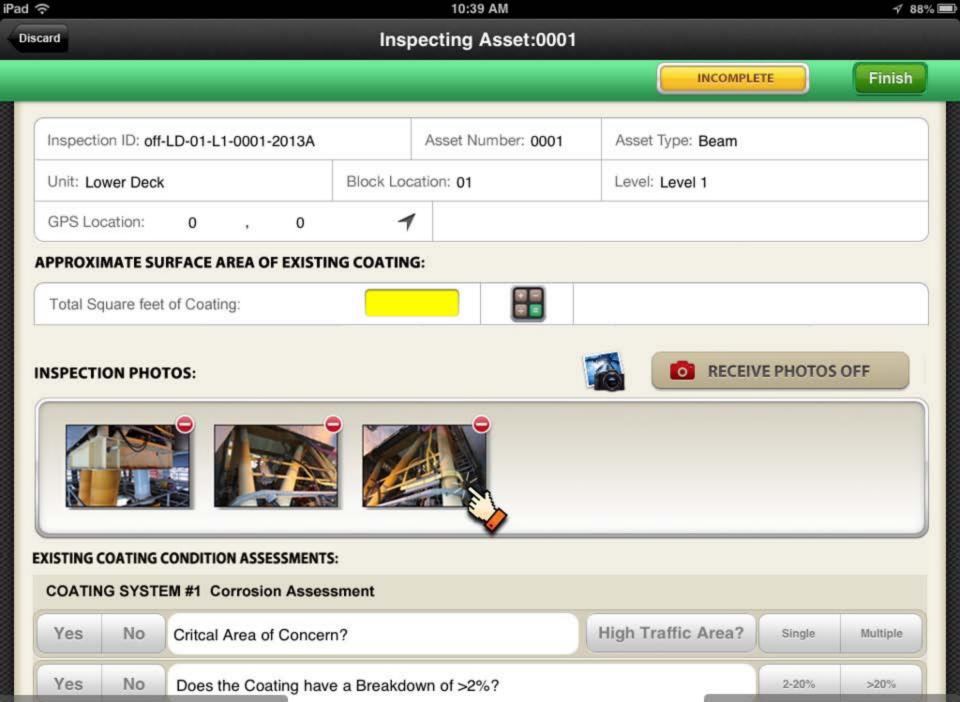


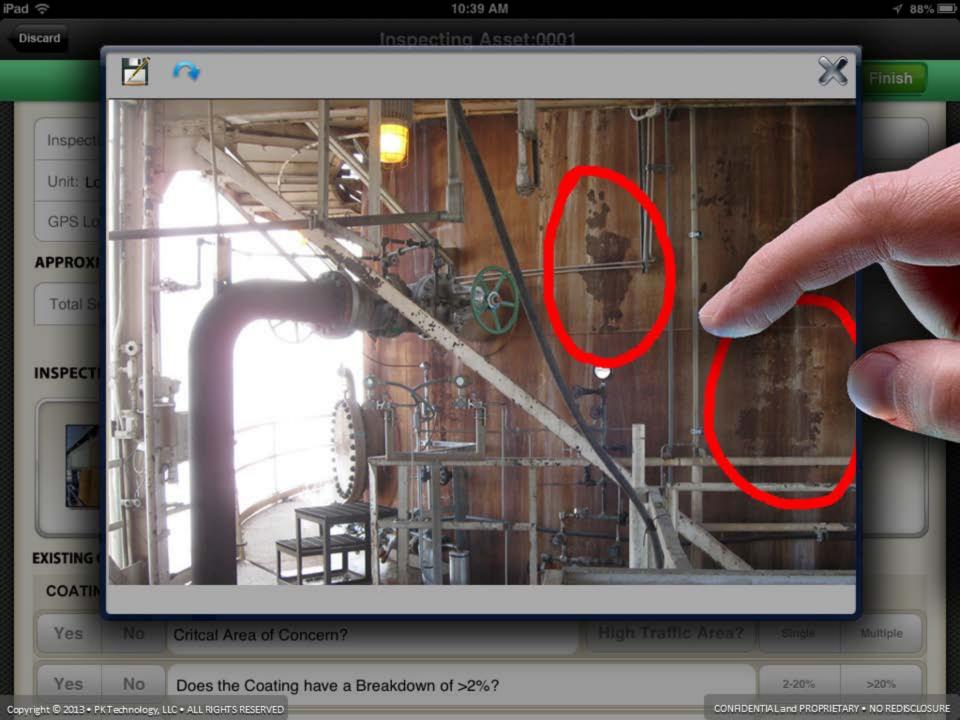
EXISTING COATING CONDITION ASSESSMENTS:

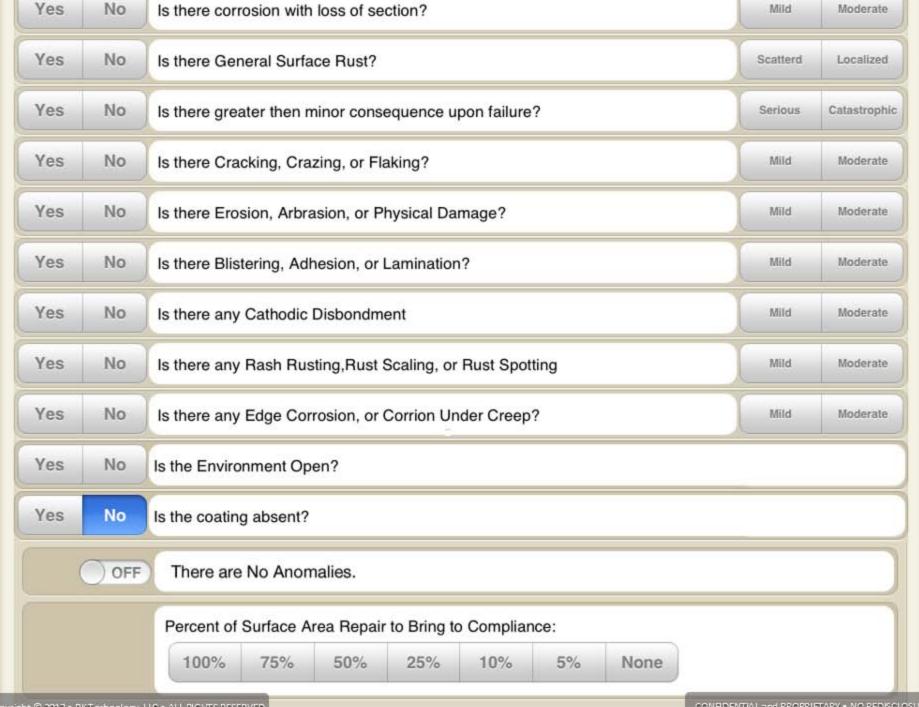
COATING SYSTEM #1 Corrosion Assessment

High Traffic Area? Yes No Critcal Area of Concern? Single Multiple Yes No Does the Coating have a Breakdown of >2%? 2-20% >20%

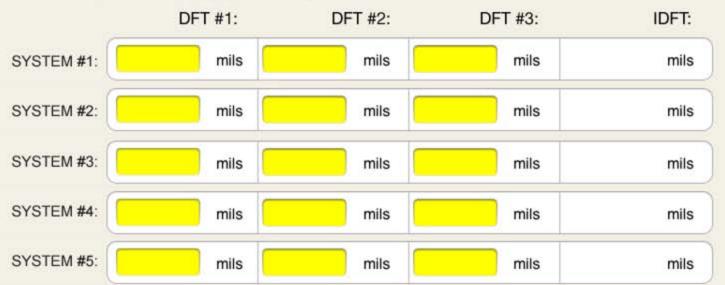




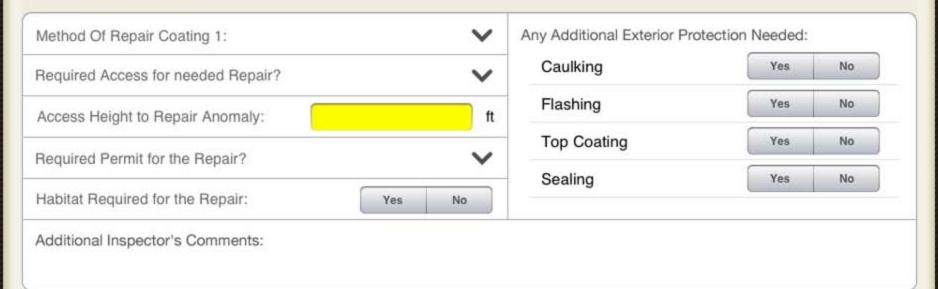




INSPECTED DRY FILM THICKNESS OF COATING:



REPAIR INFORMATION



COPY INSPECTION

INSPECTION ID

off-LD-01-L1-0001-2013A

Transfer All

3

Transfer Que

LOCATION

Lower Deck:01:Level 1



ASSET ID

0001

Class 1 Div2 Rugged iPad Case





Online Portal Environment



UNABLE TO LOGON?



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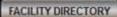














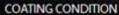


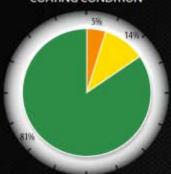




REPAIR







7			F-1 10	CRITICALITY	A-Sales An
Coatings Rating			Minor Consequence Upon Falture	Serious Consequence Upon fabute	Catastrephic Cerusquence Uport Falura
_	Matrix	Grade	1	2	3
agon	< 2%	A	A1	A2	А3
g Degrad	2-20%	В	B1	B2	В3
Coatta	>20%	С	C1	C2	C3







SELECT SPECIFIC OVERVIEW



INSPECTION PROGRESS



Inspection Cycles

SUBSTRATE CONDITION



_	Tarabana and		Table 1	CRITICALITY			
Substrate Rating Matrix			Manor Consequence Upon Fallers	Serteus Consequence Upon/alture	Consequence Consequence Upon Falters		
	Matrix	Grade	1	2	3		
detion	No Metal Loss	x	X1	X2	ХЗ		
te Degra	Mild Metal Loss	Υ	YI	Y2	Y3		
Substra	Moderate Metal Loss	z	Z1	Z2	23		









OVERVIEW

MAPPING

INSPECTIONS

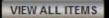
REPAIR

LOGOUT

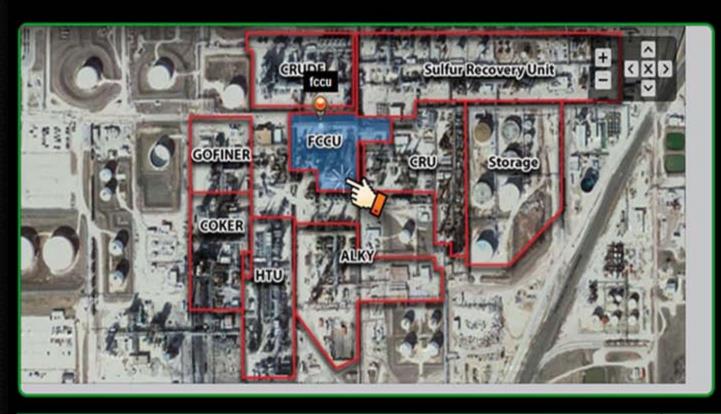


PLANT 39:

The Mapping Feature is a visual reference for the facility and the inspected items.







MAPPING REFERENCE KEY PLANT 39 ▶ E Plant 39

Unit	Blocks	Assets	
CRUDE	1	0	Find Go
<u>SRU</u>	8	63	Find Go
FCCU	n	59	Find Go
PRI TO 2012 - BY Technology LLC - ALL RIGHTS RESERVED	14	36	FIND GO



OVERVIEW

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REPAIR

LOGOUT

INSPECTION LIBRARY

INSPECTIONS LIBRARY:

The Inspections Library makes available information regarding all assets inspected.



