

== USS ESTOCIN (FFG-15) ==
SEMAT SHELL CONDITION ASSESSMENT
SURVEY
INTERIOR AREAS



PREPARED BY
SUPERVISOR OF SHIPBUILDING CONVERSION
AND
REPAIR
PORTSMOUTH, VIRGINIA
3/13/02 TO 3/22/02

USS ESTOCIN (FFG-15)

SHELL CONDITION ASSESSMENT SURVEY INTERIOR AREAS TABLE OF CONTENTS

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USS ESTOCIN (FFG-15)
SHELL CONDITION ASSESSMENT SURVEY, INTERIOR AREAS.

A SEMAT UNDERWATER HULL AND SUPPORTING STRUCTURE SURVEY OF INTERIOR AREAS WAS CONDUCTED ON BOARD **USS ESTOCIN (FFG-15)** FROM 03/13/02 TO 03/22/02 AT NAVAL STATION MAYPORT, JACKSONVILLE FLORIDA.

THE SURVEY WAS CONDUCTED IN ACCORDANCE WITH HULL STRUCTURE MRC 1102 USING A DELMHORST BD 2100 MOISTURE METER AND A KRAUTKRAMER BRANSON MODEL DM2TC ULTRASONIC TEST INSTRUMENT SERIAL NO.00NV8 CALIBRATION DUE DATE 02/22/03.THE PROBES USED WERE KRAUTKRAMER BRANSON'S TC/560, FH2E AND KBA 525.

THE MOST CRITICAL AREAS NOTED WERE THE HOLED STRINGER, THE THINNING TANK AND THE DETERIORATED WEB ON WEB FRAME (316) IN AMR 3. THE THINNING AND CORROSION ON THE SHELL IN THE MAIN ENGINE ROOM, THE CORROSION IN THE FORWARD EDUCTOR ROOM, THE THINNING TANK TOP / DECK IN THE A/C MACHINERY ROOM, THE THINNING TANK TOP / DECK IN THE CHT ROOM AND THE DETERIORATED STRINGER IN SONAR COOLING.

HISTORIC AREAS OF CORROSION ON **(FFG-7)** CLASS SHIPS WERE INSPECTED AND NOTED. REMOVAL OF HULL INSULATION IN SONAR COOLING AND IN AMR 2 UNDER THE HPAC WILL REDUCE CORROSION SIGNIFICANTLY.

THE JSN'S WILL BE ASSIGNED AND ENTERED AS SOON AS POSSIBLE. THE SHIP WILL RECEIVE AN UPDATED REPORT. THE FINAL SECTION CONTAINS A (FFG-7) CLASS STRUCTURAL MATRIX. THESE ARE SPACES LOCATED AT THE WATER LINE AND BELOW. THE SECTIONS HIGHLIGHTED IN RED ARE HISTORIC AREAS OF CORROSION FOR THIS CLASS SHIP.

THE SURVEY WAS CONDUCTED BY FRANCIS J. (JOE) LAROCK II
CERTIFIED U/T LEVEL II ON 21 DECEMBER 2001
AND TERRI L WHITMORE, SCRIBE.

QED SYSTEMS INC.
4646 N. WITCHDUCK RD
VIRGINIA BEACH, VIRGINIA. 23455-6215
PHONE: (757) 490-5047

MATERIAL ASSESSMENT FORM

| | | | | | | | | | |
|--|--|---|---------------------|---|--|--|--|--|-------------|
| ITEM NUMBER | | | | SHIP | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC | | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 5-368-01-E | | WORK CENTER EM04 | | JSN P022 |
| 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 .9 | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: STARBOARD SIDE, (5-368-01-E) STEERING GEAR RM | | | | | | | | | |
| EDUCTOR SPACE AFT OF BHD (368). FLANGE ON 2 ND STRINGER OUTBOARD OF SWASH BULKHEAD, APPROXIMATELY 18" AFT OF BULKHEAD (368) IS HOLED. WEB'S OF 1 ST AND 2 ND STRINGERS OUTBOARD OF SWASH BULKHEAD ARE THINNING AT THE WELD CONNECTION TO THE HULL. U/T READINGS OF THE SHELL PLATE REVEALED NO SIGNIFICANT LOSS OF THICKNESS. | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND REPAIR ACTIVITY CUT OUT AND REPLACE APPROXIMATELY 8 LF OF 1 ST AND 2 ND STRINGERS 16' TOTAL, REPLACE WITH (8 X 4 X 10# T-BEAM). RECOMMEND REPAIRS BE CONDUCTED DURING DRYDOCK AVAILABILITY. | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | |
| CSMP SUMMARY: 1 ST AND 2 ND STRINGERS ARE DETERIORATED. | | | | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | | SECOND CONTACT BENNETT | | RATE HTC | | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | TD | TL | | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
STEERING GEAR ROOM (5-368-01-E)
STARBOARD SIDE



STBD SIDE EDUCTOR SPACE AT BHD (368)



HOLE IN FLANGE OF 2ND STRINGER OUTBOARD OF SWASH BULKHEAD

USS ESTOCIN (FFG-15)
STEERING GEAR ROOM (5-368-01-E)
STARBOARD SIDE



ARROW INDICATES WASHOUT OF WELD ON 2ND STRINGER OUTBOARD OF SWASH BULKHEAD.



CORROSION ON SHELL AFT OF WEB FRAME (376)

MATERIAL ASSESSMENT FORM

| | | | | | | | |
|---|---|---|--|--|--|---|-----|
| ITEM NUMBER | | | | SHIP USS ESTOCIN (FFG-15) | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | EIC A100 | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 5-368-01-E | WORK CENTER EM04 | | JSN P023 | |
| 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 .9 | |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | MAN HRS REMAINING | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: STEERING GEAR ROOM (5-368-01-E), PORT AND STARBOARD EDUCTOR SPACES HAVE APPROXIMATELY 140 SF OF HEAVY PAINT SEPARATION AND RUST. | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE POWER CLEAN APPROXIMATELY 140 SF OF AREA, PRIME AND PAINT USING EURO-NAVY COATING. | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | |
| CSMP SUMMARY: CORROSION IN PORT AND STARBOARD EDUCTOR SPACES. | | | | TEST# MRC 1102/1 | | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | STEP# 1,2,3,4 & 5 | | | |
| SYSTEM LEVEL IMPACT: | | | | | | | |
| PART NO. | NOMEMCLATURE | | | QTY | NSN | COST | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | TD | TL | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
STEERING GEAR ROOM (5-368-01-E)
PORT SIDE



PORT SIDE EDUCTOR SPACE AT BULKHEAD (368)



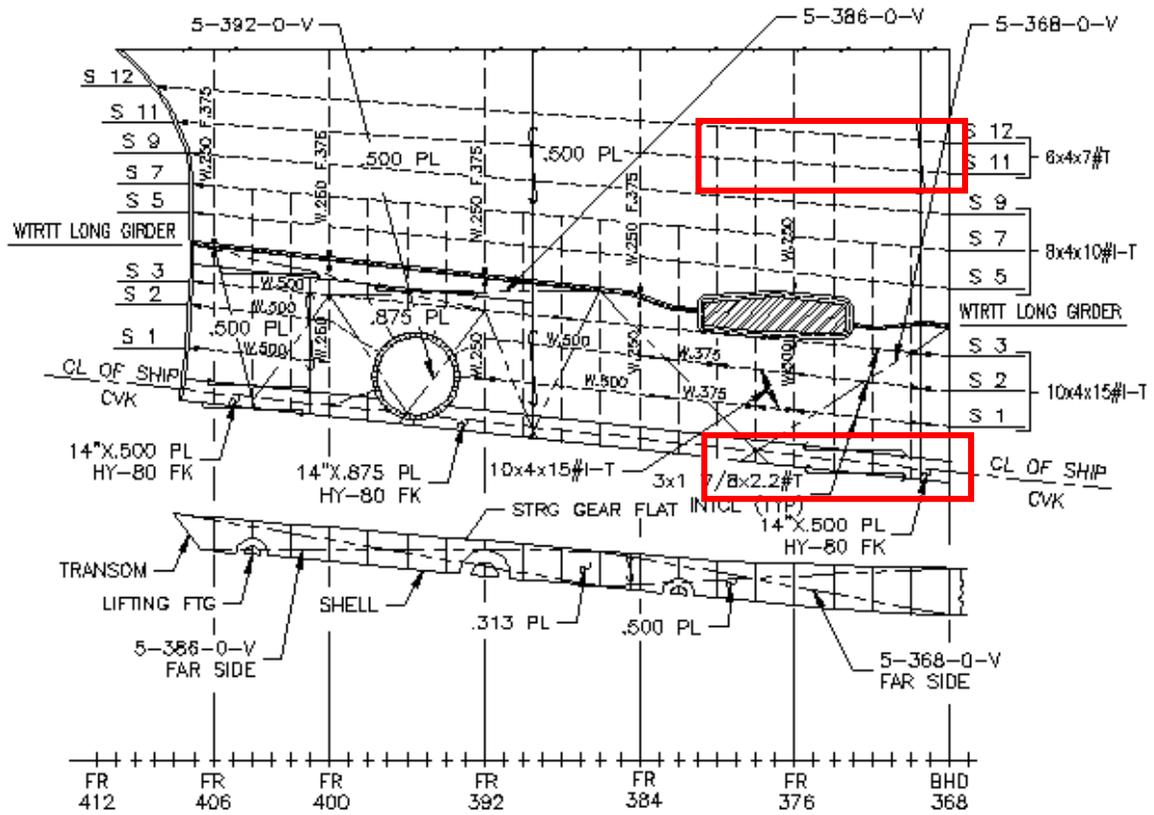
STANDING WATER, HEAVY PAINT SEPARATION AND CORROSION ON SHELL AND FRAMES
AFT OF BHD (368).

USS ESTOCIN (FFG-15)
STEERING GEAR ROOM (5-368-01-E)
PORT SIDE



CORROSION AND WATER UNDER FAN COIL UNIT.

**USS ESTOCIN (FFG-15)
STEERING GEAR ROOM (5-368-01-E)**



RED BOX INDICATES AREA OF INSPECTION

MATERIAL ASSESSMENT FORM

| | | | | | | |
|---|---|---|--|--|--|---|
| ITEM NUMBER | | SHIP USS ESTOCIN (FFG-15) | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWS 11011 | EIC | APL X SYSTEMS | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 5-292-0-E | WORK CENTER EM04 | JSN P024 | |
| 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 .9 |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | MAN HRS REMAINING 1000 | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: AMR NO. 3 (5-292-0-E) PORTSIDE | | | | | | |
| 6 X 4 STRINGER AT DECK LEVEL UNDER POWER PANEL. (3-319-2) IS SEVERELY DETERIORATED. THE SHELL IS THINNING IN SEVERAL PLACES ALONG THIS STRINGER AND THE ONE ABOVE. WEB FRAME (316) IS HOLED IN SEVERAL PLACES. THE HULL INSULATION IS TRAPPING WATER AND HIDING CORROSION. | | | | | | |
| RECOMMENDED REPAIRS: | | | | | | |
| RECOMMEND REPAIR ACTIVITY REMOVE HULL INSULATION FROM DECK LEVEL UP APPROXIMATELY 5', FROM WEB FRAME (316) TO BHD (328). CUT OUT APPROXIMATELY 60 SF OF HULL FROM WELD SEAM ABOVE (7 X 6 T-BEAM) TO STRINGER ABOVE OVBD DISCHARGE FROM WEB FRAME (316) TO BHD (328), REPLACE WITH .313 OS. CUT OUT AND REPLACE APPROX 10' OF (6 X 4 T-BEAM). CUT OUT AND REPLACE LOWER 10" OF FRAME (316) FROM SIDE OF TANK (5-308-2-W) TO STRINGER BELOW OVBD DISCHARGE, REPLACE WITH .250 OS. PRIME AND PAINT, REPLACEMENT OF INSULATION IS NOT RECOMMENDED | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | |
| CSMP SUMMARY: DETERIORATED STRINGER / THIN HULL / HOLES IN WEB FRAME (316) | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | |
| PART NO. | NOMEMCLATURE | | | QTY | NSN | COST |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| FIRST CONTACT WAGNER | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | TD | TL | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO. 3 (5-292-0-E)
PORTSIDE

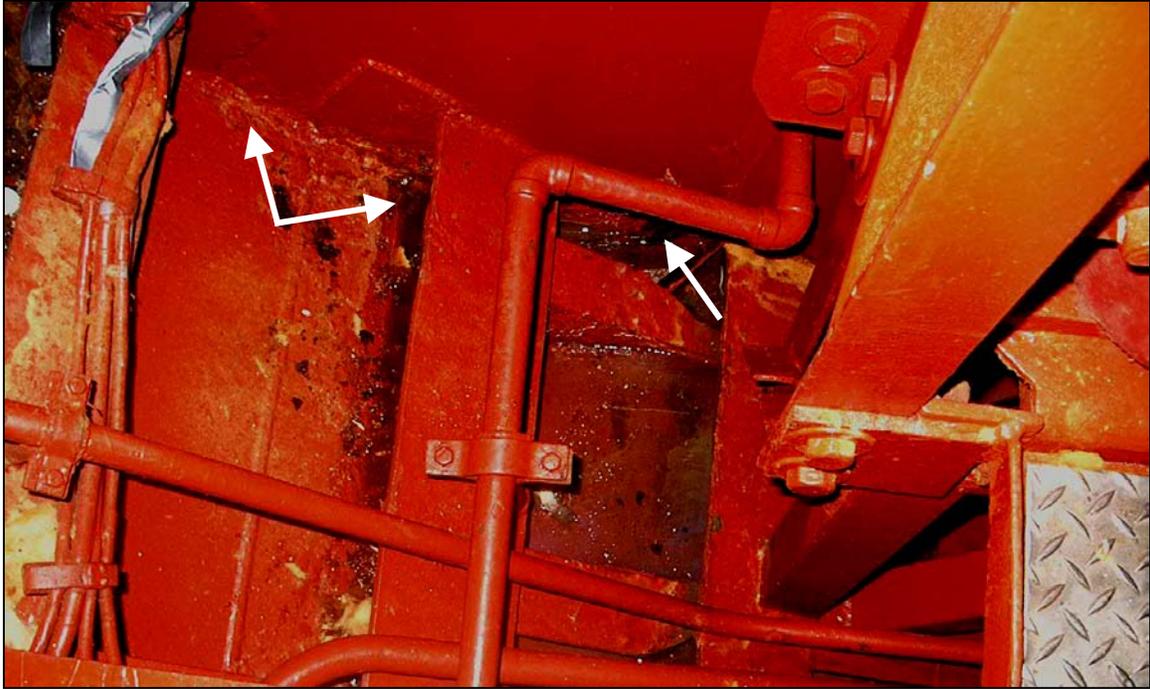


DETERIORATED STRINGER, THINNING HULL AND HOLES IN WEB FRAME (316) ARE LOCATED BELOW POWER PANEL AND TLI



HOLE IN WEB FRAME (316), AFT SIDE OF NO. 4 SSDG ENCLOSURE

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO. 3 (5-292-0-E)
PORT SIDE



ARROWS INDICATE SEVERAL HOLES IN WEB FRAME (316)



LARGE HOLE IN WEB FRAME (316)

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO. 3 (5-292-0-E)
PORT SIDE



CORROSION ON SHELL HIDDEN BY HULL INSULATION.

