



# SURVEY REPORT TABLE OF CONTENTS

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## SURVEY SCOPE & GENERAL INFORMATION

### SCOPE OF SURVEY

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**Report file no:** CWS-2012-13.  
**Inspection date(s):** July 9, 2012.  
**Date of written report:** July 10, 2012.  
**Disclaimer:** *The services rendered herein and the report furnished herewith are done with the specific understanding that the undersigned and or Wilson & Associates, LLC will not be held responsible under any and all circumstances for any and all errors, omissions, or failure to properly perform the requested services as set forth above. As it concerns the vessel described herein, all matters and statements contained herewith constitute statements of opinion only and not to be construed as representations, warranties, or guarantees and that, any and all statements made herein or in connection herewith will not be used for the basis of any claim, demand, or action against the undersigned. The request for services and the report herewith shall be construed to be an acceptance of the above conditions. Any and all claims for damages of what-so-ever nature asserted against the undersigned are limited to refund of the entire cost of the survey.*

**Type of survey:** Audio Gauging.  
**Conducted by:** Chuck Solarek.  
**Requested by:** This survey was performed at the request of the purchaser [REDACTED] who was not present at the time of the survey.  
**Purpose of survey:** Assess the overall condition of the vessel's hull sides and/or decking for pre-purchase decision making.  
**Intended use:** Recreational. Area of operation to be determined by the Insurance underwriter.  
**Vessel surveyed at:** Lovrics Boatyard, Anacortes, WA.  
**Attended by:** Chuck Solarek,  
**Weather conditions:** Clear & dry.  
**How survey conducted:** The vessel was surveyed both while afloat & hauled out of the water.

### VESSEL CONDITION & VALUE

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**Condition rating:** EXCELLENT CONDITION.  
**NOTE:** *The overall vessel condition established after a complete inspection of stated vessel, the results of which are included in this report of survey.*

### SURVEY REQUESTED BY

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**Client name:** [REDACTED]  
**City/State/Zip:**  
**Business phone:**  
**e-mail:** [REDACTED]

## VESSEL INFORMATION

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**Vessel Yr/Make/Model:** 1970 Smedvik mek Versted.  
**Vessel name:** [REDACTED]  
**Hailing port:** Port Madison, WA.  
**Hull ID number verification:** This vessel was constructed prior to the requirement for a 12 digit hull ID number to be affixed; therefore, the hull ID number is not affixed to the vessel and no rubbing or photo was obtained.  
**Manufacturer/Builder:** Smedvik mek Versted, Norway.  
**Vessel description:** 75' Norwegian steel rescue vessel yacht conversion, 3,500 nautical mile range. Class "C" ice rated. Sleeps 6 in three staterooms plus crew quarters. Pilothouse with helm and controls forward. Todd swivel navigator's chairs port and starboard. Raised seat centerline aft which converts to a navigator's berth. Navigation desk aft. Weather tight door port and starboard down to main deck. Forward stateroom with walk-around Queen berth, storage port and starboard. Hanging locker starboard. Quarter berth port aft. Ensuite starboard aft with electric head, wash basin/vanity and separate shower inboard aft. Schuttle escape to foredeck centerline aft. Centerline passageway with stacked washer and dryer. Watertight door. Linen closet starboard. General storage port. Port and starboard double staterooms with ensuites. Staterooms with raised double berth outboard aft and storage under double berth. Settee/berth lower aft. Ensuites with electric head, wash basin/vanity and separate shower inboard forward. Staircase centerline aft to main deck. Crew accommodations with berth starboard, upper and lower berth port. Watertight escape hatch to engine room. Bathroom with electric head, wash basin and separate shower.  
**U.S.C.G. Official Documentation No:** [REDACTED]  
**Documented use:** Coastwise Unrestricted, Passenger, Inspected.  
**Documented home port:** Port Madison, WA.  
**Documented length:** 64.3 feet.  
**Documented breadth:** 19.7 feet.  
**Documented depth:** 11.8 feet.  
**Documented gross tons:** 104.  
**Documented net tons:** 70.

## VESSEL SPECIFICATIONS

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**Type:** Steel.  
**Length overall (L.O.A.):** 75 feet per broker/owner.  
**Beam:** 19.6 feet per broker/owner.