Priority	Inspection Date	Inspection ID	Unit	Block Loc.	Critical Area Of Concern	Coating Condition	Substrate Condition	% of Repair	Inspection Photos	Repair Info	Estimated Cost
			Filter :	: Filter	Filter :	Filter :	Filter :	: Filter			
1	26-Apr-2013	LD-805-L1-0064-2013A	FCCU	B05	YES	CI	Z1	50%	(Q	POE	\$14,490.00
2	29-Apr-2013	PD-B13-L1-0601-2013A	FCCU	B13	NO	B1	ΥI	25%	(0)	PDFC	3,162.50
3	27-Mar-2013	LD-B04-L1-0042-2013A	FCCU	B04	NO	Cl	ŸĬ	25%	(0)	PDFQ	\$300.00
4	29-Apr-2013	LD-808-L1-0124-2013A	SRU	B08	NO	A1	YI	10%	(0)	PDFQ	\$600.00
5	29-Apr-2013	LD-807-L1-0101-2013A	CRUDE	B07	NO	A1	ΥΊ	10%	(0)	PDFQ	\$450.00
6	26-Apr-2013	LD-806-L1-0086-2013A	CRUDE	B06	NO	CI	Z1	25%	(0)	POFC	\$6,264.98
7	29-Apr-2013	LD-805-L1-0062-2013A	GOFINER	B05	NO	A1	ΥI	5%	10	PDFQ	\$300.00
8	29-Apr-2013	PD-B04-L1-0422-2013A	FCCU	B04	NO	B1	X1	25%	(0)	PDFQ	\$1,500.00
9	29-Apr-2013	PD-803-L1-0403-2013A	FCCU	B03	NO	Al	X1	10%	(8)	PDFQ	\$300.00
10	29-Apr-2013	MTM1-801-L1-0987-2013A	FCCU	B01	NO	A1	XI	None%	0	PDEQ	\$300.00
ht © 2013 •	PŘTechnológy, L	LC • IAEL-RIGHTS RESERVED 3A	FCCU	B11	NO	A1	X1	CONFIDE	NTIAL and PROF	RIETARY • N	O REDISCLOSUR

Inspection Number LD-805-L1-0064-2013A Inspector Randy Orimiston



GOUT

	D. 100		1	
Facility:	Plant 39	Asset Number:	0064	Continu C4
Unit	FCCU	Block	B05	Coating: C1
Owner.		Unit Level	N/A	Coherento 74
Insp. Date:	04/18/2013	Inspector:	Randy Orimiston	Substrate: Z1



Total Square Footage: 966.00 SQ FT Needed Repair Square Footage: 0.00 SQ FT

Inspection Item Number	0064
Name of Module where Item is Located:	LOWER_DECK
Block Diagram Location of Item:	B05

Description of Item Inspected:	Beam
GPS Location Coordinates of the item.	0,0
Critical Area of Concern:	

Inspected Dry Film Thickness of Coating:

DFT1: 7 DFT2: 7 DFT3: 4 EDFT#1: 6

Existing Coating Condition Assessments: Critcal Area of Concern? Does the Coating have a Breakdown of >2%? >20% Is there corrosion with loss of section? Moderate is there greater then minor consequence upon failure? None Is there General Surface Rust? Scatterd is there Cracking, Crazing, or Flaking? None Is there Erosion, Arbrasion, or Physical Damage? Mid. Is there Blistering, Adhesion, or Lamination? Mild Is there any Cathodic Disbondment None Is there any Rash Rusting Rust Scaling, or Rust Spotting. Moderate Is there any Edge Corrosion, or Corrion Under Creep? Moderate is the Environment Open? None is the coating absent? None 50% Percentage of square footage of repair needed to bring to compliance....

Overall condition Grade B

Well Bay beams for C1 thru C4 and D1 thru D4

Mil readings on top side of beams: 5,7,4,5,4,6,4,6,5,5

Structural Steel

Inspector Comments:

The coatings system on the inside webbing and bottom flange is in good condition.

Areas of Concern: there are a few areas where additional stiffeners were welded to the web in a few different locations and insufficient coatings were applied and have failed allowing some scattered and localized metal loss to occur with some rust scaling present, and some minor surface pitting.

Top side flange of beams coating system is in poor condition with 50 to 75% coating breakdown.

Areas of Concern: mil readings on the top had an average of 5.33 mils and coating loss and coating failure has lied to several area.

