

	Coating Repair Form for L5 Straits of Mackinac
---	---

General Information

Date:	06/07/18, 06/10/18, 06/11/18, 06/28/18, 06/29/18, 07/02/18	Diver:	
AFE / W.O.#:	20008990	Company Inspector:	
Segment:	WP-17-15	Water Depth (ft):	81
Longitude:		Latitude:	

Material Information

Product Name/Batch Number	Belzona 1161 Part A Batch # 17080408 Part B Batch # 17080406	Expiration Date:	08/2020
Product Name/Batch Number	Belzona 1161 Part A Batch # 17110598 Part B Batch # 1710507	Expiration Date:	08/2020

Temperature (°F):	44	Wall Thickness Measurements (mil):	See Comments for Multiple Entries
--------------------------	----	---	-----------------------------------

Location of the Coating Repair:	See Comments for Multiple Entries	Coating Repair Method #:	3
--	-----------------------------------	---------------------------------	---

Quality Assurance During Application

<input checked="" type="checkbox"/>	The steel surface was cleaned using scarpers, hydroblasting cleaning, wet abrasive blasting, or wire wheel brush. The repair area was abraded to bare metal and the majority of the existing primer has been removed (4.1).
<input checked="" type="checkbox"/>	Feathering removed the sharp edge at the transition from the parent coating. The parent coating was roughened (abraded) using a cup disk brush to remove the loosely adherent biota, coating and provide a surface for overcoating (4.2).
<input checked="" type="checkbox"/>	HOLD POINT – Diver cannot proceed without approval from the Inspector that the surface preparation is acceptable for coating application. The Diver removed any flash rust and/or accumulated debris (silt, clay, etc.) using a wire brush or other method approved by the Manufacturer (5.1). <i>The majority of the existing primer has been removed.</i>
<input checked="" type="checkbox"/>	The diver applied sufficient epoxy filler so that the bare steel is completely covered and the repair area is flush with the adjacent parent coating (5.2).
	If using Method #1 or #2, the Full Circumferential Composite Wrap Repair (5.3) or Composite Patch Repair (5.4) applied in accordance with the coating procedure.
<input checked="" type="checkbox"/>	Release film or alternative protective wraps/encasements allowed by the coating Manufacturer applied over the composite wrap, patch repair, or epoxy filler.

After Cure of Coating Repair

Date:	07/02/2018	Cure Time (days):	3 days
Temperature (°F):	60	Shore D Hardness:	84.9
Total thickness measurements of the Coating Repair (mil):	DFT verified via "straight edge" method per project coating application specification. Results appeared to be acceptable per video.		



Coating Repair Form for L5 Straits of Mackinac

Comments/Issues/Discussion

Report authored by [REDACTED]. First dimension of exposed bare steel listed is North to South (horizontal / parallel to the axis of the pipe) dimension and second dimension listed is East to West (vertical / perpendicular to the axis of the pipe) dimension. (ex. N/S x E/W)

Repair Area #1) This repair area includes the repair of feature numbers 8, 9 & 12, UT readings are as follows: 828, 822, 810, 800, 792, 776, 778, 798, 831,834, 810, 806, 814, 808, 778, 780, 806, 830
 No surface corrosion, per diver's observation.
 3'8" x 2'10" bare steel exposed beginning at 1'1" S of CL & ending at 2'7" N of CL from approximately 12:30 to 6:00 o'clock; no corrosion per diver's observation.
 Anchor profiles: 4.3 mils and 2.7 mils.
 Coating (Belzona 1161) mixed and applied as per specification. Potlife was not exceeded.
 DFT's of surrounding parent coating: 88,102,92,94,104,92,120,105,10498,82,80,84
 Repair area incomplete due to span transition into lake bed.

Repair Area #2) This repair area includes the repair of feature number 11, UT readings are as follows: 848, 794, 808, 788, 800, 808, 816, 810, 794, 788, 786, 802, 808
 No surface corrosion, per diver's observation.
 2'4" x 1'8" bare steel exposed beginning at 1'2" S of CL ending at 3'7" S of CL from approximately 4:00 to 8:30 o'clock; no corrosion per diver's observation.
 Anchor profiles: 2.6 mils and 3.6 mils.
 Belzona 1161 mixed and applied per specification. Potlife was not exceeded.
 DFT's of surrounding parent coating:82,104,101,140,140,125,112,85,94,105,95

Repair Area #3) This repair area includes the repair of feature number 17, UT readings are as follows: 814, 822, 814, 818, 816
 No surface corrosion, per diver's observation.
 2" x 1 1/2" bare steel exposed beginning at 3'8" S of CL ending at 3'10" S of CL at approximately 8:30 o'clock; no corrosion per diver's observation.
 Anchor profiles: 3.9 mils and 2.9 mils.
 Belzona 1161 mixed and applied per specification. Potlife was not exceeded.
 DFT's of surrounding parent coating: 86,89,83,95

Repair Area #4) This repair area includes the repair of feature number 18, UT readings are as follows: 800, 806, 804, 792, 793, 806, 808, 800
 No surface corrosion, per diver's observation.
 5" x 3" bare steel exposed beginning at CL ending at 5" S of CL from approximately 8:30 to 9:30 o'clock; no corrosion per diver's observation.
 Anchor profiles: mils 4.1
 Belzona 1161 mixed and applied per specification. Potlife was not exceeded.
 DFT's of surrounding parent coating: Attached to repair area 1



Coating Repair Form for L5 Straits of Mackinac

Repair Area #5) This repair area includes the repair of feature number 29, UT readings are as follows: 786, 782, 788, 796, 772, 782, 780, 788

No surface corrosion, per diver's observation.

7" x 9 1/2" bare steel exposed beginning at 11" S of CL ending at 1'6" S of CL from approximately 7:30 to 9:30 o'clock; no corrosion per diver's observation.

Anchor profiles: 5.5 mils and 3.1 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating: 85,82,41,42,82,57,90

Repair Area #6) This repair area includes the repair of feature number 31, UT readings are as follows: 740, 742, 748, 738, 740

No surface corrosion, per diver's observation.

2 3/4" x 3 1/2" bare steel exposed beginning at 1'4 1/2" S of CL ending at 1'7 1/4" S of CL from approximately 11:30 to 12:30 o'clock; no corrosion per diver's observation.

Anchor profiles: 3.1 mils and 4.4 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:94,81,88,80

Repair Area #7) This repair area includes the repair of feature number 32, UT readings are as follows: 788, 786, 786, 786, 790

No surface corrosion, per diver's observation.

1'8" x 2" bare steel exposed beginning at 2" S of CL ending at 1'10" S of CL at approximately 12:00 o'clock; no corrosion per diver's observation.

Anchor profiles: 3.8, 3.4 mils.

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:95,80,92,78

Repair Area #8) This repair area includes the repair of feature number 33, UT readings are as follows: 788, 786, 786, 786, 786

No surface corrosion, per diver's observation.

5" x 10" bare steel exposed beginning at 1"6" S of CL ending at 1'11" S of CL from approximately 1:00 to 4:00 o'clock; no corrosion per diver's observation.

Anchor profiles: 3.2 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:Attached to repair area 1

Repair Area #9) This repair area includes the repair of feature number 34, UT readings are as follows: 798, 800, 800, 798, 796

No surface corrosion, per diver's observation.

2" x 1 1/2" bare steel exposed beginning at 3'3" S of CL ending at 3'5" S of CL at approximately 3:00



Coating Repair Form for L5 Straits of Mackinac

o'clock; no corrosion per diver's observation.

Anchor profiles: 3.5 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:86,92,79,79

Repair Area #10) This repair area includes the repair of feature number 35, UT readings are as follows: 826, 826, 828, 824, 824

No surface corrosion, per diver's observation.

3 ¾" x 3 ½" bare steel exposed beginning at 4'10 ¾" S of CL ending at 5'2" S of CL from approximately 12:00 to 12:30 o'clock; no corrosion per diver's observation.

Anchor profiles: 4.5 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:76,76,90,84

Repair Area #11) This repair area includes the repair of feature number 36, UT readings are as follows: 804, 808, 804, 810, 808

No surface corrosion, per diver's observation.

3 ½" x ¾" bare steel exposed beginning at 3'8" S of CL ending at 3'11 ½" S of CL from approximately 10:00 to 10:30 o'clock; no corrosion per diver's observation.

