

# **USS ELROD (FFG-55)**

## **SPECIAL U/T SURVEY**

### **MAIN ENGINE ROOM (5-250-0-E)**

**PORT AND STARBOARD SIDES  
BULKHEAD (250) TO FRAME (270)**

**AUGUST 28, 2002**

**CONDUCTED BY  
F. LaROCK U/T LEVEL 2  
J. LaROCK U/T LEVEL 2  
QED SYSTEMS INC.**

**USS ELROD (FFG-55)  
SPECIAL SEMAT VISIT**

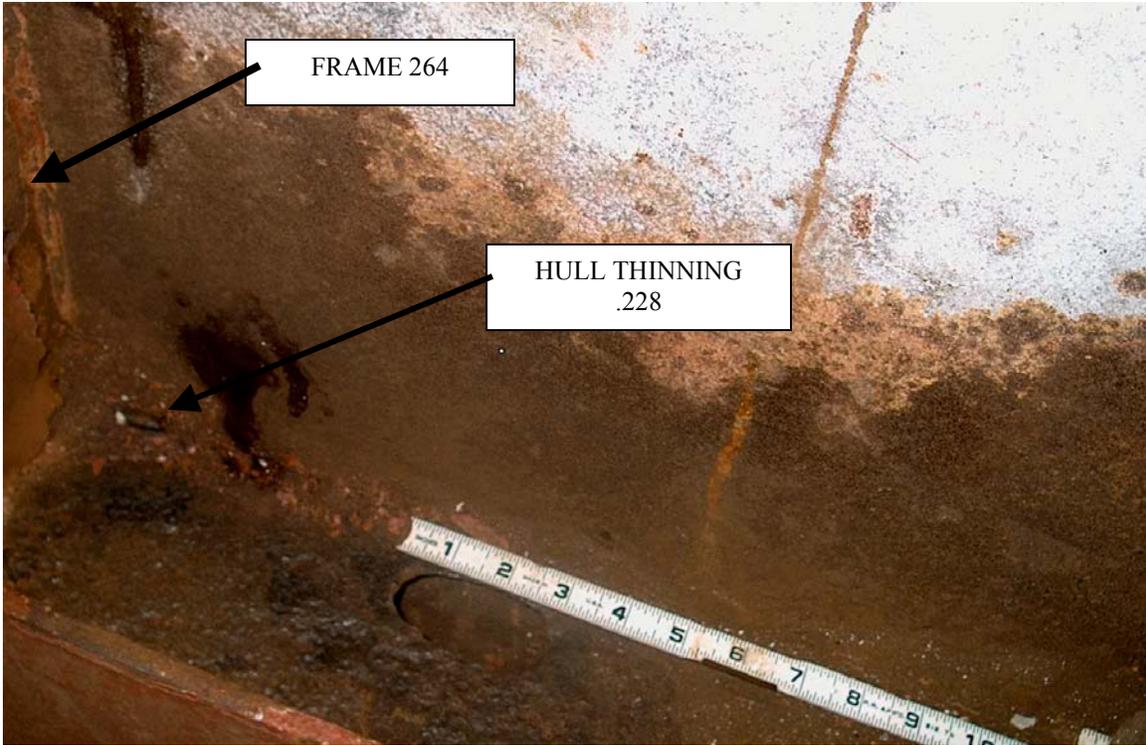
A SPECIAL SEMAT VISIT WAS HELD ONBOARD **USS ELROD (FFG-55)** ON 28 AUGUST 2002 AT NORSHIPCO, NORFOLK VIRGINIA.

**ELROD** WAS IN NORSHIPCO'S FLOATING DRYDOCK **TITAN**. A U/T SURVEY OF THE MAIN ENGINE ROOM (5-250-0-E) PORT AND STARBOARD SIDES FROM STRINGERS (10 TO 13) BETWEEN BULKHEAD (250) AND FRAME (270) WAS CONDUCTED AT THE REQUEST OF SUPSHIP PORTSMOUTH. THE SHIPYARD WAS IN THE PROCESS OF REMOVING THE INSULATION AND PRESERVING THE SHELL. AN AREA OF THE SHELL ABOVE STRINGER (10) AT THE AFTER END OF FRAME (264) IS THINNED BELOW THE 25% WASTAGE ALLOWANCES. IT WAS RECOMMENDED THAT A (4) SQUARE FOOT AREA OF THE SHELL BE REPLACED. THE FOLLOWING DRAWINGS AND PICTURE PAGES DOCUMENT THE RESULTS.