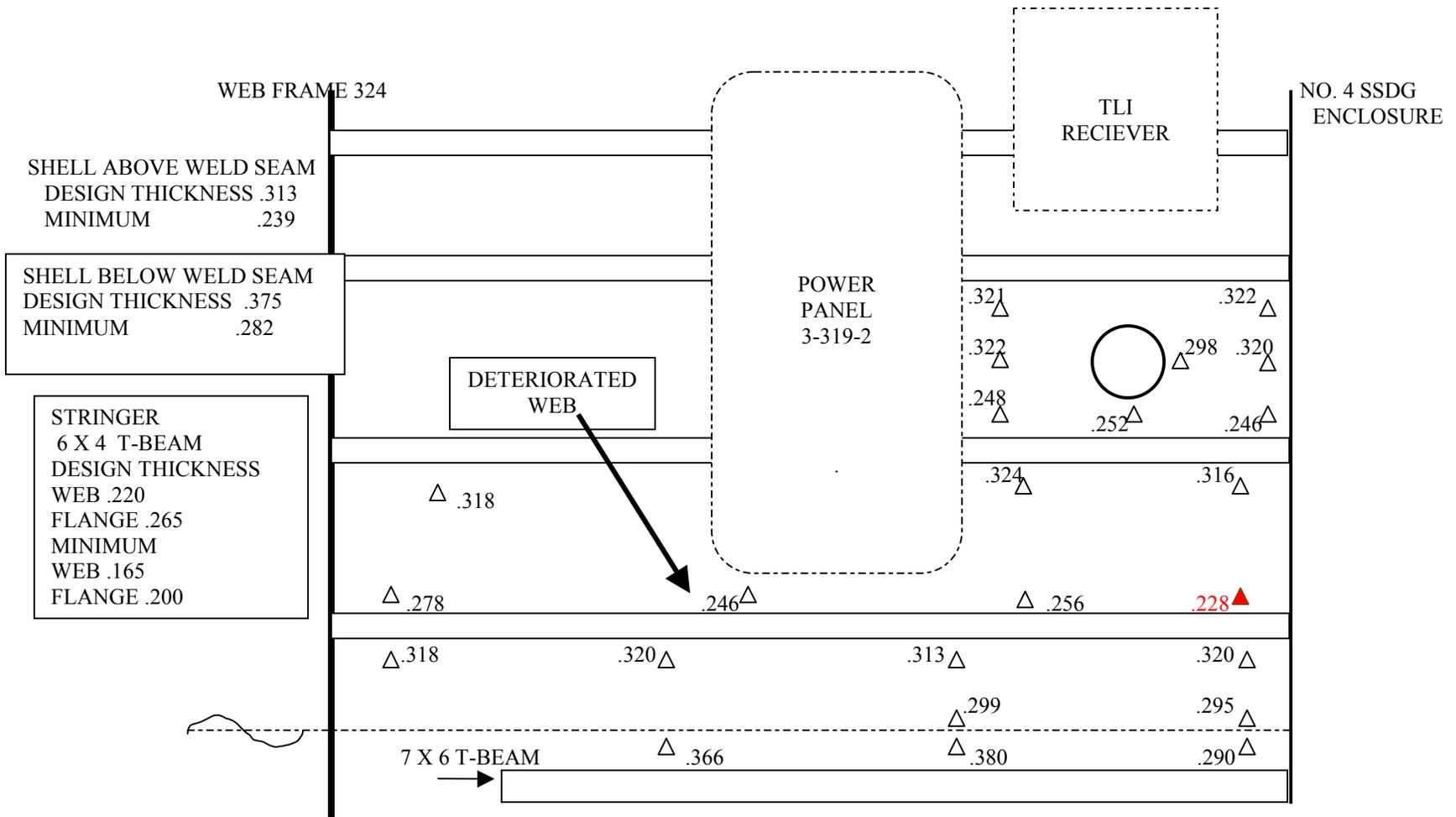


CORROSION ON SHELL BELOW OVBD DISCHARGE. REMOVAL OF INSULATION FROM DECK LEVEL TO BOTTOM OF TLI AND FROM WEB FRAME (316) TO BHD (328) IS HIGHLY RECOMMENDED

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO. 3 (5-292-0-E)
PORT SIDE



WEB OF (6 X 4 T-BEAM) AT DECK LEVEL BELOW POWER PANEL (3-319-2).
LOW U/T READINGS ON THE SHELL WERE REVEALED AT THE WELD JUNCTION.
REFER TO DRAWING FOR U/T READINGS OF AREA.



USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO.3 (5-292-0-E)
PORT SIDE

J. LAROCK / T. WHITMORE
QED SYSTEMS INC.
03-15-02

MATERIAL ASSESSMENT FORM

| | | | | | | | | | |
|---|--|---|----------------------------------|---|---|--|----------------------------|--|-------------|
| ITEM NUMBER | | | | SHIP | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWS 11011 | | EIC | | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 5-292-0-E | | WORK CENTER EM04 | | JSN P025 |
| 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 | | | | .9 |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | | MAN HRS REMAINING 1000 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: AUXILIARY MACHINERY ROOM 3 (5-292-0-E) | | | | | | | | | |
| POTABLE WATER TANK (5-292-3-W) LOCATED APPROXIMATELY 6 FT OUTBOARD OF CENTER LINE. THE INBOARD SIDE AND AFTER END REVEALED SPOTS OF HEAVY CORROSION AND LOW U/T READINGS. TRANSVERSE WEB FRAME (306) IS HOLED APPROXIMATELY 2" INBOARD OF TANK SIDE. | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND REPAIR ACTIVITY CUT OUT AND REPLACE THE ENTIRE INBOARD SIDE AND AFT END OF TANK. APPROXIMATELY 70 SF OF .250 MILD STEEL. IN CONJUNCTION WITH REPAIRS TO TANK CUT OUT AND REPLACE APPROXIMATELY 1 SF OF THE WEB OF FRAME (306) WITH .250 OS. PRIME AND PAINT. | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | |
| CSMP SUMMARY: HEAVY CORROSION TANK (5-292-3-W) FRAME (306) IS HOLED. | | | | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | | RATE HTC | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | TD | TL | LOGISTICIAN | | TSP |

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO. 3 (5-292-0-E)



HEAVY PITTING ON INBOARD SIDE OF POTABLE WATER TANK (5-292-3-W)
NOTE CORROSION AT WELD SEAM. U/T READING OF PIT WAS .136 THE MINIMUM FOR .250
STEEL IS .187.



INBOARD AFTER CORNER OF POTABLE WATER TANK (5-292-3-W) REVEALED LOW U/T
READINGS

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM NO. 3 (5-292-0-E)



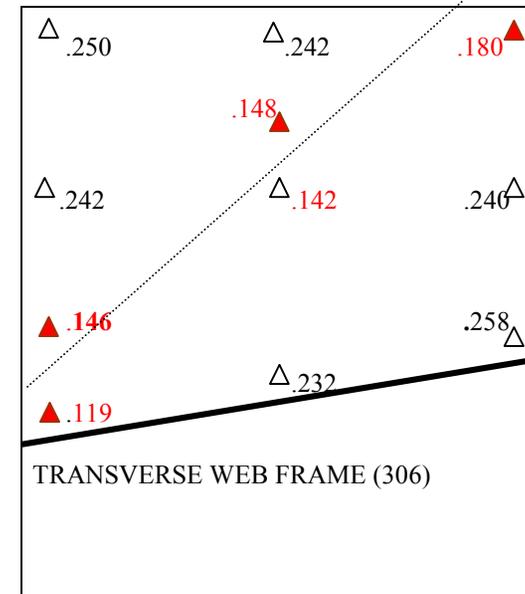
HOLE IN WEB OF FRAME (306) LOOKING AFT APPROXIMATELY 2" INBOARD OF POTABLE WATER TANK (5-292-3-W)



CORROSION ON AFTER END OF POTABLE WATER TANK (5-292-3-W). ARROW INDICATES TRANSVERSE WEB FRAME (306).

DESIGN THICKNESS .250
 MINIMUM .187
 WELD SEAM.....

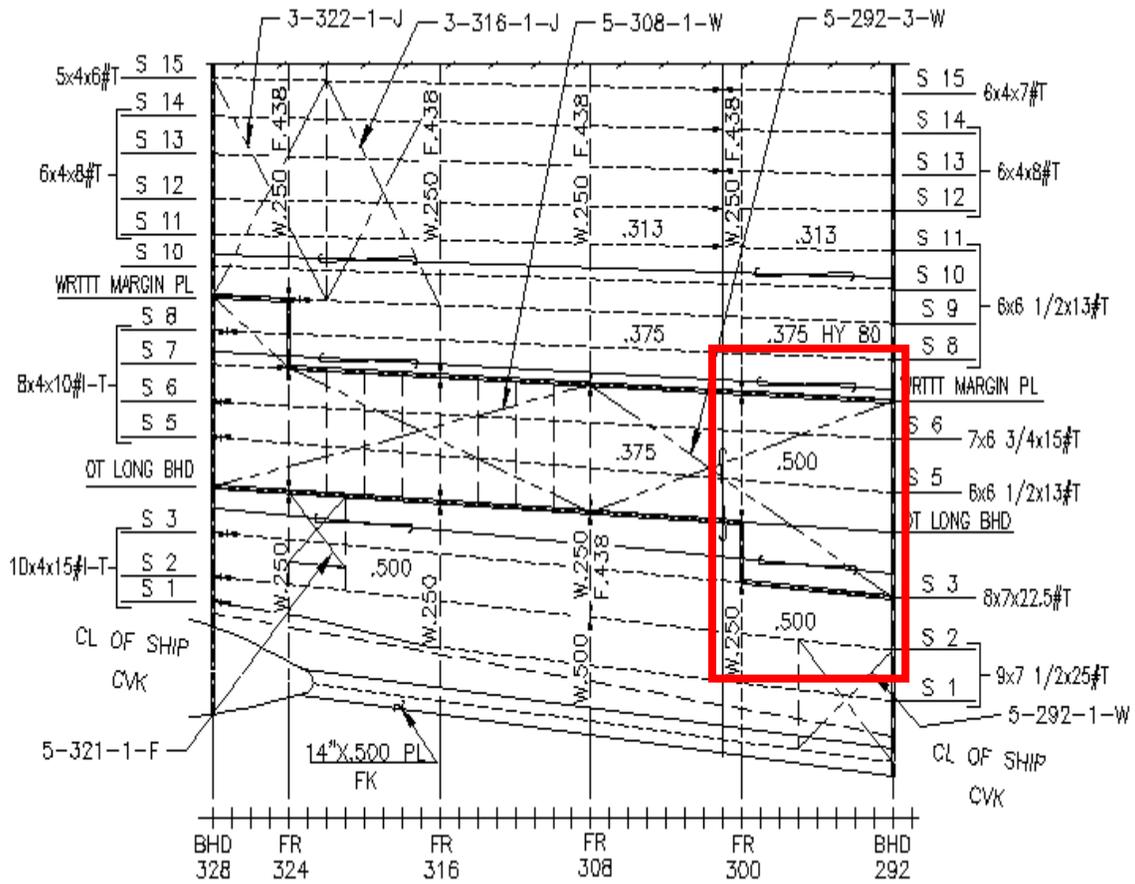
| | | | | |
|------------|--------|--------|--------|--------------|
| △ .242 | △ .256 | ▲ .142 | △ .256 | .251△ |
| △ .251 | △ .263 | △ .258 | △ .254 | .251△ |
| △ .260 | △ .258 | △ .262 | △ .251 | .099▲ |
| ----- | | | | |
| △ .260 | △ .262 | ▲ .136 | △ .266 | △ .244 .109▲ |
| △ .254 | △ .266 | | △ .258 | △ .250 .136▲ |
| DECK LEVEL | | | | △ .241 .123▲ |



J. LAROCK / T. WHITMORE
 QED SYSTEMS INC.
 03/15/02

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 3 (5-292-0-E)
POTABLE WATER TANK (5-292-3-W)

**USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 3 (5-292-0-E)**

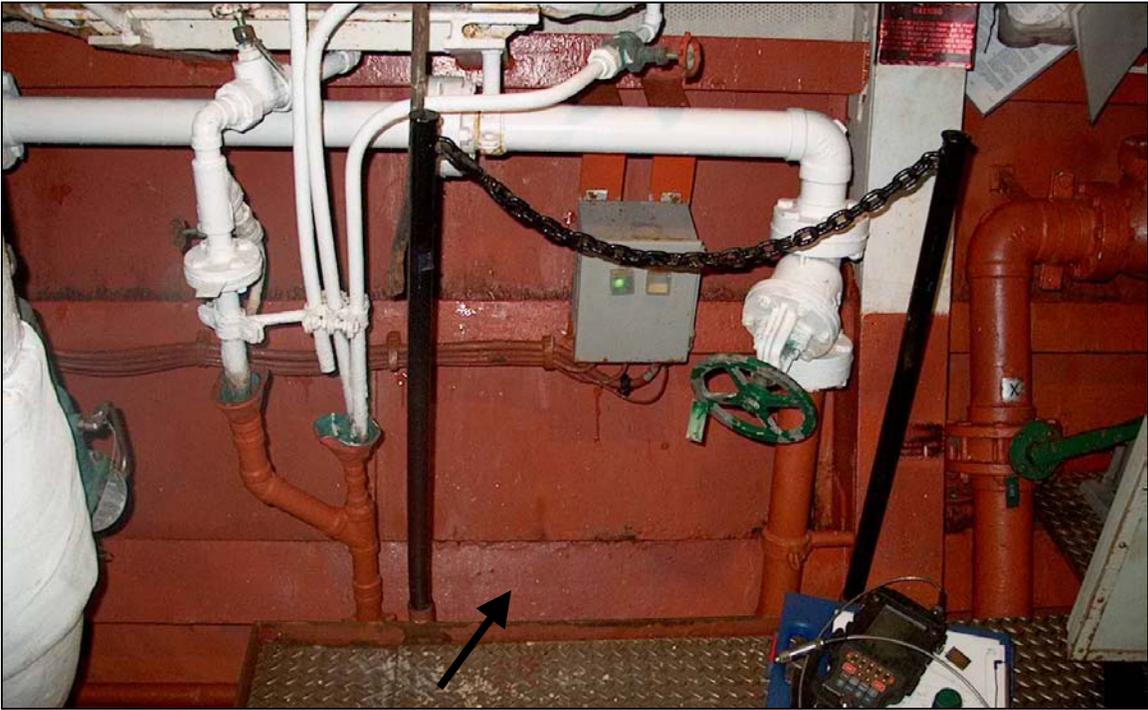


RED BOX INDICATES AREA OF
INSPECTION

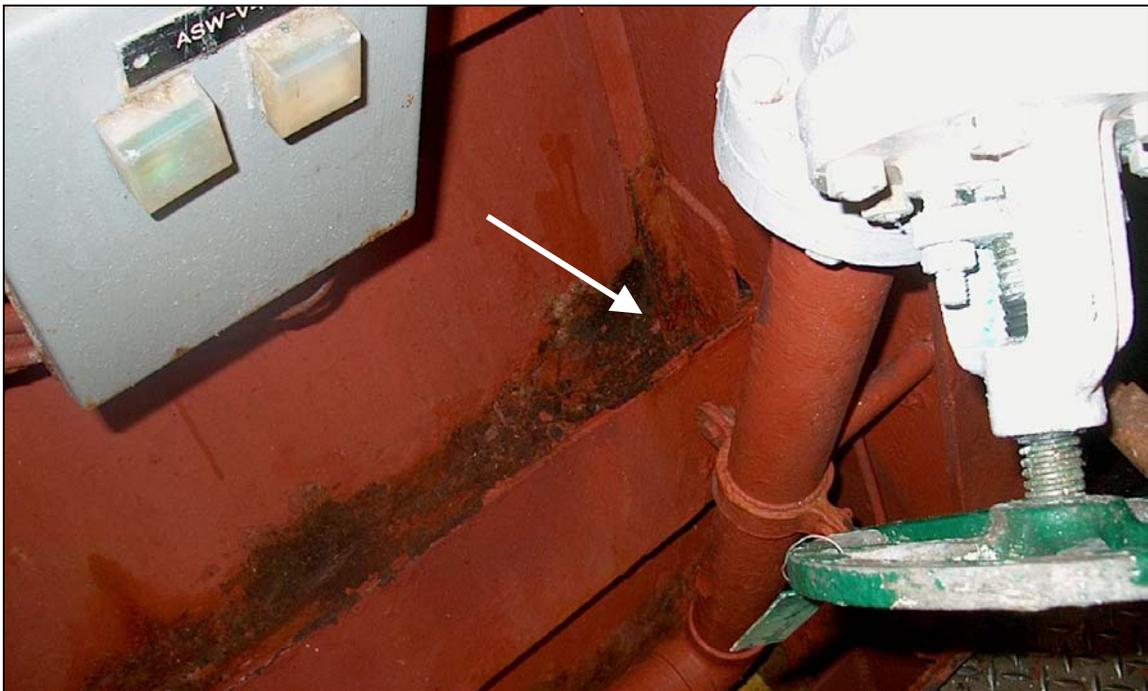
MATERIAL ASSESSMENT FORM

| | | | | | | | | | |
|--|--|---|----------------------------------|---|---|--|----------------------------|--|-------------|
| ITEM NUMBER | | | | SHIP | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC | | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 5-250-0-E | | WORK CENTER EM04 | | JSN P026 |
| 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 | | | | .9 |
| TYPE/AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | | MAN HRS REMAINING 400 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: MAIN ENGINE ROOM (5-250-0-E) PORT AND STARBOARD BETWEEN FRAMES (164-170) SHELL IS THINNING IN SEVERAL LOCATIONS AT THE WELD JUNCTION OF THE 1ST STRINGER OFF THE DECK. THE PROFILE OF THE TRANSVERSE WELD SEAM APPROXIMATELY 1' AFT OF FRAME (270) PORT SIDE IS WASHED OUT (FLUSH) IN SEVERAL LOCATIONS. WELD SEAM WAS HIDDEN BY INSULATION. | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND REPAIR ACTIVITY, CLAD WELD THINNING AREAS ON SHELL PORT AND STARBOARD AND REPAIR TRANSVERSE WELD SEAM PORT SIDE, PRIME AND PAINT. | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | |
| CSMP SUMMARY: SHELL THINNING, TRANSVERSE WELD SEAM WASHED OUT | | | | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | | RATE HTC | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | TD | TL | LOGISTICIAN | | TSP |

USS ESTOCIN (FFG-15)
MAIN ENGINE ROOM (5-250-0-E)
PORT SIDE



BETWEEN FRAMES (264) AND (270), ARROW INDICATES 7 X 6 T-BEAM. THINNING OF THE HULL WAS DETECTED AT THE WELD CONNECTION WITH A LOW READING OF .215 AT WEB FRAME (264). WATER TRAPPED IN THE STRINGERS AND A POOR PAINT APPLICATION ARE THE MAIN CAUSE. REFER TO DRAWING FOR U/T READINGS.



ARROW INDICATES LOCATION OF LOW U/T READING.