Anchor profiles: 2.7, 3.4 mils.

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:Attached to repair area 2

Repair Area #12) This repair area includes the repair of feature number 16, UT readings are as follows: 818, 822, 824, 822, 822

No surface corrosion, per diver's observation

2" x 1 ¼" bare steel exposed beginning at 4' 8" S of CL ending at 4'10 ½" S of CL at approximately 9:00 o'clock; no corrosion per diver's observation.

Anchor profiles: 3.8 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:105,100,125,95

Repair Area #13) This repair area includes the repair of feature number 28, UT readings are as follows: 830, 828, 828, 830, 828, 830, 830, 830, 830

No surface corrosion, per diver's observation.

2" x 4" bare steel exposed beginning at 3'1 ½" S of CL ending at 3'3½" S of CL from approximately 9:00 o'clock; no corrosion per diver's observation.

Anchor profiles: 4.6 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating:105,105,110,105

Repair Area #14) This repair area includes the repair of feature number 10, UT readings are as



Coating Repair Form for L5 Straits of Mackinac

follows: 812, 810, 812, 812, 812

No surface corrosion, per diver's observation.

1 1/2" x 1 1/2" bare steel exposed beginning at 5" S of CL ending at 6 1/2" S of CL at approximately 2:30 o'clock; no corrosion per diver's observation.

Anchor profiles: 4.5 mils

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating: Attached to repair area 1

Repair Area #15) This repair area includes the repair of feature number 37, UT readings are as follows: 856, 854, 852, 856, 856

No surface corrosion, per diver's observation.

1 1/2" x 1/2" bare steel exposed beginning at 8" N of CL ending at 9 1/2" N of CL at approximately 12:30 o'clock; no corrosion per diver's observation.

Anchor profiles: 3.4 mils and 4.4 mils.

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

DFT's of surrounding parent coating: 92, 84, 82, 82

Average time from start of mix to completion of coating application is 15 minutes.

0719/2018

Areas of delamination found in repair area 1

2" South 7:00 1"X1"

11" South 6:00 1/4"X 1/4" on weld seam

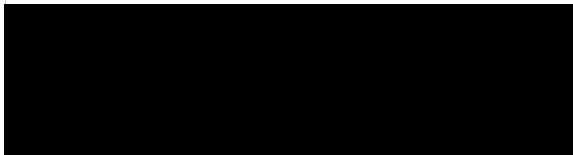
1' South 7:00 1"X2"

11" South 6:00 1"X1" on weld seam

1'8" South 6:30 1"X1 1/2"

11" South 3:00 1/4" X 1/4" on weld seam

8/22/2018



Dive Superintendent

Signed by: [Redacted] Signature



Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 1.

Surface of the pipe after epoxy filler
application Repair Area # 1.

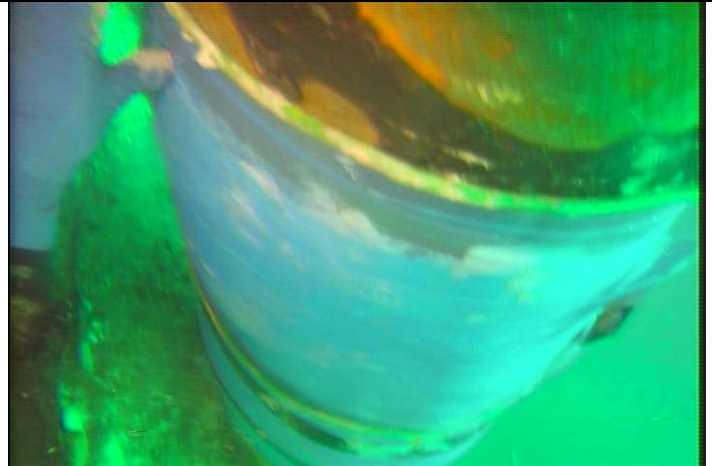


Date:	10/06/18	Frame (HH:MM:SS)	01:22:19
-------	----------	---------------------	----------

Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Surface of the pipe after composite wrap
(if applicable) Repair Area # 1.

Surface of the pipe after release film
application Repair Area # 1.



Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	01:00:25
-------	----------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 1.

[Additional Photograph Caption]

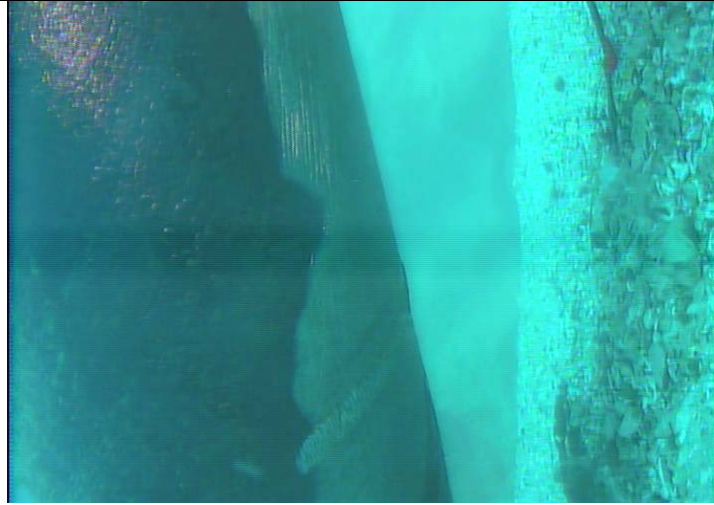


Date:	02/07/18	Frame (HH:MM:SS)	01:01:29	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	----------	-------	----------	------------------	--

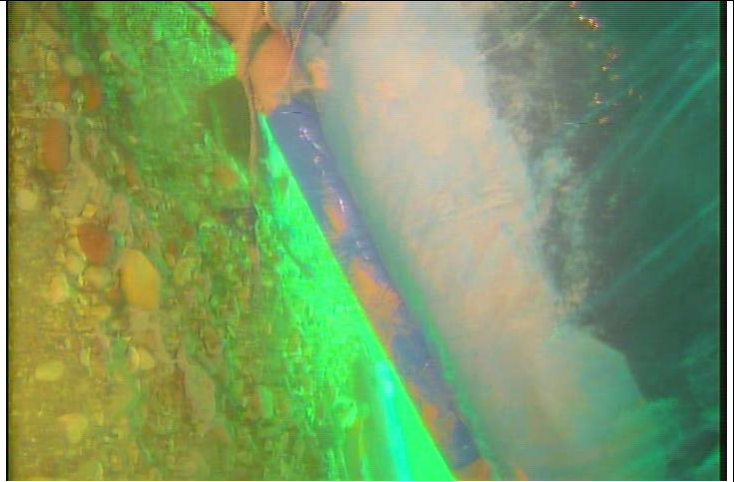


Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 2.



Surface of the pipe after epoxy filler application
Repair Area # 2.



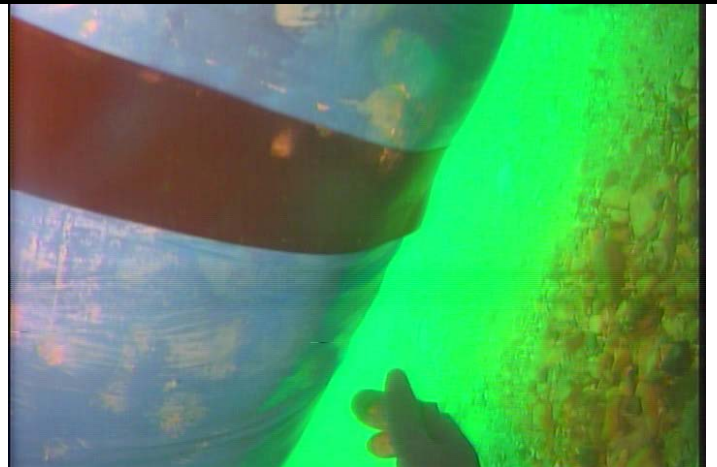
Date:	10/06/18	Frame (HH:MM:SS)	00:22:16
-------	----------	------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:59:10
-------	----------	------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 2.




Surface of the pipe after release film application
Repair Area # 2.





Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	01:09:52
-------	----------	------------------	----------

	Coating Repair Form for L5 Straits of Mackinac
---	---

Surface of the pipe after cure and removal of release film Repair Area # 2.				[Additional Photograph Caption]			
							
Date:	02/07/18	Frame (HH:MM:SS)	01:05:09	Date:	DD/MM/YY	Frame (HH:MM:SS)	

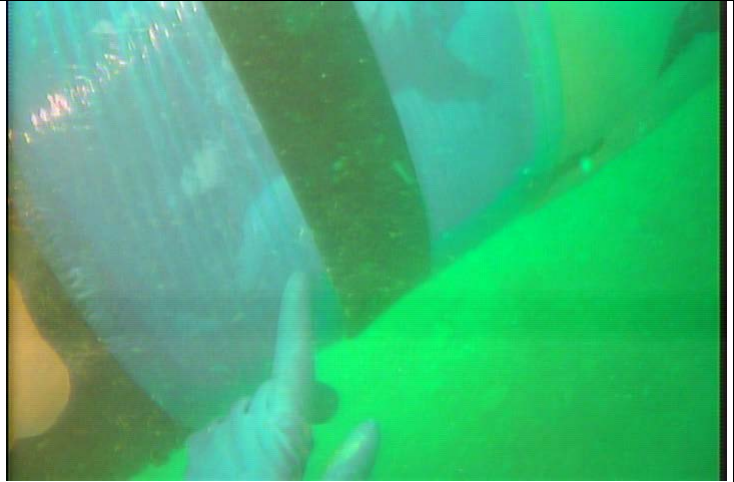
Surface of pipe after surface preparation Repair Area # 3.				Surface of the pipe after epoxy filler application Repair Area # 3.			
							
Date:	10/06/18	Frame (HH:MM:SS)	00:57:00	Date:	28/06/18	Frame (HH:MM:SS)	00:12:28



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after composite wrap
(if applicable) Repair Area # 3.

Surface of the pipe after release film
application Repair Area # 3.



Date:		Frame (HH:MM:SS)		Date:	28/06/2018	Frame (HH:MM:SS)	00:18:58
-------	--	---------------------	--	-------	------------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 3.

[Additional Photograph Caption]



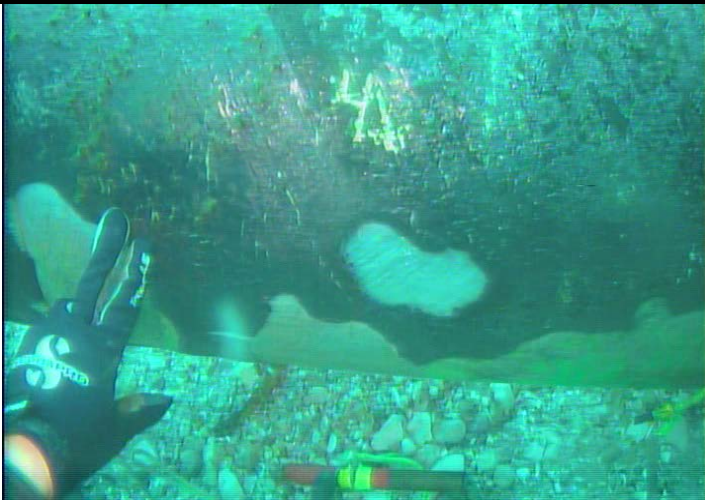
Date:	02/07/18	Frame (HH:MM:SS)	01:08:41	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--



Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 4.

Surface of the pipe after epoxy filler
application Repair Area # 4.



Date:	10/06/18	Frame (HH:MM:SS)	01:01:55
-------	----------	---------------------	----------

Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Surface of the pipe after composite wrap
(if applicable) Repair Area # 4.

Surface of the pipe after release film
application Repair Area # 4.



Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	01:03:22
-------	----------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 4.

[Additional Photograph Caption]

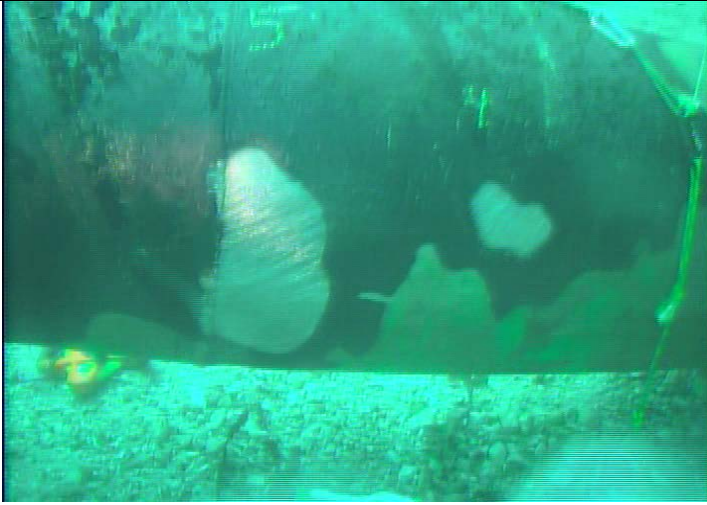


Date:	02/0718	Frame (HH:MM:SS)	01:07:30	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	---------	---------------------	----------	-------	----------	---------------------	--

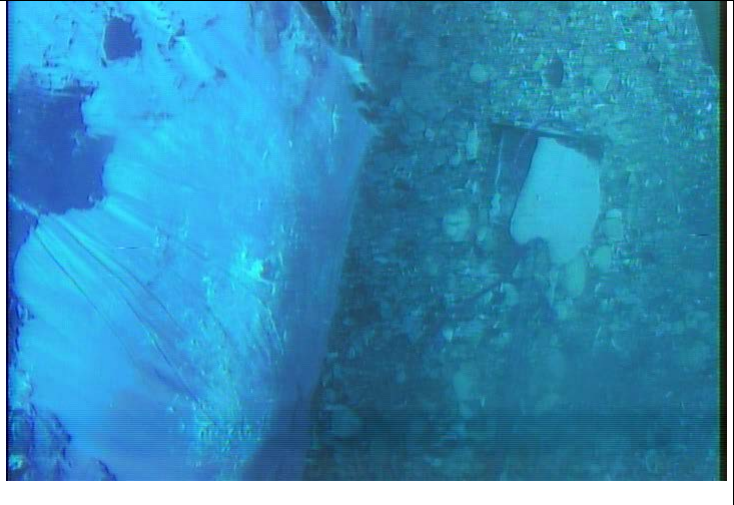


Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 5.



Surface of the pipe after epoxy filler application
Repair Area # 5.



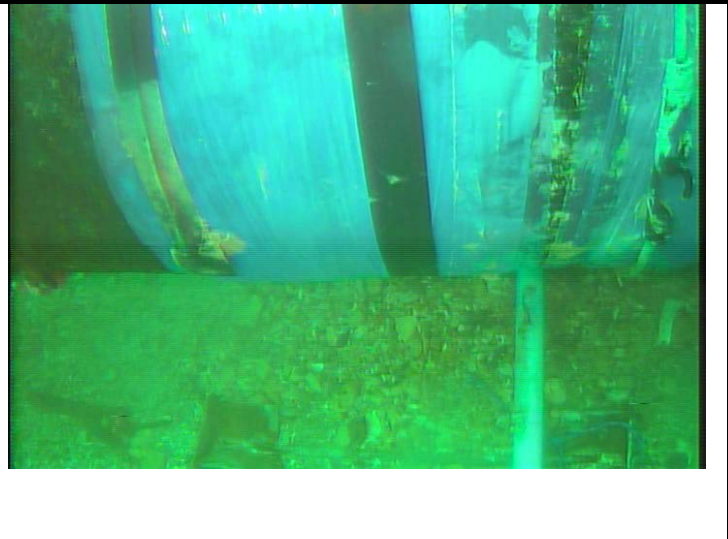
Date:	10/06/18	Frame (HH:MM:SS)	01:14:46
-------	----------	------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:58:07
-------	----------	------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 5.



Surface of the pipe after release film application
Repair Area # 5.



Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	01:11:16
-------	----------	------------------	----------



Coating Repair Form for L5 Straits of Mackinac

01:07

[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:59	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--

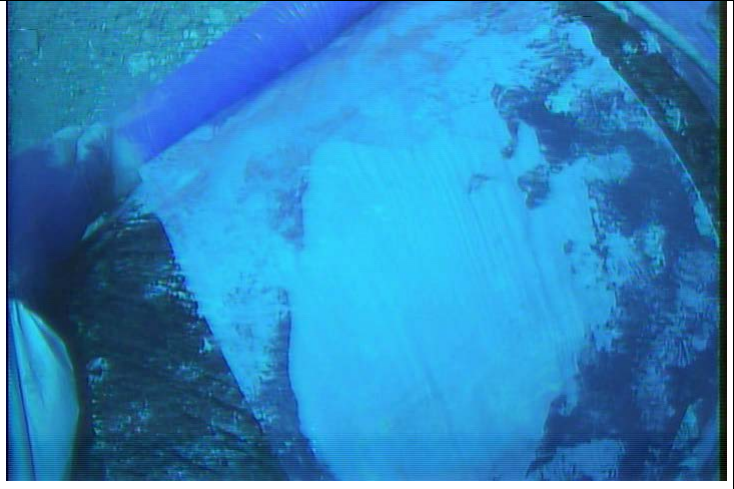


Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 6.



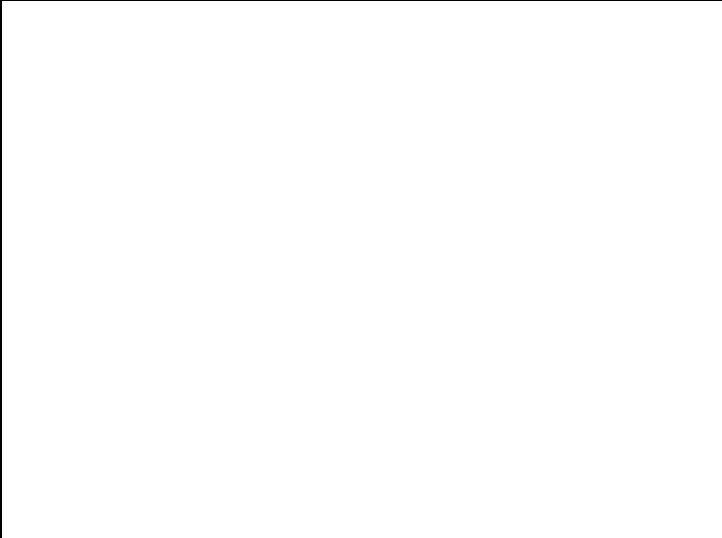
Surface of the pipe after epoxy filler
application Repair Area # 6.



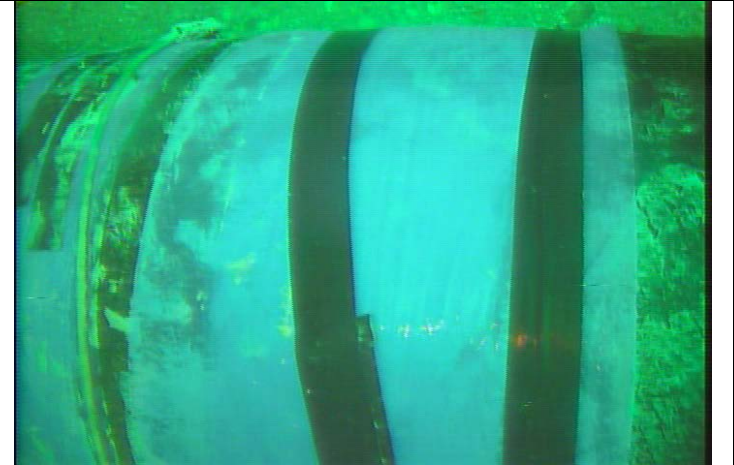
Date:	10/06/18	Frame (HH:MM:SS)	01:17:56
-------	----------	---------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:57:16
-------	----------	---------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 6.



Surface of the pipe after release film
application Repair Area # 6.



Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	01:10:50
-------	----------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 6.

[Additional Photograph Caption]

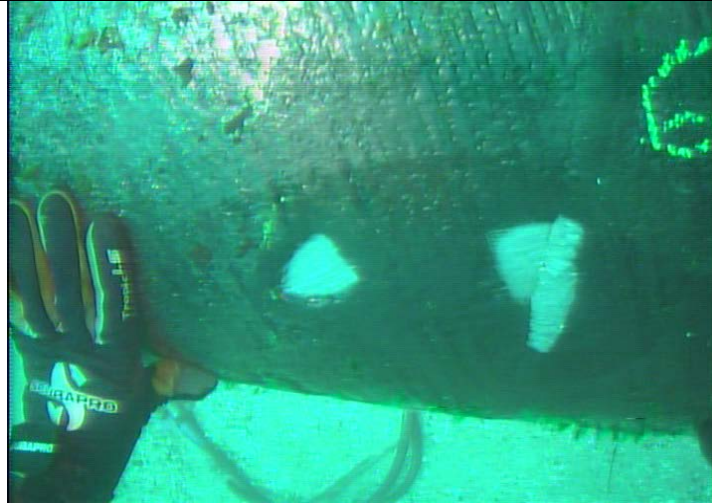


Date:	02/07/18	Frame (HH:MM:SS)	01:07:30	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--



Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 7.



Surface of the pipe after epoxy filler
application Repair Area # 7.



Date:	10/06/18	Frame (HH:MM:SS)	01:21:38
-------	----------	---------------------	----------

Date:	28/06/18	Frame (HH:MM:SS)	00:46:38
-------	----------	---------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 7.



Surface of the pipe after release film
application Repair Area # 7.



Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Date:	28/06/18	Frame (HH:MM:SS)	01:25:40
-------	----------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 7.

[Additional Photograph Caption]

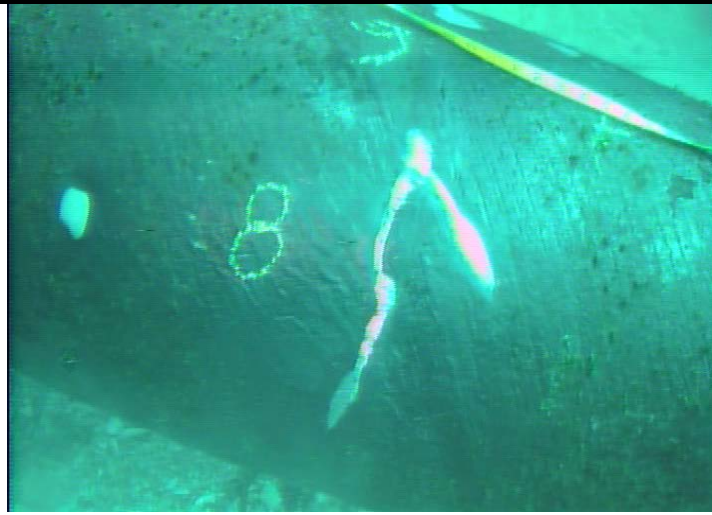


Date:	02/07/18	Frame (HH:MM:SS)	01:07:59	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--



Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 8.



Surface of the pipe after epoxy filler application
Repair Area # 8.



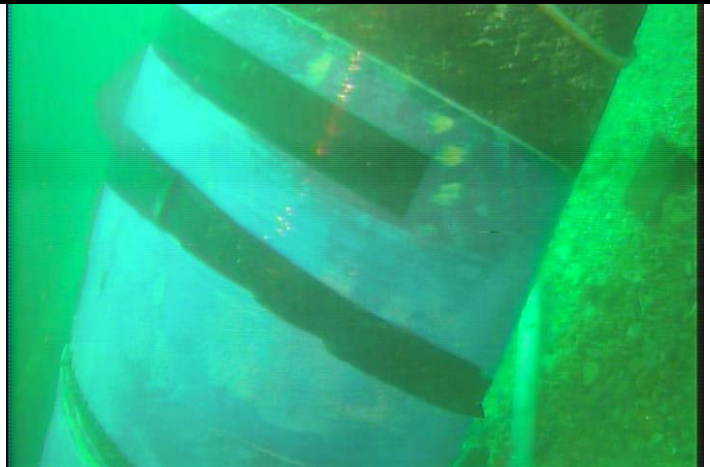
Date:	10/06/18	Frame (HH:MM:SS)	01:25:47
-------	----------	------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:15:55
-------	----------	------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 8.



Surface of the pipe after release film application
Repair Area # 8.



Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	01:10:29
-------	----------	------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 8.

[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:01	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--



Coating Repair Form for L5 Straits of Mackinac

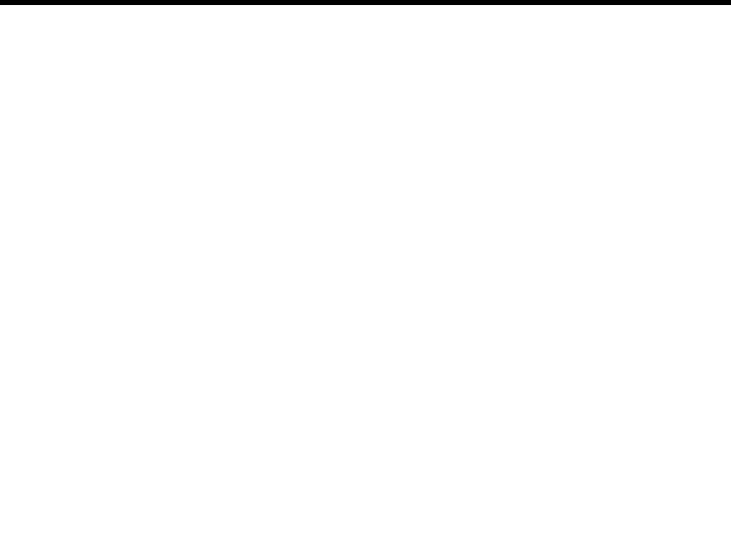
Surface of pipe after surface preparation Repair Area # 9. **Surface of the pipe after epoxy filler application Repair Area # 9.**



Date:	10/06/18	Frame (HH:MM:SS)	01:28:08
-------	----------	------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	01:35:58
-------	----------	------------------	----------

Surface of the pipe after composite wrap (if applicable) Repair Area # 9. **Surface of the pipe after release film application Repair Area # 9.**



Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	--



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 9.

[Additional Photograph Caption]

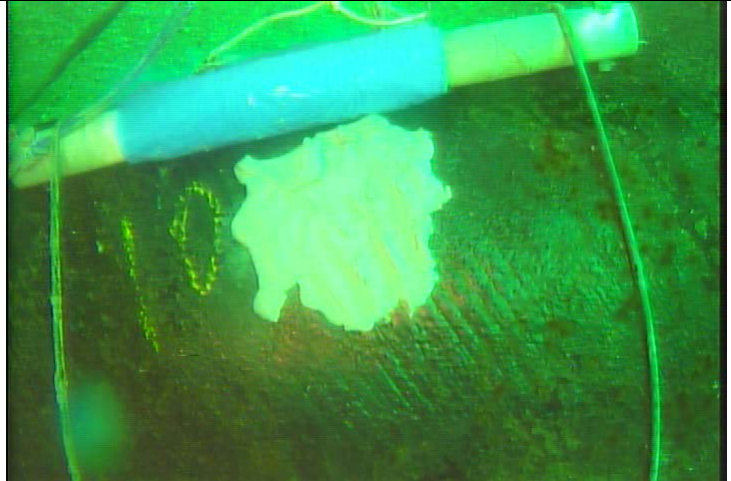
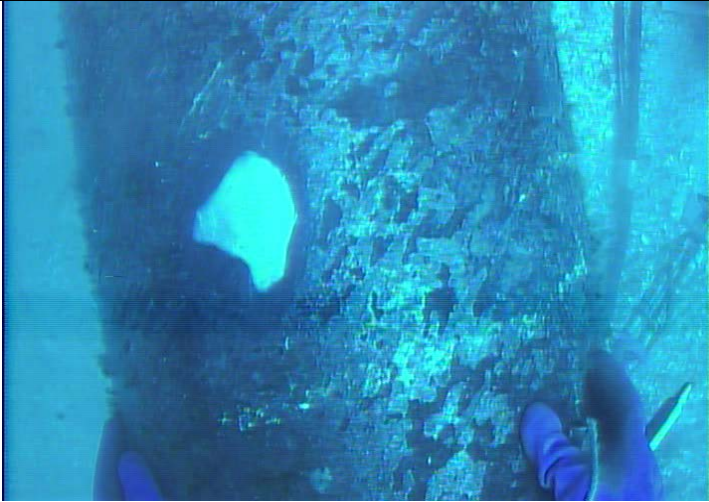


Date:	02/07/18	Frame (HH:MM:SS)	01:07:30	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--



Coating Repair Form for L5 Straits of Mackinac

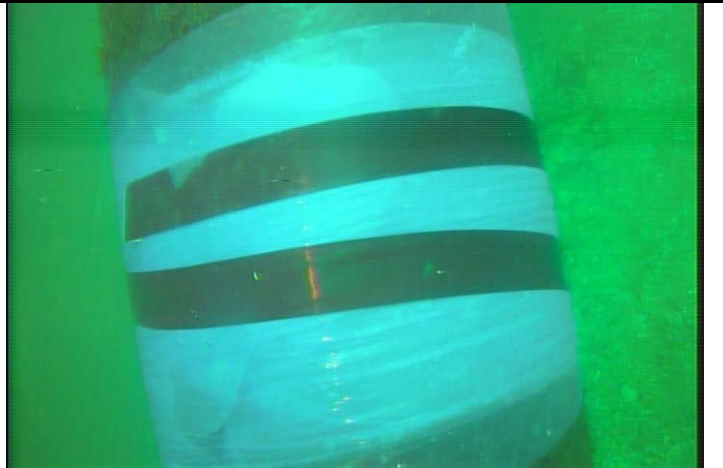
Surface of pipe after surface preparation Repair Area # 10. **Surface of the pipe after epoxy filler application Repair Area # 10.**



Date:	10/06/18	Frame (HH:MM:SS)	00:19:00
-------	----------	------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:34:12
-------	----------	------------------	----------

Surface of the pipe after composite wrap (if applicable) Repair Area # 10. **Surface of the pipe after release film application Repair Area # 10.**



Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	00:42:18
-------	----------	------------------	----------



Coating Repair Form for L5 Straits of Mackinac

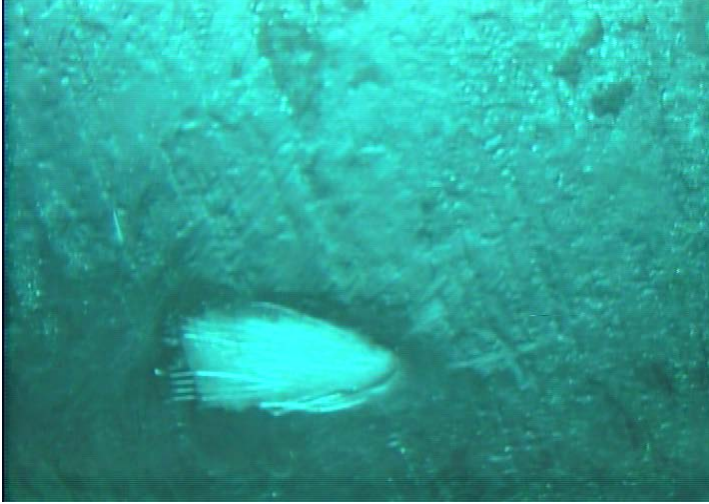
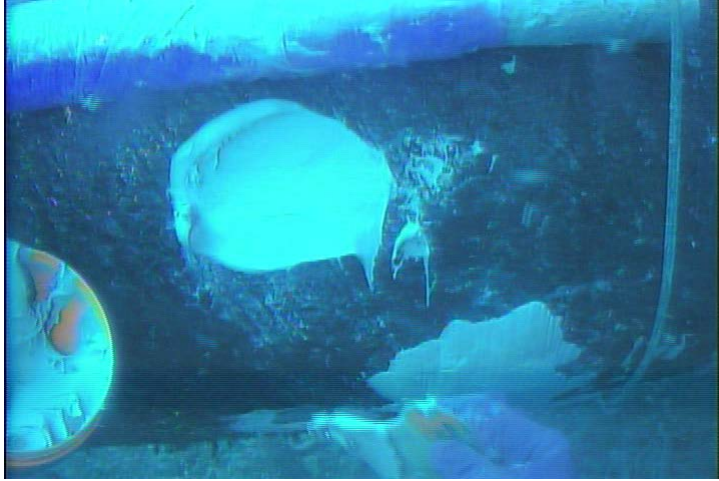
Surface of the pipe after cure and removal of release film Repair Area # 10.