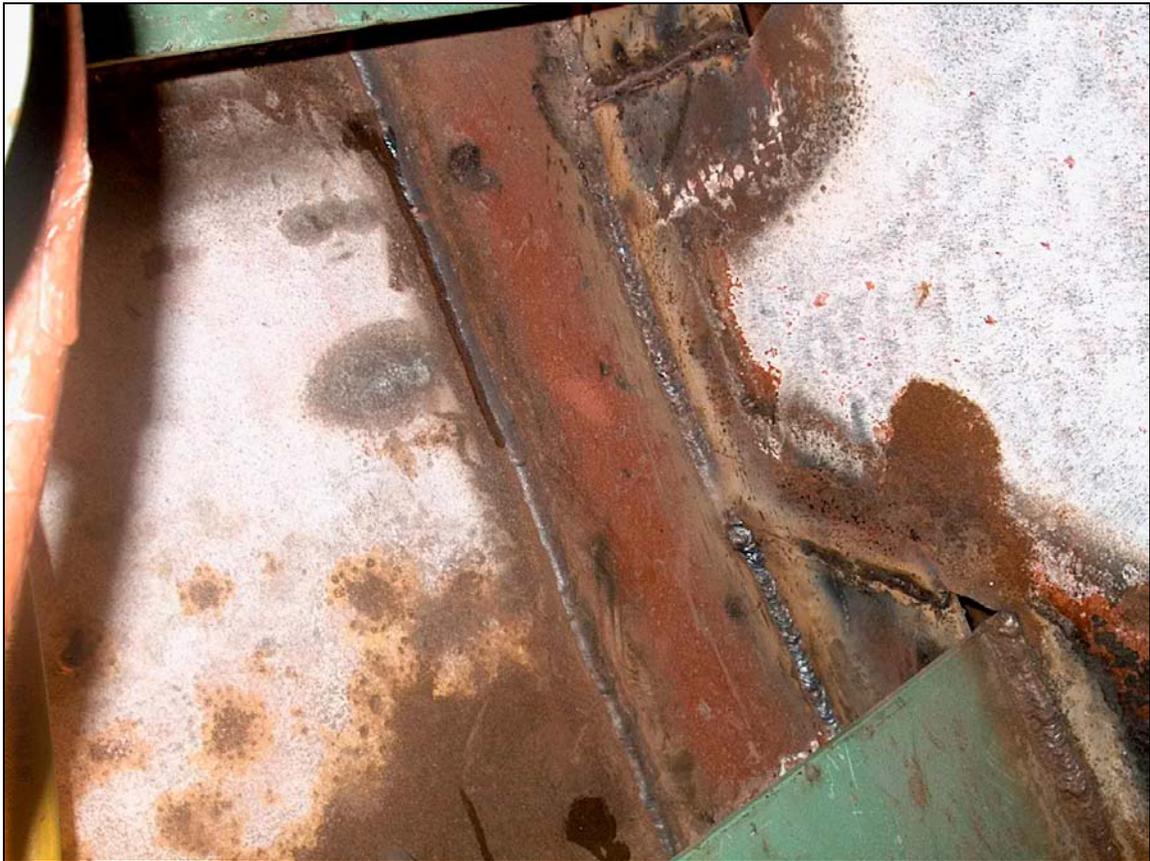
# MATERIAL ASSESSMENT FORM

ITEM NUMBER		SHIP <b>USS ELROD (FFG-55)</b>				
SYSTEM SHELL & SUPPORTING STRUCTURE		ESWBS 1101	EIC A-100	APL	RIN N/L	
EQUIPMENT NAME HULL STRUCTURE		IDENT/SERIAL N/A	LOCATION 5-250-0-E	WORK CENTER EM04	JSN	
EQUIPMENT STATUS		PROBLEM STATUS		CATEGORY		EOC
1. SAT - SATISFACTORY 2. UNSAT - UNSATISFACTORY 3. TNA - TEST NOT ATTEMPTED 4. TNC - TEST NOT COMPLETED 5. NOB - EQUIPMENT NOT ONBOARD		1. C - CORRECTED 2. A - AWAITING PARTS 3. T - AWAITING TECH ASSIST* 4.S - SHIP'S FORCE *UNCORRECTED PROBLEMS		1. S - PERSONNEL SAFETY 2. Z - EQUIPMENT SAFETY 3. H - HARDWARE 4. D - DOWN 5. L - LIMITED		.6
TYPE/AVAILABILITY	WHEN TO BE ACCOMPLISHED	STATUS	CAUSE	DEFERRAL REASON		
1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL <p style="text-align: center;"><b>3</b></p>	1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY <p style="text-align: center;"><b>3</b></p>	1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 0. NOT APPLICABLE <p style="text-align: center;"><b>1</b></p>	1. ABNORMAL ENVIRONMENT 2. MANUFACTURER/INSTALLATION DEFECTS 3. LACK OF KNOWLEDGE 4. COMMUNICATION PROBLEMS 5. INADEQUATE INSTRUCTION/PROCEDURE 6. INADEQUATE DESIGN 7. NORMAL WEAR AND TEAR 0. NOT APPLICABLE <p style="text-align: center;"><b>7</b></p>	1. S/F BACKLOG/OPERATIONAL PRIORITY 2. LACK OF MATERIAL 3. NO FORMAL TRAINING ON THIS EQUIPMENT 4. FORMAL TRAINING INADEQUATE IN THIS EQUIPMENT 5. INADEQUATE SCHOOL PRACTICAL TRAINING 6. LACK OF FACILITIES/CAPABILITIES 7. NOT AUTHORIZED FOR S/F ACCOMPLISHMENT 8. FOR S/F OVERHAUL OR AVAILABILITY WORK LIST 9. LACK OF TECHNICAL DOCUMENTATION 0. OTHER OR NOT APPLICABLE <p style="text-align: right;"><b>7</b></p>		