USS ESTOCIN (FFG-15)
MAIN ENGINE ROOM (5-250-0-E)
PORT SIDE



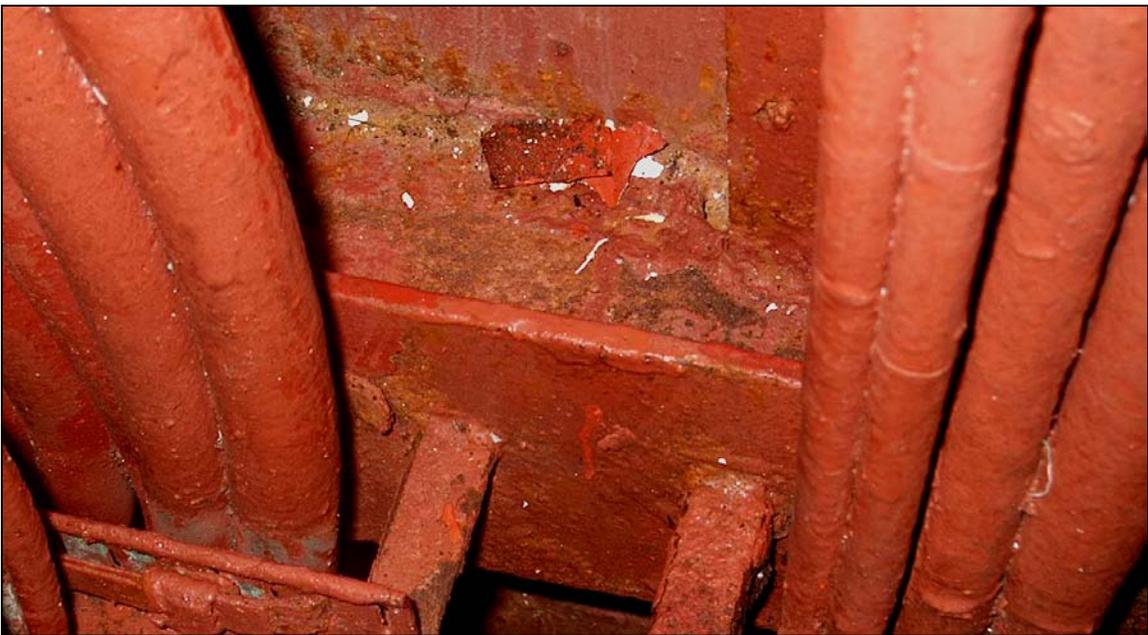
CORROSION ON SHELL PLATE AT TRANSVERSE WELD SEAM APPROXIMATELY 1 FT AFT OF WEB FRAME (270). THIS CORROSION WAS HIDDEN BY HULL INSULATION. MINOR THINNING OF THE HULL WAS NOTED. THE WELD PROFILE IN SEVERAL AREAS IS ALMOST FLUSH WITH SHELL PLATE. REMOVAL OF HULL INSULATION TO APPROXIMATELY 4 FT ABOVE THE DECK LEVEL IS RECOMMENDED.



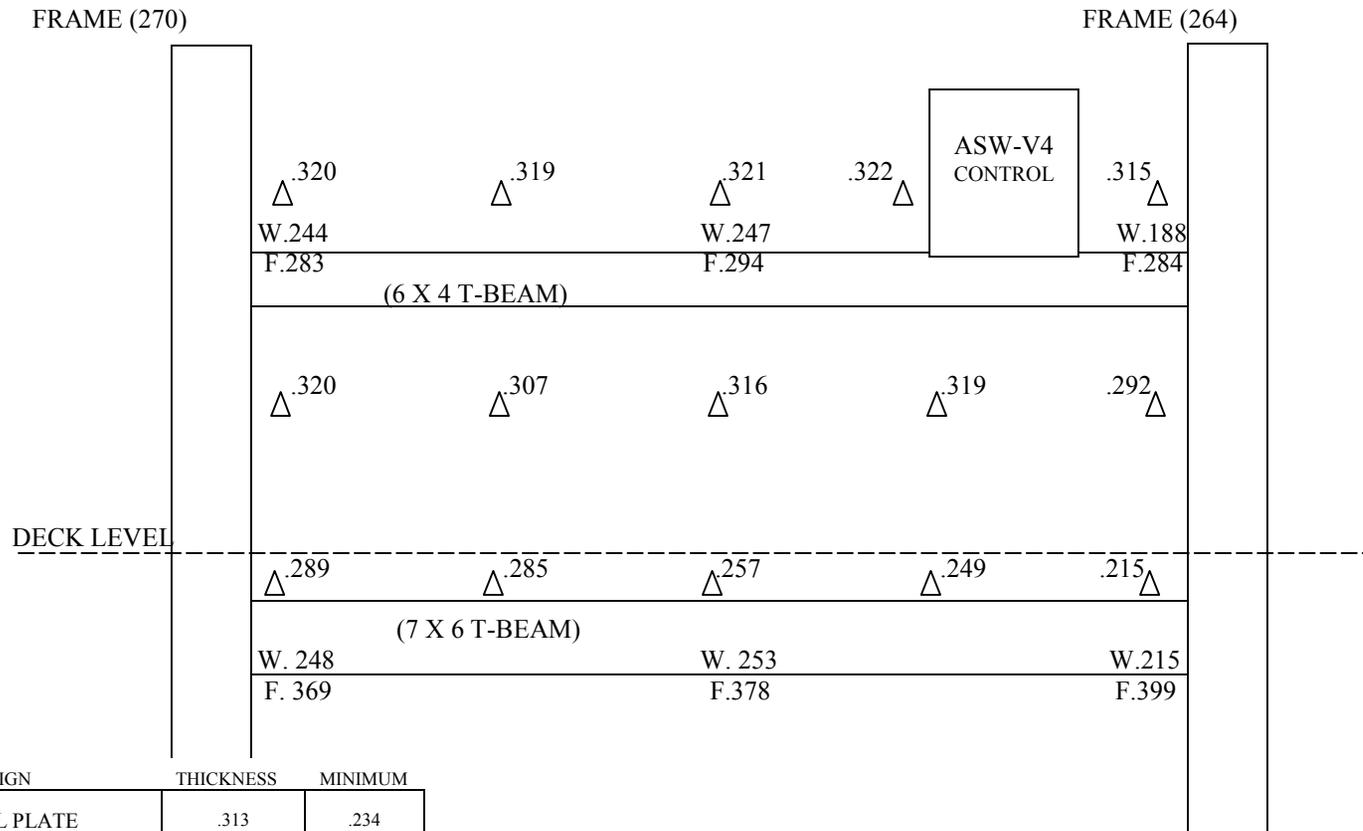
USS ESTOCIN (FFG-15)
MAIN ENGINE ROOM (5-250-0-E)
STARBOARD SIDE



BETWEEN FRAMES (264-270) ARROW INDICATES LOCATION OF LOW U/T READINGS.



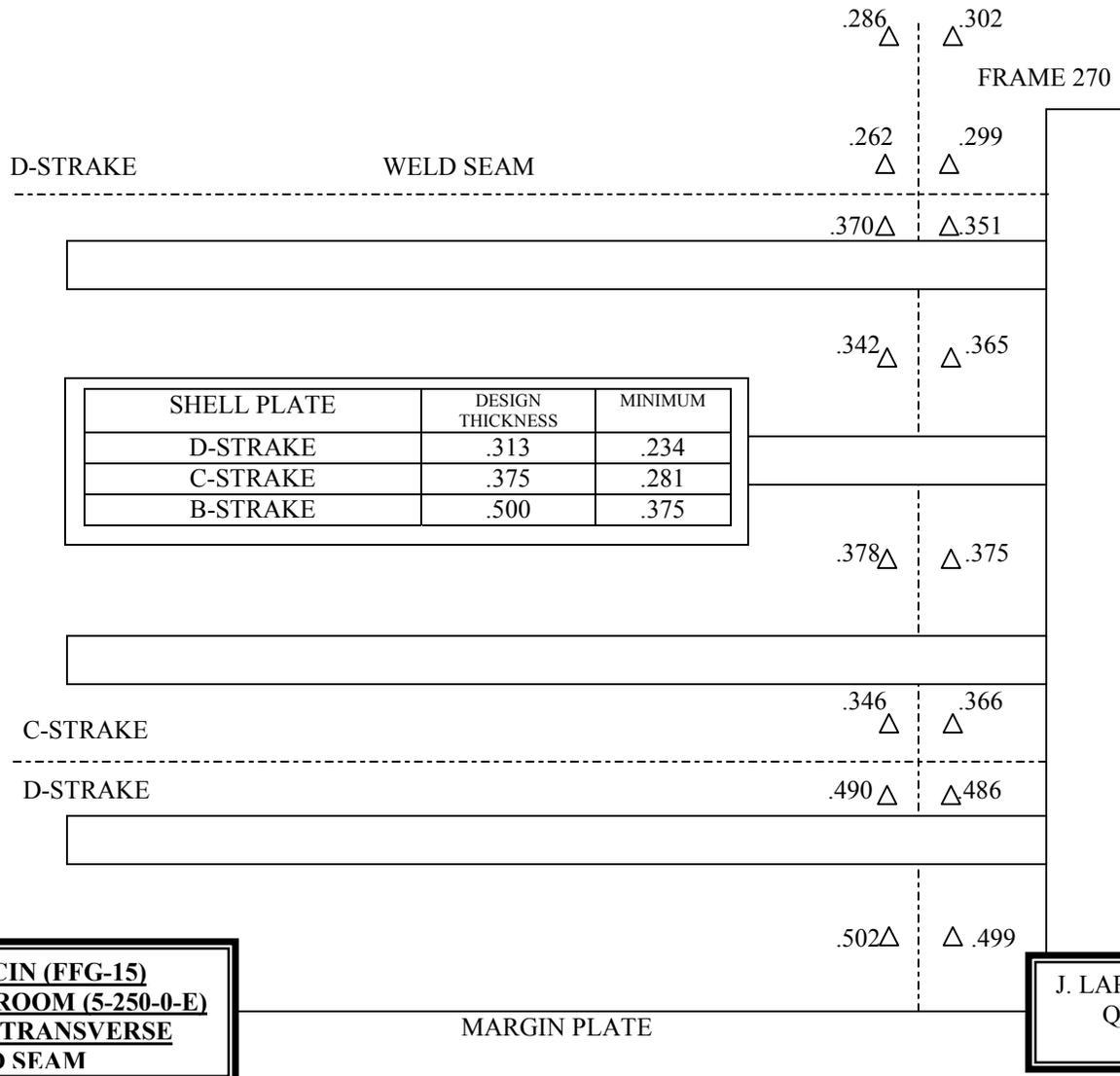
HEAVY PAINT SEPARATION AND CORROSION. FIRST STRINGER UP FROM DECK LEVEL.



| DESIGN | THICKNESS | MINIMUM |
|-------------------------------------|-----------|---------|
| SHELL PLATE | .313 | .234 |
| W STRINGER WEB (6 X 4 T-BEAM) | .220 | .165 |
| F STRINGER FLANGE (6 X 4 T-BEAM) | .265 | .198 |
| W STRINGER WEB (7 X 6 T-BEAM) | .270 | .202 |
| F STRINGER FLANGE (7 X 6 T-BEAM) | .385 | .289 |

USS ESTOCIN (FFG-15)
MAIN ENGINE ROOM (5-250-0-E)
PORT SIDE

J. LAROCK / T. WHITMORE
 QED SYSTEMS INC.
 03/16/02



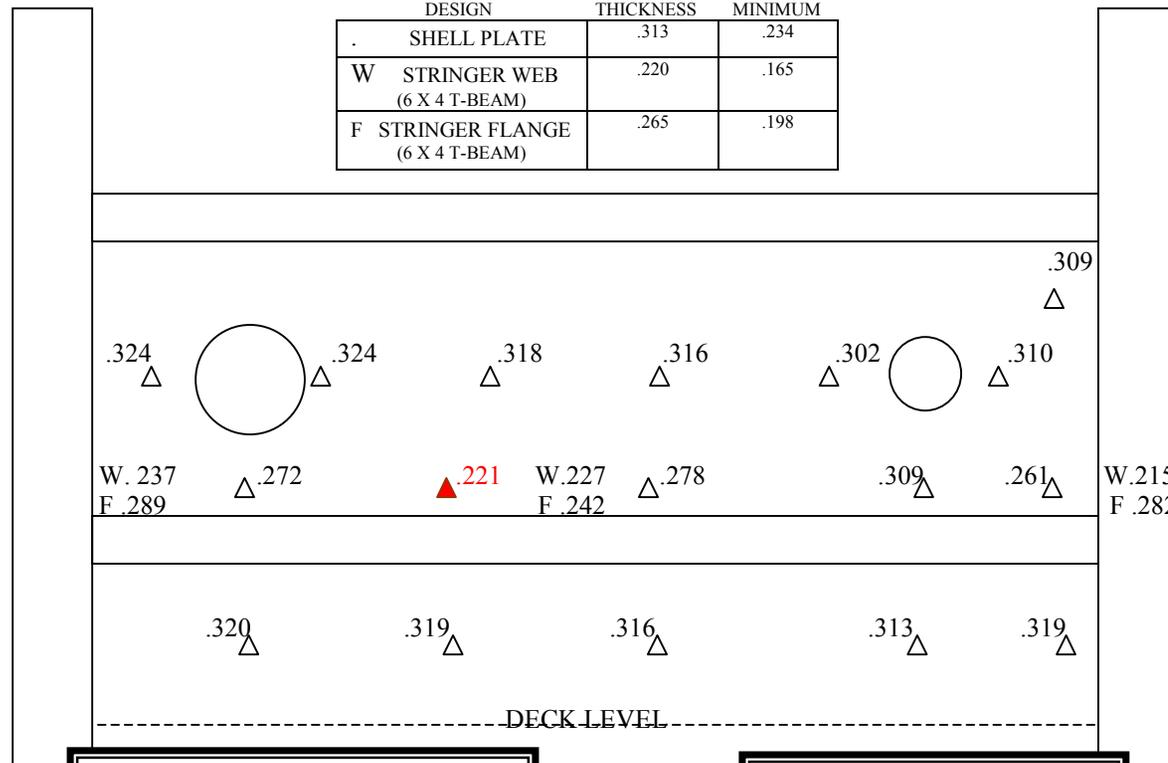
USS ESTOCIN (FFG-15)
MAIN ENGINE ROOM (5-250-0-E)
PORT SIDE / TRANSVERSE
WELD SEAM

J. LAROCK / T. WHITMORE
QED SYSTEMS INC
03/17/02

FRAME (264)

FRAME (270)

| DESIGN | THICKNESS | MINIMUM |
|-------------------------------------|-----------|---------|
| SHELL PLATE | .313 | .234 |
| W STRINGER WEB (6 X 4 T-BEAM) | .220 | .165 |
| F STRINGER FLANGE (6 X 4 T-BEAM) | .265 | .198 |



**USS ESTOCIN (FFG-15)
MAIN ENGINE ROOM (5-250-0-E)
STARBOARD SIDE**

**J. LAROCK / T. WHITMORE
QED SYSTEMS INC.
03/16/02**

MATERIAL ASSESSMENT FORM

| | | | | | | |
|---|---|---|--|---|--|------|
| ITEM NUMBER | | SHIP USS ESTOCIN (FFG-15) | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | EIC A100 | APL X-SYSTEMS | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 5-212-0-E | WORK CENTER EM04 | JSN P027 | |
| 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 | | .9 |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PIROR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: AUXILIARY MACHINERY ROOM 2 (5-212-0-E) | | | | | | |
| PORT AND STARBOARD SIDES, LOWER LEVEL BETWEEN FRAMES (228-236) BELOW SW STRAINERS APPROXIMATELY 120 SF OF PAINT FAILURE AND MILD CORROSION. | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE POWER CLEAN AREA TO BARE METAL, PRIME AND PAINT USING EURO-NAVY COATING. | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | |
| CSMP SUMMARY: CORROSION AND PAINT FAILURE IN BILGES | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | STEP# 1,2,3,4 & 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | |
| PART NO. | NOMENCLATURE | | | QTY | NSN | COST |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| FIRST CONTACT WAGNER | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | TD | TL | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 2 (5-212-0-E)
PORT SIDE LOWER LEVEL



ARROW INDICATES NO. 3 SSDG SW STRAINER. APPROXIMATELY 60 SF OF PAINT SEPARATION AND MILD SURFACE RUST IS LOCATED BETWEEN FRAMES (228-236). FOUNDATION FOR SW STRAINER HAS HEAVY RUST AND PAINT SCALING.