## SURVEY STANDARDS

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**Standards followed:** *This survey was completed using as reference the federal regulations and amendments issued and enforced by the United States Coast Guard under the authority of Title 33 and Title 46 of the United States Code of Federal Regulations (CFR's). In addition the American Boat and Yacht Council (ABYC) and National Fire Protection Association (NFPA-302) voluntary standards were used as reference during the survey. These ABYC and NFPA voluntary standard practices are generally followed by most vessel manufacturers today.*

## SURVEY INSPECTION COMMENTS

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**Comments:** The undersigned surveyor was retained by [REDACTED] to conduct audio gauging in the converted ice breaker yacht [REDACTED] to assess the condition of its hull plating for pre-purchase consideration. Builder's plans were available at the time of the inspection and used to determine the original plate thickness at 10mm. Additionally, deck areas were audio gauged. Builder's plans have the pilot house and 01 level decking as 7mm aluminum. Some hull area readings were limited due to the thickness of applied marine paint. The fore deck area has had a fiberglass over lay applied which precluded the ability to perform audio gauging.

## EXTERIOR HULL INSPECTION

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### HULL BOTTOM

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**Construction material:** Steel; determined to be 10mm plate based on available builder's plans. No double plates were noted by the undersigned surveyor.

**Date of last haul:** Approximately two years ago, November.

**Bottom paint:** [Anti-fouling bottom paint in need of renewal. RECOMMENDATION: Remove all loose flaking paint, prep and repaint entire bottom with fresh bottom paint before next launch.](#)

**Condition summary:** Overall hull condition is rated as EXCELLENT. Readings were taken on the hull sides. A 18"(H) x 36"(L) grid system was made up. Readings are charted on the attached pages of this report.

In preparation a single (1) CE certified TM-8811 portable 5 mhz ultrasonic thickness measuring instrument (accuracy + 1.0%) was calibrated just prior to inspection on a known thickness plate of 5.0 mm or 0.197" (glycerin was used as a couplant). The UT gauge was regularly rechecked for proper calibration. The transducer was 10 mm in diameter, with velocity set for steel. UT unit 'A' was used. The vessel's owner was able to provide a piece of hull plate which had been removed for installation of the bow thruster. The TM-8811 read this sample plate at 13.3mm.

The TM-8811 ULTRASONIC THICKNESS METER works best on surfaces which are either bare metal or have an applied coating, such as paint, that is 0.040" or less. Best estimate on the thickness of the applied paint is between 1mm to 2mm. When possible readings were taken on bare metal or areas where it appeared that most of the protective marine paint had worn off. In the event that the coating was too rough or thick, the reading was deemed to be inaccurate.

A total of seventy-four (74) readings were obtained on the starboard hull sides. The overall average for these readings is 14.26mm. For a coating thickness of 1mm this becomes 13.26mm with wastage at approximately 6% for 10mm plate (read at 13.3 by sample plate as mentioned above). Increasing the paint thickness to 2mm lowers the average thickness to 12.26 with wastage at approximately 8%.

The port hull sides had a total of eighty-four (84) readings taken. The overall average reading is 14.28mm. If a paint thickness of 1mm were to be used this would bring the average down to 13.28, which is less than 1% wastage. This is

not very realistic for a vessel of this age. However, if a coating thickness of 2mm were used this would lower the overall average to 12.28mm and approximately 6% wastage.

Based on experience wastage of only 6-8% on a vessel of this age is not common and is an indication of how this particular vessel has been maintained.

## TOP DECK & SUPERSTRUCTURE

### MAIN DECK & FITTINGS

**Construction material:** Aluminum.  
**Deck Surface:** Molded in grey non skid.  
**Condition summary:** Overall deck condition is rated as VERY GOOD.

The fore deck has had a fiberglass layer added. Present owner informed this surveyor that this had been done prior to the purchase of the vessel. Audio gauging is not possible through fiberglass. However, percussion testing of the entire main deck areas showed no signs of delamination of the fiberglass from the steel decking. Twelve (12) readings were taken from in the chain locker, essentially the under side of the fore deck. The average reading was 11.46mm. According to builder's plans the main deck is made of 7mm steel. Based on the TM-8811 reading approximately 3mm higher on the sample plate provided these readings would be consistent for a 7mm steel deck with a 1-2mm coating of marine paint. This would mean the fiberglass layer may have been added as a protective measure rather than a corrective one due to excessive corrosion.