Tire all Cotor	Generated by:	Kevin Turpin	
CHARLESTON	Representing:		
	Date:	05/06/2013	

Mil readings on inside web of beam: 11,7,10,12,6,9,11,8,8,8

SKELLY

stimated

14.490.00

13,162.50

\$300.00

\$600.00

\$450.00

56,264.98

\$300.00

1.500.00

\$300.00

\$300.00

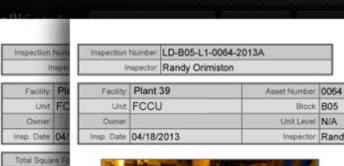
Cost

ng tion	Substrate Condition	% of Repair	Inspection Photos	Repair Info	E
	Filter •	: Filter			ı
	ā	50%		POFQ	\$
	M	25%		POEC	
	W	25%		POFQ	
	/ Y1	10%		POFQ	
	: ٧1	10%		POFQ	
	a	25%		PDEQ	
	(4)	5%		PDEC	
	xi	25%		PDFQ	

None%

POFC

POFC





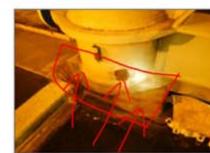






Inspection Hem 5 Name of Module Block Diagram Li





Coating: C1

Substrate: Z1

% of Inspection Repair Estimated Repair Photos Info



Critcal Area @

Inspected Dry

DFT1: 7

Does the Coa is there come is there great is there Gene is there Crack is there Eros is there Bliste is there any C is there any E is there any E

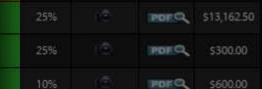
is the Environ



Block: B05

Inspector Randy Orimiston







Inspector Comments:





PDFQ	\$450.00
POPO	56,264.98
PDFQ	\$300,00
PDFQ	\$1,500.00

POFQ

POFQ

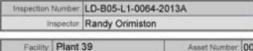
\$300.00

POFQ 514,490.00



@hidelltCoher	Generated by:	Kevin Turpin
Chapter December 2018	Representing:	
	Date:	05/06/2013





	0064	Asset Number:	Plant 39	Facility:
1	B05	Block	FCCU	Unit
г	N/A	Linit Level:		Owner
1	Randy Orimiston	Inspector:	04/18/2013	insp. Date:





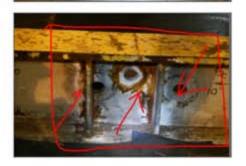




Coating: C1

Substrate: Z1







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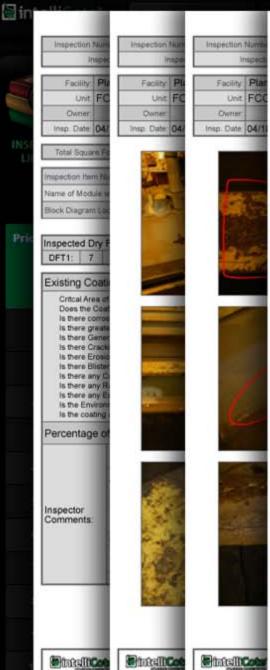
490.00

162.50

spection hotos	Repair Info	Esti
	POEQ	\$14,
	PORC	513,
	PDEC	\$30
	POEQ	\$60
	PDEC	\$4
	FREQ	56,2
	PDFQ	\$30
	PDEQ	\$1,5
	POEC	\$30

POFQ

\$300.00





Facility	Plant 39	Asset Number	0064
Unit	FCCU	Block	B05
Owner		Linit Level	N/A
nsp. Date	04/18/2013	Inspector	Randy Orimiston





Coating: C1

Substrate: Z1



Estimated

Cost

S14,490.00

on \$13,162.50

\$300.00

\$600.00

\$450.00

56,264.98

\$300.00

\$1,500.00

\$300.00

OF Q

OFQ

OFQ

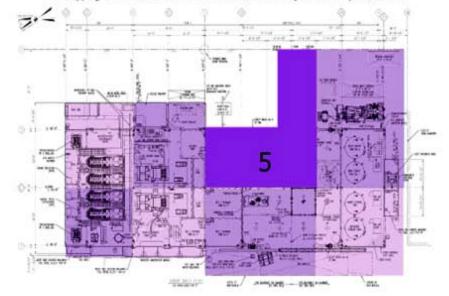
OFQ

DFQ

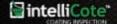
DFQ

DEC

The Mapping Feature defines	viewal reference for the fac	slity and the Inspected Items
THE MAPPING COLUMNS	Alengi Leleteline ini tile lar	anty and the mapecied items.



