September 15, 2025

Domestics Department
U.S. Coast Guard – Sector San Diego
Officer in Charge, Inspections Division
2710 N. Harbor Drive
San Diego, CA 92101-1064

Re: Vessel, "DESERT PRINCESS" Official Number 978704
Alternate Hull Examination with Diver Video and UT Gauging/Diver Survey

To Whom it May Concern:

Enclosed is our written inspection report along with narrated video files for an inspection on the above referenced vessel which was conducted on behalf of Lake Mead Cruises on September 10th and 11th, 2025 at Horsepower Cove Marina on Lake Mead near Boulder City, Nevada.

Please don't hesitate to contact me should you have any questions or require additional information.

Sincerely,

Chris Levesque | Operations Manager
415-559-3484 | chris@urdiving.com

M/V DESERT PRINCESS, O.N. 978704

ALTERNATE HULL EXAMINATION (AHE) & ULTRASONIC GAUGING SURVEY

An underwater examination was conducted utilizing a diver with hard-wired communications to inspect and document the condition of the vessel underbody and appurtenances of the *M/V DESERT PRINCESS* at the Lake Mead Cruises dockside facility located in Horsepower Cove on Lake Mead near Boulder City, Nevada on September 10th and 11th, 2025. The survey was performed by Underwater Resources, Inc. personnel with ADCI diving supervisors Mike Skuija, and John Papapetrou along with diver Matt Jones, and attended by USCG Section San Diego Marine Inspection personnel.

Preparations for the survey included removal of soft algae and hard marine growth from the underbody. To better keep track of inspection areas, the diver cleaned along hull welds. Brand new isolation valves were installed prior to this survey and inspected by the coast guard. As a result, it was not necessary for the diver to seal the strainer screens for the raw water intakes.

The entire underbody hull plating and appurtenances, including steering gear, were surveyed using our diver and a helmet mounted HD video system with topside monitor. Bottom and side shell plate thickness readings were then conducted from the exterior of the vessel along transverse sections selected by the Coast Guard, from the interior of the vessel at the transverse bulkheads, and along the sheer strake around the vessel at the waterline using a *Cygnus 2* UT Thickness Meter (S/N 1866) with a digital display and a 2.25 MHz ½" diameter transducer (S/N 733/15). The "multiple echo" UT gauging instrument, which is designed to both read through and discount paint thickness, was calibrated using a variable thickness reference test block (IIW Standard) and has a current annual *Certificate of Calibration* on file in our office.

EXTENT OF PHYSICAL & VIDEO INSPECTION OF UNDERBODY

At the request of Lake Mead Cruises, URI arrived on-site on September 10th, 2025, prior to conducting the Alternative Hull Examination, to perform spot cleaning of the underbody of the hull to remove algae using hand scrapers and wire brushes in preparation for the UT thickness survey. It appeared that the underbody coating was covered with random patches of staining and/or discoloration. Minor coating failure (rust blisters) were present at several locations on the vessel underbody. These blisters, which were most prominent on the rudders and the bow, came off and left exposed steel after the cleaning process. All anodes were present with only minor (20%) depletion except for the port rudder anode which had 50% wastage. The diver noted minor warping on the forward end of the keel.

One area of note during the UT inspection was the PORT bow between Frames 0 and 2 which had pitting and readings of 0.194 inches compared to a nominal thickness of 0.250 inches. Another area of interest was the hull (beneath the engine) in void 4 with a thickness of 0.204 inches compared to a nominal thickness of 0.250 inches. The lower STARBOARD side had pitting and a reading of 0.216 inches compared to a nominal thickness of 0.250 inches on Frame 44. The STARBOARD intake between Frame 24 and Frame 22 had a deflection in the bottom that was 0.75-inches deep and 6-inches wide.

Both PORT and STARBOARD propeller shafts, struts, nuts, and posts were inspected and were reported to be in good condition. There is corrosion present on both PORT and STARBOARD rudders. The divers reported that each rudder is razor sharp on the bottom leading edge due to this corrosion and that the PORT rudder is in worse condition than the STARBOARD. Each propeller had several small nicks/dings around the blades the largest of which was 2 inches long and 1/2 inch deep on the PORT side. They showed no major evidence of impact or cavitation and, likewise, the shaft and struts were also fully intact and void of any significant corrosion or damage. The zinc sacrificial anodes on both rudders were reported as partially depleted. Each propeller shaft bearing had a small gap at the 12 o'clock position.

The survey was recorded by the diver with a helmet mounted video camera. The diver narrated the underbody hull and appurtenance condition, which was annotated with a "time/date stamp" overlaid onto the video, along the entire underbody of the hull. A *Video Log* describing the locations of inspection by the diver with corresponding times during the entire inspection accompanies this report.

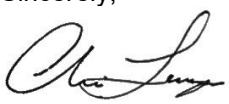
The following areas recorded and documented on the Video Log:

- PORT and STBD Sea Chest Strainer Screens
- Propeller shafts, Strut Supports and Rudders, STBD and PORT
- Underbody Hull Plating (Fwd and Aft) and Leading Edge of CVK, PORT and STBD
- Transducers at Frames 18 and 56
- Anodes on the rudder, propeller shafts and hull
- Bow thrusters

EXTENT OF UT GAUGING SURVEY – Approximately 709 UT Readings (See Attached)
Wind and Waterline – Port and Starboard Sides
Interior Voids 1 through 6 – Port and Starboard Sides
Interior Transverse Bulkheads – Frames 8, 18, 38, 54, 66, and 76
Transverse Girth Belts – Frames 28, 36, 44, 52, 60 and 72
Hull Plates 1 through 12 – Port and Starboard Sides

RESULTS OF UT GAUGING SURVEY
The ultrasonic thickness (UT) gauging measurements are at locations shown on the accompanied drawings on all the wind/waterlines, interior voids, transverse bulkheads, transverse girth belts and hull plates. UT gauging was performed and recorded at a minimum of five (5) points on each plate wherever possible, usually at the corners and in the middle, with other readings recorded elsewhere as directed.

Sincerely,



Chris Levesque | Operations Manager
415-559-3484 | chris@urdiving.com

9-11-25 Hull Inspection Video Log		
Time	**Location**	**Description**
11:39:00	STBD Rudder	Anode in good condition. STBD rudder good.
11:40:08	STBD Prop.	STBD prop and nut in good condition with minor dings on each blade.
11:40:20	STBD Prop.	Minor dings on each blade.
11:40:52	STBD Prop.	STBD Shaft and associated anode in good condition.
11:41:30	STBD Prop.	Supporting brackets in good condition.
11:42:00	PORT Rudder	Rudder in good condition. Associated anode has 50% wastage.
11:42:41	PORT Stern	Anode in good condition with 25% wastage (same as STBD stern).
11:42:58	PORT Prop.	Nut in good condition. Blades similar to STBD
11:43:34	PORT Prop.	Shaft and associated anode and brackets in good condition.
11:44:41	Frame 64	End of keel and hull plates to either side in good condition.
11:44:53	Frame 56	STBD Transducer between Frame 56 and 58 in good condition.
11:45:37	Frame 44	STBD intake between Frame 44 and Frame 46 in good condition.
11:46:19	Frame 44	PORT intake between Frame 44 and Frame 46 in good condition.
11:46:53	Frame 32	STBD anode over patch repair with 20% wastage. Repair in good condition.
11:47:23	Frame 32	Forward end of keel with minor deflection on STBD flange.
11:47:48	Frame 32	PORT anode with 20% wastage.
11:48:17	Frame 24	STBD intake between F24 & F22 with 0.75” deep deflection in bottom.
11:48:55	Frame 18	STBD Transducer between Frame 16 and 18 in good condition.
11:49:17	Frame 8	Forward doubler plates in good condition.
11:49:49	Frame 4	PORT bow thruster in good condition.
11:50:18	Frame 0	Minor rust patches and pitting on bow.
11:53:13		End of inspection

The video of the inspection can be viewed and downloaded here:
https://www.dropbox.com/scl/fo/0vh8ou638hnpaau1vjzrv/AEn4FIUieH0xq5hjIYoeCi0?rlkey=v9byy2jp2alwm8zkpwl2e1urz&dl=0