MAN HRS EXPENDED 20	MAN HRS REMAINING 200	COMPLETED ACTION TAKEN		S/F MANHOURS	PRIORITY	
SAFETY HAZARD: 1. SERIOUS - CORRECT AS SOON AS POSSIBLE 2. SERIOUS - SUSPENSION OF EQUIPMENT/SYSTEM/SPACE REQUIRED 3. SERIOUS - WAIVER OF EQUIPMENT/SYSTEM 4. SAFETY ITEM - MINOR 5. COMBUSTIBLE MATERIAL		1. MAINTENANCE ACTION COMPLETED: PARTS DRAWN FROM SUPPLY 2. MAINTENANCE ACTION COMPLETED: REQUIRED PARTS NOT DRAWN FROM SUPPLY 3. MAINTENANCE ACTION COMPLETED: NO PARTS REQUIRED 4. CANCELLED - DEFERRAL WILL BE REMOVED FROM CSMP 7. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 0. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION			1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE <p style="text-align: right;"><b>3</b></p>	
<b>DISCREPANCY DESCRIPTION: PER SEMAT UNDERWATER HULL ASSESSMENT: MAIN ENGINE ROOM (5-250-0-E) STBD SHELL IS THINNED ABOVE STRINGER (10) AT THE AFTER SIDE OF FRAME (264). AREA HAS PITS DEEPER THAN THE LOW (.228) U/T READING (MIN. .234). STRINGER HAS A 5 INCH OBLONG HOLE IN THE WEB AT FRAME (264)</b>						
<b>RECOMMENDED REPAIRS:XXX CROP OUT APPROX. 4 SQFT OF SHELL PLATE AND REPLACE WITH A FLUSH INSERT OF .313 OS. REPLACE A 3 FT. PIECE OF 6X 61/2 T BEAM</b>						
<b>SSPORT C221 POC: A.DAVIS (757-396-4001 )TPOC: F. LAROCK QED SYSTEMS INC (757-490-5047)</b>						
<b>CSMP SUMMARY:SHELL PLATE THINNED, DETERIORATED STRINGER</b>				<b>TEST# MRC 1102/1</b>		
<b>ROOT CAUSE/AMPLIFICATION: H1</b>				<b>STEP# 1 THRU 5</b>		
<b>SYSTEM LEVEL IMPACT:</b>						
PART NO.	NOMENCLATURE			QTY	NSN	COST
1						
2						
3						
4						
5						
6						
FIRST CONTACT LT MILLIKEN	RATE CHENG	SECOND CONTACT BILL KLOTZ PORT ENGINEER		RATE	PHONE	
ASSESSOR / ACT / TECH ID# F.LAROCK/ J.LAROCK CERT. LVL 2 QED SYSTEMS INC			TD	TL	LOGISTICIAN	TSP