Thirdli Cobs	Generated by:	Kevin Turpin
	Representing:	
	Date:	05/06/2013



OVERVIEW

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FPAIR

LOGOUT



REPAIR PLANS -- BETA - INTERNAL TESTING-

To modify an existing repair plan, select "Edit" in the row of the corresponding "In Progress Repair Plans" table.

To verify repairs that have been completed, select "View" in the row of the corresponding "In Progress Repair Plans" table.



REPAIR PLAN

To modify a repair plan that has not yet been approved, select "Edit" in the "Tentative Repair Plans" table.

To delete a repair plan that has not yet been approved, select "Delete" in the "Tentative Repair Plans" table.

To approve a repair plan that has not yet been approved, select "Approve" in the "Tentative Repair Plans" table.

To view the before and after inspections of a complete repair plan, select "View" in the Completed Repair Plans" table

TENTATIVE REPAIR PLANS

Add Repair Plan

Name

No Assets found for this plant.

IN PROGRESS REPAIR PLANS

Name	Budget Amount	Start Date	Plan Approved By	Qty. of Assets	Area To Repair	Download Report	Actions	
No Assets found for this plant.								

COMPLETED REPAIR PLANS

Name	Budget Amount	Actual Repair Cost	Area Repaired	Actions
		No Assets found for this plant.		





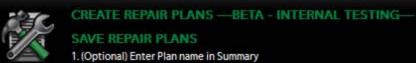


OVERVIEW

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2. Click Save REPAIR PLAN Price per SQ FT: 15

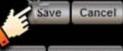
FCCU

FCCU



200.00 SQ FT

4800.00 CONFIDENTIAL and PROPRIETARY . NO REDISCLOSURE



Plan Name:	RepairPlan050613 Start Yes	r: 2013 ▼ Start Quarter	Q1 ~	Plan Budget:	50000	Cost:	\$2,025.00	Update	Cost Re	set Cost
Asset Number	Inspection Number	Unit	Block	Critical Area Of Concern	Coating Severity	Substrate Severity	Area Needing Repair	Repair Cost	Report	Add To Plan
		Filter 0	: Filter	Filter :	Filter :	Filter :				
0064	LD-B05-L1-0064-2013A	FCCU	392	YES	Cl	Z1	50% of 966.00 SQ FT	\$750.00	PDFQ	
0601	PD-813-L1-0601-2013A	FCCU	419	NO	81	ΥI	25% of 1755.00 SQ FT	\$375.00	PDEQ	
0042	LD-804-L1-0042-2013A	FCCU	391	NO	CI	YI	25% of 12.00 SQ FT	\$375.00	POFQ	
0062	LD-805-L1-0062-2013A	FCCU	392	NO	A1	YI	5% of 165.00 SQ FT	\$75.00	PDFQ	•
0101	LD-807-L1-0101-2013A	FCCU	394	NO	A1	Υı	10% of 150.00 SQ FT	\$150.00	PDFQ	
0086	LD-B06-L1-0086-2013A	FCCU	393	NO	cı	Z1	25% of 835.33 SQ FT	\$375.00	PDFQ	
0124	LD-808-L1-0124-2013A	FCCU	395	NO	A1	YI	10% of	\$150.00	POFQ	v.

NO

390

OVERVIEW

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LOGOUT



REPAIR PLANS —BETA - INTERNAL TESTING—

To modify an existing repair plan, select "Edit" in the row of the corresponding "In Progress Repair Plans" table.

To verify repairs that have been completed, select "View" in the row of the corresponding "In Progress Repair Plans" table.



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To approve a repair plan that has not yet been approved, select "Approve" in the "Tentative Repair Plans" table.

To view the before and after inspections of a complete repair plan, select "View" in the Completed Repair Plans" table

Name RepairPlan050613 Budget: \$50,000.00 Start Date: 2013 Q1 View / Edit - Delete - Approve

IN PROGRESS REPAIR PLANS Name Budget Amount Start Date Plan Approved By Qty. of Assets Area To Repair Download Report Actions No Assets found for this plant.

COMPLETED REPAIR PLANS								
Name	Budget Amount	Actual Repair Cost	Area Repaired	Actions				
	No Assets found for this plant							



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REPAIR PLAN

EDIT REPAIR PLANS -BETA - INTERNAL TESTING-

Drag and drop assets into any other repair plan.

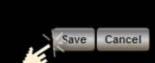
Click the checkbox in the Remove column to remove an asset.