Numerous readings were also taken atop the pilot house enclosure and the 01 level boat deck. The vessel superstructure and 01 deck areas are made of 7mm aluminum, according to the available builder's plans. A total of 45 readings were taken with an average reading of 10.95mm. Paint and non-skid application was very thin, estimated at less than 1mm. Readings show very little to no wastage.

## **INSPECTION RECOMMENDATIONS SUMMARY**

### **PRIORITY I - SAFETY & REGULATORY RECOMMENDATIONS:**

*(MAY BE MANDATORY)*

The items listed are required by state laws or federal laws and U.S.C.G. regulations or are considered by the attending surveyor to represent unsafe operating conditions. Recommend these items be corrected before next use of vessel.

NONE

### **PRIORITY II - MAINTENANCE & STANDARDS RELATED RECOMMENDATIONS:**

*(NOT NORMALLY MANDATORY)*

These are important maintenance items sighted which in this firm's opinion should be performed. They may also include recommendations to conform to current ABYC and NFPA-302 voluntary standards which may not have been in effect or may not have been adhered to by the builder when the vessel was constructed. Some of these, if not addressed, could lead to a Priority I safety issue and/or may result in a reduced vessel market value.

#### **EXTERIOR HULL INSPECTION**

##### **HULL BOTTOM**

*Bottom paint:*

Anti-fouling bottom paint in need of renewal. **RECOMMENDATION:** Remove all loose flaking paint, prep and repaint entire bottom with fresh bottom paint before next launch.

### **PRIORITY III OTHER OBSERVATIONS:**

These are other less significant maintenance items or observations that if not addressed, could lead to more important priority issues and/or could lead to a reduced vessel market value. The cost of addressing these recommendations is generally minimal.

NONE

## CONDITION & VALUE REPORT SUMMARY

### SURVEY INSPECTION AND REPORT LIMITATIONS

The report herewith report the overall condition of the above described vessel at the time of survey to the best of the undersigned's ability by examining and testing the vessel's accessible areas, systems, and accessories by non-destructive ultrasonic testing, probing, and visual inspection: without taking borings, removing all hull fastenings, testing for water leakage inside the hull or at through-hull fittings, or operating machinery.

The services rendered herein and the report furnished herewith are done with the specific understanding that the undersigned and or CWS Maritime Services will not be held responsible under any and all circumstances for any and all errors, omissions, or failure to properly perform the requested services as set forth above, As it concerns the vessel described herein, all matters and statements contained herewith constitute statements of opinion only and not to be construed as representations, warranties, or guarantees and that, any and all statements made herein or in connection herewith will not be used for the basis of any claim, demand, or action against the undersigned. The request for services and the report herewith shall be construed to be an acceptance of the above conditions. Any and all claims for damages of what-so-ever nature asserted against the undersigned are limited to refund of the entire cost of the survey,

The survey and report herein. is *given without* prejudice to the questions of rights, interests, and or liabilities on the part of any and all persons concerned.

### CLOSING STATEMENT & SIGNATURE:

This report is submitted in confidence for the exclusive use of Farley Blackman without prejudice to the rights and/or interests of other concerned parties and may not be used for any other purpose or relied upon by any other person other than for the purpose of obtaining insurance or financing.

ATTENDING SURVEYOR:



Charles W Solarek, S.A.

13.7				15		waterline
13.8	14.3			14.7		
		14.3		14.2	14.6	
			13.7	14.2	13.9	

SHAFT AND STRUT ASSEMBLY

14.2	14.3	14.1	
13.9	14.1	14.1	14.4
14.1	14.7	14.2	13.9

KEEL

AFT

STBD



NOT TO SCALE

							14.3	14.2
14.3	14.4	14.3						
			13.9					13.8
	13.8	13.8		14.3				
	14.6							14.1
		14.8			14.7		14.8	13.9
14.1				14.4				14.2
13.9				14.3	14.6	14.7	14.1	
				14.8*				
					14.3*	15*		

waterline

NOT TO SCALE

KEEL

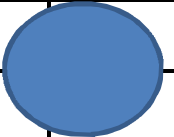
\* approximate location of stbd stabilizer; readings taken inboard of stabilizer fin