**USS ELROD (FFG-55)  
MAIN ENGINE ROOM (5-250-0-E) STARBOARD SIDE**



STRINGER 10 AT FRAME 264



NEW PLATE AND STRINGERS AT FRAME 270

**USS ELROD (FFG-55)  
MAIN ENGINE ROOM (5-250-0-E) STARBOARD SIDE**



HULL INSULATION HAS BEEN REMOVED AND PRESERVATION IS IN PROGRESS BETWEEN FRAMES (264 AND BULKHEAD (250), STARBOARD SIDE.



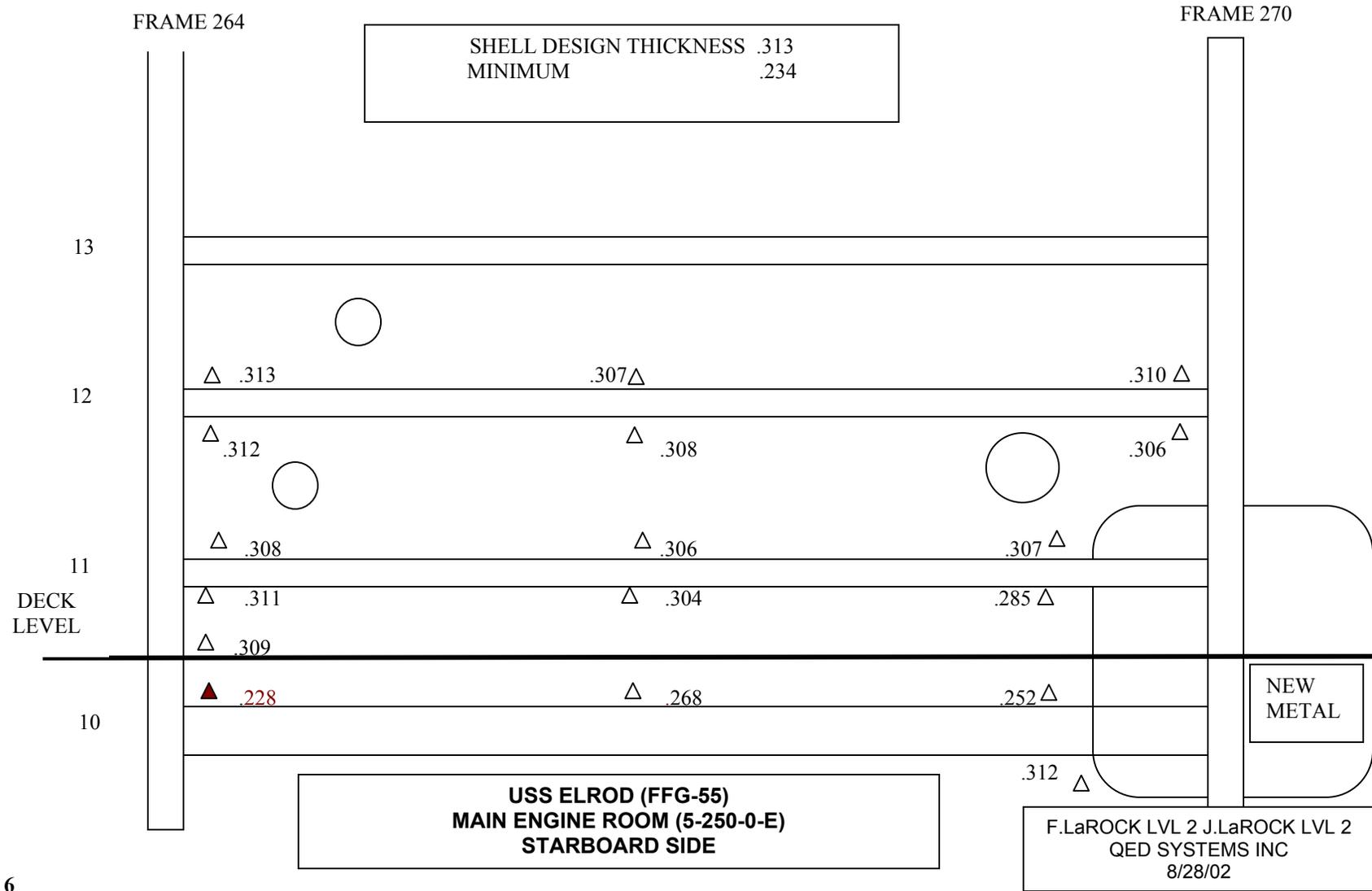
STRINGER (11) APPROXIMATELY 4 FT AFT OF BULKHEAD (250).