Click "Add Assets" to add assets to the current repair plan.

SAVE REPAIR PLANS

1. Click Save

RepairPlan050613 2013 Q1 Budget: \$50,000.00 Estimate: \$0.00



Plan Name: RepairPlan050613 Start Year: 2013 ▼ Start Quarter: Q1 ▼ Project Budget: \$50,000.00								Add Assets		
Asset Number	Inspection Number	Unit	Block	Critical Area Of Concern	Coating Severity	Substrate Severity	Area Needing Repair	Repair Cost	Report	Remove From Plan
7416	LD-804-L1-0042-2013A	FCCU	B04	NO	C1	ΥT	0% of 12.00 SQ FT	\$0.00	PDFQ	
7438	LD-805-L1-0064-2013A	FCCU	B05	YES	Cī	Z1	0% of 966.00 SQ FT	\$0.00	PDFQ	P
7460	LD-806-L1-0086-2013A	FCCU	B06	NO	C1	Z1	0% of 835.33 SQ FT	\$0.00	PDFQ	r
7498	LD-808-L1-0124-2013A	FCCU	B08	NO	A1	Y1	0% of 200.00 SQ FT	\$0.00	PDFQ	
7975	PD-B13-L1-0601-2013A	FCCU	B13	NO	B1	YI	0% of 1755.00 SQ FT	\$0.00	POFQ	





				CRITICALITY	
Coatings Rating Matrix			Minor Consequence Upon Failure	Serious Consequence Upon Failure	Catastrophic Consequence Upon Failure
		Grade	1	2	3
ation	< 2%	Α	A1	A2	А3
Coating Degradation	2-20%	В	B1	B2	В3
Coatir	>20%	С	C 1	C2	С3

Coating Conditions (A, B, C):

- A: Good Coating Condition: as New to <2% Coating Breakdown
- B: Fair Coating Condition: 2-20% Coating Breakdown
- C: Poor Coating Condition: >20% Coating Breakdown

- · Non Hydrocarbon
- Non Flammable/ Non Toxic Gas
- · Low Priority Structural
- · Low Priority Equipment

Failure Can Cause:

- · Minor Consequence
- Possible Injury
- No Flammability Chance
- · Low Environmental Impact
- Less than \$100K
 Deferred Production

- · Hydrocarbon & Flammable Liquid
- Toxic Chemical
- · Stairs, Handrails, Decks, Walkways
- Critical Equipment (Not SCE)

Failure Can Cause:

- · Serious Consequence
- · Possible Fatality (1-5) or Injury
- · Low Flammability Chance (Liquid)
- Moderate Environmental Consequence
- 1-1000 bbls Release
- \$100K \$1M Deferred Production

- Hydrocarbon & Flammable Gas
- Toxic Gas
- Critical Structural
- Safety Critical Equipment (SCE)
- Sewage

Failure Can Cause:

- · Very Serious Catastrophic Consequence
- Multiple Fatalities
- Explosion/Fire
- · Majority Environmental Consequence
- More than 1000 bbls Release
- More than \$1M Deferred Production
- Facility Shutdown

-	A CONTRACTOR OF THE PARTY OF TH			CRITICALITY	
Substrate Rating		ating		Serious Consequence Upon Failure	Catastrophic Consequence Upon Failure
	Matrix	Grade	1	2	3
dation	No Metal Loss	Х	X1	X2	ХЗ
Substrate Degradation	Mild Metal Loss	Υ	Y1	Y2	Y3
Substra	Moderate Metal Loss	Z	Z 1	Z2	Z 3

Substrate Conditions (X, Y, Z):

- X: Good Substrate Condition:
 No Corrosion to Superficial
 Rusting with No Metal Loss
- Y: Fair Substrate Condition:
 Mild General Corrosion with
 Minor/Insignificant Metal Loss
- Z: Poor Substrate Condition:

 Moderate to Significant Corrosion
 which may Require Further Inspection

- Non Hydrocarbon
- Non Flammable/ Non Toxic Gas
- Low Priority Structural
- · Low Priority Equipment

Failure Can Cause:

- Minor Consequence
- Possible Injury
- No Flammability Chance
- Low Environmental Impact
- Less than \$100K
 Deferred Production