STBD  
MIDSHIPS

FWD



	14.4	14.1								waterline
			14.3							
	13.4		13.9				14.7	14.6		
14.1									14.4	
	14.4		14.6	14.8	14.4		14.6			
14.1				14.3				14.1		
	14.2		14.4	14.2						
14.1			14.1		14.3	13.7				



NOT TO SCALE

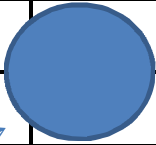
approximate location of bow thruster

FWD



STBD



15.5	15						13.8	14.1	14.4	14.2	
15.3			14.4	14.6	14.3		14.3	14.8	14.7	14.3	waterline
14.2		14.1	13.9		14.8	14.4			13.9	14.6	
			14.1			14.3		14.4		14.2	
							14.2	14.7			
										14.3	

approximate location of bow thruster

NOT TO SCALE



14.7								
14.3	13.8	13.7	13.8			14.3		
14.2			14.3			14.4	14.3	
	13.8					14.4	14.3	
							14.4	
	13.8		14.4				14.8	
			14.6			14.3		
			13.7*		14.3*	13.9		13.9
			14.3*	14.1*	14.7*			13.9
				14.3			14.2	
						13.9	13.7	

waterline

SHAFT AND STRUT ASSEMBLY

NOT TO SCALE

KEEL

\* approximate location of stbd stabilizer; readings taken inboard of stabilizer fin



FWD

PORT

MIDSHIPS

waterline					13.9	
	14.4	14.3	14.3	14.3	14.3	
14.7		14.3	13.6			
14.7	14.7	13.4				
SHAFT AND STRUT ASSEMBLY						
14.1	14.3	14.4				
14.1	14.3	14.2				