POSSIBLE LEAKING OF CORRODED BATTERY DRAIN BETWEEN FRAMES (258- 264) IS CAUSE FOR CORROSION.



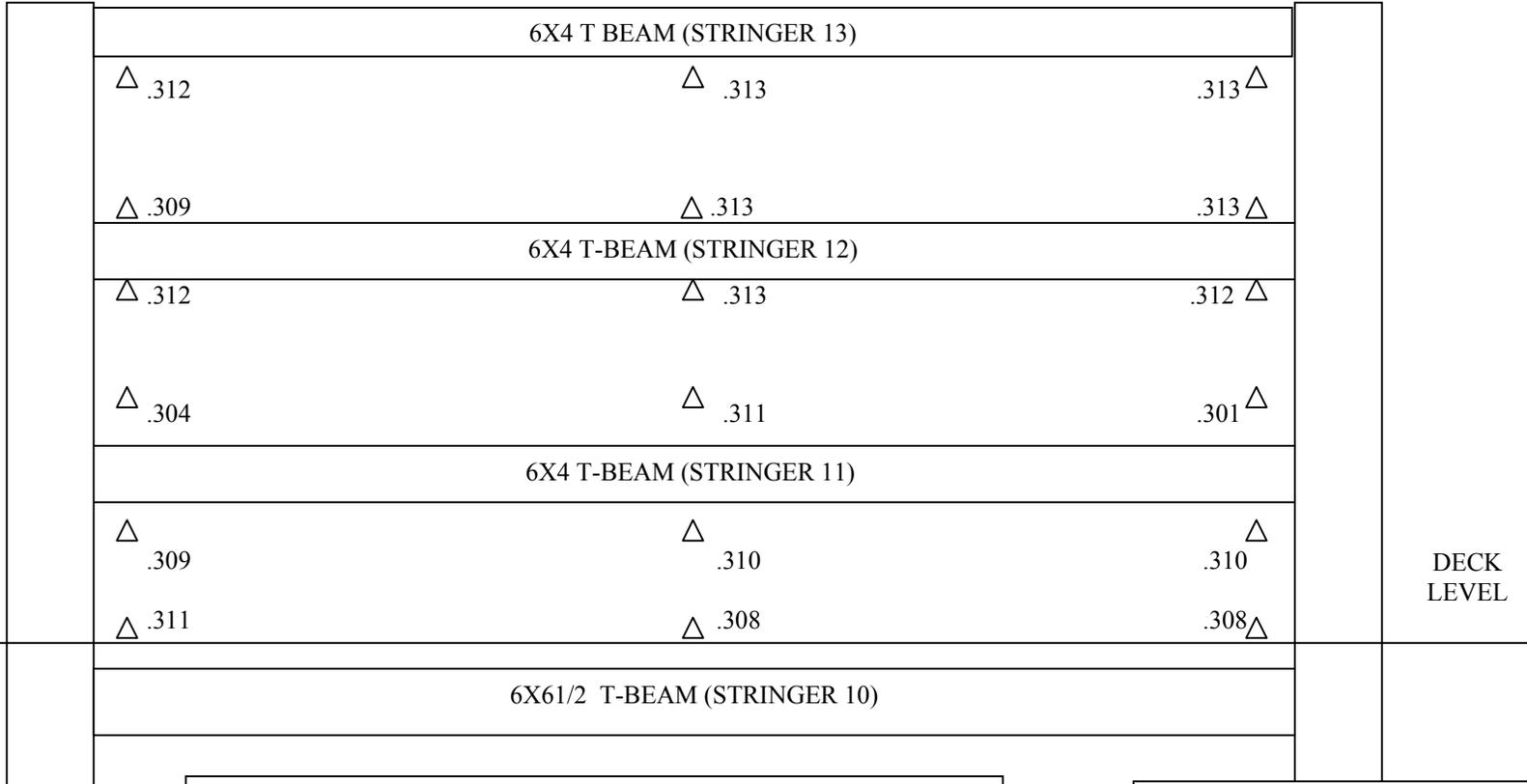
LEAKING VALVE APPROXIMATELY 3 FT AFT OF BHD (250) IS A POSSIBLE CAUSE OF CORROSION.