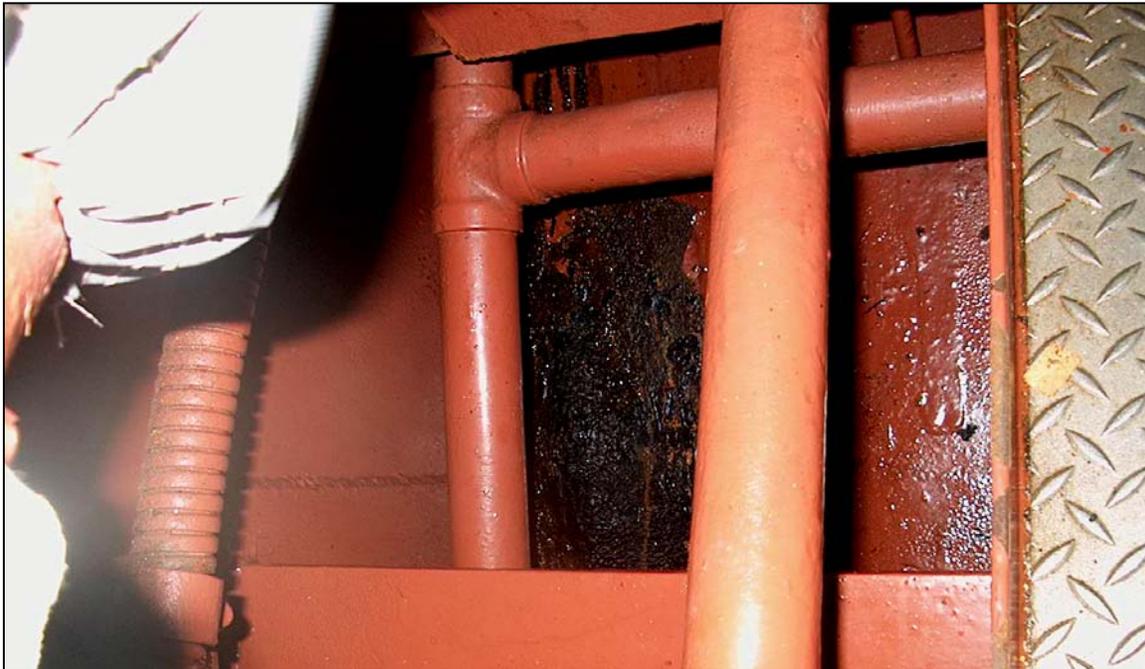


SHELL PLATE INBOARD OF NO. 3 SSDG ENCLOSURE.

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 2 (5-212-0-E)
STARBOARD SIDE LOWER LEVEL



SW STRAINER FOR NO. 2 SSDG. APPROXIMATELY 60 SF OF PAINT FAILURE IS LOCATED BETWEEN FRAMES (228-236).



TYPICAL VIEW OF PAINT FAILURE.

MATERIAL ASSESSMENT FORM

| | | | | | |
|---|---|---|--|--|------|
| ITEM NUMBER | | SHIP USS ESTOCIN (FFG-15) | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | ESWBS 11011 | EIC A100 | APL X-SYSTEMS | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | IDENT/SERIAL N/A | LOCATION 5-212-0-E | WORK CENTER EM04 | JSN P028 | |
| 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 | | | .9 |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: AUXILIARY MACHINERY ROOM 2 (5-212-0-E) | | | | | |
| PORT SIDE UPPER LEVEL, PERFORATED METAL AND HULL INSULATION ARE TRAPPING WATER AND CAUSING CORROSION. | | | | | |
| SHELL AND STRINGERS BELOW UPPER LEVEL DECK HAVE APPROXIMATELY 80 SF OF PAINT FAILURE AND MILD CORROSION. | | | | | |
| | | | | | |
| RECOMMENDED REPAIRS: | | | | | |
| RECOMMEND SHIPS FORCE REMOVE APPROXIMATELY 60 SF OF INSULATION AND METAL, POWER CLEAN ENTIRE AREA TO BARE METAL, PRIME AND PAINT USING EURO-NAVY COATING. | | | | | |
| | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | |
| CSMP SUMMARY: INSULATION TRAPPING WATER CAUSING CORROSION | | | | TEST# MRC 1102/1 | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | STEP# 1,2,3,4 & 5 | |
| SYSTEM LEVEL IMPACT: | | | | | |
| PART NO. | NOMEMCLATURE | | QTY | NSN | COST |
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| FIRST CONTACT WAGNER | RATE DCA | SECOND CONTACT BENNETT | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | TD | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 2 (5-212-0-E)
PORT SIDE / UPPER LEVEL

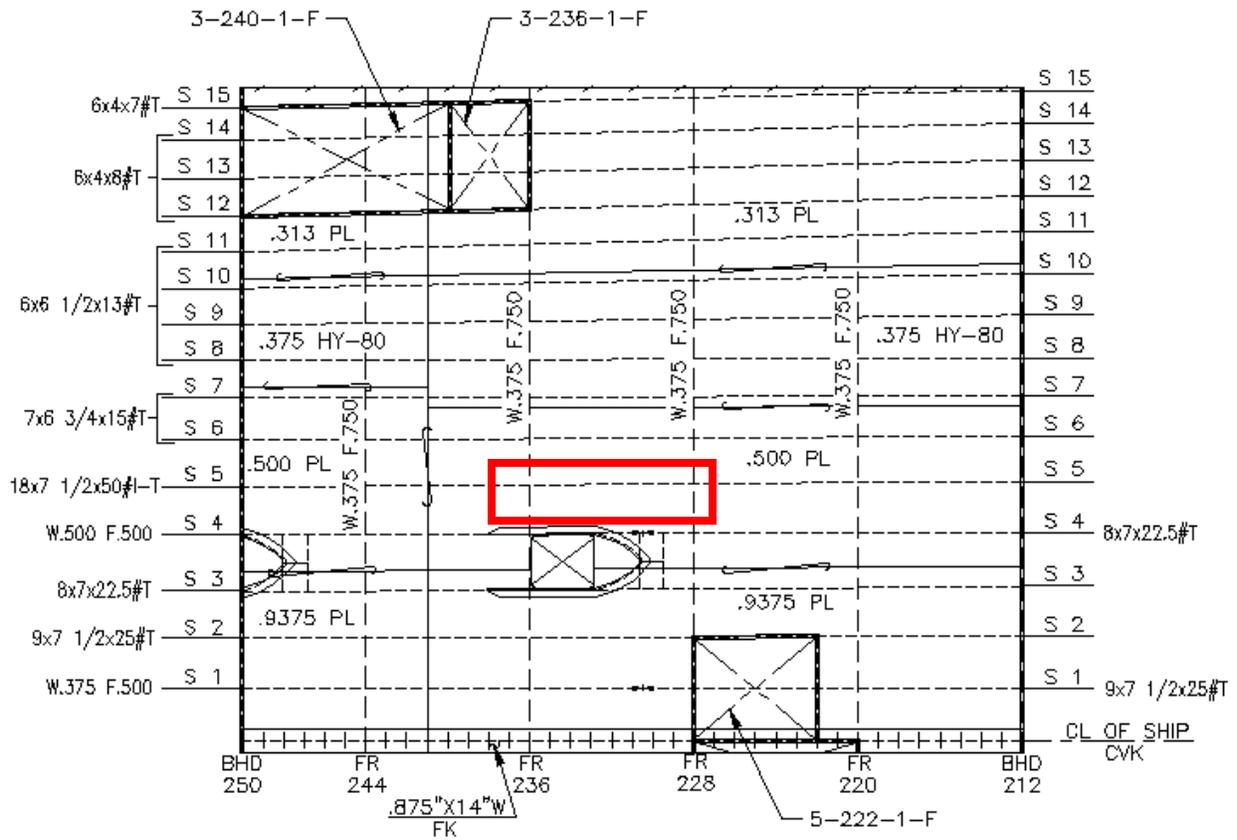


HPAC AFT OF BHD (212). REMOVAL OF PERFORATED METAL AND HULL INSULATION IS HIGHLY RECOMMENDED.



MILD CORROSION AND PAINT SCALING OUTBOARD AND BELOW HPAC.

**USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 2 (5-212-0-E)**



RED BOX INDICATES AREA OF INSPECTION

MATERIAL ASSESSMENT FORM

| | | | | | | | | | |
|---|--|---|----------------------------------|---|---|--|----------------------------|--|-------------|
| ITEM NUMBER | | | | SHIP | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWS 11011 | | EIC | | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 5-180-0-E | | WORK CENTER EM04 | | JSN P029 |
| 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 | | | | .9 |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: AUXILIARY MACHINERY ROOM 1 (5-180-0-E) | | | | | | | | | |
| HEAVY CORROSION AND DEEP PITTING ON FORWARD END OF FO TANK (5-204-2-F). AREA IS HIDDEN BY INSULATION AND COVERED WITH METAL. A STRONG ODOR OF DIESEL FUEL WAS DETECTED AFTER REMOVING INSULATION. SEVERE CORROSION PREVENTS ACCURATE U/T READINGS FROM OUTSIDE OF TANK. | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND REPAIR ACTIVITY, DRAIN, CLEAN AND GAS FREE FO TANK (5-204-2-F) CONDUCT U/T ASSESSMENT FROM INSIDE TANK, AND MAKE FINAL REPAIR RECOMMENDATIONS. | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | |
| CSMP SUMMARY: FO TANK (5-204-2-F) CORRODED. POSSIBLE LEAK. | | | | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | | RATE HTC | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | TD | TL | LOGISTICIAN | | TSP |

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 1 (5-180-0-E)
FO TANK (5-204-2-F)

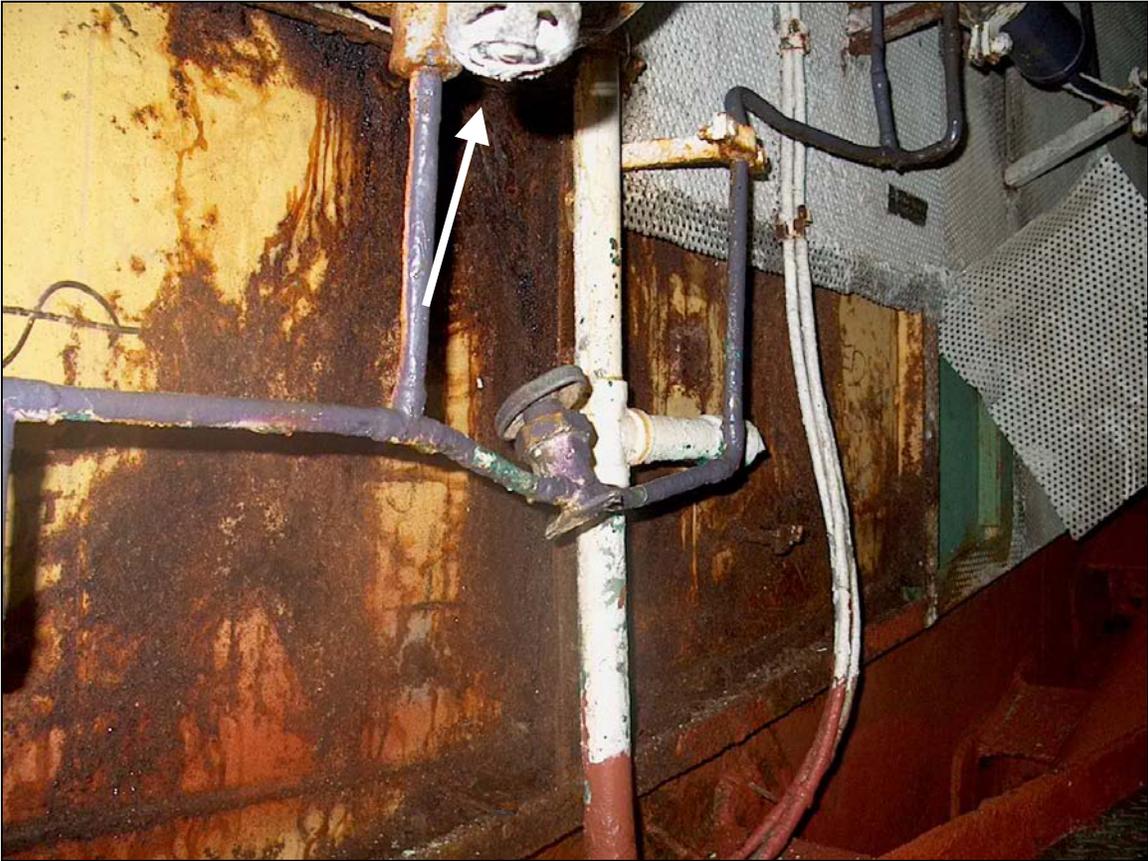


FORWARD END OF FO TANK (5-204-2-F) SEVERE PITTING AND HEAVY CORROSION IS HIDDEN BY INSULATION. A STRONG ODOR OF DIESEL FUEL WAS DETECTED AFTER REMOVING INSULATION.



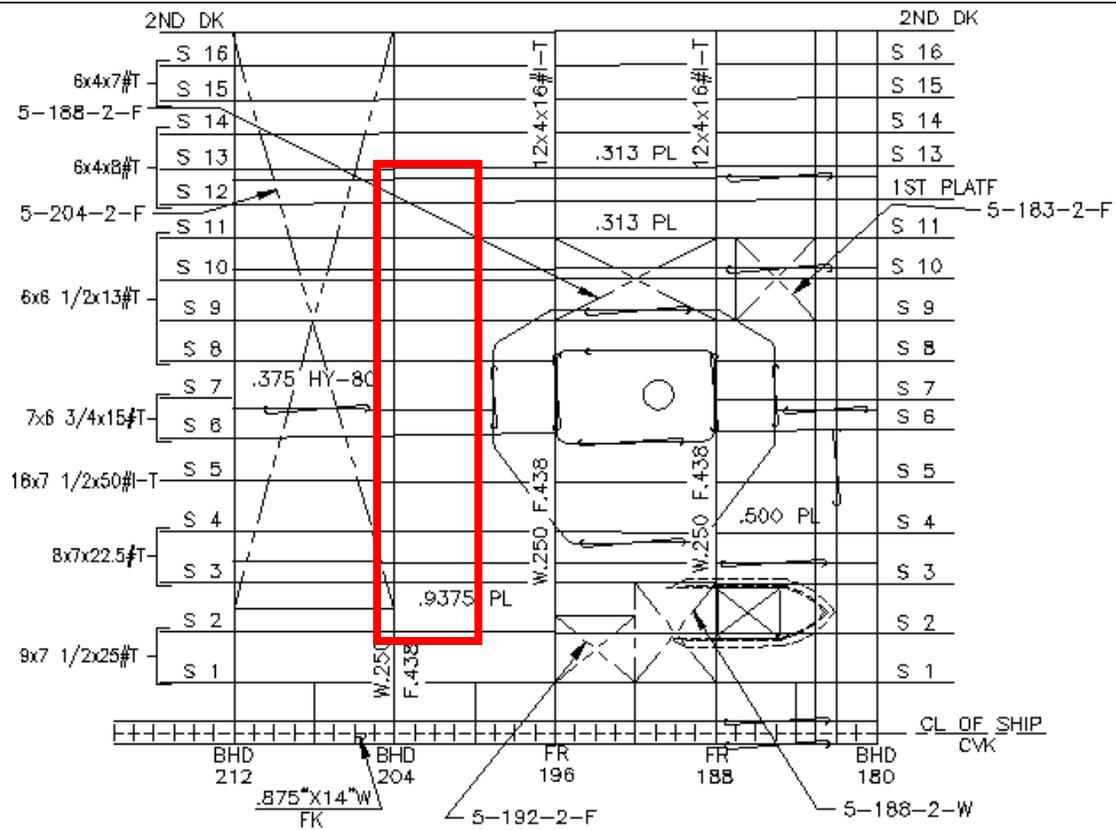
ARROW INDICATES ONE OF SEVERAL DEEP PITS IN TANK. THE EXTENT OF DETERIORATION IS UNKNOWN AS THE ENTIRE TANK IS INSULATED AND COVERED WITH PERFORATED METAL. CORROSION IS SO SEVERE THAT ACCURATE U/T READINGS CANNOT BE TAKEN.

USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 1 (5-180-0-E)
FO TANK (5-204-2-F)



ARROW INDICATES POSSIBLE AREA OF LEAK. AN ULTRASONIC THICKNESS TEST FROM THE INSIDE OF TANK IS HIGHLY RECOMMENDED.

**USS ESTOCIN (FFG-15)
AUXILIARY MACHINERY ROOM 1 (5-180-0-E)**



MATERIAL ASSESSMENT FORM

| | | | | | | |
|--|---|---|--|--|--|------|
| ITEM NUMBER | | SHIP USS ESTOCIN (FFG-15) | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | EIC | APL X-SYSTEMS | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 5-51-0-Q | WORK CENTER EM04 | JSN P030 | |
| 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 | | .9 |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | MAN HRS REMAINING 500 | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: FORWARD EDUCTOR ROOM (5-51-0-Q) | | | | | | |
| STARBOARD SIDE, FLANGE ON 1 ST STRINGER (10 X 4 X 15#) T-BEAM IS DETERIORATED. 3 X 2 VERTICAL STIFFENERS FROM THE KEEL TO THE 2 ND STRINGER PORT AND STARBOARD ARE DETERIORATED. DECK SUPPORT ANGLE IS DETERIORATED. | | | | | | |
| RECOMMENDED REPAIRS: | | | | | | |
| RECOMMEND REPAIR ACTIVITY, CUT OUT AND REPLACE FLANGE ON 1 ST STRINGER STARBOARD APPROXIMATELY 4 LF USING 4" X .250 OS FLAT BAR. CUT OUT AND REPLACE APPROXIMATELY 16 LF OF 3 X 2 VERTICAL STIFFENERS FROM THE KEEL TO THE 2 ND STRINGER. PORT AND STARBOARD. CUT OUT AND REPLACE ALL DECK SUPPORT ANGLES USING 3 X 3 X .250 ANGLE PRIME AND PAINT | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | |
| CSMP SUMMARY: CORRODED STRINGER FLANGE, VERTICAL STIFFENERS, DECK SUPPORTS | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | |
| PART NO. | NOMEMCLATURE | | | QTY | NSN | COST |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| FIRST CONTACT WAGNER | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | TD | TL | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
FORWARD EDUCTOR ROOM (5-51-0-Q)



STARBOARD SIDE, 1ST STRINGER AT BHD (55)



PORT SIDE, 3 X 2 VERTICAL STIFFENER. APPROXIMATELY 16 FT OF THESE STIFFENERS ARE CORRODED, PORT AND STARBOARD.