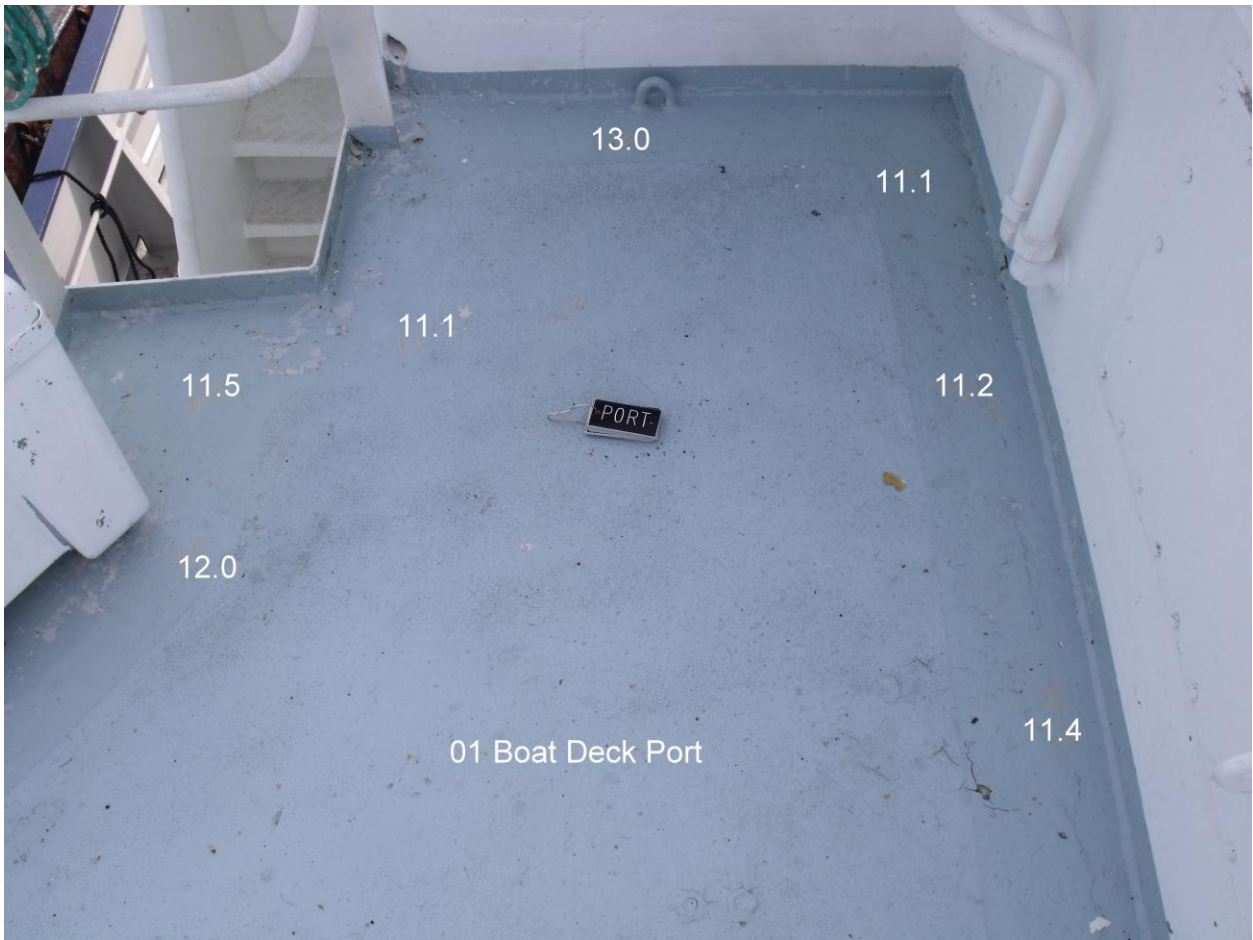
NOT TO SCALE

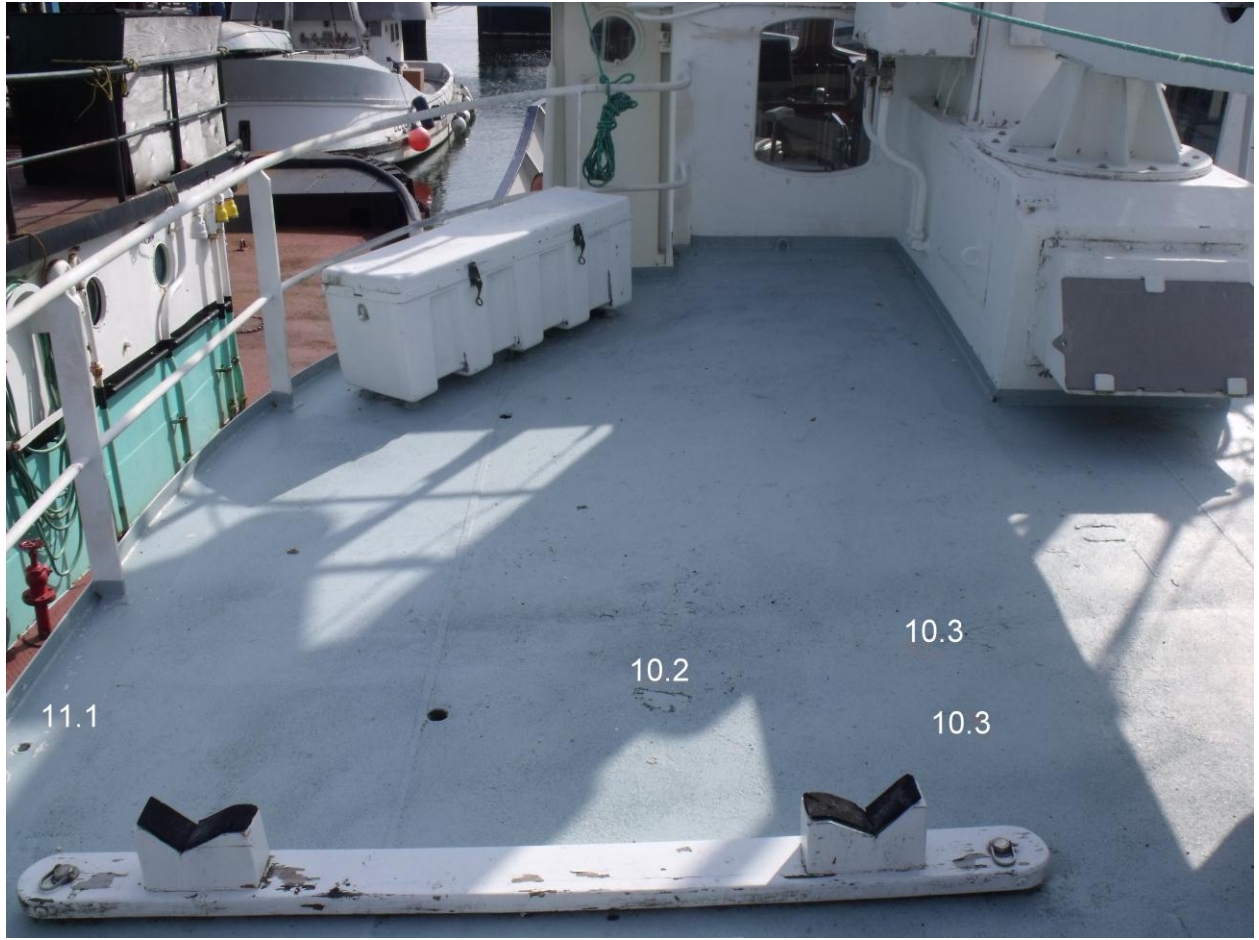