SHELL DESIGN THICKNESS .313  
 MINIMUM .234

FRAME 258

FRAME 264



DECK  
LEVEL

**USS ELROD (FFG-55)  
 MAIN ENGINE ROOM (5-250-0-E)  
 STARBOARD SIDE**

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SHELL DESIGN THICKNESS .313  
 MINIMUM .234



BHD 250.

FRAME 258

6X4 T-BEAM (STRINGER 13)			
△ .319	△ .319	△ .316	.313 △
△ .317	△ .315	△ .313	.318 △
6X4 T-BEAM (STRINGER 12)			
△ .315	△ .319	△ .315	.312 △
△ .310	△ .311	△ .310	.312 △
6X4 T-BEAM (STRINGER 11)			
△ .312	△ .314	△ .312	.311 △
△ .273	△ .312	△ .313	.308 △
6X6 1/2 T-BEAM (STRINGER 10)			

DECK  
 LEVEL

**USS ELROD (FFG-55)  
 MAIN ENGINE ROOM (5-250-0-E)  
 PORT SIDE**

F.LaROCK LEVEL 2  
 J. LaROCK LEVEL 2  
 QED SYSTEMS INC  
 8/28/02

**USS ELROD (FFG-55)  
MAIN ENGINE ROOM (5-250-0-E) PORT SIDE FRAMES (264-270)**



STRINGER (10) PORT SIDE BETWEEN FRAMES (264-270). WATER FROM PIPING DRAINS AND CONDENSATION FROM OVERBOARD DISCHARGES AND OTHER EQUIPMENT WAS TRAPPED BY THE HULL INSULATION CAUSING CORROSION. THIS AREA, PORT AND STARBOARD IS A CLASS WIDE PROBLEM. PERMANENT REMOVAL OF THE HULL INSULATION WILL REDUCE CORROSION AND ALLOW PROPER MAINTAINANCE OF THE HULL AND SUPPORTING STRUCTURAL MEMBERS.



STRINGER (10) AT FRAME (264) PORT SIDE.

**USS ELROD (FFG-55)  
MAIN ENGINE ROOM (5-250-0-E) PORT SIDE**



STRINGER (11) AT FRAME (258) PORT SIDE OUTBOARD OF THE ACCESS TRUNK.  
NOTE THE CORROSION ON THE SHELL WHERE THE INSULATION WAS REMOVED  
IN ORDER TO TAKE U/T READINGS.