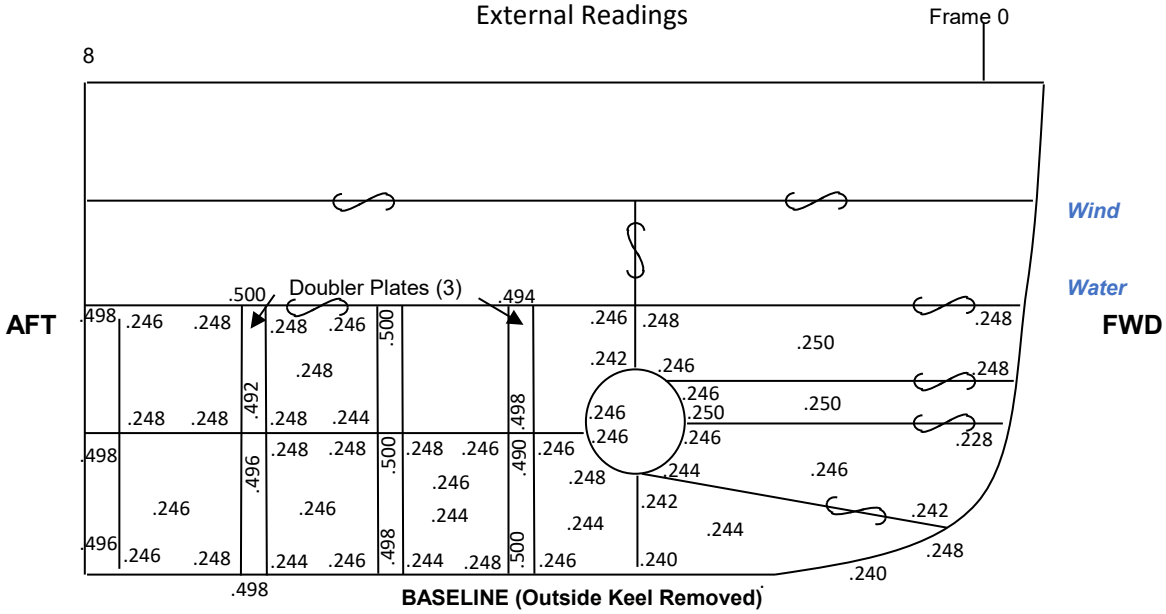
WIND & WATER UT THICKNESS READINGS

Measured PORT/STBD - Approximately at 2 Foot Increments

Location	Thickness	STARBOARD		PORT	
Dist. (ft)	O.T. (in.)	Wind	Water	Wind	Water
FWD	0.250	0.248	0.246	0.246	0.246
2	0.250	0.248	0.246	0.244	0.244
4	0.250	0.246	0.248	0.248	0.244
6	0.250	0.248	0.244	0.248	0.246
8	0.250	0.246	0.246	0.248	0.244
10	0.250	0.248	0.246	0.246	0.244
12	0.250	0.248	0.248	0.248	0.246
14	0.250	0.248	0.248	0.246	0.244
16	0.250	0.246	0.242	0.242	0.246
18	0.250	0.250	0.246	0.250	0.244
20	0.250	0.246	0.248	0.250	0.250
22	0.250	0.250	0.246	0.250	0.250
24	0.250	0.250	0.244	0.248	0.240
26	0.250	0.250	0.248	0.250	0.250
28	0.250	0.244	0.244	0.246	0.246
30	0.250	0.248	0.250	0.248	0.250
32	0.250	0.250	0.246	0.248	0.250
34	0.250	0.250	0.250	0.250	0.250
36	0.250	0.246	0.250	0.248	0.246
38	0.250	0.250	0.250	0.248	0.246
40	0.250	0.248	0.246	0.244	0.250
42	0.250	0.248	0.246	0.244	0.250
44	0.250	0.250	0.250	0.246	0.250
46	0.250	0.248	0.250	0.242	0.244
48	0.250	0.248	0.248	0.250	0.250
50	0.250	0.248	0.248	0.250	0.248
52	0.250	0.248	0.246	0.244	0.246
54	0.250	0.250	0.244	0.250	0.250
56	0.250	0.250	0.242	0.250	0.246
58	0.250	0.250	0.246	0.250	0.250
60	0.250	0.252	0.246	0.250	0.250
62	0.3125	0.312	0.308	0.316	0.250
64	0.3125	0.312	0.314	0.312	0.310
66	0.3125	0.312	0.312	0.314	0.310
68	0.3125	0.318	0.310	0.314	0.312
70	0.3125	0.316	0.308	0.314	0.312
72	0.3125	0.312	0.310	0.310	0.310
74	0.3125	0.318	0.312	0.316	0.314
76	0.3125	0.312	0.304	0.316	0.312
AFT	0.250	0.242	0.244	0.246	0.244

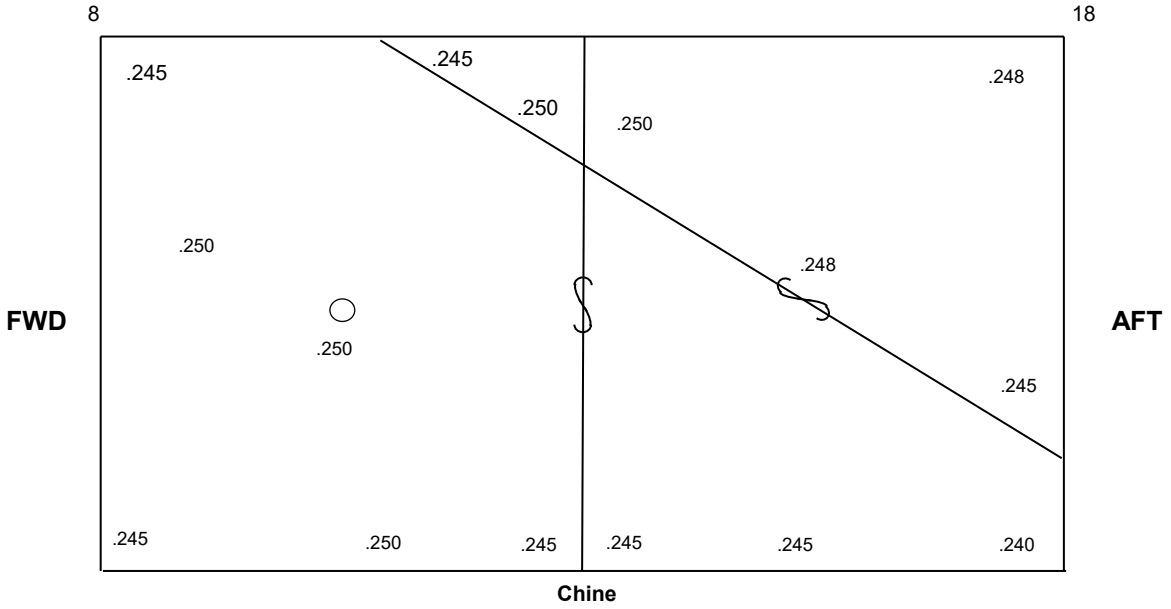
STARBOARD SIDE - VOID #1

External Readings


Frame 0
8
Wind
Water
AFT
FWD
Doubler Plates (3)
.500
.494
.498
.246 .248 .246 .248 .248 .248

