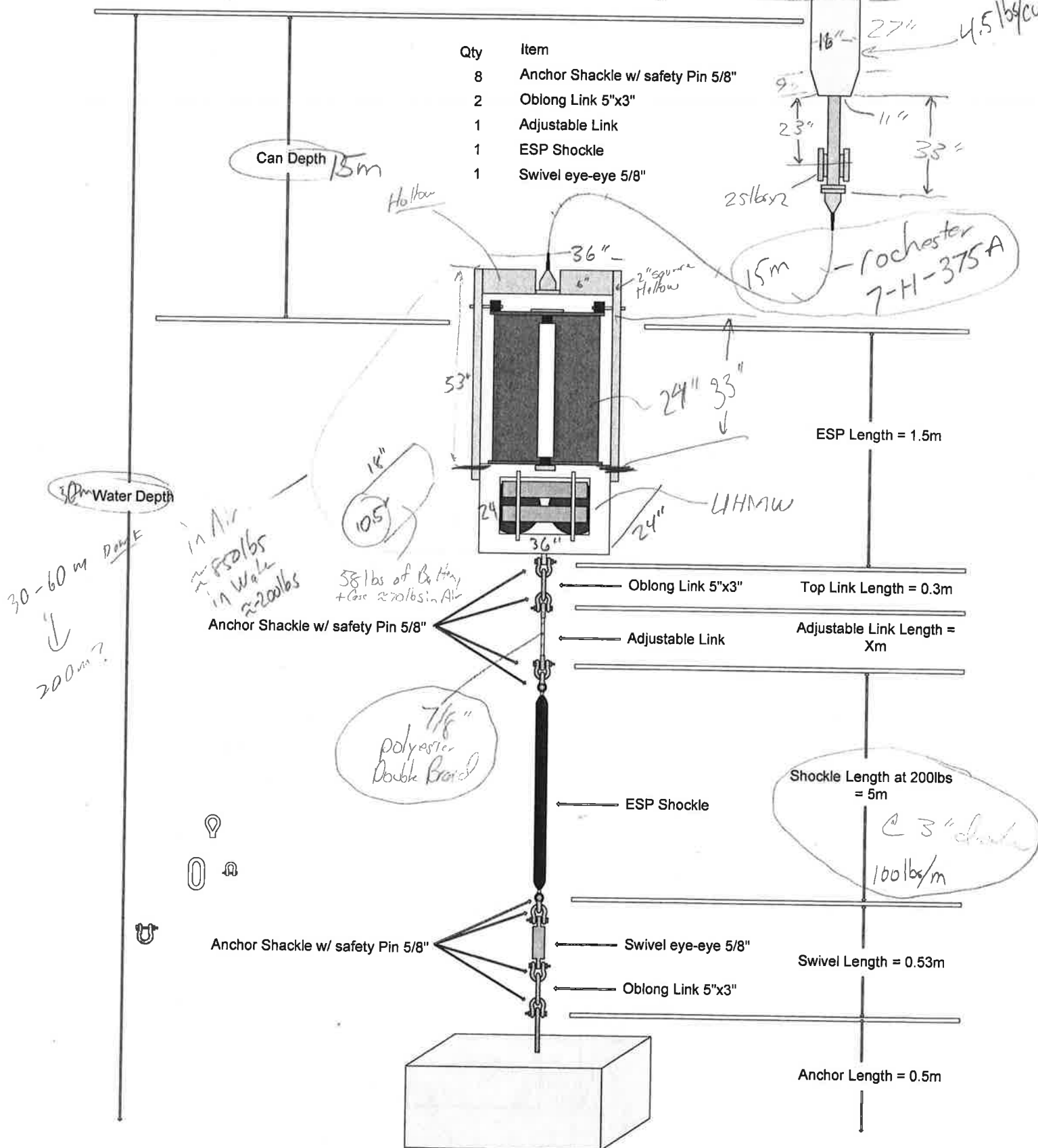




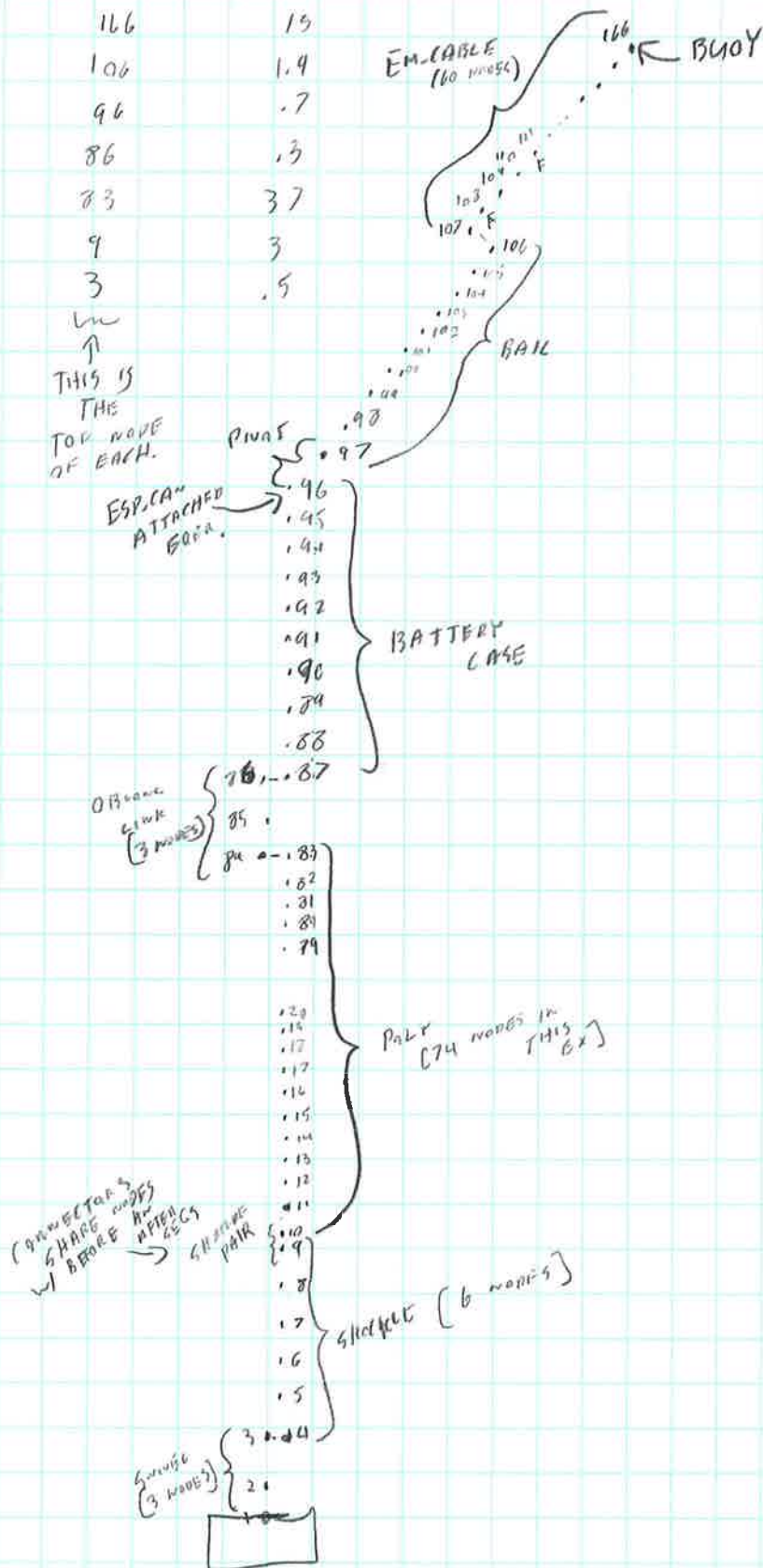
Hand-drawn schematic diagram of a probe assembly. The diagram includes the following dimensions and labels:

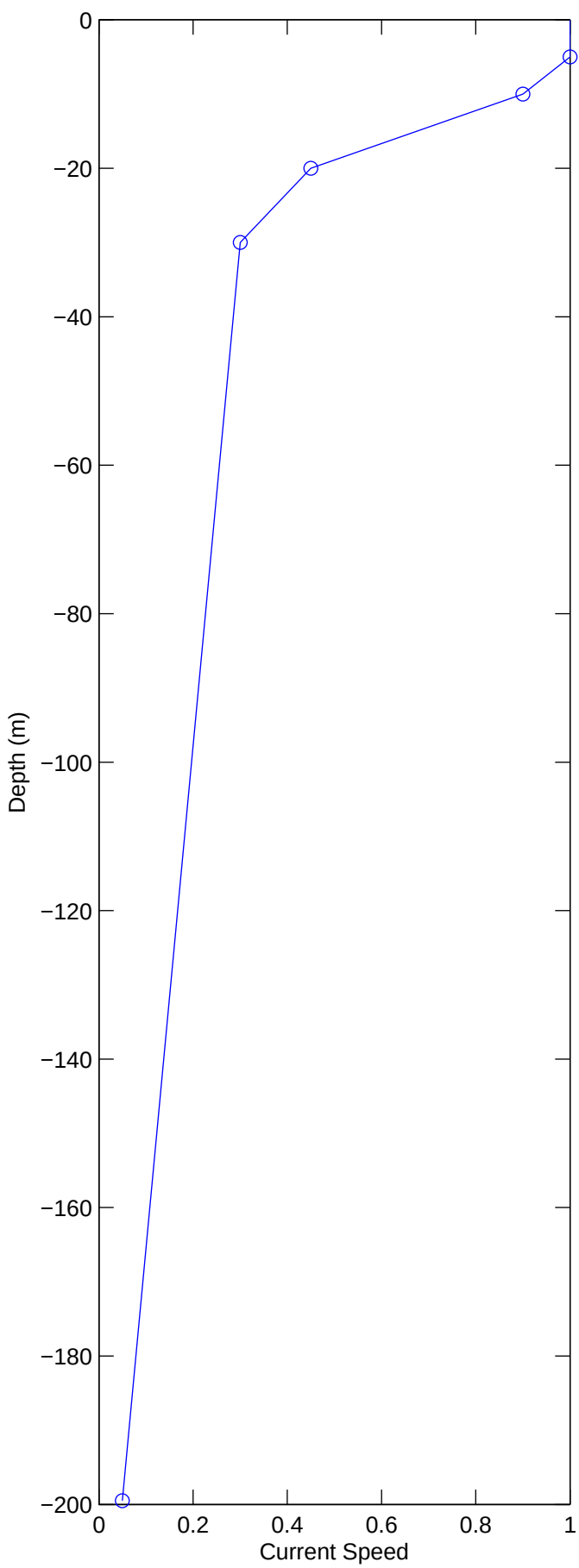
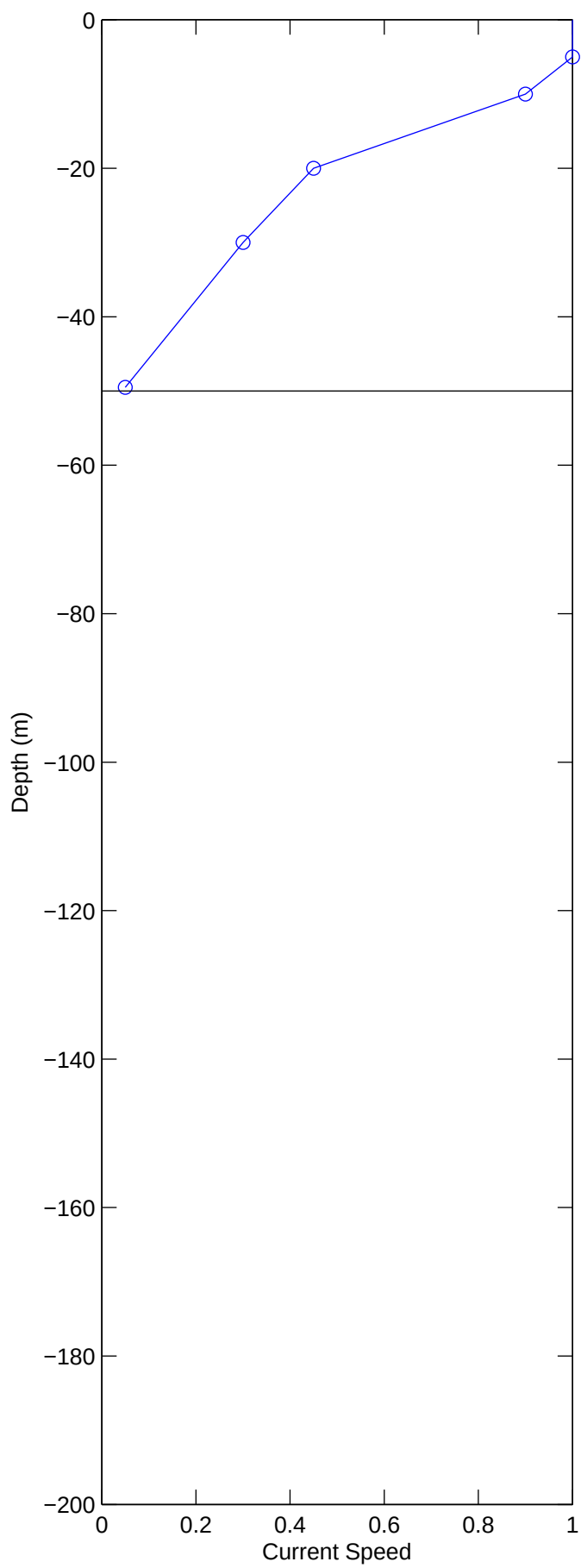
- 18"**: Dimension for the upper section of the probe.
- 16"**: Dimension for the main body of the probe.
- 27"**: Dimension for the lower section of the probe.
- 4.5 lb/cu ft**: Density specification for the material.
- 9"**: Dimension for the lower section of the probe.
- 23"**: Dimension for the lower section of the probe.
- 11"**: Dimension for the lower section of the probe.
- 33"**: Dimension for the lower section of the probe.
- 25 lb/cu ft**: Density specification for the material.
- 15m**: Dimension for the lower section of the probe.
- rochester 7-H-375A**: Label for the probe tip.