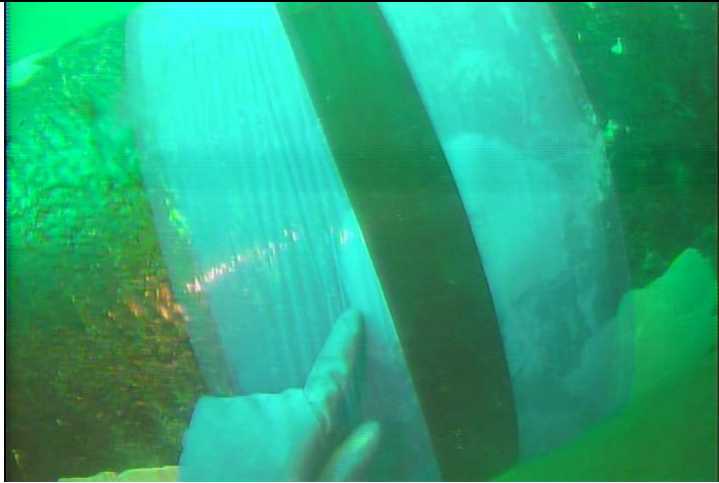
[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:30	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	----------	-------	----------	------------------	--

	Coating Repair Form for L5 Straits of Mackinac
---	---

Surface of pipe after surface preparation Repair Area # 11.				Surface of the pipe after epoxy filler application Repair Area # 11.			
							
Date:	10/06/18	Frame (HH:MM:SS)	01:33:53	Date:	28/06/18	Frame (HH:MM:SS)	00:10:52

Surface of the pipe after composite wrap (if applicable) Repair Area # 11.				Surface of the pipe after release film application Repair Area # 11.			
							
Date:		Frame (HH:MM:SS)		Date:	28/06/18	Frame (HH:MM:SS)	00:18:48



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 11.

[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:59	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	----------	-------	----------	------------------	--

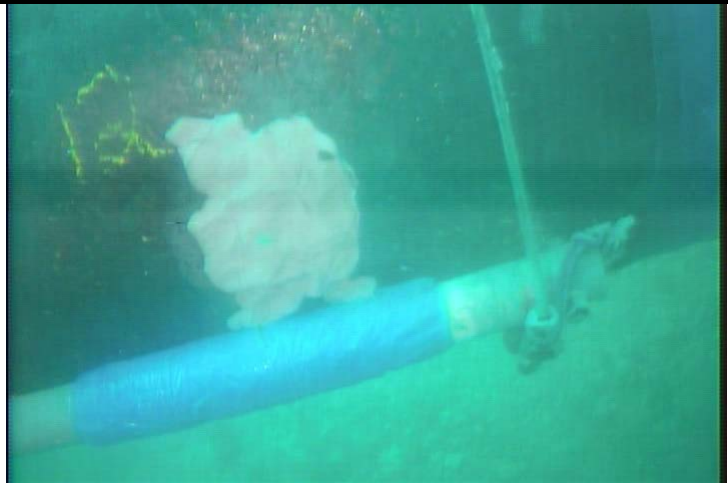


Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 12.



Surface of the pipe after epoxy filler application
Repair Area # 12.



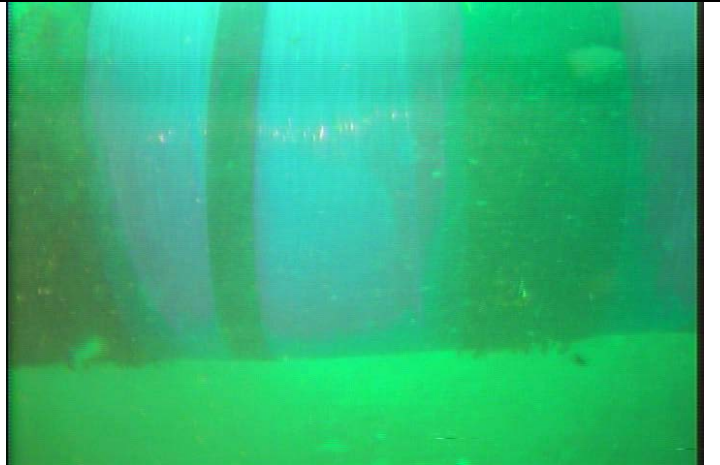
Date:	10/06/18	Frame (HH:MM:SS)	01:36:22
-------	----------	---------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:36:06
-------	----------	---------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 12.



Surface of the pipe after release film application
Repair Area # 12.



Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	00:42:35
-------	----------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 12.

[Additional Photograph Caption]

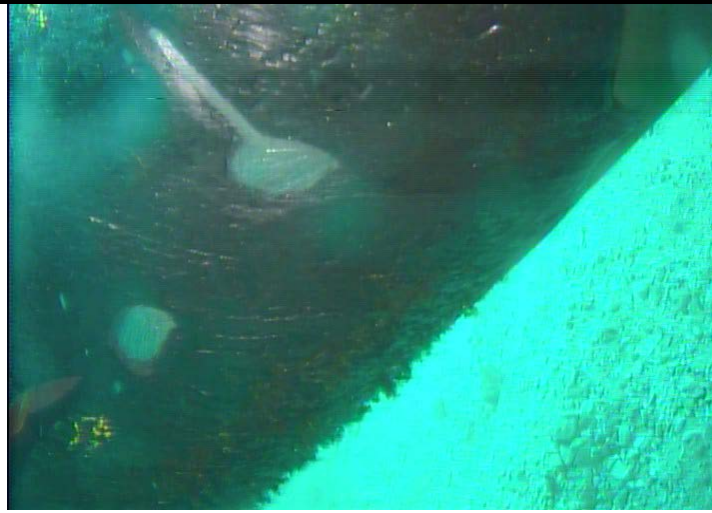


Date:	02/07/18	Frame (HH:MM:SS)	01:07:59	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	----------	-------	----------	------------------	--



Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 13.



Surface of the pipe after epoxy filler application
Repair Area # 13.



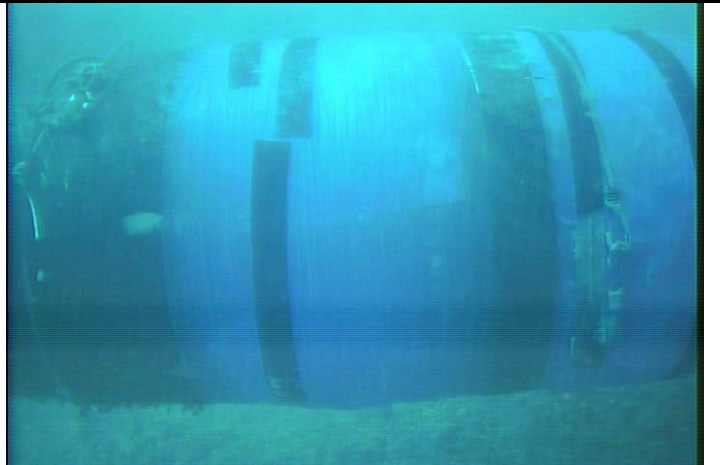
Date:	10/06/18	Frame (HH:MM:SS)	01:42:10
-------	----------	---------------------	----------

Date:	11/06/18	Frame (HH:MM:SS)	00:13:09
-------	----------	---------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 13.



Surface of the pipe after release film application
Repair Area # 13.



Date:		Frame (HH:MM:SS)	
-------	--	---------------------	--

Date:	11/06/18	Frame (HH:MM:SS)	00:19:23
-------	----------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac



Surface of the pipe after cure and removal of release film Repair Area # 13.