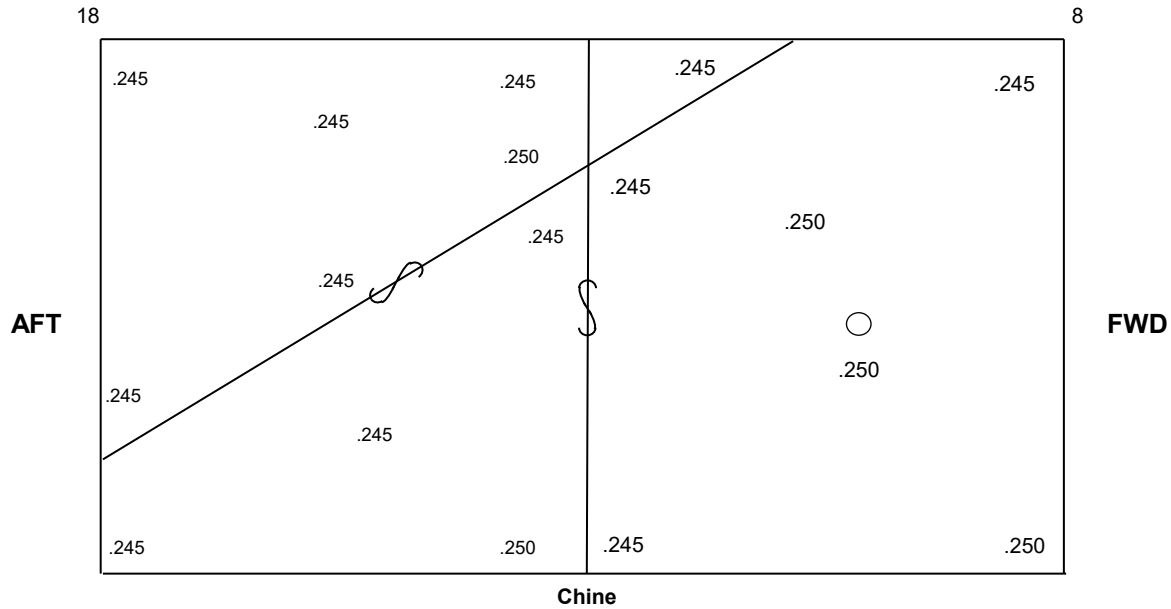
STBD SIDE - VOID #2

Readings from Interior



PORT SIDE - VOID #2

Readings from Interior

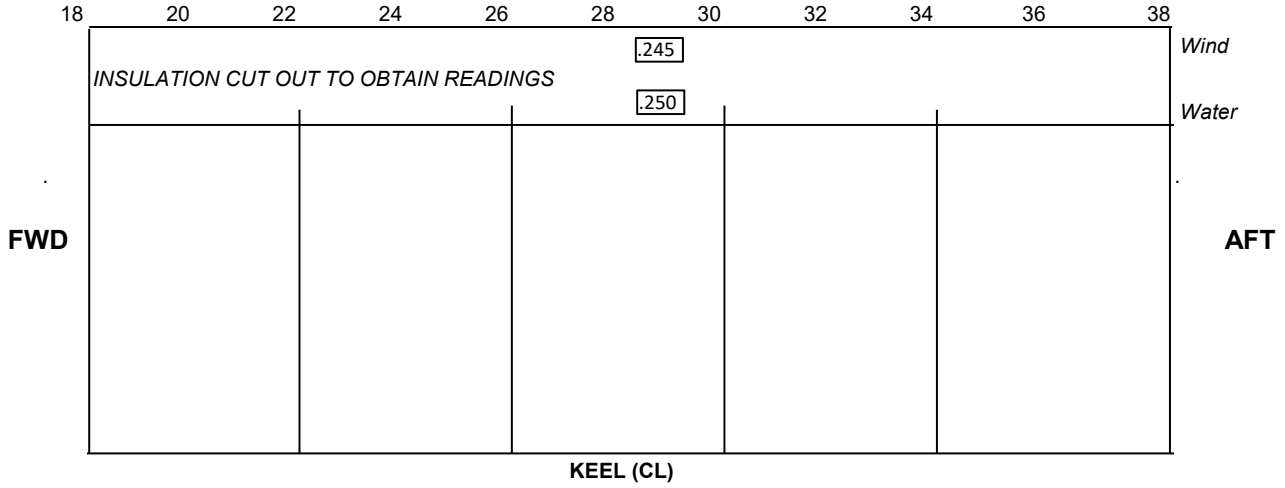


Notes:

1) Drawing not to scale
2) 0.250" Steel Plate Original Thickness (OT)
3) Thickness readings recorded in decimals of inch (0.000")
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) Horizontal/Vertical Lines indicated as weld seams

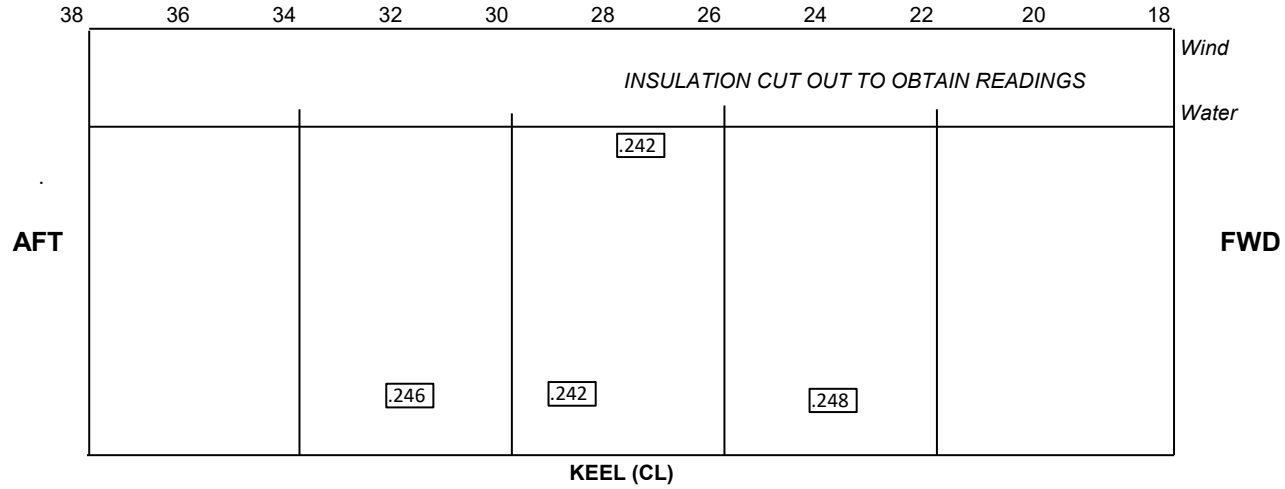
STARBOARD SIDE - VOID #3

Generator Room



PORT SIDE - VOID #3

Generator Room

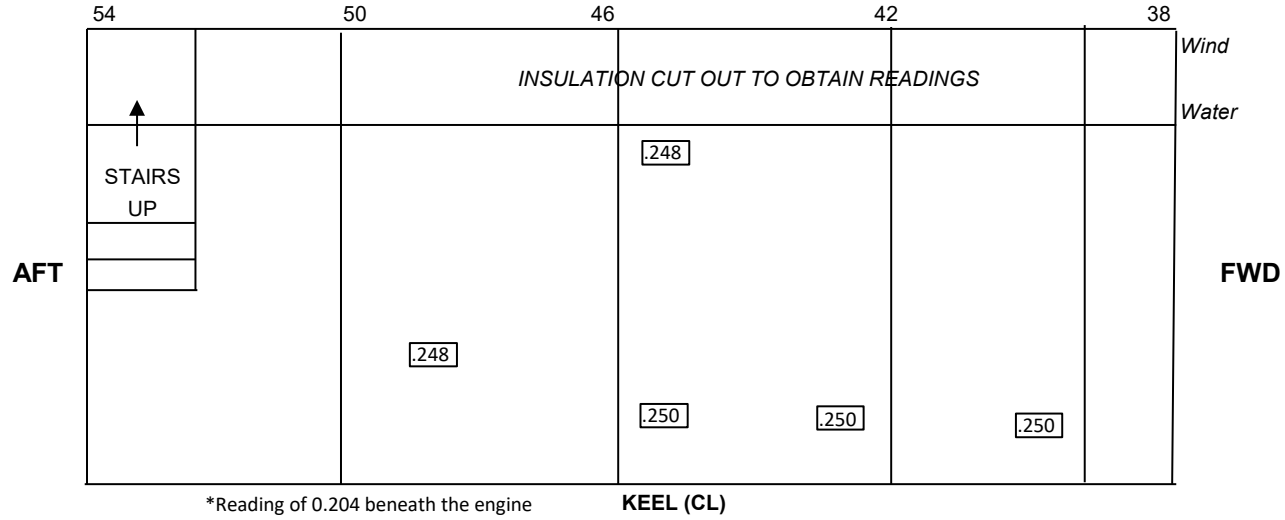


Notes:

1) Drawing not to scale
2) 0.250" Steel Plate (Original Thickness), Keel (CVK) 0.375"
3) Thickness readings recorded in decimals of inch (0.000")
4) Wastage shown in (%) of loss from Original Thickness
5) NR indicates no UT reading obtainable (No Reading)
6) All UT readings obtained from interior of shell (view looking out)
7) Horizontal/Vertical Lines (__) indicate weld seams