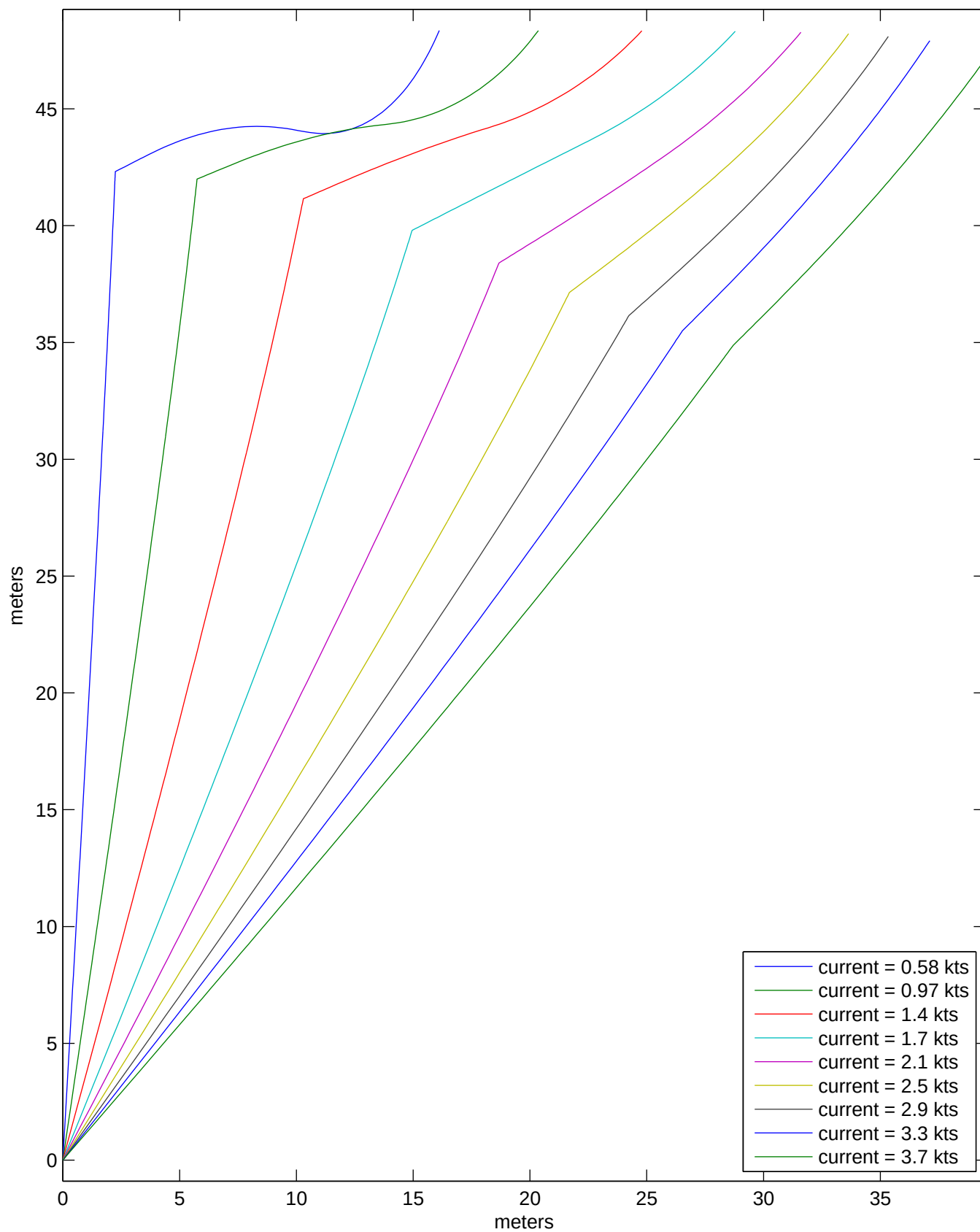


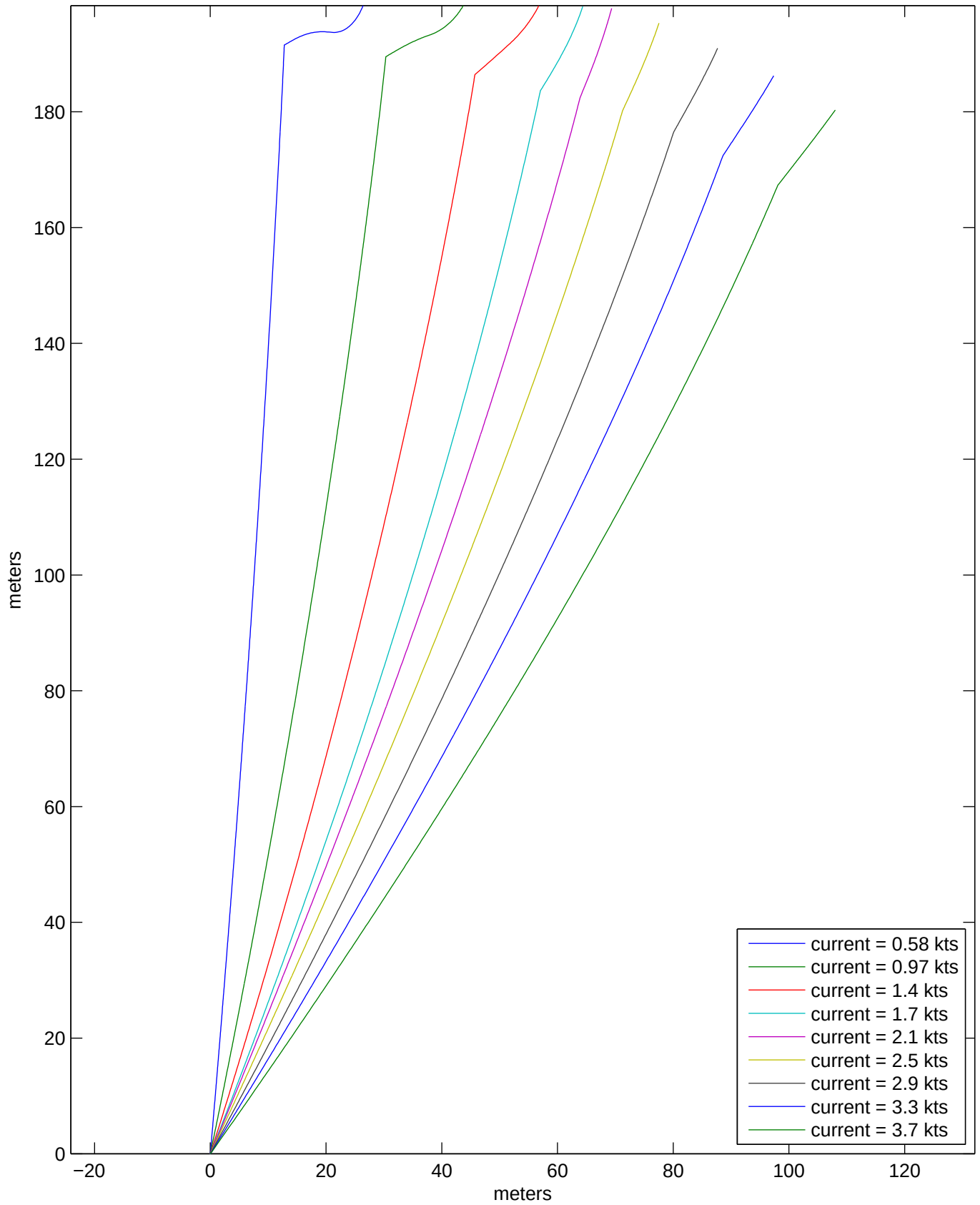
Seq-names	Seq-nodes	Seq-nodes	Seq-length
rock-cable	60	166	19
Bail	10	106	1.4
Battery Case	10	96	.7
Oblong-Link	3	86	.3
polyent-c. 708	74	83	37
shackle lockout	6	9	3
anchorswivel	3	3	.5

IN
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 THIS IS
 THE
 TOP NODE
 OF EACH.