**USS ELROD (FFG-55)  
MAIN ENGINE ROOM (5-250-0-E) PORT SIDE**



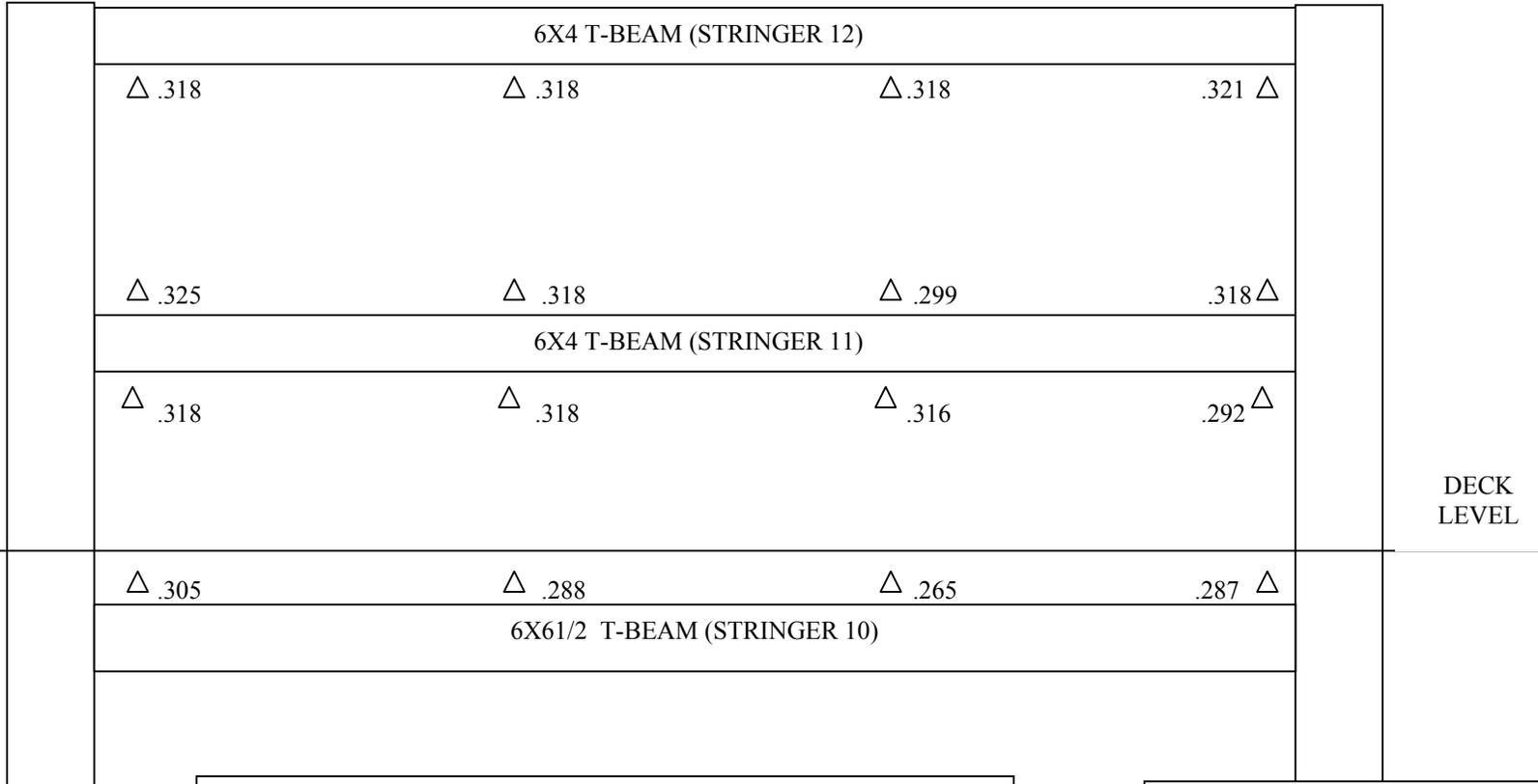
OVERBOARD DISCHARGE FORWARD OF FRAME (258) PORT SIDE BETWEEN STRINGERS (11 AND 12). THE HULL INSULATION ABOVE STRINGER (12) IS WET AND PERMANENT REMOVAL IS HIGHLY RECOMMENDED.



SHELL DESIGN THICKNESS .313  
 MINIMUM .234

FRAME 270

FRAME 264



**USS ELROD (FFG-55)  
 MAIN ENGINE ROOM (5-250-0-E)  
 PORT SIDE**

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 J. LaROCK LEVEL 2  
 QED SYSTEMS INC  
 8/28/02



SHELL DESIGN THICKNESS .313  
MINIMUM .234

FRAME 258

△ .313

△ .313

△ .319

.321 △

FRAME 250

6X4 T-BEAM (STRINGER 12)

△ .315

△ .315

△ .315

.318 △



△ .309

△ .273

△ .315

.318 △

6X4 T-BEAM (STRINGER 11)

△ .314

△ .318

△ .319

.318 △

DECK  
LEVEL

△ .313

△ .291

△ .306

.305 △

6X6 1/2 T-BEAM (STRINGER 10)

**USS ELROD (FFG-55)  
MAIN ENGINE ROOM (5-250-0-E)  
PORT SIDE**

F.LaROCK LEVEL 2  
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QED SYSTEMS INC  
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