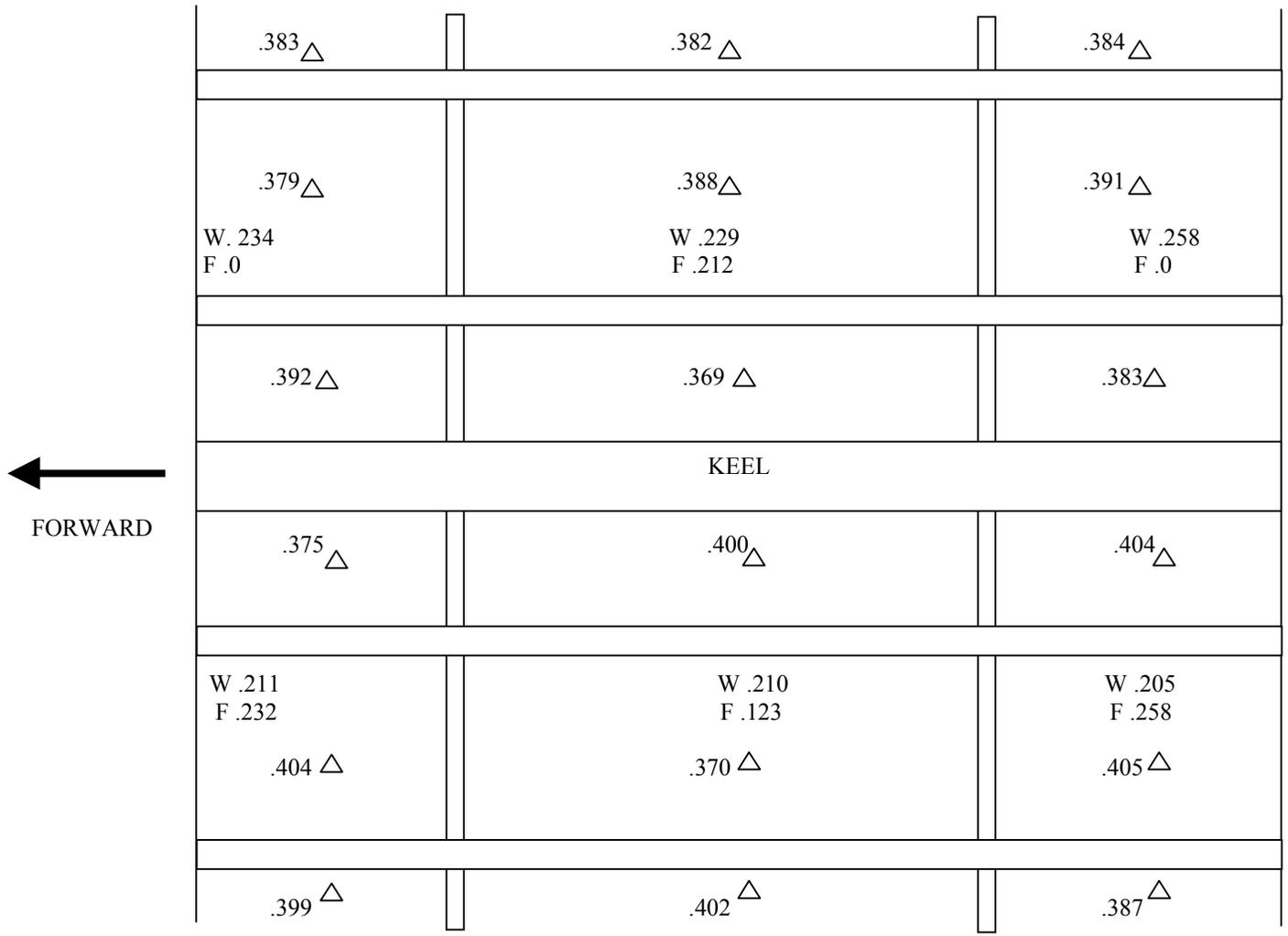
USS ESTOCIN (FFG-15)
FORWARD EDUCTOR ROOM (5-51-0-Q)



PORT SIDE, 3 X 2 VERTICAL STIFFENER



CORRODED 3 X 3 X .250 DECK SUPPORT ANGLE



←
FORWARD

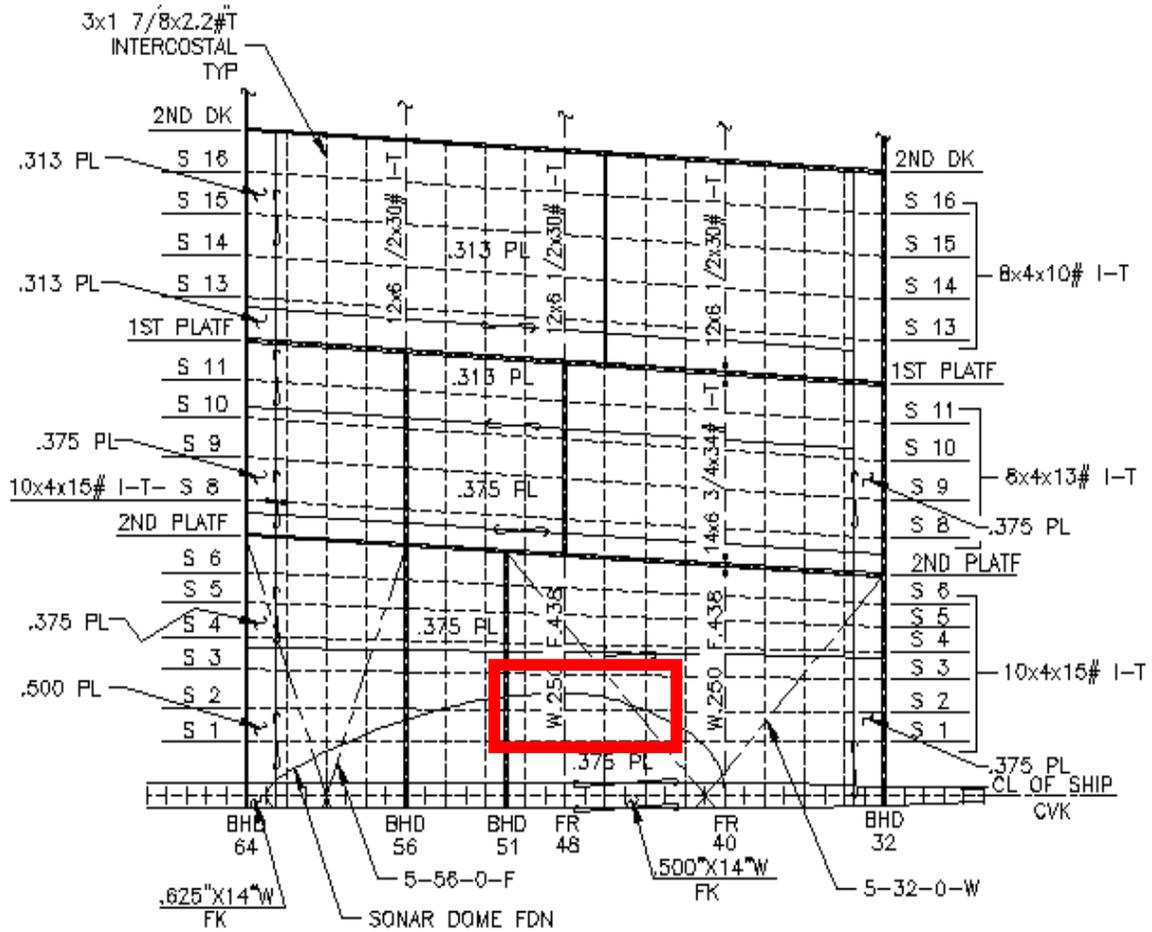
**USS ESTOCIN (FFG-15)
FORWARD EDUCATOR ROOM
(5-51-0-Q)
TOP VIEW**

SHELL DESIGN THICKNESS .375
MINIMUM .281
(10 X 4 15# T-BEAM)
WEB .230
FLANGE .269

J. LAROCK / T. WHITMORE
QED SYSTEMS INC.
03-20-02

38A

**USS ESTOCIN (FFG-15)
FORWARD EDUCATOR ROOM (5-51-0-Q)**



RED BOX INDICATES LOCATION OF AREA
INSPECTED

MATERIAL ASSESSMENT FORM

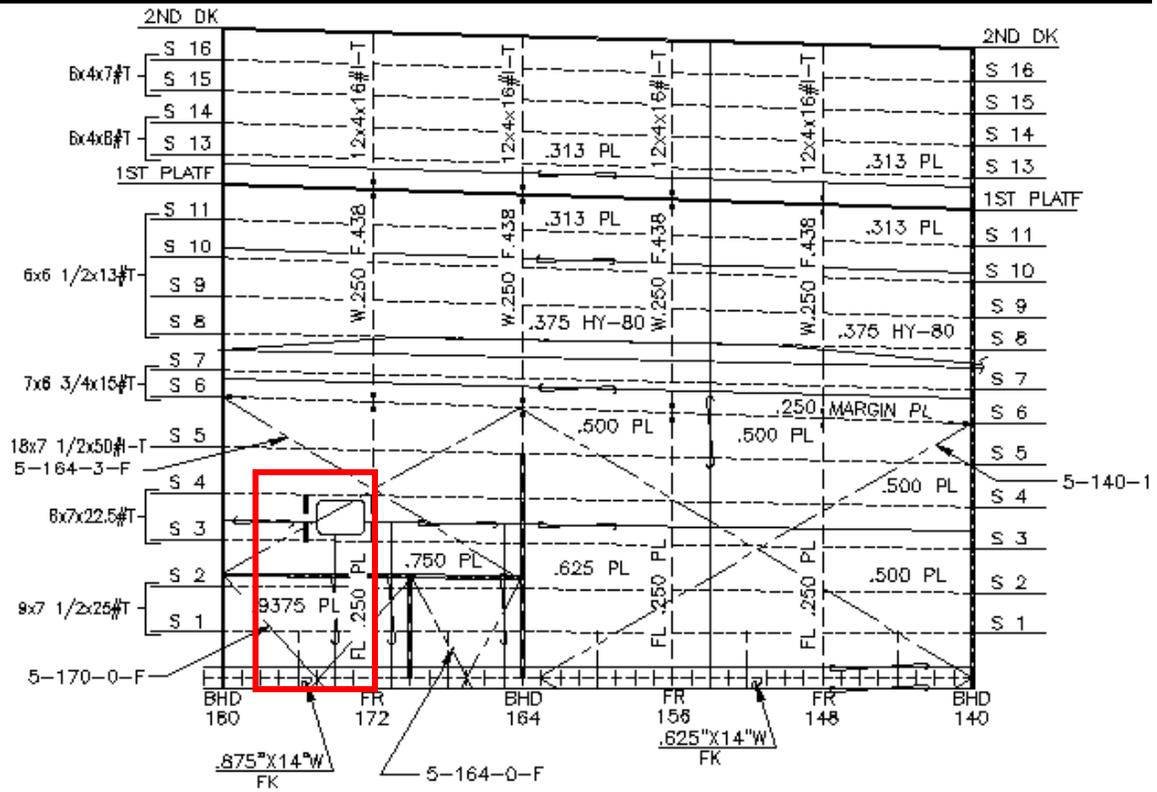
| | | | | | | | | | | |
|--|--|---|---------------------|---|--|--|---------------------|--|-------------|-----|
| ITEM NUMBER | | | | SHIP | | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC A100 | | APL X-SYSTEMS | | RIN N/L | | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 4-172-1-E | | WORK CENTER EM04 | | JSN P031 | |
| 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 .9 | | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | | MAN HRS REMAINING 100 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: FIRE PUMP ROOM (4-172-1-E) | | | | | | | | | | |
| STARBOARD BILGE POCKET HAS APPROXIMATELY 30 SF OF CORROSION ON SHELL AND MARGIN PLATE. ZINC ANNODE IS DETERIORATED. | | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE REMOVE ANNODE, POWER CLEAN ENTIRE BILGE AREA APPROXIMATELY 30 SF. PRIME AND PAINT. REPLACE ANNODE. | | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | | |
| CSMP SUMMARY: BILGE POCKET AREA CORRODED, ZINC ANNODE DETERIORATED. | | | | | | TEST# MRC 1102/1 | | | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | STEP# 1,2,3,4 & 5 | | | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | | SECOND CONTACT BENNETT | | RATE HTC | | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | TD | | TL | | LOGISTICIAN | | TSP |

USS ESTOCIN (FFG-15)
FIRE PUMP ROOM (4-172-1-E)



DETERIORATED ZINC ANNODE. REPLACEMENT IS RECOMMENDED.

**USS ESTOCIN (FFG-15)
FIRE PUMP ROOM (4-172-1-E)**



RED BOX INDICATES AREA OF
INSPECTION

MATERIAL ASSESSMENT FORM

| | | | | | | | | | | |
|---|--|---|----------------------------------|---|---|--|---------------------|--|-------------|-----|
| ITEM NUMBER | | | | SHIP | | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC | | APL X-SYSTEMS | | RIN N/L | | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 4-160-0-Q | | WORK CENTER EM04 | | JSN P032 | |
| 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 | | | | .9 | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | | MAN HRS REMAINING 600 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: CHT ROOM (4-160-0-Q) PORT SIDE, TANK TOP/ DECK (5-164-0-F) AFT OF SINK, IS BUCKLED AND SEVERELY THINNED APPROXIMATELY 6 SF. | | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND REPAIR ACTIVITY, DRAIN TANK (5-164-0-F), CLEAN AND GAS FREE, CUT OUT APPROXIMATELY 6 SF OF TANK TOP, REPLACE WITH .250 OS PERFORM NDT ON TANK PRIME AND PAINT. | | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | | |
| CSMP SUMMARY: TANK TOP / DECK IS THINNING | | | | | | TEST# MRC 1102/1 | | | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | STEP# 1 THRU 5 | | | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | | RATE HTC | | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | TD | TL | | LOGISTICIAN | | TSP |

MATERIAL ASSESSMENT FORM

| | | | | | | | | | | |
|--|--|---|---------------------|---|--|--|----------------------|--|-------------|-----|
| ITEM NUMBER | | | | SHIP | | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC A100 | | APL X-SYSTEMS | | RIN N/L | | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 4-160-0-Q | | WORK CENTER EM04 | | JSN P033 | |
| 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 .9 | | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | | MAN HRS REMAINING 120 | | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: CHT ROOM (4-160-0-Q) PORT AND STBD BILGE POCKETS HAVE STANDING WATER, CORROSION AND PAINT SEPARATION. APPROXIMATELY 120 SF. | | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE POWER CLEAN AREAS, PRIME AND PAINT USING EURO-NAVY COATING, APPROXIMATELY 120 SF | | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | | |
| CSMP SUMMARY: CORROSION IN BILGE POCKETS | | | | | | | TEST# MRC 1102/1 | | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | | STEP# 1,2,3,4 & 5 | | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | | |
| PART NO. | | NOMENCLATURE | | | | QTY | NSN | | COST | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | | SECOND CONTACT BENNETT | | RATE HTC | | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | TD | | TL | | LOGISTICIAN | | TSP |

USS ESTOCIN (FFG-15)
CHT ROOM (4-160-0-Q)