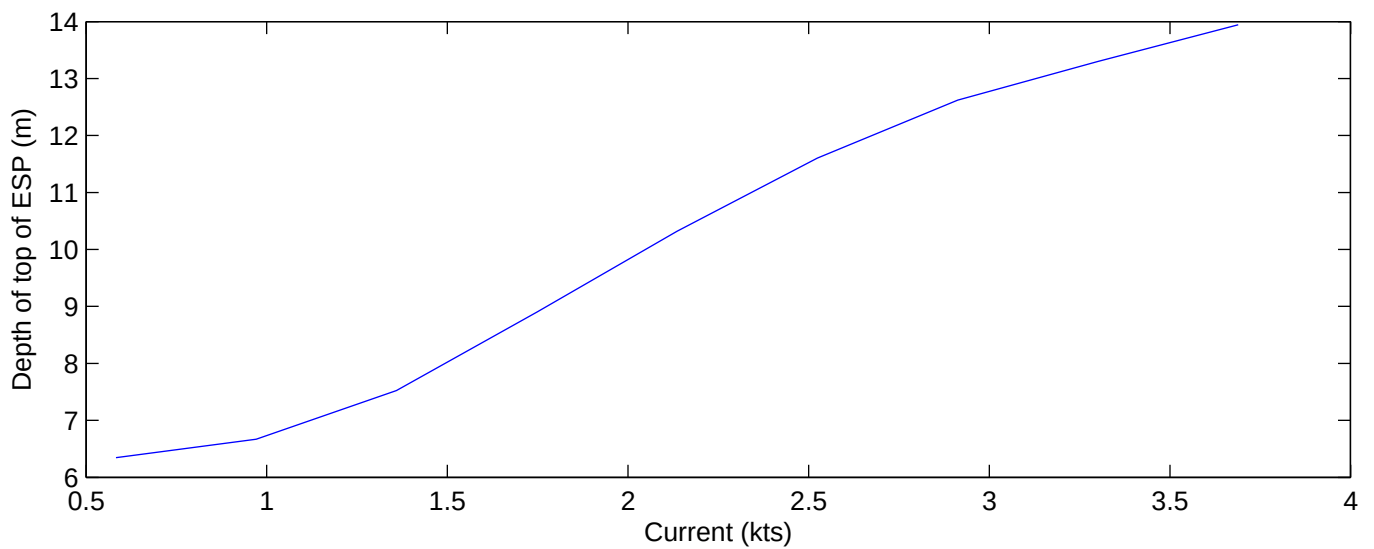
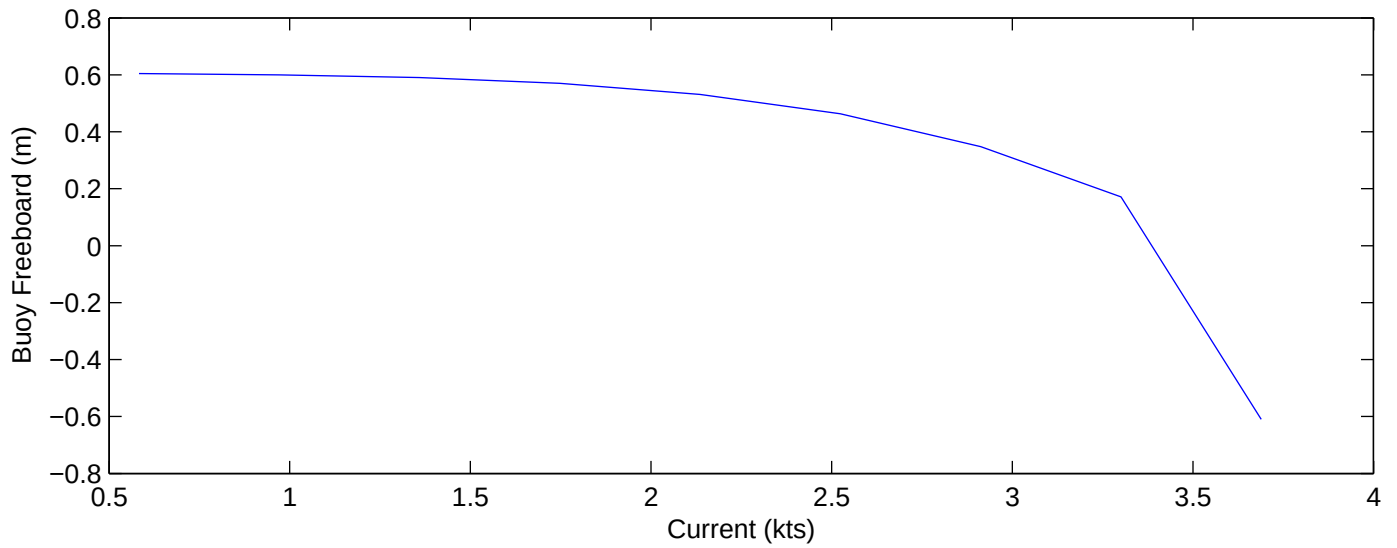
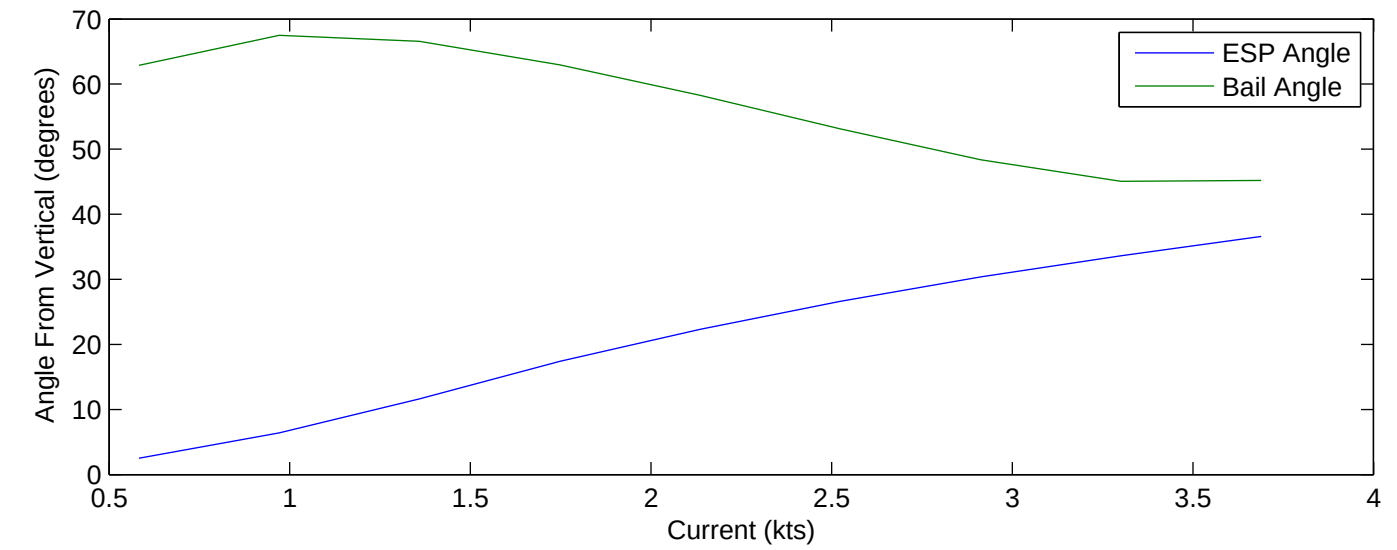