AFT  
PORT

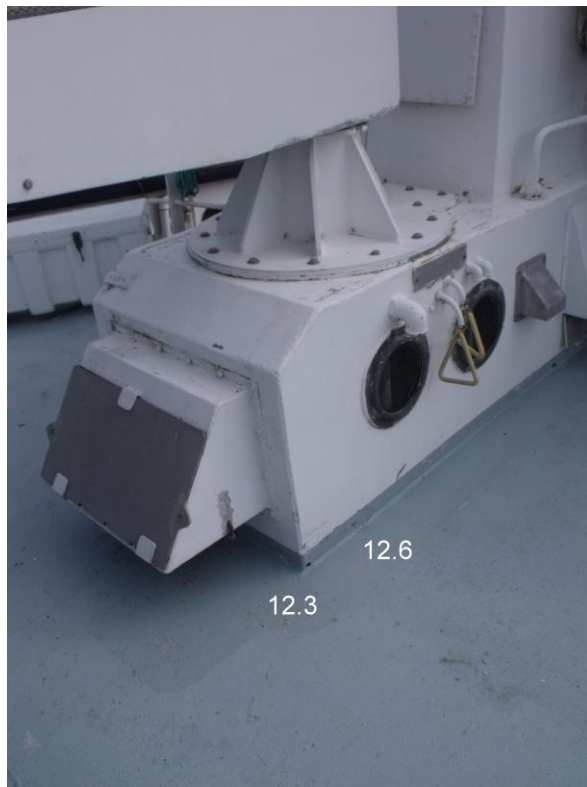
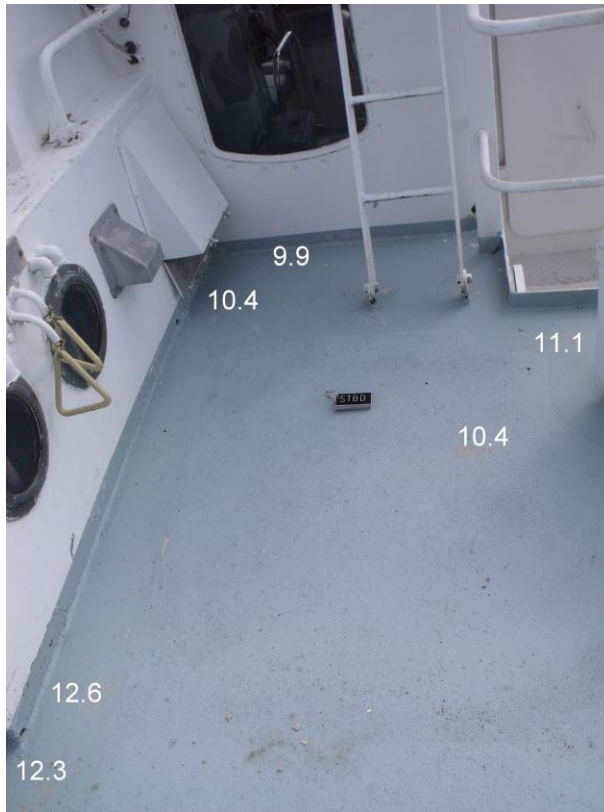