PORT SIDE BILGE POCKET



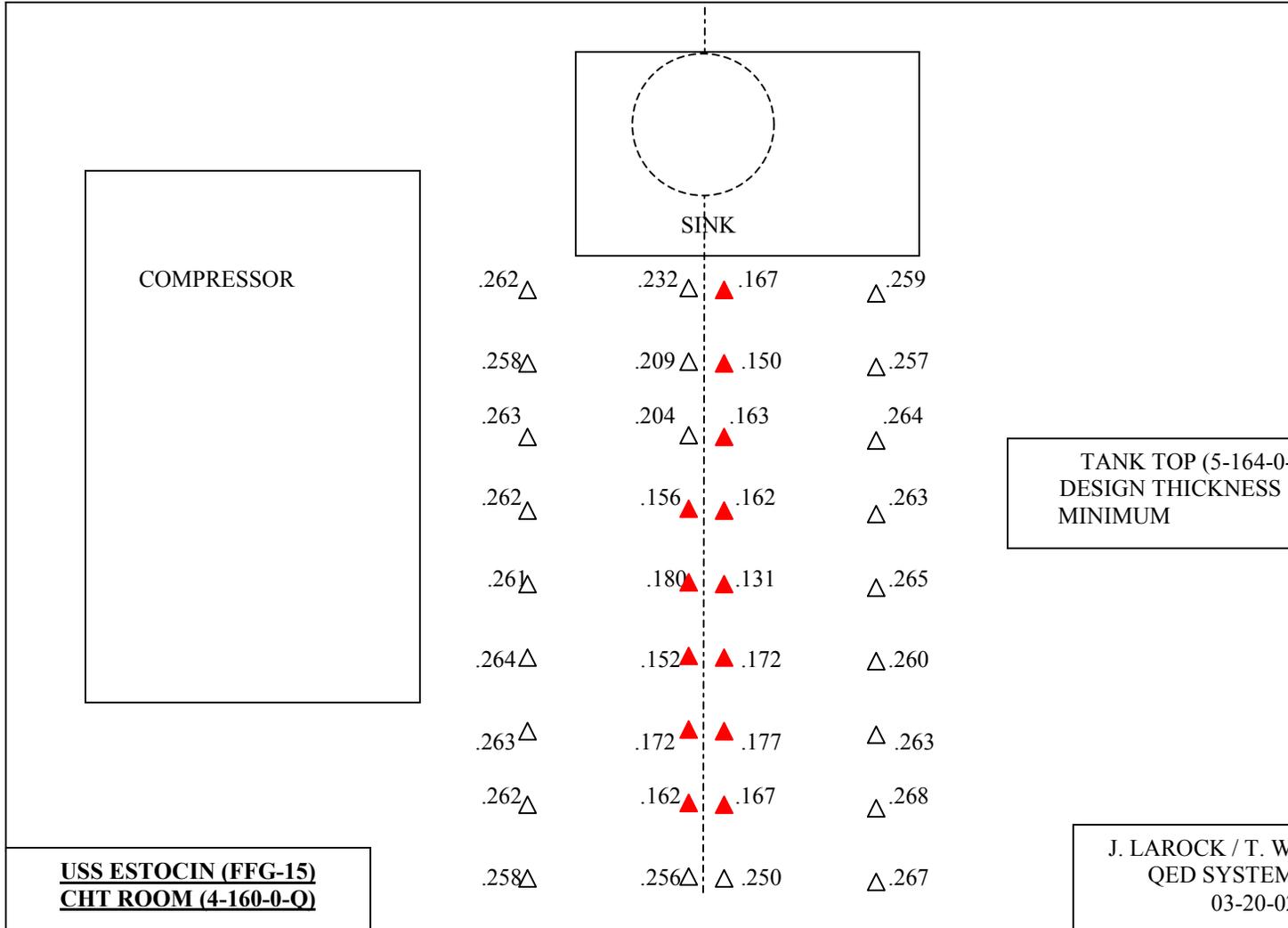
STARBOARD SIDE BILGE POCKET LOOKING AFT. U/T READINGS ARE SATISFACTORY

USS ESTOCIN (FFG-15)
CHT ROOM (4-160-0-Q)



TANK TOP / DECK (5-164-0-F) PORT SIDE, JUST AFT OF SINK. TANK TOP IS BUCKLED AND THINNING IN A 2'X 3' AREA, REFER TO DRAWING FOR U/T READINGS.

FRAME 164



COMPRESSOR

SINK

TANK TOP (5-164-0-F)
 DESIGN THICKNESS .250
 MINIMUM .187

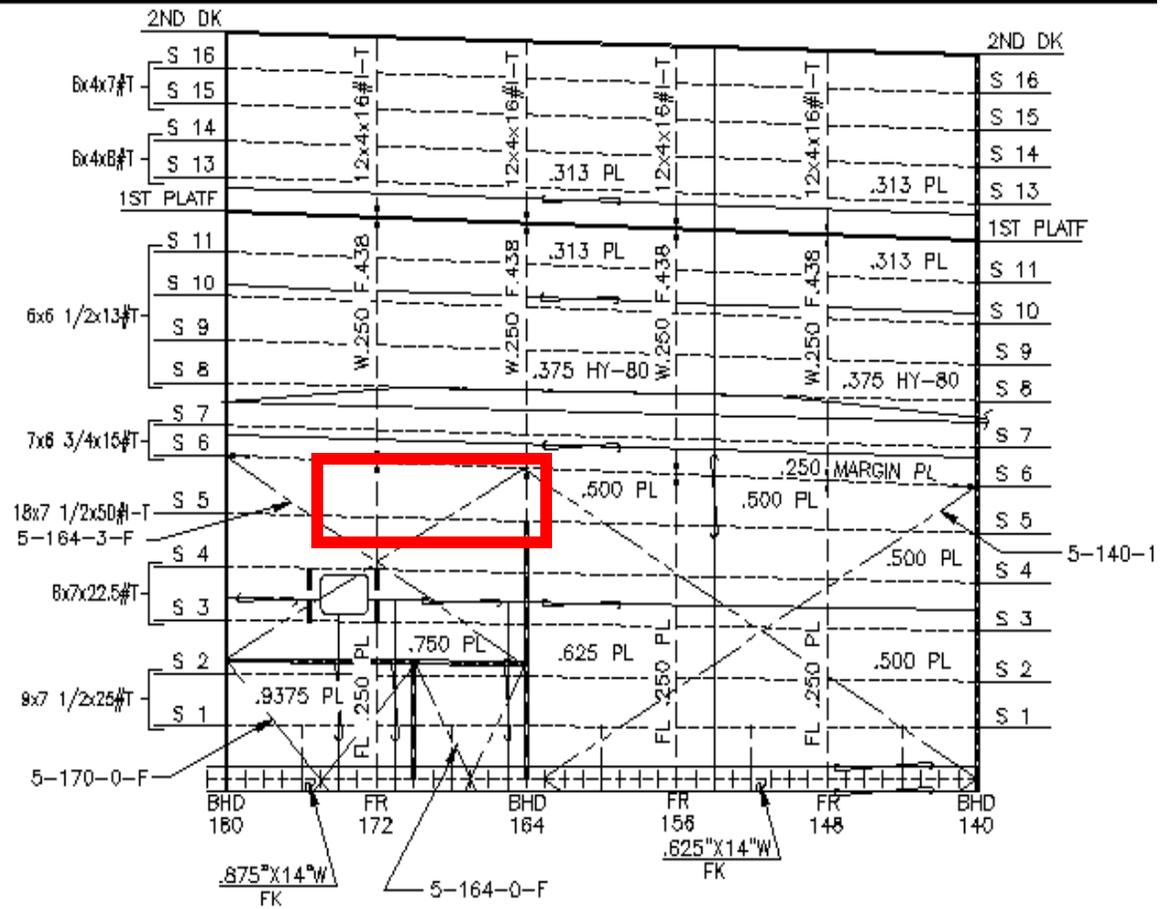
USS ESTOCIN (FFG-15)
CHT ROOM (4-160-0-Q)

J. LAROCK / T. WHITMORE
 QED SYSTEMS INC.
 03-20-02

45A

| | | | |
|-------|-------|-------|-------|
| .262△ | .232△ | ▲.167 | △.259 |
| .258△ | .209△ | ▲.150 | △.257 |
| .263△ | .204△ | ▲.163 | △.264 |
| .262△ | .156▲ | ▲.162 | △.263 |
| .26△ | .180▲ | ▲.131 | △.265 |
| .264△ | .152▲ | ▲.172 | △.260 |
| .263△ | .172▲ | ▲.177 | △.263 |
| .262△ | .162▲ | ▲.167 | △.268 |
| .258△ | .256△ | △.250 | △.267 |

**USS ESTOCIN (FFG-15)
 CHT ROOM (4-160-0-Q)**



RED BOX INDICATES AREA OF
 INSPECTION

MATERIAL ASSESSMENT FORM

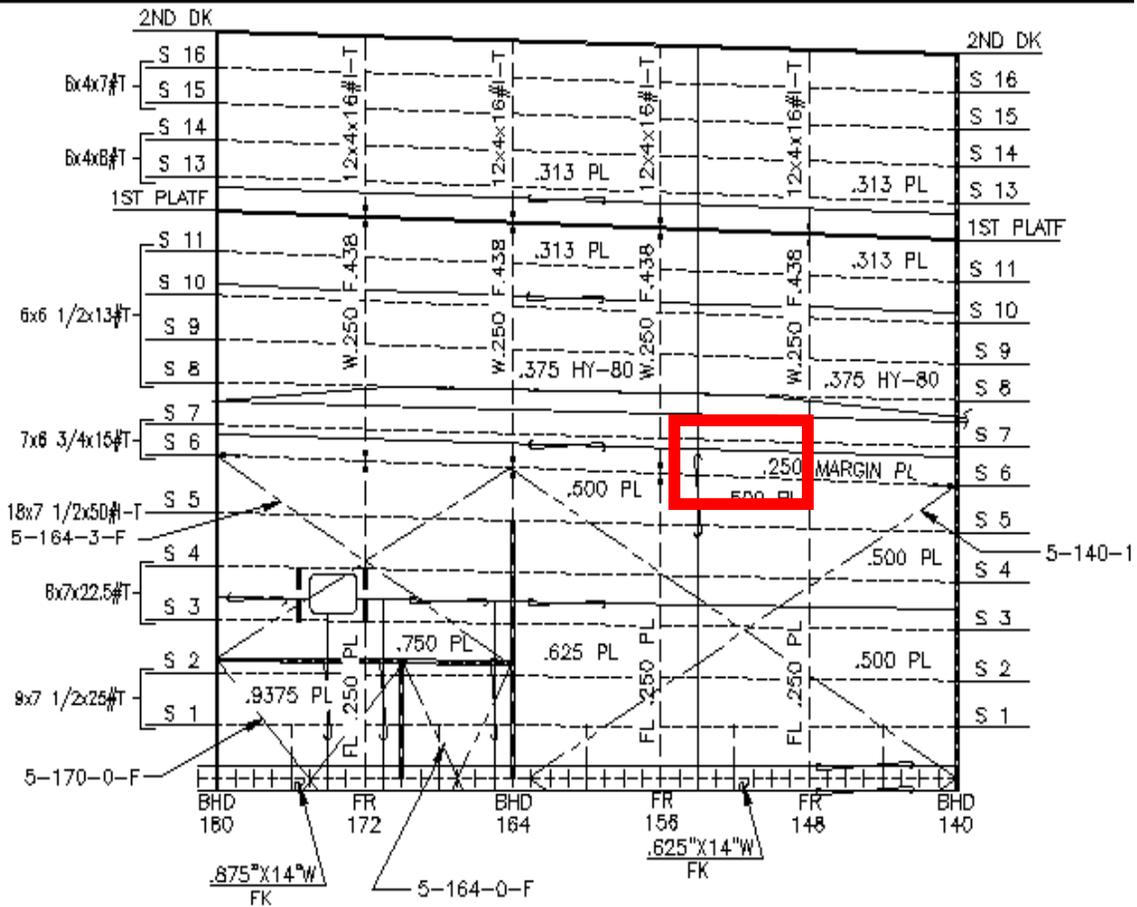
| | | | | | | | | | | |
|--|--|---|---------------------|---|--|--|---------------------|--|-------------|-----|
| ITEM NUMBER | | | | SHIP | | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC A100 | | APL X-SYSTEMS | | RIN N/L | | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 4-152-1-A | | WORK CENTER EM04 | | JSN P034 | |
| 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 .9 | | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 1 | | MAN HRS REMAINING 60 | | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: CHEMICAL WARFARE DEFENSE STRM (4-152-1-A) APPROXIMATELY 24 SF OF HEAVY PAINT SEPARATION AND MILD CORROSION. | | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE POWER CLEAN ENTIRE BILGE AREA TO BARE METAL, PRIME AND PAINT USING EURO-NAVY COATING. | | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | | |
| CSMP SUMMARY: BILGE AREA HAS CORROSION AND HEAVY PAINT SEPARATION. | | | | | | TEST# MRC 1102/1 | | | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | STEP# 1,2,3,4 & 5 | | | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | | |
| PART NO. | | NOMENCLATURE | | | | QTY | NSN | | COST | |
| 1 | | | | | | | | | | |
| 2 | | | | | | | | | | |
| 3 | | | | | | | | | | |
| 4 | | | | | | | | | | |
| 5 | | | | | | | | | | |
| 6 | | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | | SECOND CONTACT BENNETT | | RATE HTC | | PHONE | | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | TD | | TL | | LOGISTICIAN | | TSP |

USS ESTOCIN (FFG-15)
CHEMICAL WARFARE DEFENSE STOREROOM (4-152-1-A)



HEAVY PAINT SEPARATION / MILD CORROSION. U/T READINGS ARE SATISFACTORY.

**USS ESTOCIN (FFG-15)
CHEMICAL WARFARE DEFENSE STOREROOM (4-152-1-A)**



RED BOX INDICATES AREA OF INSPECTION

MATERIAL ASSESSMENT FORM

| | | | | | | | |
|---|--|---|---|--|----------------------|--|----------|
| ITEM NUMBER | | | | SHIP | | | |
| USS ESTOCIN (FFG-15) | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | EIC A100 | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 4-140-0-Q | WORK CENTER EM04 | | JSN P036 | |
| 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 | | .9 | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PIROR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 1 | | MAN HRS REMAINING 100 | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: SHIPS LAUNDRY (4-140-0-Q) PORT SIDE, ENTIRE BILGE POCKET HAS STANDING WATER RUST AND CORROSION, APPROXIMATELY 60 SF. | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE POWER CLEAN ENTIRE BILGE AREA APPROXIMATELY 60 SF, PRIME AND PAINT USING EURO-NAVY COATING | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | |
| CSMP SUMMARY: ENTIRE BILGE AREA / PAINT FAULURE / MILD CORROSION | | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | STEP# 1,2,3,4 & 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | | |
| PART NO. | | NOMEMCLATURE | | QTY | NSN | COST | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | TD | TL | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
SHIPS LAUNDRY (4-140-0-Q)



CORROSION IN BILGE POCKET AT BHD (160).



CORROSION AND PAINT FAILURE. U/T READINGS ARE SATISFACTORY.

MATERIAL ASSESSMENT FORM

| | | | | | | | | | |
|---|--|---|---------------------|---|--|--|---------------------|--|-------------|
| ITEM NUMBER | | | | SHIP | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC A100 | | APL X-SYSTEMS | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 4-140-3-A | | WORK CENTER EM04 | | JSN P035 |
| 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 .9 | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 1 | | MAN HRS REMAINING 60 | | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: ATHLETIC GEAR STOREROOM (4-140-3-A) APPROXIMATELY 24 SF OF HEAVY PAINT SEPARATION AND MILD CORROSION. | | | | | | | | | |
| RECOMMENDED REPAIRS: RECOMMEND SHIPS FORCE POWER CLEAN BILGE AREA TO BARE METAL, PRIME AND PAINT USING EURO-NAVY COATING. | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | |
| CSMP SUMMARY: BILGE AREA HAS HEAVY PAINT SCALING AND MILD CORROSION. | | | | | | TEST# MRC 1102/1 | | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | | | STEP# 1,2,3,4 & 5 | | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | | SECOND CONTACT BENNETT | | RATE HTC | | PHONE | |
| ASSESSOR / ACT / TECH ID# J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | | TD | TL | | LOGISTICIAN | TSP |

USS ESTOCIN (FFG-15)
ATHLETIC GEAR STOREROOM (4-140-3-A)



BILGE AREA CORROSION AND HEAVY PAINT SCALING. U/T READINGS ARE SATISFACTORY.