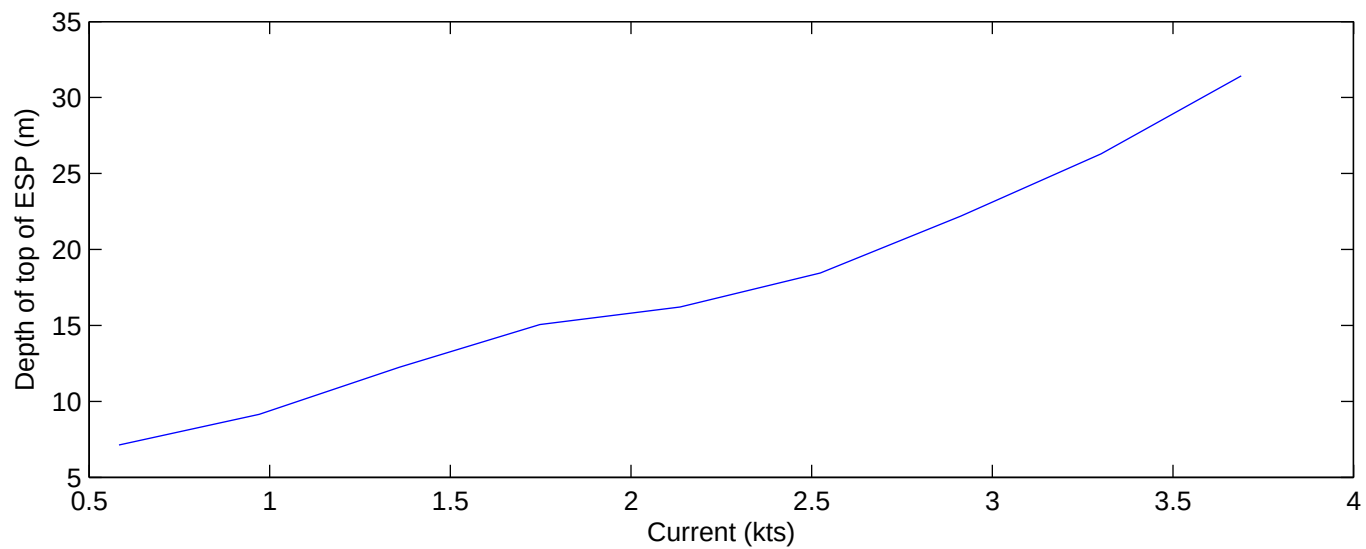
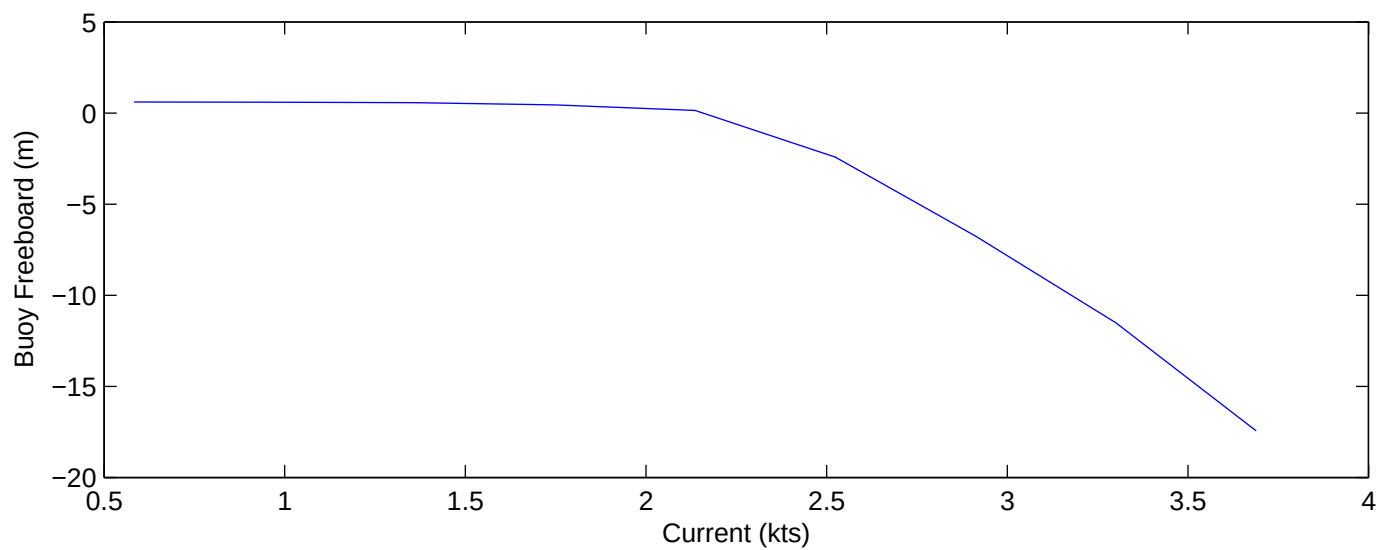
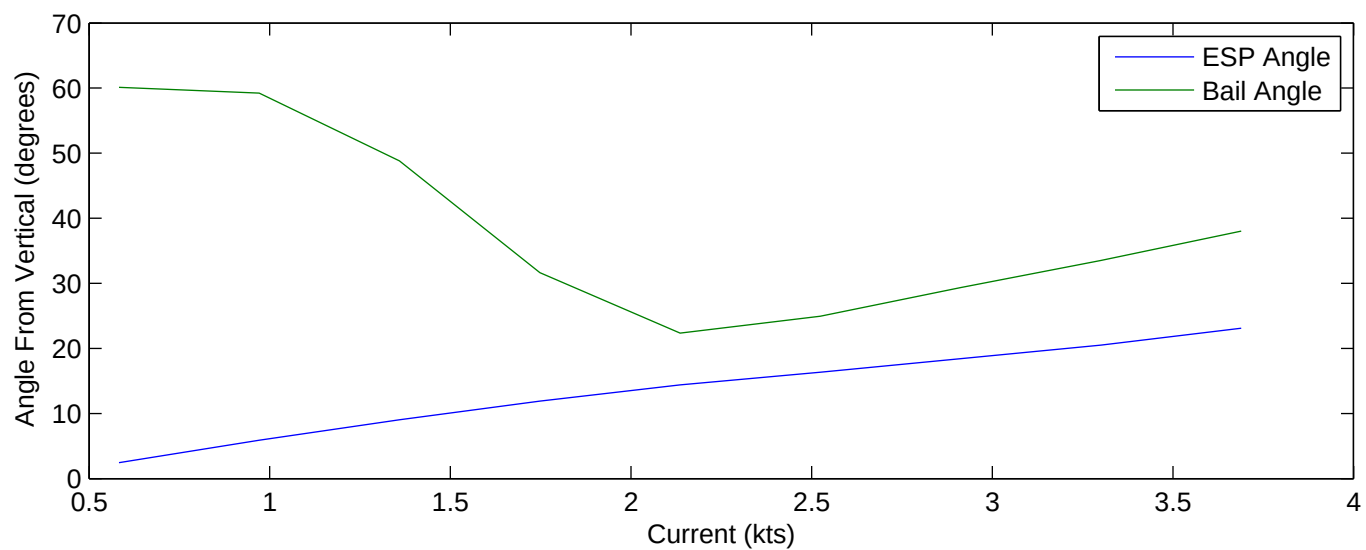