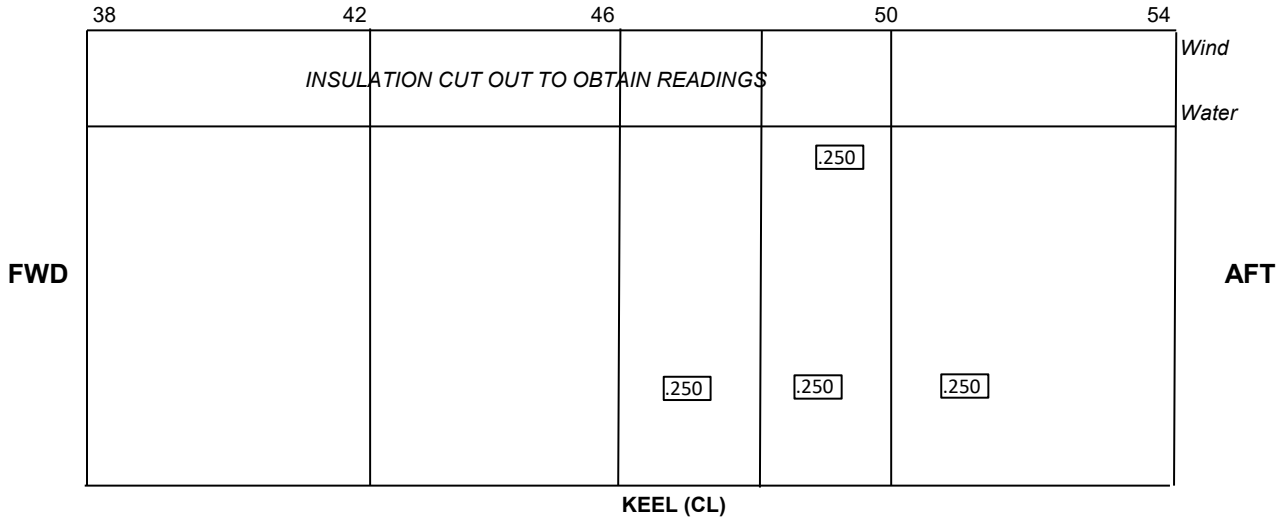
PORT SIDE - VOID #4

Engine Room



STARBOARD SIDE - VOID #4

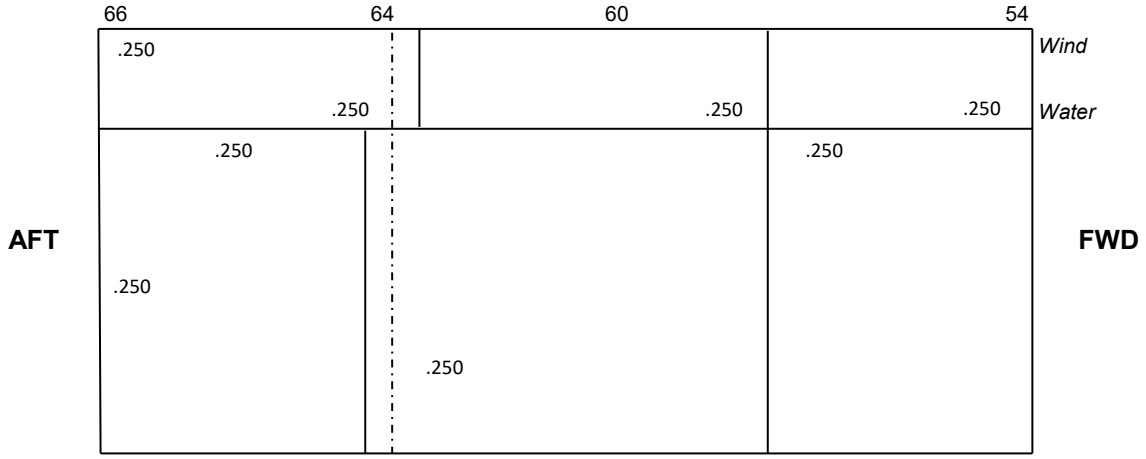
Engine Room



Notes:

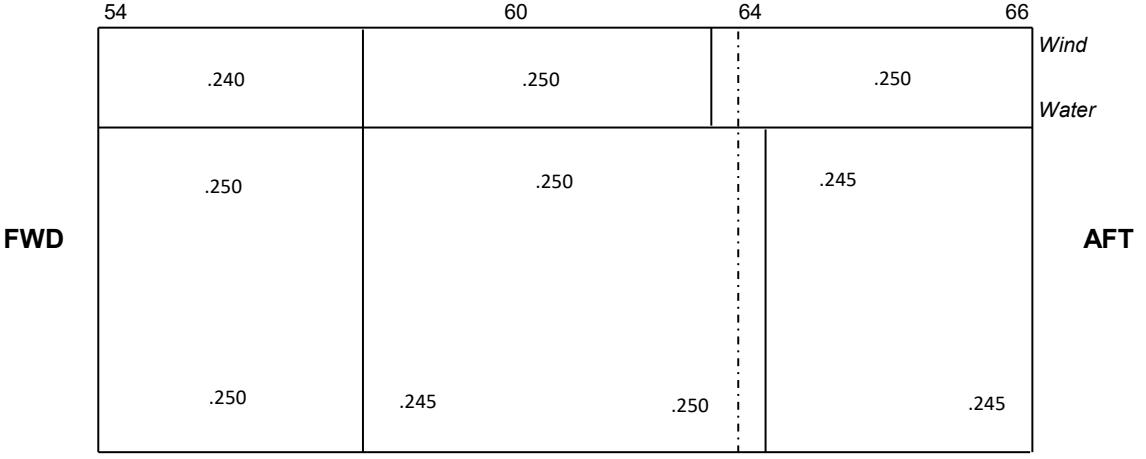
1) Drawing not to scale
2) 0.250" Steel Plate (Original Thickness); Keel (CVK) 0.375"
3) Thickness readings recorded in decimals of inch (0.000")
4) Wastage shown in (%) of loss from Original Thickness
5) NR indicates no UT reading obtainable (No Reading)
6) All UT readings obtained from interior of shell (view looking out)
7) Horizontal/Vertical Lines (__) indicate weld seams

PORT SIDE - VOID #5



* 0.245 around the shaft in standing water
0.240 beneath the shaft

STARBOARD SIDE - VOID #5

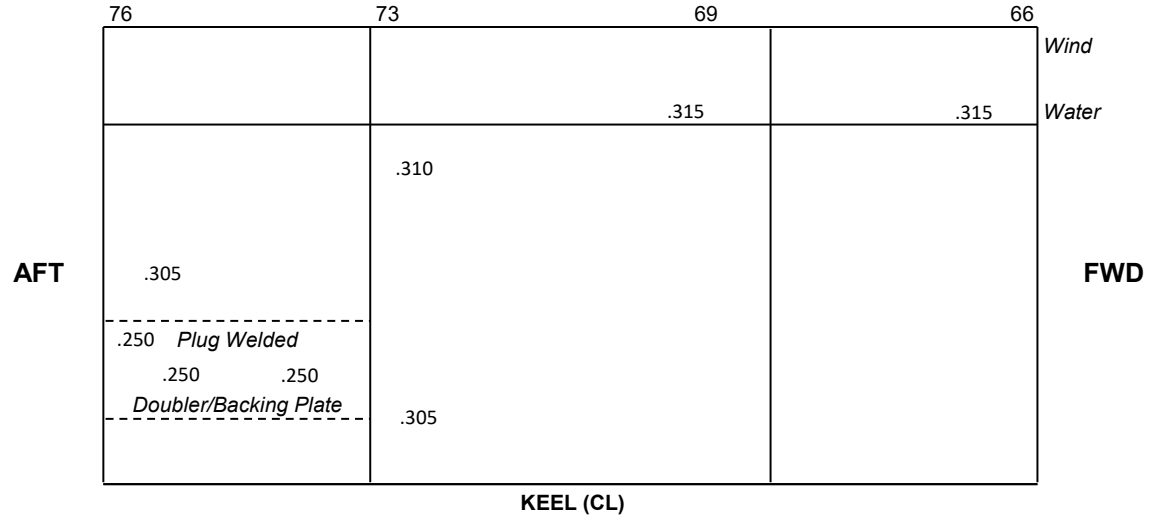


* 0.245 around the shaft in standing water
0.240 beneath the shaft

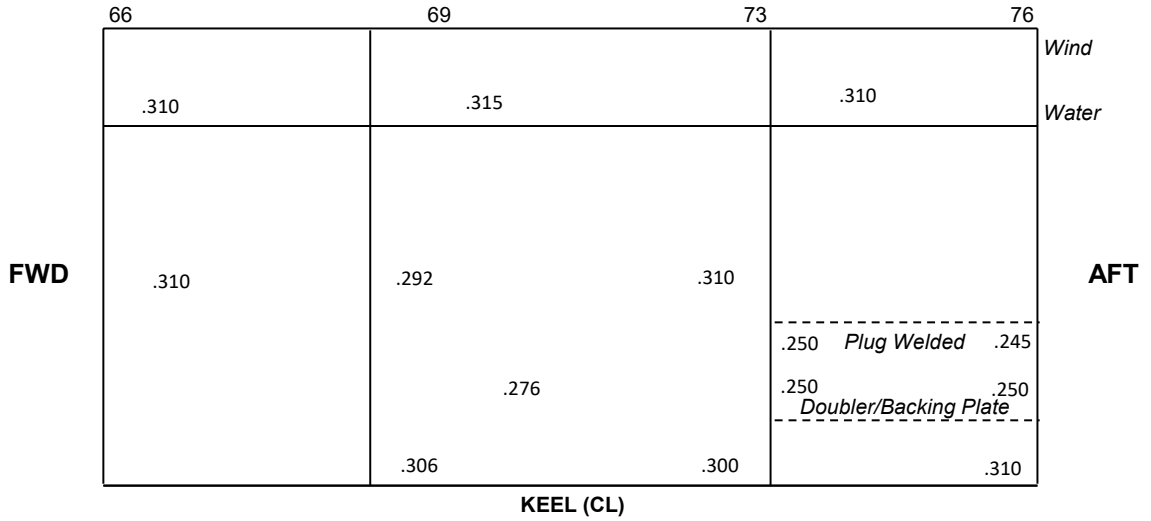
Notes:

1) Drawing not to scale
*2) .250" Plate FWD/0.3125" AFT of Frame 64; Keel (CVK) 0.375"
3) Thickness readings recorded in decimals of inch (0.000")
4) Wastage shown in (%) of loss from Original Thickness
5) NR indicates no UT reading obtainable (No Reading)
6) All UT readings obtained from interior of shell (view looking out)
7) Horizontal/Vertical Lines (__) indicate weld seams

PORT SIDE - VOID #6



STARBOARD SIDE - VOID #6

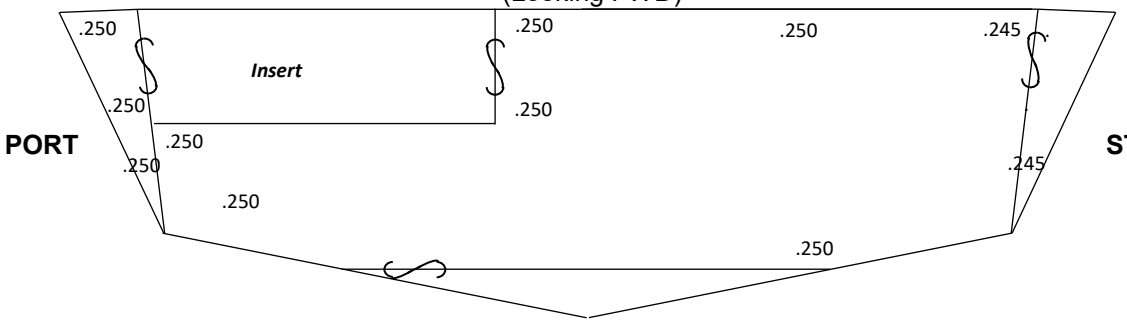


Notes:

1) Drawing not to scale
2) 0.3125" Plate (assumed); Keel (CVK) 0.375"
3) Thickness readings recorded in decimals of inch (0.000")
4) Wastage shown in (%) of loss from Original Thickness
5) NR indicates no UT reading obtainable (No Reading)
6) All UT readings obtained from interior of shell (view looking out)
7) Horizontal/Vertical Lines (__) indicate weld seams

FRAME 8 - FWD TRANSVERSE BKHD

(Looking FWD)

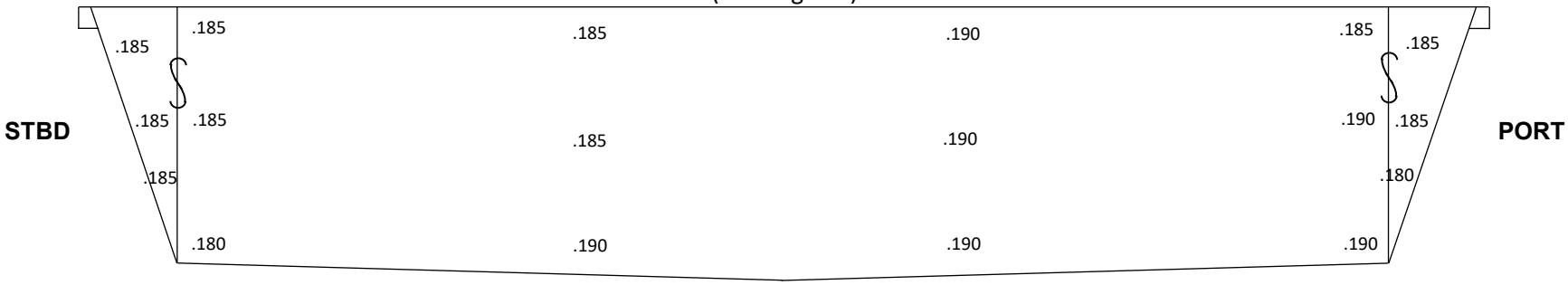


Notes:

1) Drawing to scale
2) 0.250" Steel Plate (Original Thickness)
3) Thickness readings recorded in decimals of inch (0.000")
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) Horizontal/Vertical Lines indicated as weld seams

FRAME 18 - MIDSHIPS TRANSVERSE BKHD

(Looking AFT)

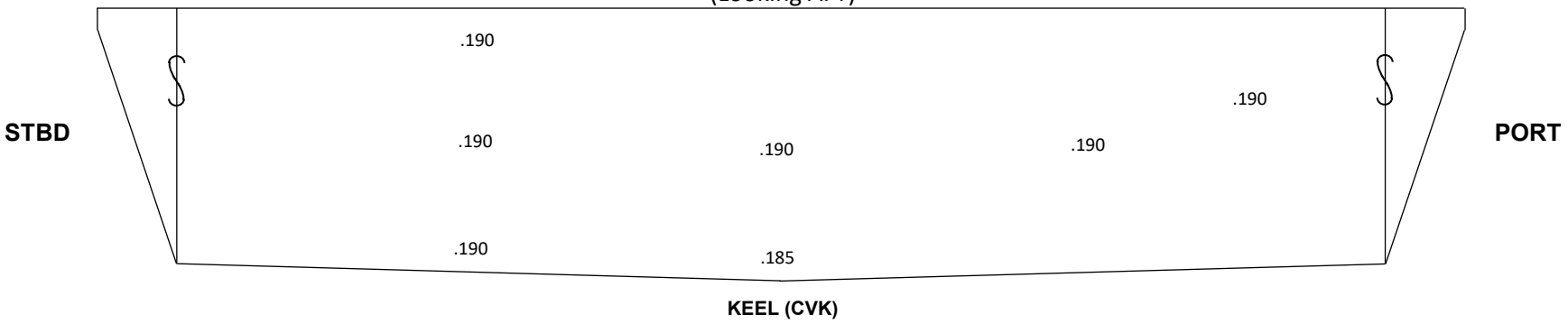


Notes:

1) Drawing to scale
2) 0.1875" Steel Plate (3/16" Original Thickness Assumed)
3) Thickness readings recorded in decimals of inch (0.000")
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) All UT readings obtained from exposed bulkhead side without insulation
6) Horizontal/Vertical Lines indicated as weld seams

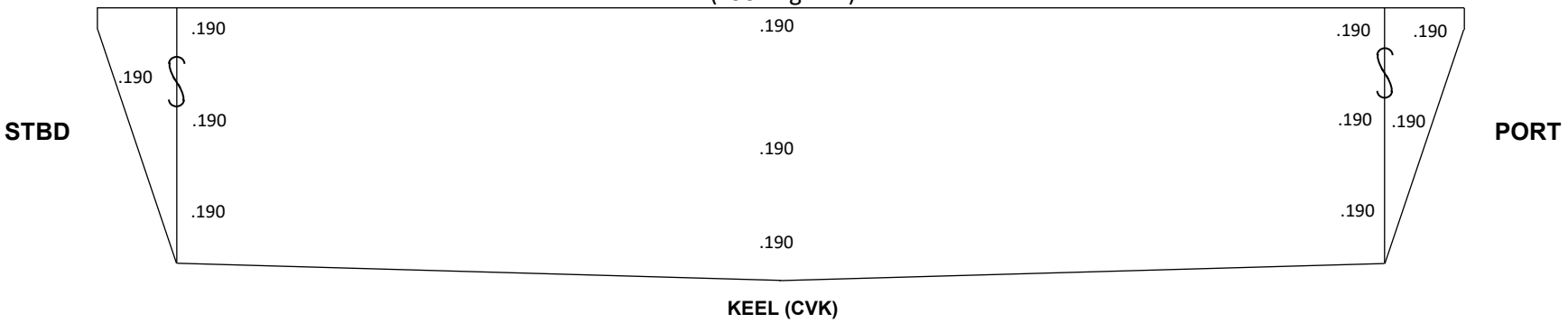
FRAME 38 - MIDSHIPS TRANSVERSE BKHD

(Looking AFT)



FRAME 54 - MIDSHIPS TRANSVERSE BKHD

(Looking AFT)



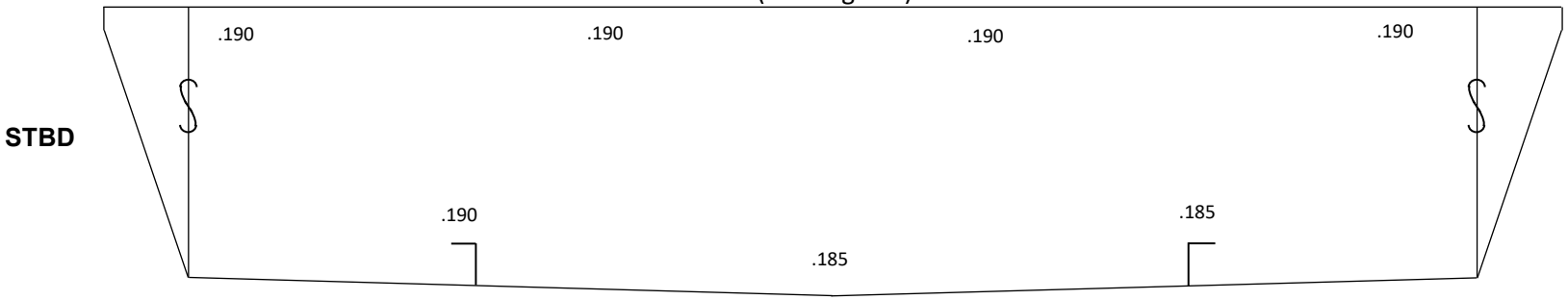
Readings of 0.186 and 0.148 on the floor beneath the battery box

Notes:

1) Drawing to scale
2) 0.1875" Steel Plate (3/16" Original Thickness Assumed)
3) Thickness readings recorded in decimals of inch (0.000")
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) All UT readings obtained from exposed bulkhead side without insulation
6) Horizontal/Vertical Lines indicated as weld seams

FRAME 66 - MIDSHIPS TRANSVERSE BKHD

(Looking AFT)