MATERIAL ASSESSMENT FORM

| | | | | | | |
|---|---|---|-----------------------|--|--|------|
| ITEM NUMBER | | SHIP USS ESTOCIN (FFG-15) | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | EIC A100 | APL X-SYSTEMS | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 4-100-0-E | WORK CENTER EM04 | JSN P037 | |
| 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 | | .9 |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | | CAUSE | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PIROR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 1 | MAN HRS REMAINING 100 | 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 - WAVIER 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: AUXILIARY PROPULSION MACHINERY ROOM | | | | | | |
| (4-100-0-E), PROT AND STARBOARD BILGE POCKETS HAVE STANDING WATER AND MILD CORROSION. CABLE HANGER FORWARD OF POWER DISTRIBUTION PANELS STARBOARD SIDE IS BROKEN. | | | | | | |
| RECOMMENDED REPAIRS: | | | | | | |
| RECOMMEND SHIPS FORCE DRAIN BILGES, POWER CLEAN AREAS TO BARE METAL, APPROXIMATELY 100 SF, REPAIR CABLE HANGER, PRIME AND PAINT USING EURO-NAVY COATING. | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | |
| CSMP SUMMARY: | | | | TEST# | | |
| STANDING WATER CORROSION IN BILGE POCKETS, . BROKEN CABLE HANGER. | | | | MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: | | | | STEP# | | |
| H1 | | | | 1,2,3,4 & 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | |
| PART NO. | NOMEMCLATURE | | | QTY | NSN | COST |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | | | | | | |
| FIRST CONTACT WAGNER | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE | |
| ASSESSOR / ACT / TECH ID# | | | TD | TL | LOGISTICIAN | TSP |
| J. LaROCK/ T. WHITMORE QED SYSTEMS INC. | | | | | | |

USS ESTOCIN (FFG-15)
AUXILIARY PROPULSION MACHINERY ROOM (4-100-0-E)



STARBOARD SIDE, BETWEEN POWER DISTRIBUTION PANELS AND BHD (108)



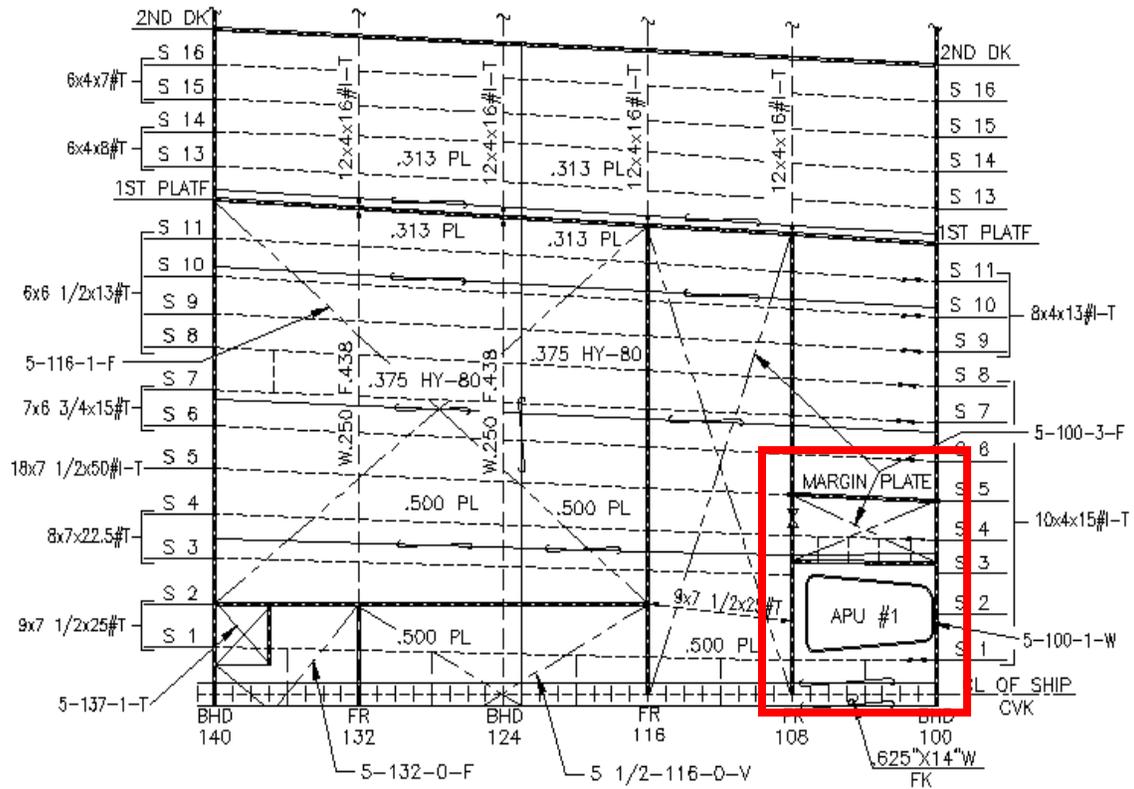
STARBOARD SIDE, BETWEEN POWER DISTRIBUTION PANELS AND BHD (100)
ARROWS INDICATE BROKEN CABLE HANGER.

USS ESTOCIN (FFG-15)
AUXILIARY PROPULSION MACHINERY ROOM (4-100-0-E)



PORT SIDE, BILGE POCKET.

USS ESTOCIN (FFG-15)
AUXILIARY PROPULSION MACHINERY ROOM (4-100-0-E)



RED BOX INDICATES AREA OF
INSPECTION

MATERIAL ASSESSMENT FORM

| | | | | | | |
|---|---|---|--|--|---|-------|
| ITEM NUMBER | | SHIP USS ESTOCIN (FFG-15) | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | EIC | APL X-SYSTEMS | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | IDENT/SERIAL N/A | LOCATION 4-48-1-Q | WORK CENTER EM04 | JSN P038 | |
| 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 .9 | |
| TYPE AVAILABILITY | WHEN TO BE ACCOMPLISHED | STATUS | CAUSE | DEFERRAL REASON | | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | 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 8. NOT APPLICABLE | 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 10. OTHER OR NOT APPLICABLE | | |
| MAN HRS EXPENDED 2 | MAN HRS REMAINING 500 | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: SONAR COOLING EQUIPMENT ROOM (4-48-1-Q) | | | | | | |
| 1 ST STRINGER FROM THE DECK IS HOLED AT BHD (56), 3 X 2 VERTICAL STIFFENERS ARE CORRODED FROM DECK TO 2 ND STRINGER. APPROXIMATELY 40 SF OF HULL INSULATION IS SATURATED HIDING CORROSION. | | | | | | |
| RECOMMENDED REPAIRS: | | | | | | |
| RECOMMEND SHIPS FORCE REMOVE APPROXIMATELY 40 SF OF HULL INSULATION. RECOMMEND REPAIR ACTIVITY CUT OUT AND REPLACE APPROXIMATELY 2 LF OF 1 ST STRINGER, REPLACE WITH (8 X 4 X 13# T-BEAM). CUT OUT AND REPLACE APPROXIMATELY 20 LF OF VERTICAL STIFFENERS. (3 X 2 X2.2# T-BEAM) RECOMMEND SHIPS FORCE CLEAN ALL AREAS EXPOSED BY REMOVALS AND REPAIRS AND PAINT WITH AN ANTI-SWEAT COATING. REPLACEMENT OF HULL INSULATION IS NOT RECOMMENDED. | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | |
| CSMP SUMMARY: SATURATED INSULATION, HOLED STRINGER, CORRODED VERT. STIFFENERS | | | | TEST# MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: H1 | | | | STEP# 1 THRU 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | |
| PART NO. | NOMEMCLATURE | | | QTY | NSN | COST |
| 1 | | | | | | |
| 2 | | | | | | |
| 3 | | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| FIRST CONTACT WAGNER | | RATE DCA | SECOND CONTACT BENNETT | | RATE HTC | PHONE |
| ASSESSOR / ACT / TECH ID# | | | TD | TL | LOGISTICIAN | TSP |
| J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | | |

USS ESTOCIN (FFG-15)
SONAR COOLING EQUIPMENT ROOM (4-48-1-Q)



STARBOARD SHELL, 1ST STRINGER FROM DECK IS HOLED AT BHD (56). HULL INSULATION IS SATURATED FROM 1ST STRINGER TO APPROXIMATELY 5' OFF THE DECK . THIS IS A COMMON PROBLEM ON FFG-7 CLASS SHIPS.



1ST STRINGER AT BHD (56).

USS ESTOCIN (FFG-15)
SONAR COOLING EQUIPMENT ROOM (4-48-1-Q)

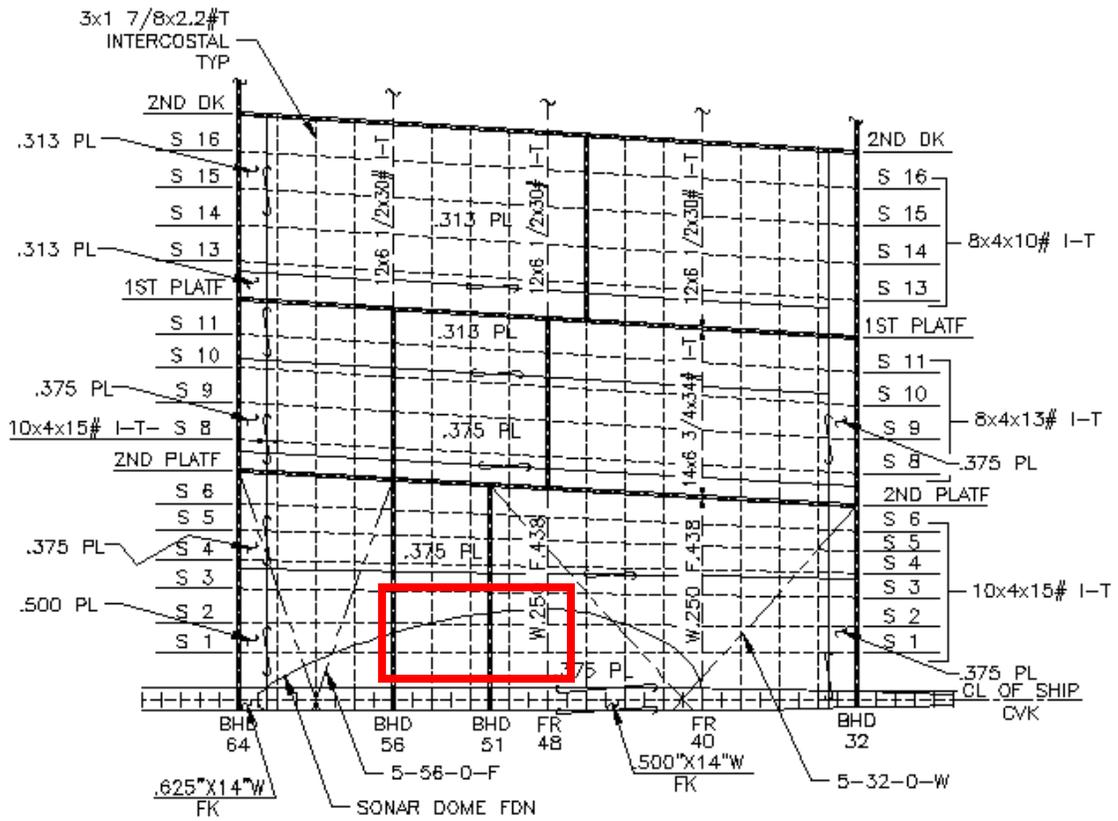


1ST 3 X 2 VERTICAL STIFFENER FORWARD OF BHD (56)



2ND VERTICAL STIFFENER FORWARD OF BHD (56)

USS ESTOCIN (FFG-15)
SONAR COOLING EQUIPMENT ROOM (4-48-1-Q)



RED BOX INDICATES AREA OF
INSPECTION

MATERIAL ASSESSMENT FORM

| | | | | | | | | | |
|---|--|---|---------------------|---|--|--|---------------------|--|-------------|
| ITEM NUMBER | | | | SHIP | | | | | |
| USS ESTOCIN (FFG-15) | | | | | | | | | |
| SYSTEM SHELL & SUPPORTING STRUCTURE 110 | | ESWBS 11011 | | EIC | | APL | | RIN N/L | |
| EQUIPMENT NAME HULL STRUCTURE 1102XY | | | IDENT/SERIAL N/A | | LOCATION 3-84-0-E | | WORK CENTER EM04 | | JSN P039 |
| 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 .9 | |
| TYPE AVAILABILITY | | WHEN TO BE ACCOMPLISHED | | STATUS | | CAUSE | | DEFERRAL REASON | |
| 1. DEPOT 2. IMA 3. TECH ASSIST 4. SHIP'S FORCE 5. SFWL | | 1. IMMEDIATELY 2. PRIOR TO NEXT UNDERWAY 3. PRIOR TO NEXT DEPLOYMENT 4. DURING POST DEPLOYMENT AVAILABILITY | | 1. OPERATIONAL 2. NON-OPERATIONAL 3. REDUCED CAPABILITY 4. NOT APPLICABLE | | 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 8. NOT APPLICABLE | | 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 10. OTHER OR NOT APPLICABLE | |
| MAN HRS EXPENDED 2 | | MAN HRS REMAINING 1500 | | 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 5. MAINTENANCE ACTION COMPLETED: 3-M CAPABILITY UTILIZED 6. NONE OF THE ABOVE, DESCRIBE IN REMARKS/DESCRIPTION SECTION | | | | 1. MANDATORY 2. ESSENTIAL 3. HIGHLY DESIRABLE 4. DESIRABLE | |
| DISCREPANCY DESCRIPTION: PER SEMAT II UNDERWATER HULL ASSESSMENT: A/C MACHINERY ROOM (3-84-0-E) | | | | | | | | | |
| TANK TOP / DECK UNDER AND SURROUNDING A/C PLANT IS THINNING. SEVERAL READINGS WERE BELOW THE 25% | | | | | | | | | |
| WASTAGE CRITERIA. TANK TOP / DECK BETWEEN A/C PLANT AND SHELL HAS HEAVY CORROSION. IT IS IMPOSSIBLE FOR SHIP'S FORCE TO MAINTAIN THE AREA DUE TO THE CLOSE PROXIMITY OF EQUIPMENT, BHD, AND SHELL. | | | | | | | | | |
| RECOMMENDED REPAIRS: | | | | | | | | | |
| RECOMMEND REPAIR ACTIVITY, REMOVE INTERFERENCES (A/C PLANT AND ASSOCIATED PIPING). GAS FREE TANK (5-84-2-F) | | | | | | | | | |
| CUT OUT APPROXIMATELY 120 SF, REPLACE WITH .250 MILD STEEL REPLACE INTERFERENCES, PERFORM NDT ON TANK | | | | | | | | | |
| PRIME AND PAINT | | | | | | | | | |
| SSPORT C221 POC: A. DAVIS (757-396-4001) TPOC: J. DOHERTY | | | | | | | | | |
| CSMP SUMMARY: | | | | | | | TEST# | | |
| TANK TOP / DECK IS THINNING | | | | | | | MRC 1102/1 | | |
| ROOT CAUSE/AMPLIFICATION: | | | | | | | STEP# | | |
| H1 | | | | | | | 1, 2, 3, 4 & 5 | | |
| SYSTEM LEVEL IMPACT: | | | | | | | | | |
| PART NO. | | NOMEMCLATURE | | | | QTY | NSN | | COST |
| 1 | | | | | | | | | |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| FIRST CONTACT | | RATE | | SECOND CONTACT | | RATE | | PHONE | |
| WAGNER | | DCA | | BENNETT | | HTC | | | |
| ASSESSOR / ACT / TECH ID# | | | | | TD | TL | | LOGISTICIAN | TSP |
| J. LAROCK / T. WHITMORE QED SYSTEMS INC. | | | | | | | | | |

USS ESTOCIN (FFG-15)
A/C MACHINERY ROOM (3-84-0-E)



A/C PLANT NO. 1



HEAVY PAINT SCALING INBOARD OF A/C PLANT NO. 1, THIS AREA HAS SEVERAL LOW U/T READINGS, REFER TO DRAWING.

USS ESTOCIN (FFG-15)
A/C MACHINERY ROOM (3-84-0-E)



STANDING WATER BETWEEN A/C PLANT AND SHELL



TANK TOP / DECK BETWEEN A/C COMPRESSOR AND A/C PLANT. LOW U/T READINGS WERE RECORDED IN THIS AREA.

USS ESTOCIN (FFG-15)
A/C MACHINERY ROOM (3-84-0-E)

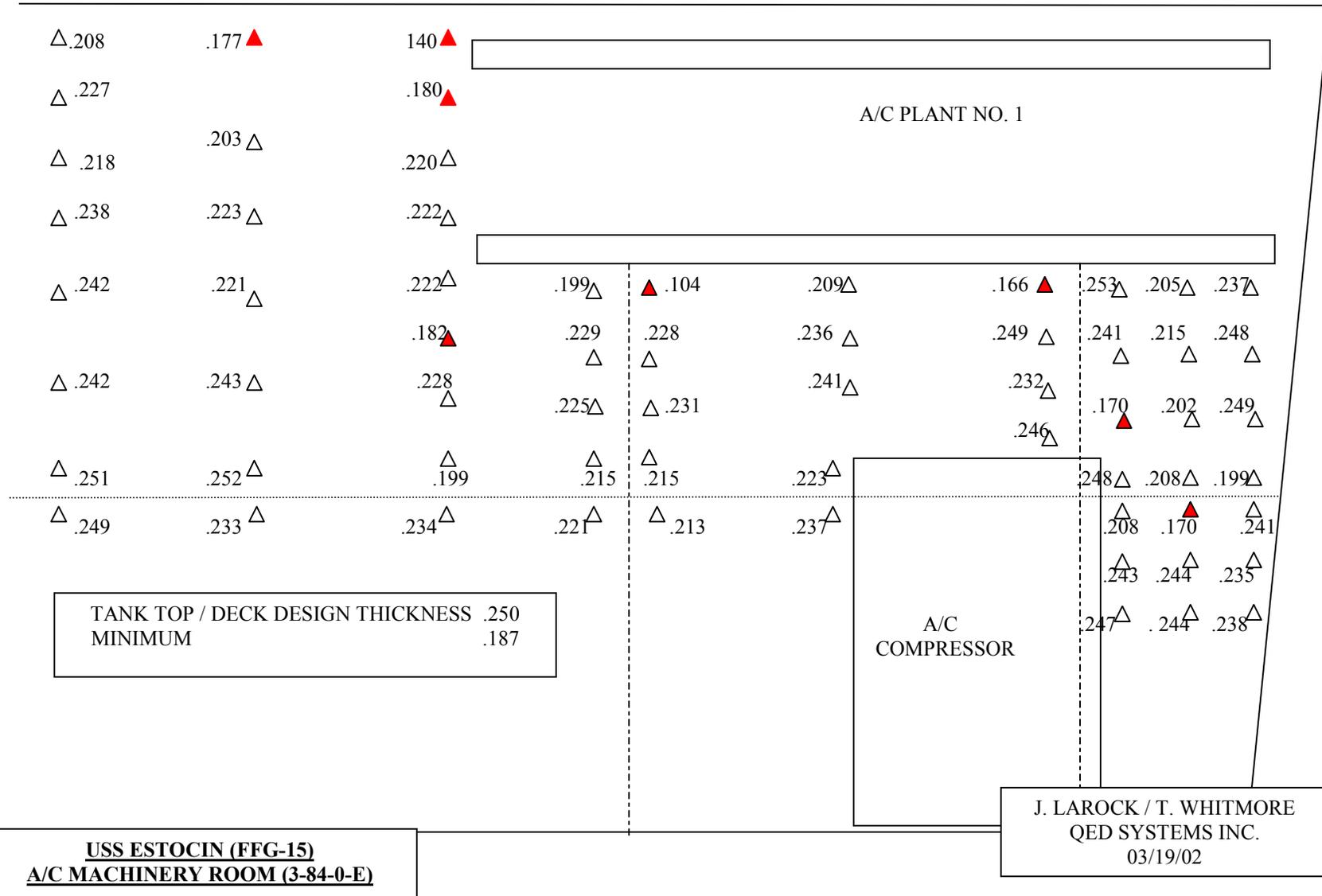


CORROSION ON A/C PLANT FOUNDATION.