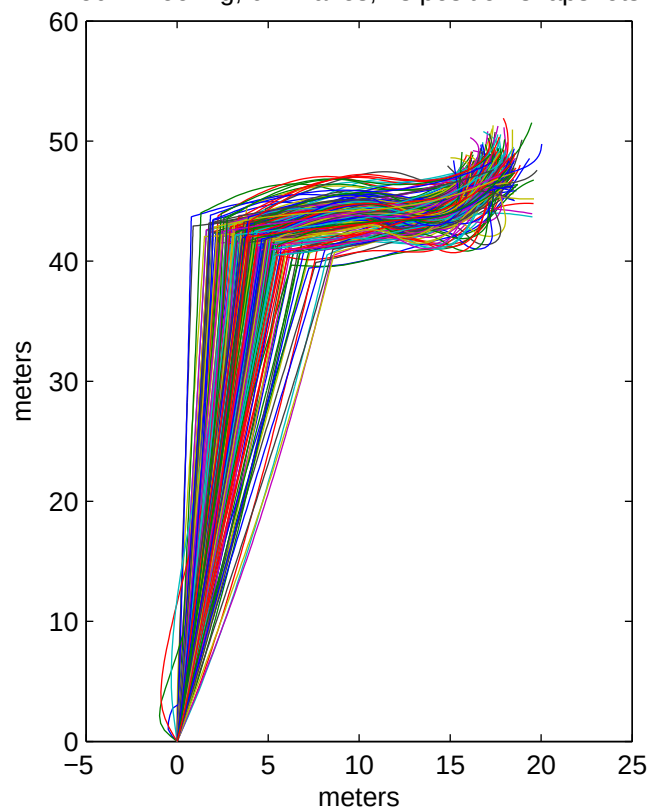
50 m Mooring



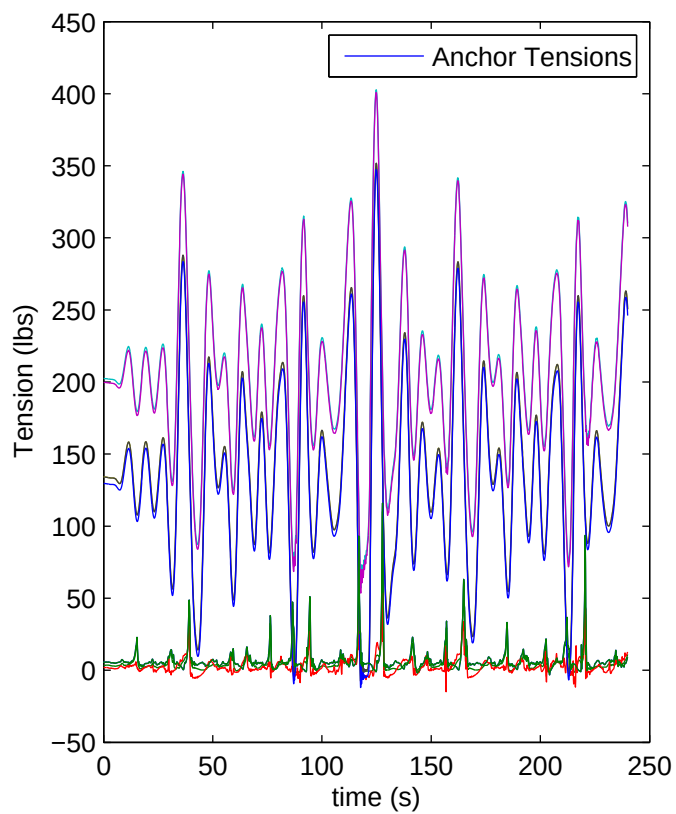
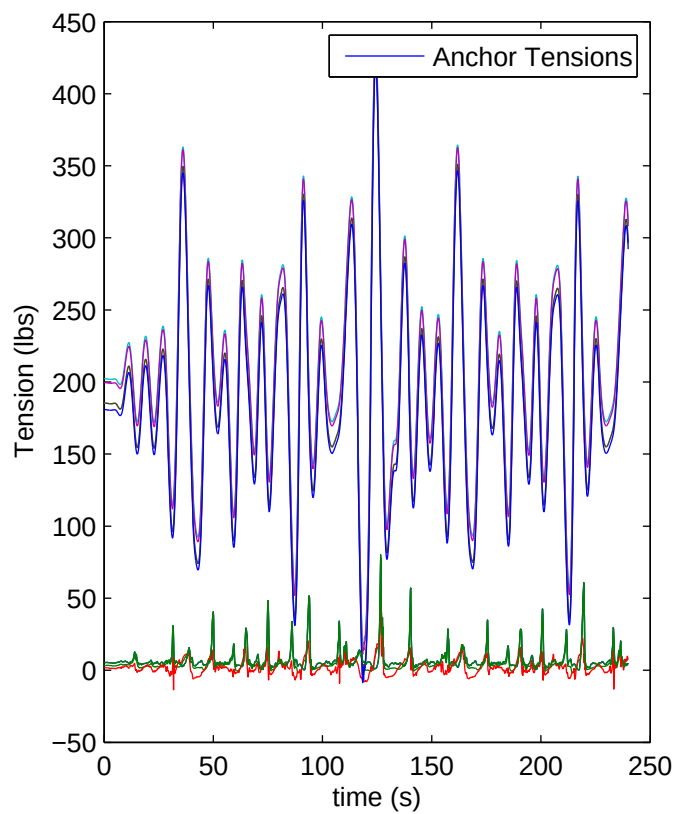
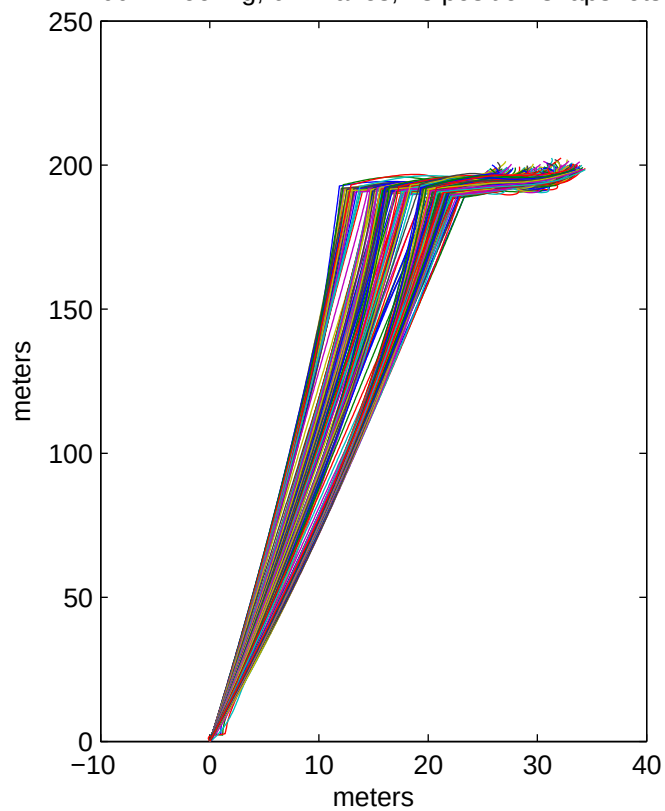
200 m Mooring