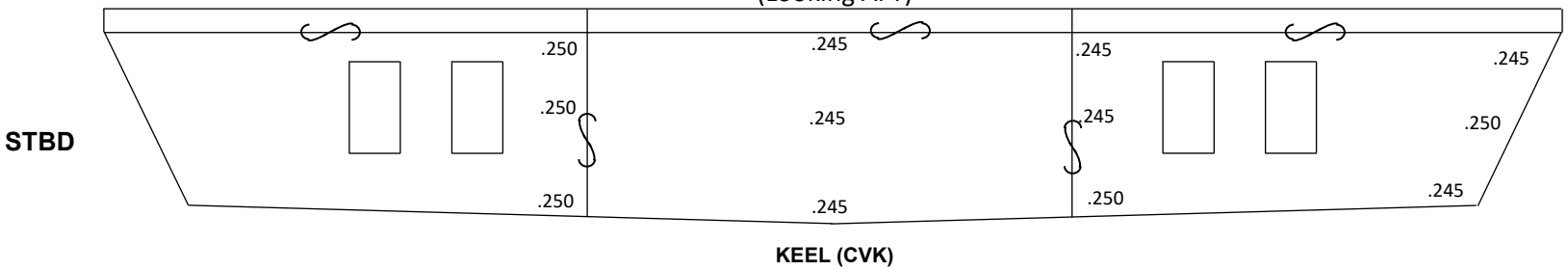


Notes:

1) Drawing to scale
2) 0.1875" Steel Plate (3/16" Original Thickness Assumed)
3) Thickness readings recorded in decimals of inch (0.000")
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) All UT readings obtained from exposed bulkhead side without insulation
6) Horizontal/Vertical Lines indicated as weld seams

FRAME 76 - AFT TRANSVERSE BKHD (TRANSOM)

(Looking AFT)

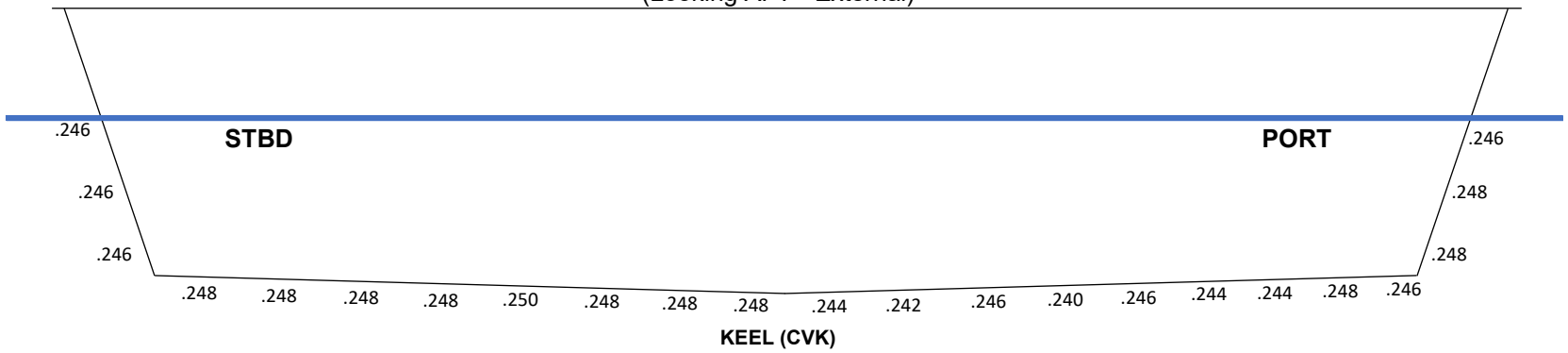


Notes:

1) Drawing to scale
2) .250" Steel Plate (Original Thickness)
3) Thickness readings recorded in decimals of inch (0.000")
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) Horizontal/Vertical Lines indicated as weld seams

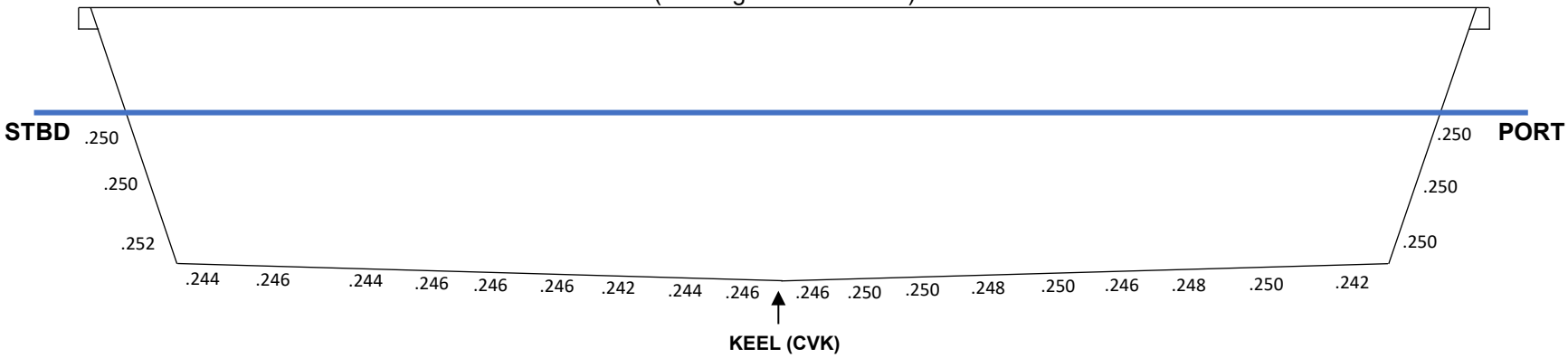
FRAME 28 TRANSVERSE SHELL

(Looking AFT - External)



FRAME 36 TRANSVERSE SHELL

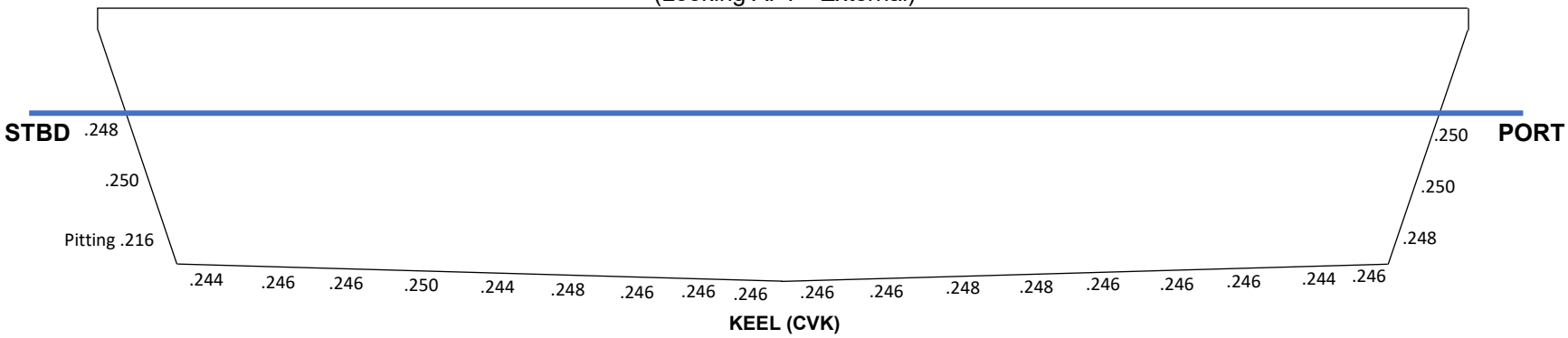
(Looking AFT - External)



1) Drawing to Scale
2) Thickness readings recorded in decimals of inch (0.000")
3) 0.250" (1/4") Steel Shell Plate Original Thickness, Fr. 64 and FWD
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) All UT readings obtained on exterior shell
6) Horizontal/Vertical Lines indicated as weld seams

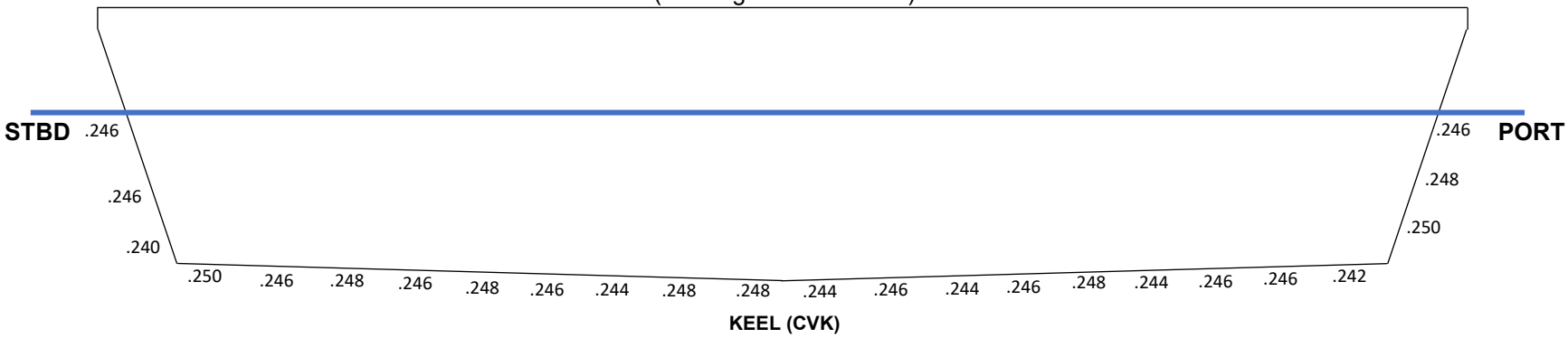
FRAME 44 TRANSVERSE SHELL

(Looking AFT - External)