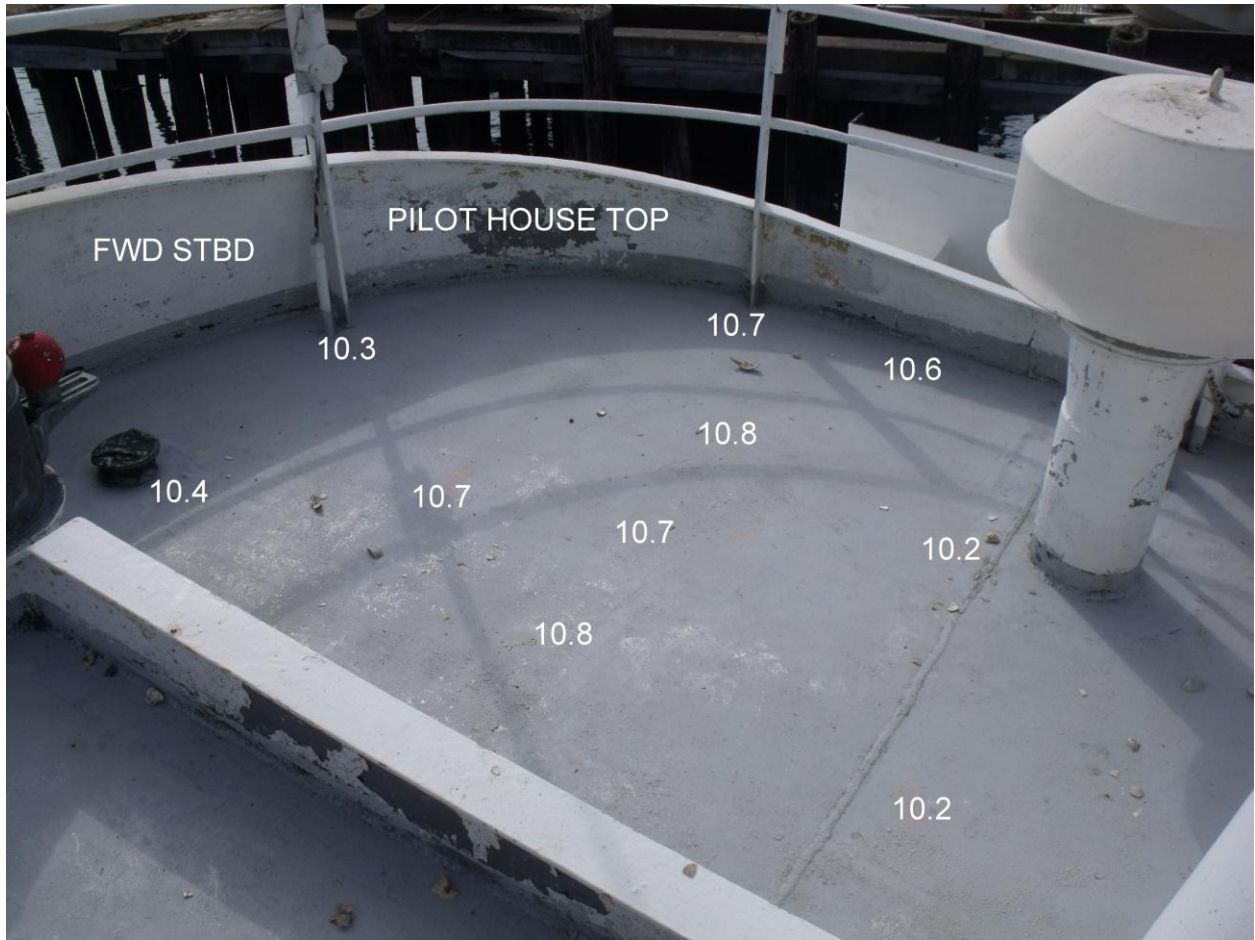
Fore deck area

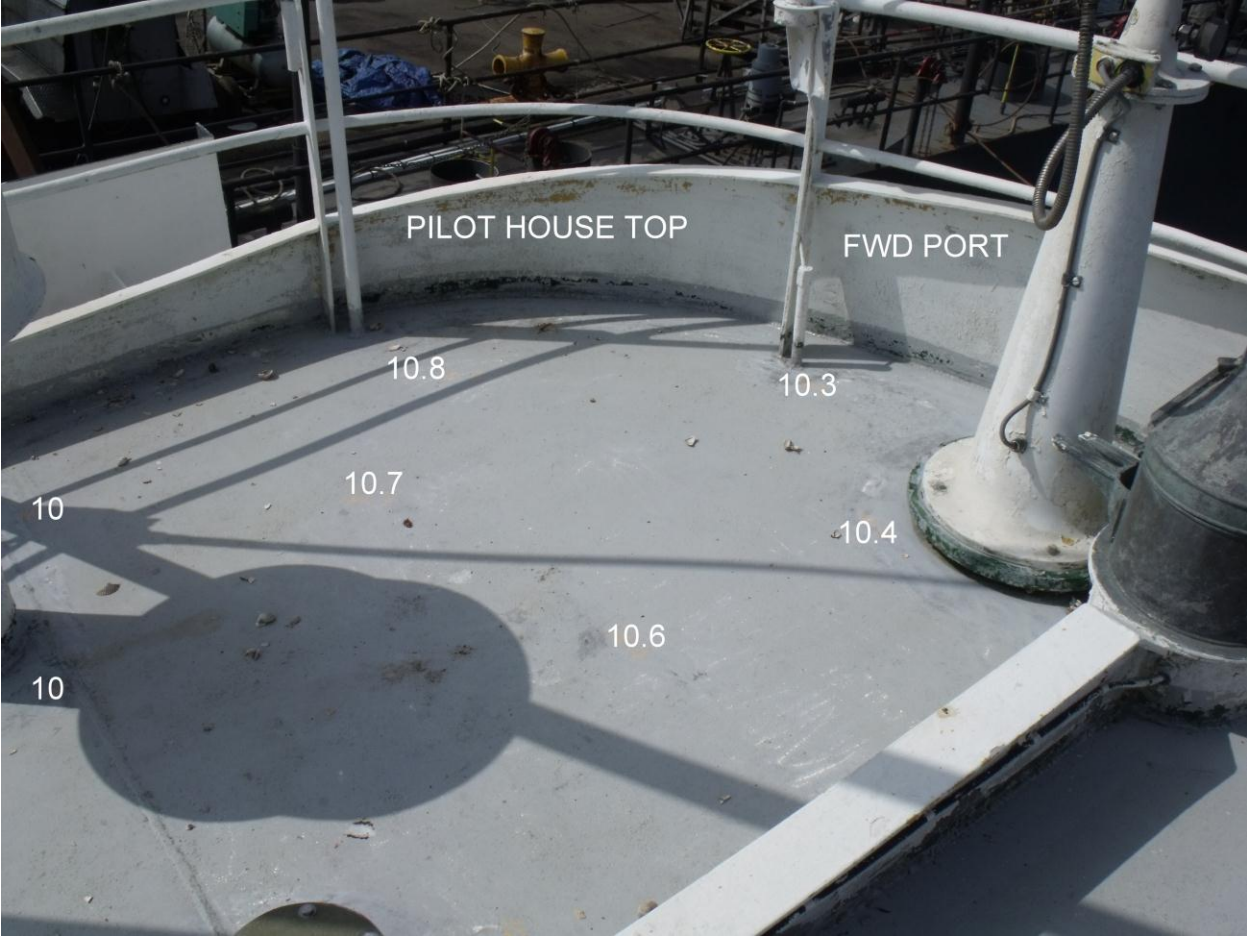






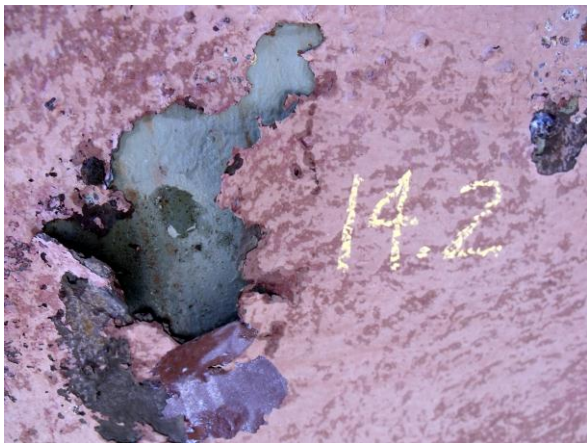








This photo shows the chalk grid markings for taking the audio gauge readings.



Example of the peeling bottom paint.

There was also a white milky fluid inside, indication the paint had not cured properly. Note the thickness reading, which is close to bare metal, but not quite.



The TM-8811 meter used and the sample plate from the owner.



Starboard stabilizer



Thought it would be nice to see her from this aspect, impressive.