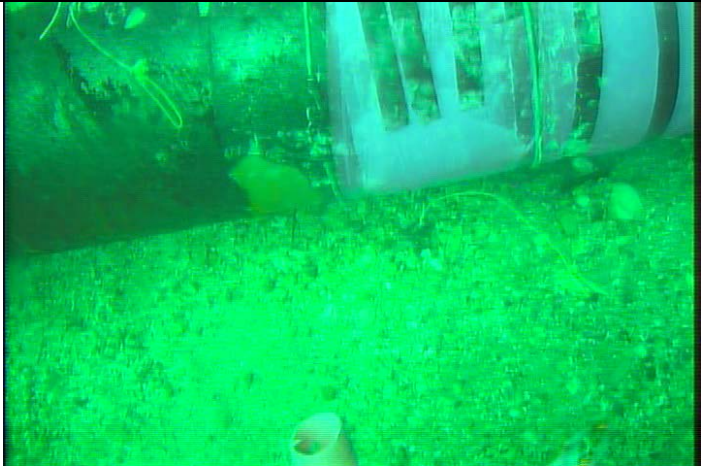
[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:59	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--

	Coating Repair Form for L5 Straits of Mackinac
---	---

Surface of pipe after surface preparation Repair Area # 14.				Surface of the pipe after epoxy filler application Repair Area # 14.			
							
Date:	10/06/18	Frame (HH:MM:SS)	01:44:55	Date:		Frame (HH:MM:SS)	

Surface of the pipe after composite wrap (if applicable) Repair Area # 14.				Surface of the pipe after release film application Repair Area # 14.			
							
Date:		Frame (HH:MM:SS)		Date:	11/06/18	Frame (HH:MM:SS)	01:02:45



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 14.

[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:01	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	----------	-------	----------	------------------	--

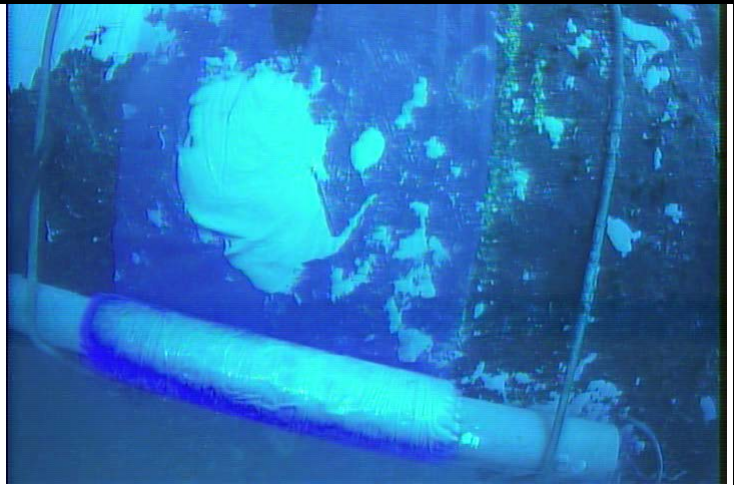


Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Repair Area # 15.



Surface of the pipe after epoxy filler application
Repair Area # 15.



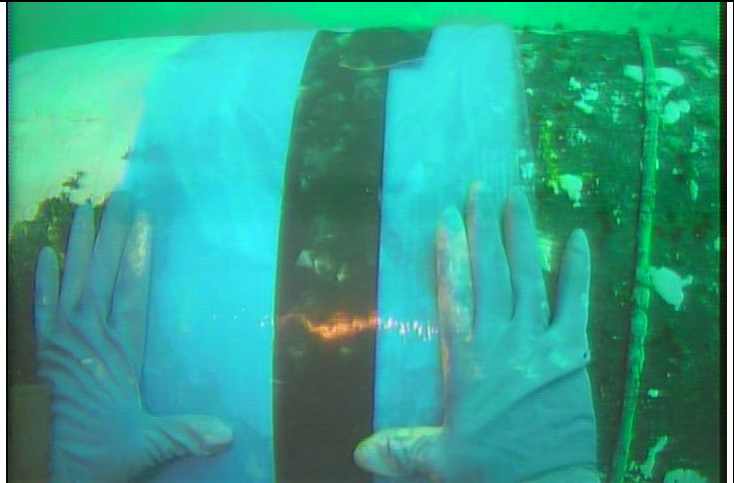
Date:	10/06/18	Frame (HH:MM:SS)	00:17:51
-------	----------	------------------	----------

Date:	28/06/18	Frame (HH:MM:SS)	00:37:52
-------	----------	------------------	----------

Surface of the pipe after composite wrap
(if applicable) Repair Area # 15.



Surface of the pipe after release film application
Repair Area # 15.



Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

Date:	28/06/18	Frame (HH:MM:SS)	00:57:34
-------	----------	------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Repair Area # 15.

[Additional Photograph Caption]



Date:	02/07/18	Frame (HH:MM:SS)	01:07:30	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	------------------	----------	-------	----------	------------------	--

	Coating Repair Form for L5 Straits of Mackinac
---	---

General Information

Date:	06/06/18, 06/11/18, 06/28/18 07/02/18	Diver:	
AFE / W.O.#:	20008990	Company Inspector:	
Segment:	WP-17-16	Water Depth (ft):	76
Longitude:		Latitude:	

Material Information

Product Name/Batch Number	Belzona 1161 Part A Batch # 17080406 Part B Batch # 17080408	Expiration Date:	08/2020
Product Name/Batch Number	Belzona 1161 Part A Batch # 17080406 Part B Batch # 17080408	Expiration Date:	08/2020

Temperature (°F):	46	Wall Thickness Measurements (mil):	Feature 1) .780, .778, .782, .782, .778 Feature 2) .798, .802, .792, .798, .796
Location of the Coating Repair:	Feature 1) 7 o'clock looking S, 1' 6" N of CL Feature 2) 1'9" South of CL, 1:30 o'clock looking South		Coating Repair Method #: 3

Quality Assurance During Application

<input checked="" type="checkbox"/>	The steel surface was cleaned using scarpers, hydroblasting cleaning, wet abrasive blasting, or wire wheel brush. The repair area was abraded to bare metal and the majority of the existing primer has been removed (4.1).
<input checked="" type="checkbox"/>	Feathering removed the sharp edge at the transition from the parent coating. The parent coating was roughened (abraded) using a cup disk brush to remove the loosely adherent biota, coating and provide a surface for overcoating (4.2).
<input checked="" type="checkbox"/>	HOLD POINT – Diver cannot proceed without approval from the Inspector that the surface preparation is acceptable for coating application. The Diver removed any flash rust and/or accumulated debris (silt, clay, etc.) using a wire brush or other method approved by the Manufacturer (5.1). <i>The majority of the existing primer has been removed.</i>
<input checked="" type="checkbox"/>	The diver applied sufficient epoxy filler so that the bare steel is completely covered and the repair area is flush with the adjacent parent coating (5.2).
<input checked="" type="checkbox"/>	If using Method #1 or #2, the Full Circumferential Composite Wrap Repair (5.3) or Composite Patch Repair (5.4) applied in accordance with the coating procedure.
<input checked="" type="checkbox"/>	Release film or alternative protective wraps/encasements allowed by the coating Manufacturer applied over the composite wrap, patch repair, or epoxy filler.

After Cure of Coating Repair

Date:	06/28/18	Cure Time (days):	7
Temperature (°F):	60	Shore D Hardness:	76
Total thickness measurements of the Coating Repair (mil):	DFT verified via "straight edge" method per project coating application specification. Results appeared to be acceptable per video.		



Coating Repair Form for L5 Straits of Mackinac

Comments/Issues/Discussion

Report authored by [redacted] and [redacted]

Feature 1)

No surface corrosion, per diver's observation.

5 1/2" X 3" bare steel exposed; no corrosion per diver's observation.

Surface profiles: 3.7 mils and 3.8 mils.

Coating (Belzona 1161) mixed and applied as per specification; two kits used to complete task. JL

Filler Material for Feature #1 required Release Wrap to hold it in place during application. This is captured in the attached picture.

Feature 2)

No surface corrosion, per diver's observation.

6" X 4" bare steel exposed after surface cleaning completed; no corrosion per diver's observation.

Surface profiles: 3.3 mils and 3.8 mils. JLB

Belzona 1161 mixed and applied per specification. Potlife was not exceeded.

Dive Superintendent
Signed by: [redacted] Signature



Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Feature 1.



Surface of the pipe after epoxy filler application
Feature 1.



Date:	6/6/18	Frame (HH:MM:SS)	00:07:25
-------	--------	------------------	----------

Date:	6/6/18	Frame (HH:MM:SS)	1:14:48
-------	--------	------------------	---------

Surface of the pipe after composite wrap
(if applicable) Feature 1.



Surface of the pipe after release film application
Feature 1.