- · Hydrocarbon & Flammable Liquid
- · Toxic Chemical
- · Stairs, Handrails, Decks, Walkways
- Critical Equipment (Not SCE)

Failure Can Cause:

- Serious Consequence
- · Possible Fatality (1-5) or Injury
- · Low Flammability Chance (Liquid)
- Moderate Environmental Consequence
- 1-1000 bbls Release
- · \$100K \$1M Deferred Production

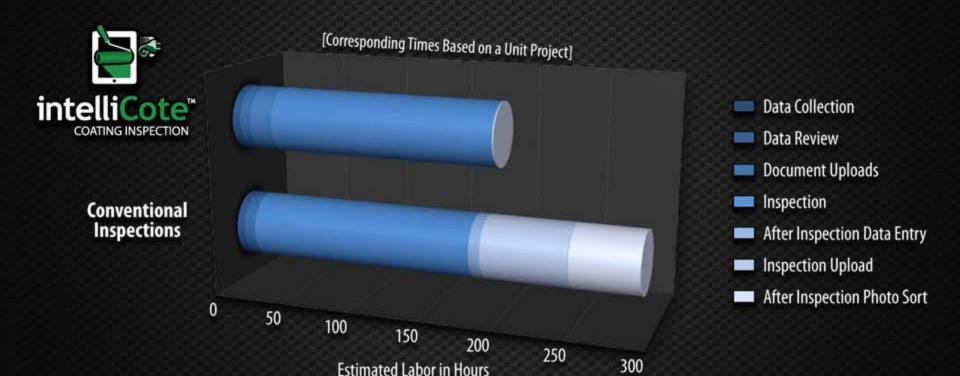
- · Hydrocarbon & Flammable Gas
- Toxic Gas
- · Critical Structural
- Safety Critical Equipment (SCE)
- Sewage

Failure Can Cause:

- Very Serious Catastrophic Consequence
- · Multiple Fatalities
- Explosion/Fire
- Majority Environmental Consequence
- · More than 1000 bbls Release
- More than \$1M Deferred Production
- · Facility Shutdown

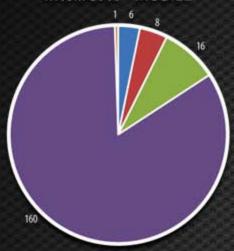
Inspection Time Comparisons

with intelliCote™ Mobile Inspection Solution



Inspection Time Comparisons

intelliCote™ MOBILE

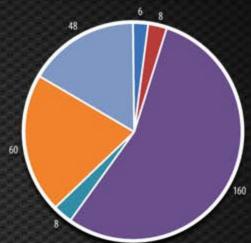


Total Hours: 191 intelliCote™ MOBILE

ACTION	# of PEOPLE	HOURS	TOTAL LABOR
■ Data Collection	1	6	6
Data Review	1	8	8
Document Uploads	1	16	16
■ Inspection	2	80	160
After Inspection Data Entry	0	0	0
Inspection Upload	2	0.5	1
After Inspection Photo Sort & Uploa	d O	0	0
Total Hours			191

[Corresponding Times Based on a Unit Project]

Conventional Inspections



Total Hours: 290
Conventional Inspections

ACTION	# of PEOPLE	HOURS	TOTAL LABOR
■ Data Collection	1	6	6
■ Data Review	1	8	8
■ Document Uploads	0	0	0
☐ Inspection	2	80	160
After Inspection Data Entry	1	8	8
Inspection Upload	2	30	60
After Inspection Photo Sort & Uploa	id 2	24	48
Total Hours			290

Benefits:

- 34% Reduction of Overall Inspection Time and No Data Entry
 After Inspection Data Entry
- Real Time Inspection Data Collection for Compliance Management
- Inspection Time Management Ease
- Easy Location in Facilities with Mapping and Navigational Tools
- Easily Record and Store Thickness Data and Visual Inspections
- Easily View Data Sheet Information and Inspection Plan for Fixed Equipment Asset Types and Relief Devices
- Patented Technology for Collecting and Managing Photos
- Create Ad Hoc Inspection Items on the Go
- Record CM's, PM's, Failure Data and Non-Conformances Easily
- Accuracy Consistency Efficiency

Questions?