FRAME 52 TRANSVERSE SHELL

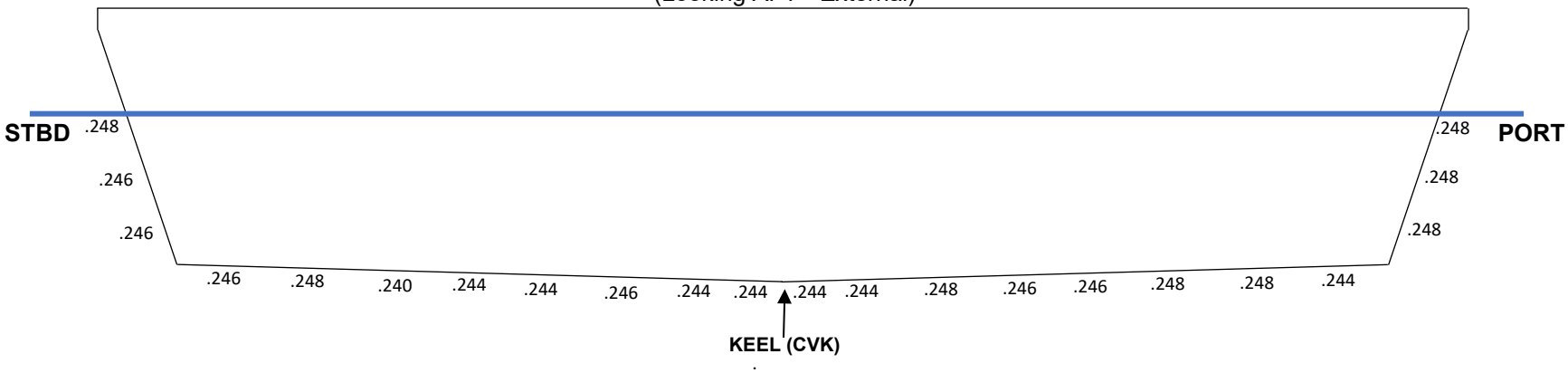
(Looking AFT - External)



1) Drawing to Scale
2) Thickness readings recorded in decimals of inch (0.000")
3) 0.250" (1/4") Steel Shell Plate Original Thickness, Fr. 64 and FWD
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) All UT readings obtained on exterior shell
6) Horizontal/Vertical Lines indicated as weld seams

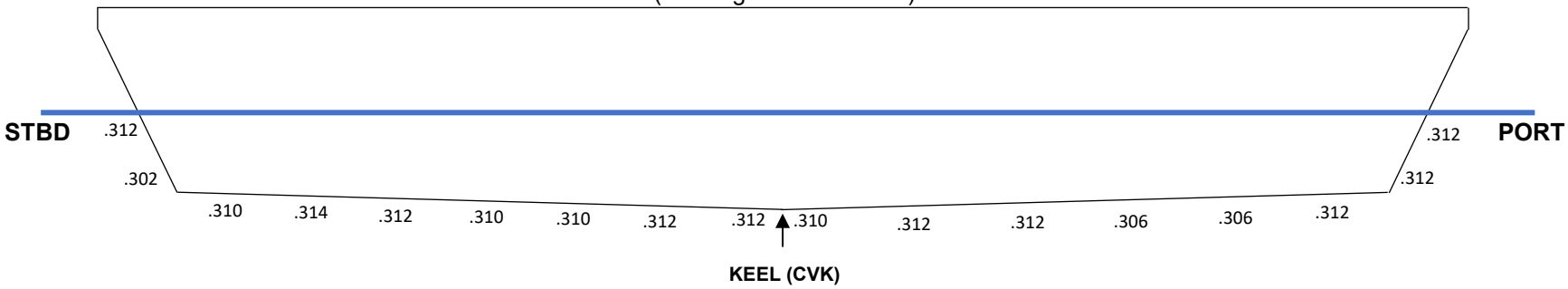
FRAME 60 TRANSVERSE SHELL

(Looking AFT - External)

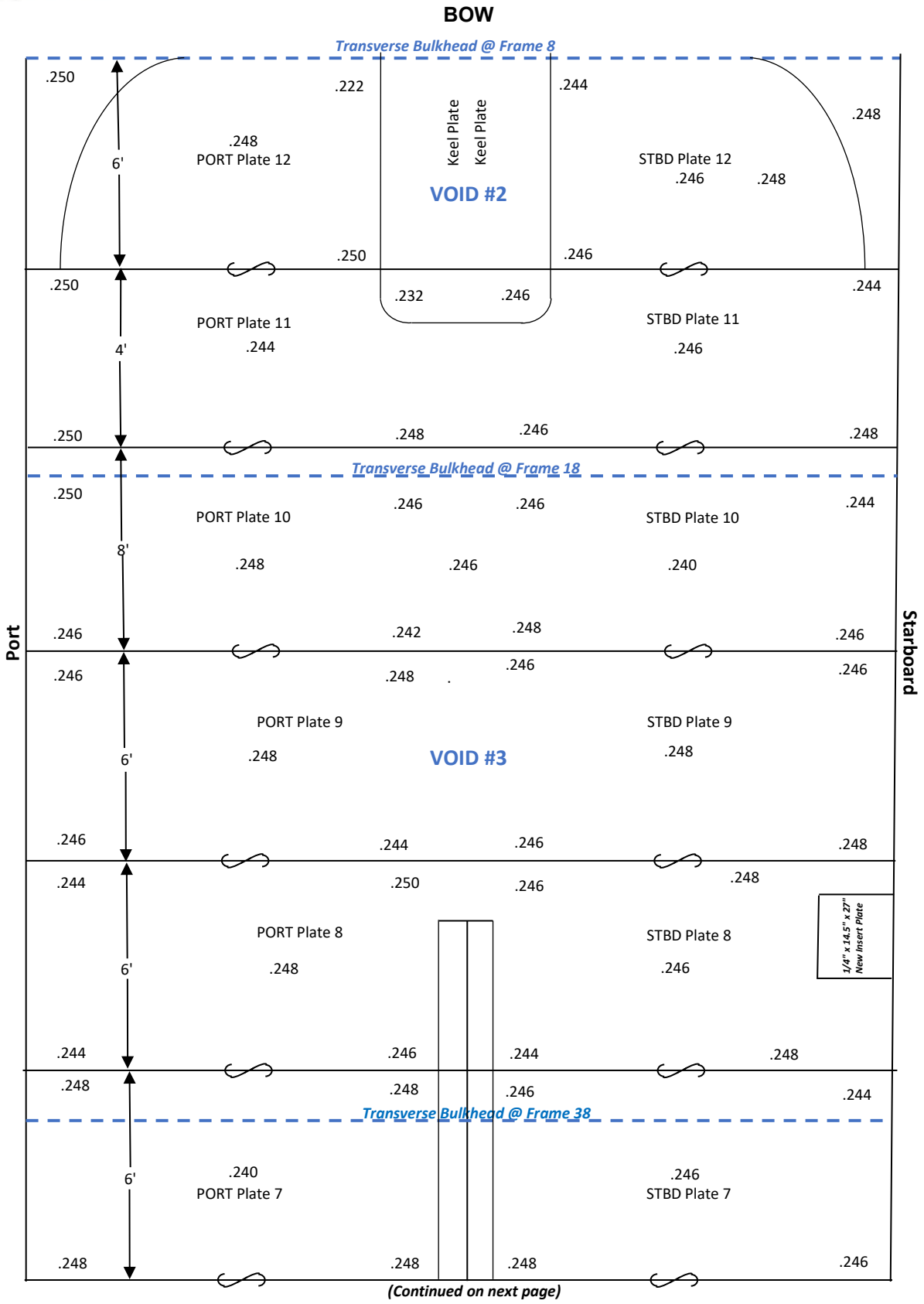


FRAME 72 TRANSVERSE SHELL

(Looking AFT - External)