CORROSION ON SHELL AT BHD (84)

BHD (100)

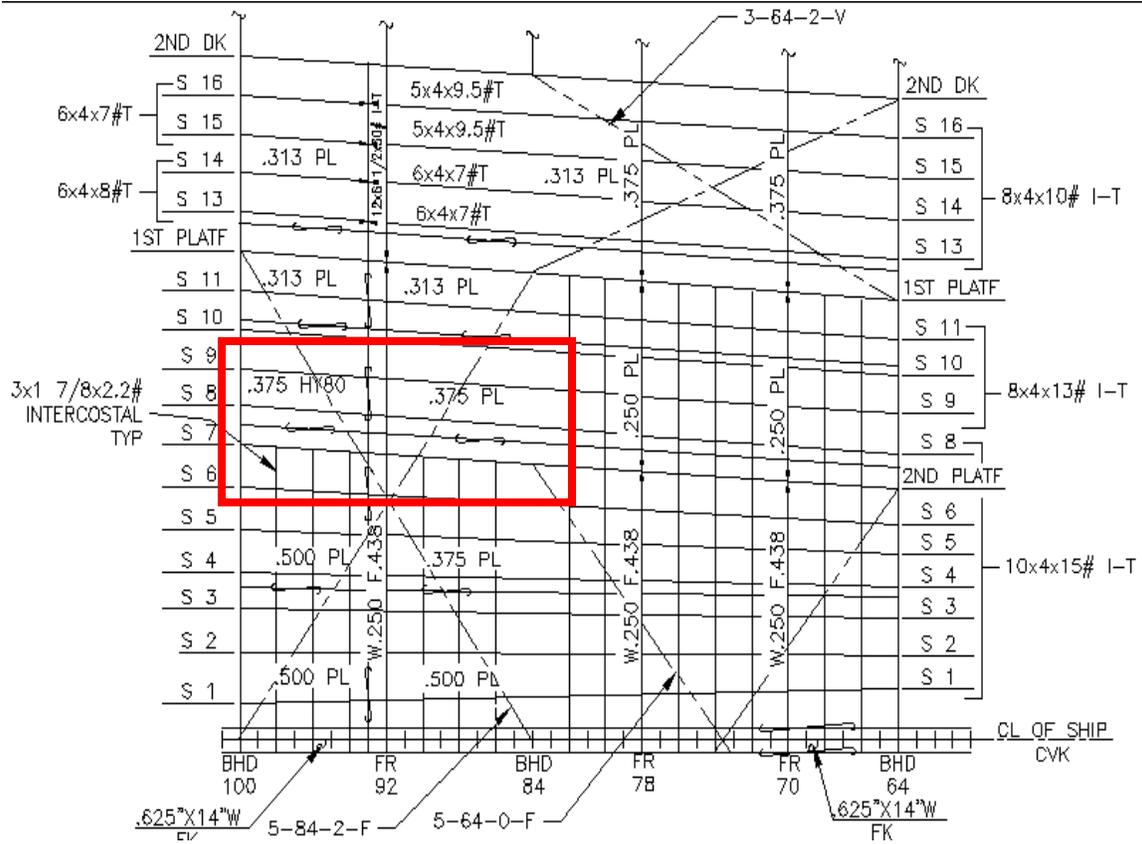


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USS ESTOCIN (FFG-15)
A/C MACHINERY ROOM (3-84-0-E)

J. LAROCK / T. WHITMORE
 QED SYSTEMS INC.
 03/19/02

**USS ESTOCIN (FFG-15)
A/C MACHINERY ROOM (3-84-0-E)**



**RED BOX INDICATES AREA OF
INSPECTION**

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|---------------------|-------------------------|---------------------------------|--|----------------------------|--|
| 3RD DECK | | | | | |
| 3-20-0-Q | N | N | Y | | SPACE REQUIRES GAS FREE |
| 3-32-2-A | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-32-1-K | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-36-2-T | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-40-2-A | Y | Y | Y | | |
| 3-46-1-A | Y | Y | Y | | |
| 3-48-2-A | Y | Y | Y | | |
| 3-53-2-A | Y | Y | Y | | |
| 3-56-0-A | Y | Y | Y | | |
| 3-64-2-V | NOT DURING SHIP CHECK | N | Y | | SPACE REQUIRES GAS FREE |
| 3-64-1-V | NOT DURING SHIP CHECK | N | Y | | SPACE REQUIRES GAS FREE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|-----------------|------------------|--------------------------|---------------------------------------|---|--|
| 3RD DECK | | | | | |
| 3-84-0-E | Y | Y | Y | FRS 94-100 STBD SIDE SHELL, DECK TO OVERHEAD FR 95, PORT SIDE, ON TANK TOP | ACCESSIBLE HIDDEN LAGGED 100% (100% OF PORT SIDE SHELL ASSESSABLE) ACCESSIBLE HIDDEN LAGGED 100% (NOT ACCESSIBLE AREA - STBD FWD BHD 84 TO FRAME 93, 5'-6" OFF DECK ELECT PANELS) |
| 3-93-1-Q | Y | Y | Y | | ACCESSIBLE LAGGING 100% STBD SIDE |
| 3-100-0-L | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (NOT ACCESSIBLE AREA PORT AND STBD FROM FRAME 115 TO AFT BHD 140, 6' 3" OFF DECK - BUNKS) |
| 3-100-1-L | Y | Y | Y | | LAGGING 100% AND SS 50% (SS INSTALLED 49" OFF DECK, FRAME 100 TO 113) |
| 3-113-0-L | Y | Y | Y | FR 113-124, STBD SIDE OF SHELL, DECK TO OVERHEAD | LAGGING 100% AND SS 50% (SS INSTALLED 49" OFF DECK, FRAME 113 TO 123) |
| 3-140-2-L | Y | Y | Y | | LAGGING 100% AND SS 50% (SS INSTALLED 49" OFF DECK, FRAME 140 TO 155) |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|---------------------|-------------------------|---------------------------------|--|----------------------------|--|
| 3RD DECK | | | | | |
| 3-140-1-L | Y | Y | Y | | LAGGING 100% AND SS 50% (SS INSTALLED 49" OFF DECK, FRAMES 140 TO 155) |
| 3-144-0-L | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (NOT ACCESSIBLE AREA, PORT & STBD FRAME 165 TO 180, 6'3" OFF DECK BUNKS) |
| 3-156-2-Q | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF PORT SIDE SHELL ASSESSABLE) |
| 3-154-1-Q | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-180-2-C | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-180-5-A | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-196-2-A | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 3-236-1-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-236-2-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-240-1-F | Y | N | Y | | SPACE REQUIRES GAS FREE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|---------------------|-------------------------|---------------------------------|--|----------------------------|--|
| 3RD DECK | | | | | |
| 3-240-2-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-272-2-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-272-1-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-278-1-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-278-2-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-286-2-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-286-1-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-292-8-F | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-316-1-J | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-322-1-J | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 3-328-0-A | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|---------------------|-------------------------|---------------------------------|--|---|---|
| 4TH DECK | | | | | |
| 4-H-0-V | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 4-20-0-W | Y | N | Y | | SPACE REQUIRES GAS FREE |
| 4-27-0-V | N | N | Y | | SPACE REQUIRES GAS FREE FR 27 FR 32 P/S FROM 3' UP 26' 4 1/16 |
| 4-32-0-Q | Y | N | Y | | |
| 4-48-2-L | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 4-48-1-Q | Y | Y | Y | FR 49-55 STBD SIDE OF SHELL, 4'-0' OFF DECK | ACCESSIBLE HIDDEN LAGGED 100% (NOT ACCESSIBLE AREA FRAME 50 TO AFT BHD 56, 4'-0' OFF DECK HEATEX & PPG) |
| 4-56-2-A | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 4-56-0-M | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| <u>SPACE NUMBER</u> | <u>SPACE ASSESSABLE</u> | <u>LAGGING INSTALLED ON BHD</u> | <u>IS THE SPACE INSPECTED DURING SEMAT 1</u> | <u>HISTORICAL HOT SPOT</u> | <u>COMMENTS</u> |
|---------------------|-------------------------|---------------------------------|--|---|--|
| 4TH DECK | | | | | |
| 4-64-0-Q | Y | N | Y | | |
| 4-100-0-E | Y | Y | Y | FR 100-101 STBD SIDE OF SHELL 6'BELOW GRATING | ACCESSIBLE HIDDEN LAGGED 100% (100% OF PORT & STBD SHELL ASSESSABLE) |
| 4-100-0-Q | Y | Y | Y | TANK TOP FOR 5-140 & 5-164-2F | STAINLESS STEEL 100% (100% OF PORT SIDE SHELL ASSESSABLE) |
| 4-140-0-Q | Y | Y | Y | N | 100% ASSESSABLE |
| 4-140-2-A | Y | Y | Y | N | 100% ASSESSABLE |
| 4-140-3-A | Y | N | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 4-152-1-A | Y | N | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 4-160-0-Q | Y | N | Y | | 100% OF PORT AND STBD SHELL ASSESSABLE |
| 4-172-1-E | Y | Y | Y | FR 174-180 STBD OF SHELL 6" BELOW GRATING BETWEEN L7-L9 | 100% OF PORT & STBD SHELL ASSESSABLE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|---------------------|-------------------------|---------------------------------|--|----------------------------|--|
| 5TH DECK | | | | | |
| 5-FF-0-V | N | N | N | | INACCESSIBLE VOID FR 18 - FR 32, P/S. FROM STEM UP 4FT. FR 5 - FR 18, P/S. FROM STEM UP ~6FT; FR E - 12, P/S. FROM STEM UP ~10FT |
| 5-32-0-W | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-51-0-Q | Y | N | Y | | 100% OF PORT & STBD SHELL ASSESSABLE |
| 5-56-0-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-64-0-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-84-2-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-84-1-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-100-2-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-100-1-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-100-4-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-100-3-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-116-2-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-116-1-F | N | N | Y | | SPACE REQUIRES GAS FREE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|---------------------|-------------------------|---------------------------------|--|--|---|
| 5TH DECK | | | | | |
| 51/2-116-0-V | N | N | N | | INACCESSIBLE VOID FR 116 - FR 132, P/S FROM KEEL UP ~4FT |
| 5-132-0-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-137-1-T | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-140-2-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-140-1-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-164-0-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-164-2-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-164-1-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-170-0-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-180-0-E | Y | Y | Y | FRAME 180, PORT 15'-0" OFF CL, 8' SQFT | SHELL NON-ASSESSABLE ON PORT SIDE FRAME 180 TO 195, FRAME 204 TO 212, OVERHEAD TO BILGE, TANK & FND |
| 5-180-01-E | Y | Y | Y | | 100% OF STBD SHELL ASSESSABLE |
| 5-192-2-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-201-1-F | N | N | Y | | SPACE REQUIRES GAS FREE |
| 5-201-3-F | N | N | Y | | SPACE REQUIRES GAS FREE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|-----------------|------------------|--------------------------|---------------------------------------|---|---|
| 5TH DECK | | | | | |
| 5-204-2-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-204-1-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-212-0-E (UL) | Y | Y | Y | FRS 215-220 PORT SIDE OF SHELL, U/L BETWEEN L13-L14 | ACCESSIBLE HIDDEN LAGGED UPPER LEVEL. (NOT ACCESSIBLE AREA, PORT SIDE FRAME 220 TO 224, 5'-0" OFF U/L GRATING VOLTAGE REGULATOR) |
| 5-212-0-E (LL) | Y | | | | ASSESSABLE HIDDEN, LAGGED LOWER LEVEL, ACCESSIBLE AREA PORT FRAME 212 TO 228, L10 TO BILGE AREA, STBD FRAME 212 TO 228 L8 TO BILGE AREA. (NOT ACCESSIBLE AREA - PORT & STBD FRAME 228 TO 250, FROM U/L TO BILGE AREA FUEL OIL HEATER) |
| 5-220-2-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-222-1-F | N | N | N | | SPACE REQUIRES GAS FREE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|-----------------|------------------|--------------------------|---------------------------------------|--|---|
| 5TH DECK | | | | | |
| 5-226-2-E | Y | Y | Y | | SHELL NON-ASSESSABLE FRAME 225 TO 229, 4'-2" OFF U/L GRATING, FRAME 235 TO 250, 6'-3" OFF U/L GRATING - AIR FLASK, MANIFOLD & FUEL TANK |
| 5-226-1-E | Y | Y | Y | | SHELL NON-ASSESSABLE FRAME 225 TO 229, 4'-2" OFF U/L GRATING, FRAME 235 TO 250, 6'-3" OFF U/L GRATING, AIR FLASK, MANIFOLD & FUEL TANK |
| 5-250-0-E | Y | Y | Y | FR 271-272 PORT SIDE OF SHELL TOP OF L0 TANK TOP | LAGGED EXCEPT FOR BILGE AREA, AT 18" ABOVE GRATING INTO BILGE AREA, (SHELL NON-ASSESSABLE ON PORT 1'-0" AFT OF FRAME 270 TO FRAME 292, FROM 5'-0" OFF GRATING, STBD FRAME 265 TO 270 FROM 1'-0" FROM OVERHEAD TO 6" BELOW GRATING, 14" AFT OF FRAME 270 TO 273, 5'-0" OFF GRATING POWER PANELS) |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|-----------------------|------------------|--------------------------|---------------------------------------|---|--|
| 5TH DECK | | | | | |
| 5-250-0-E (CONT'D) | Y | Y | Y | FR 250 PORT SIDE OF SHELL, BETWEEN L9-L12 | |
| 5-250-0-E (CONT'D) | Y | Y | Y | FR 258-264 STBD SIDE OF SHELL, BETWEEN L9-L12 | |
| 5-250-1-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-250-2-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-270-0-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-276-0-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-290-2-F | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-292-0-E | Y | Y | Y | FR 316-328 PORT SIDE OF SHELL BETWEEN L5-L9 | ACCESSIBLE HIDDEN LAGGED, ASSESSABLE AREA PORT FRAME 292 TO 318, DK GRATING TO OVERHEAD (SHELL NON-ASSESSABLE ON PORT FRAME 318 TO 328, 2'-0" FROM GRATING TO OVERHEAD OF SPACE, STBD FRAME 292 TO 300, 3'-0" OFF GRATING |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|-----------------------|-------------------------|---------------------------------|--|--|--|
| 5TH DECK | | | | | |
| 5-292-0-E (CONT'D) | Y | Y | Y | FR 316-328 PORT SIDE OF SHELL BETWEEN L5- L9 | TO OVERHEAD, FRAME 305 TO 308, 3'-0" OFF GRATING TO OVERHEAD, FRAME 313 TO 328, 6'- 3" OFF GRATING & POWER PANELS |
| 5-292-0-E (CONT'D) | | | Y | FR 292-328 PORT SIDE OF SHELL BETWEEN L1- L3 | |
| 5-292-1-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-292-2-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-292-3-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-308-2-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-308-1-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-328-0-J | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-328-2-W | N | N | N | | SPACE REQUIRES GAS FREE |

FFG-7 CLASS STRUCTURAL ASSESSMENT MATRIX

| SPACE NUMBER | SPACE ASSESSABLE | LAGGING INSTALLED ON BHD | IS THE SPACE INSPECTED DURING SEMAT 1 | HISTORICAL HOT SPOT | COMMENTS |
|-----------------|------------------|--------------------------|---------------------------------------|---------------------|--|
| 5TH DECK | | | | | |
| 5-328-1-W | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-344-0-J | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-368-0-V | N | N | N | | SPACE REQUIRES GAS FREE |
| 5-368-0-E | Y | Y | Y | | ACCESSABLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 5-376-1-A | Y | Y | Y | | ACCESSIBLE HIDDEN LAGGED 100% (100% OF SHELL ASSESSABLE) |
| 5-386-0-V | N | N | N | | INACCESSIBLE VOID FRAME 386 TO 392, P/S, FROM KEEL UP ~2FT; FRAME 392 TO 400, S, FROM KEEL UP ~2FT; FRAME 400 TO 408 P/S FROM KEEL UP ~2FT |
| 5-390-1-A | Y | Y | Y | N | SPACE 100% ACCESSABLE |
| 5-392-0-V | N | N | N | | SPACE REQUIRES GAS FREE |