Date:		Frame (HH:MM:SS)	
-------	--	------------------	--

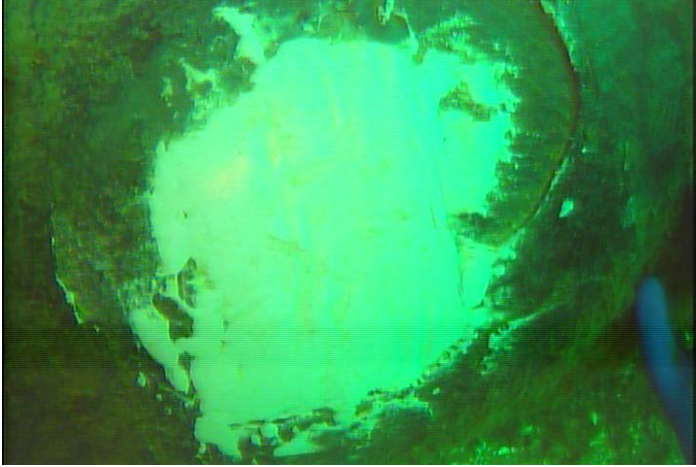
Date:	6/6/18	Frame (HH:MM:SS)	01:19:57
-------	--------	------------------	----------



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Feature 1.

[Additional Photograph Caption]

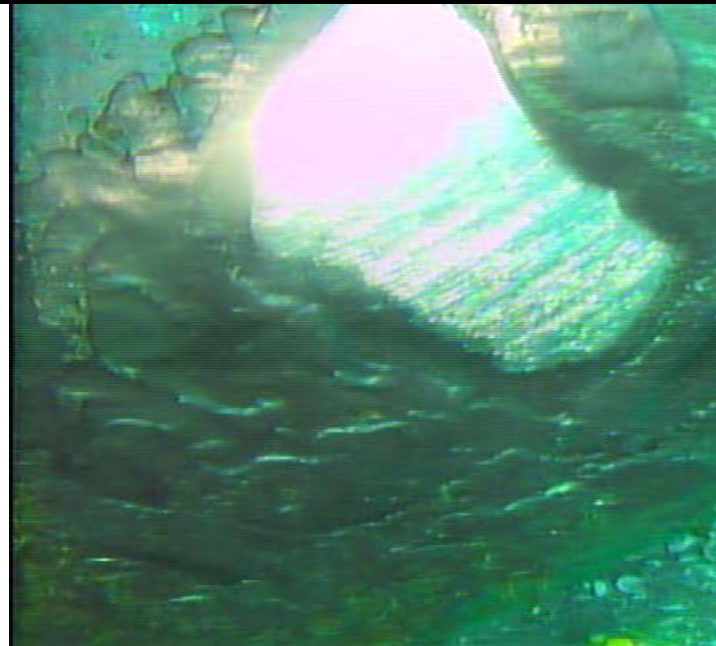


Date:	02/07/18	Frame (HH:MM:SS)	00:03:31	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	----------	---------------------	----------	-------	----------	---------------------	--

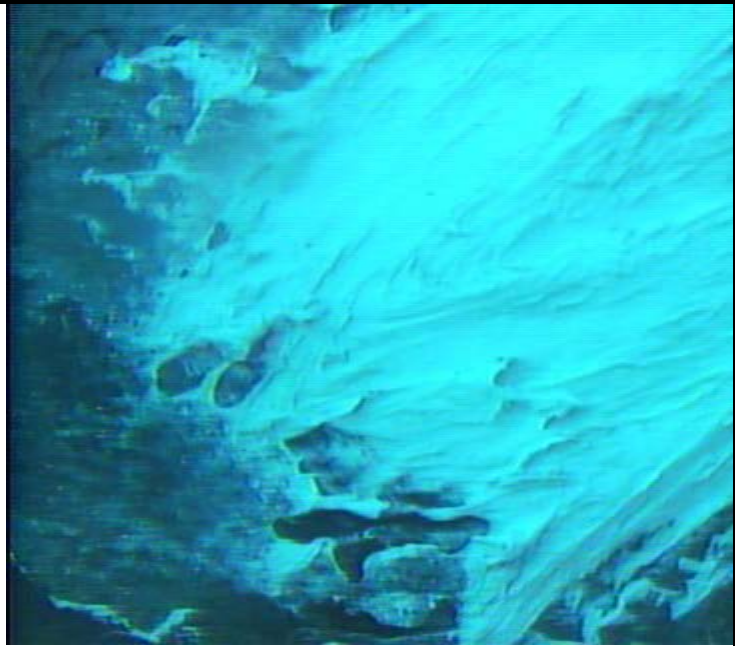


Coating Repair Form for L5 Straits of Mackinac

Surface of pipe after surface preparation
Feature 2.



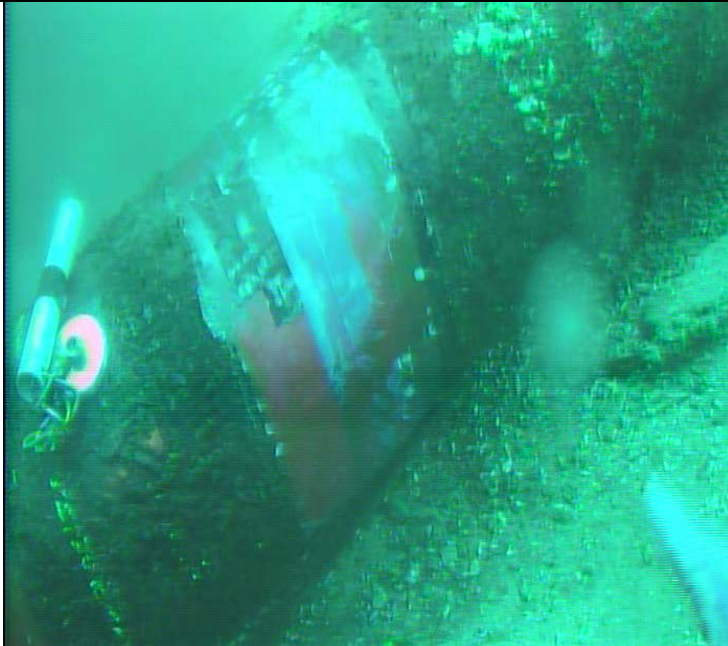
Surface of the pipe after epoxy filler
application Feature 2.



Date:	6/6/18	Frame (HH:MM:SS)	00:39:12	Date:	6/6/18	Frame (HH:MM:SS)	01:22:54
-------	--------	---------------------	----------	-------	--------	---------------------	----------



Coating Repair Form for L5 Straits of Mackinac

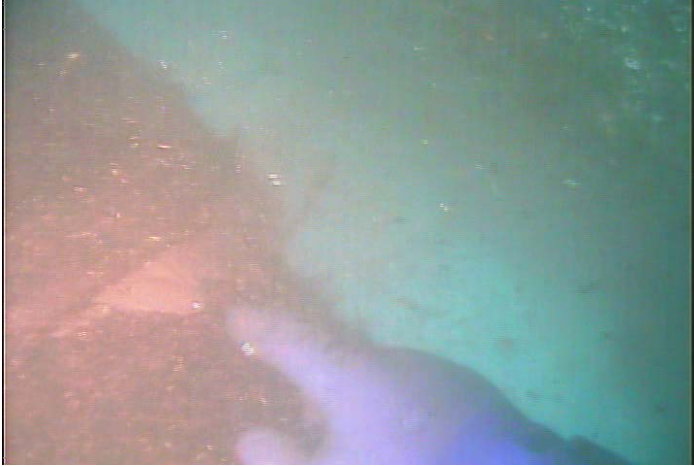
Surface of the pipe after composite wrap (if applicable Feature 2).				Surface of the pipe after release film application Feature 2.			
N/A							
Date:		Frame (HH:MM:SS)		Date:	6/6/18	Frame (HH:MM:SS)	01:32:00



Coating Repair Form for L5 Straits of Mackinac

Surface of the pipe after cure and removal of release film Feature 2.

[Additional Photograph Caption]



Date:	19/07/2018	Frame (HH:MM:SS)	01:41:17	Date:	DD/MM/YY	Frame (HH:MM:SS)	
-------	------------	---------------------	----------	-------	----------	---------------------	--