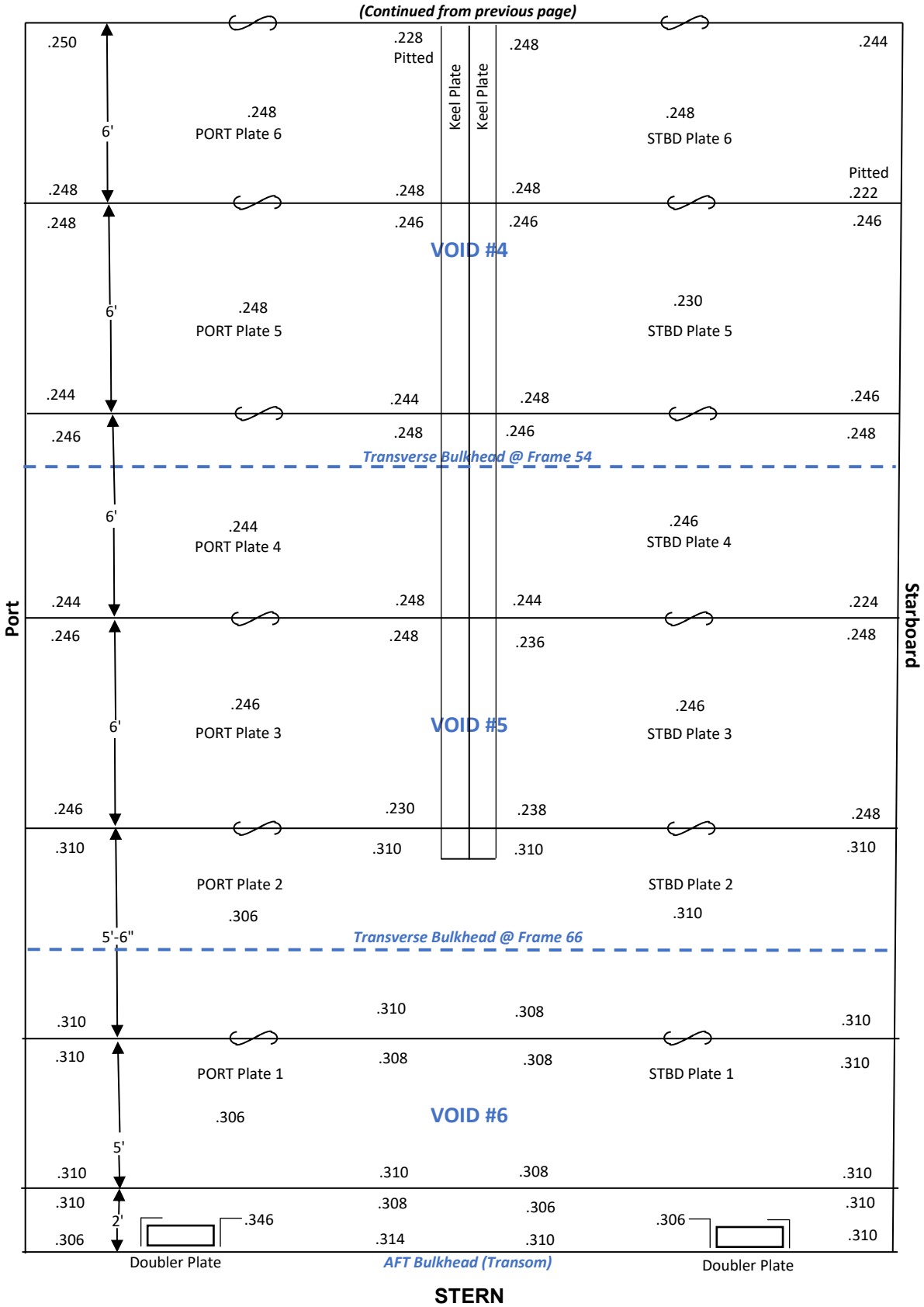
1) Drawing to scale
2) Thickness readings recorded in decimals of inch (0.000")
3) 0.3125" (5/16") Steel Plate Original Thickness AFT of Fr. 64
4) ***NR*** indicates no UT reading obtainable (No Reading)
5) All UT readings obtained on exterior shell
6) Horizontal/Vertical Lines indicated as weld seams
7) Center Vertical Keel (CVK) assumed to be 0.375" (3/8") O.T.

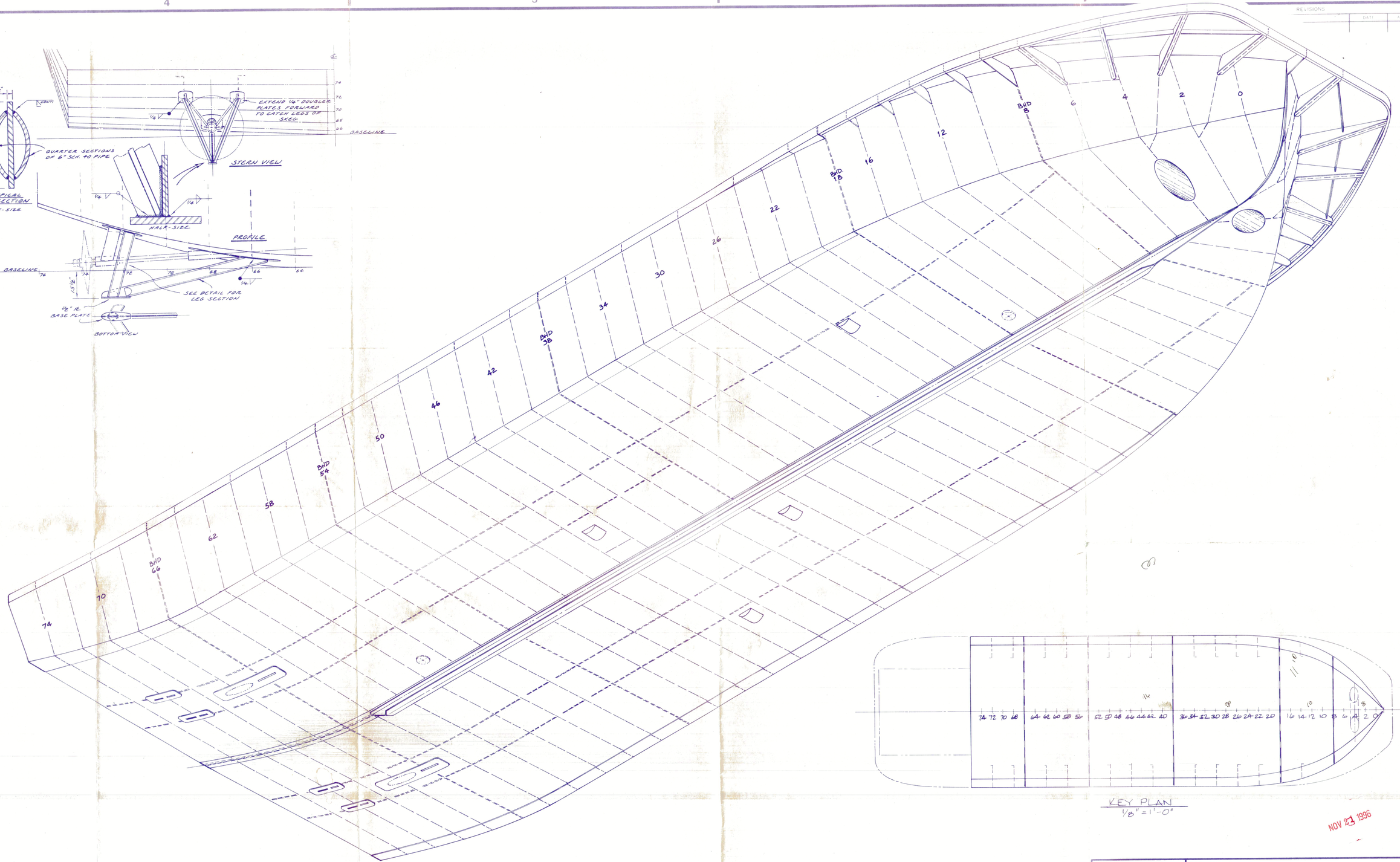


(Continued on next page)

Notes: 1) All turn UT gauging shots taken 2-inches inside of doubler

2) Longitudinal shell plate dimensions recorded from exterior, BKHD locations approx.


(Continued from previous page)
.250
.228
Pitted
.248
.244
Keel Plate
Keel Plate
6'
.248
PORT Plate 6
.248
STBD Plate 6
.248
.248
.248
Pitted
.222
.248
.246
.246
.246
VOID #4
6'
.248
PORT Plate 5
.230
STBD Plate 5
.244
.244
.248
.246
.246
.248
.246
Transverse Bulkhead @ Frame 54
6'
.244
PORT Plate 4
.246
STBD Plate 4
Port
Starboard
.244
.248
.244
.224
.246
.248
.236
.248
6'
.246
PORT Plate 3
VOID #5
.246
STBD Plate 3
.246
.230
.238
.248
.310
.310
.310
.310
PORT Plate 2
.306
STBD Plate 2
.310
5'-6"
Transverse Bulkhead @ Frame 66
.310
.310
.308
.310
.310
.308
.308
.310
PORT Plate 1
.306
VOID #6
STBD Plate 1
5'
.310
.310
.308
.310
.310
.308
.306
.310
2'
.306
.346
.314
.310
.306
.310
Doubler Plate
AFT Bulkhead (Transom)
Doubler Plate
STERN



KEY PLAN
1/8" = 1'-0"

NOV 27 1996

DRAWN BY: J. BIRMINGHAM	TGMD, Inc. / Timothy Graul marine design
APPD BY: ISRAELNA	naval architects marine engineers
DATE: 11/22/96	Sturgeon Bay, WI 54235
PROJECT: 250 PASSENGER DINNER AND EXCURSION VESSEL 'DESERT PRINCESS'	PROJECT NO.: 96071
CLIENT: LAKE MEAD CRUISES	SCALE: 3/8" = 1'-0"
FOR:	REV: — DATE: 11/22/96
TITLE: ISOMETRIC VIEW OF HULL (FROM BELOW)	DRAWING NO.: 801-012

REVISIONS

	DATE	APPROVED

Proj. 96071 Drwg. 801-012 Rev. — Title: FISH-EYE ISOMETRIC

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