50m Mooring, 6m waves, 1s position snapshots



200m Mooring, 6m waves, 1s position snapshots



- Transitioning this mooring design to deeper water increases the chance the buoy will be pulled under, but doesn't pose a survivability threat.
- Estimates are strongly dependent on knowledge of the current magnitudes and profiles at the site.
- Reducing the diameter/weight of the long polyester rope will help.

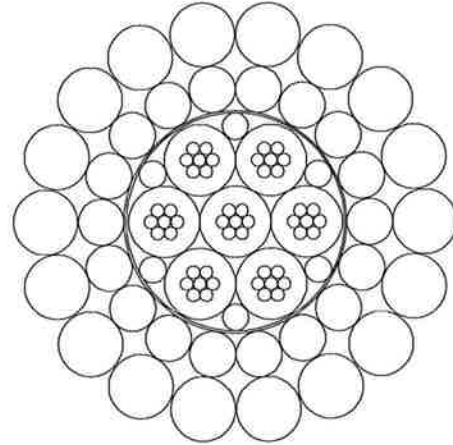
Wet Weights

	50 meter	200 meter
ESP Can	-200 lbs	-200 lbs
7/8" Polyester (25,400 lbs)	9 lbs	45 lbs
1/2" Polyester (8,800 lbs)	3 lbs	14 lbs
Poly -pro/-olefin	< 0 lbs	< 0 lbs

- Increasing the amount of buoyancy at the top of the ESP bail would also help.
- The main susceptibility of current mooring is to large currents pulling the surface buoy under, wave induced loads are modest. Therefore the buoy systems should be engineered for submergence.
- The behavior of the buoy on the surface due to wind has not been carefully analyzed, but a bail arrangement could be considered to keep the antenna more vertical. (Introduces cable management issues, of course).

DATA LINE[®]

Description	mm	Inch
CONDUCTORS (7) #20 AWG, 7/0.0121" (0.31 mm) Bare Copper	0.91	0.036
INSULATION 0.016" (0.41 mm) Wall EPC	1.73	0.068
CORE 6 insulated cdrs around 1 with fillers as necessary. Voids filled with free-stripping semiconductive material. Semiconductive tape over core.	5.05	0.199
ARMOR: Special GIPS Wire Inner: 18/0.0375" (0.95 mm) Outer: 18/0.052" (1.32 mm)	6.96 9.60	0.274 0.378



CABLE CHARACTERISTICS (Nominal Values @ 20°C)

	Metric	English
PHYSICAL		
Overall Dimensions	9.60 mm	0.378 in
Weight in Air	370 kg/km	249 lb/kft
Weight in Freshwater	310 kg/km	208 lb/kft
Temperature Rating, normal	135°C	275°F
intermittent	149°C	300°F
MECHANICAL		
Breaking Strength	57.8 kN	13,000 lbf
Bend Diameter	53 cm	21 in
Elongation (approximate)	0.31 m/km/kN	1.4 ft/kft/klbf
ELECTRICAL		
Voltage Rating	600 Vdc	600 Vdc
Insulation Resistance @ 500 Vdc	15,000 MΩ•km	50,000 MΩ•kft
dc Resistance		
cdr	36.8 Ω/km	11.2 Ω/kft
armor	5.8 Ω/km	1.8 Ω/kft
Capacitance (cdr-armor)	197 pF/m	60 pF/ft
Velocity of Propagation @ 1 MHz	67%	67%

PROPRIETARY; Use Pursuant to Company Instructions

Tyco Electronics *The Rochester Corporation*

Rochester Stock Type 7-H-375A (18 x 18 Armor)			
Date	Page	Revision	Part No.
06/11/2010	1	X	A276374

A time proven, tough 100% polyester double braid with excellent controlled working elongation

FEATURES AND BENEFITS

- > High strength
- > Low stretch
- > Durable
- > Flex-fatigue resistant
- > Pro-Gard Marine Finish

Stable Braid has a braided core and cover, both contributing to its strength and firm hand, while remaining fully spliceable. It works very well on winch drums and has the non-rotational flexibility to be flaked on deck. Stable Braid is a proven, tough rope with excellent controlled working elongation.

APPLICATIONS

VESSEL MOORING

- > General working line
- > Secondary mooring line

TUG

- > Shock line

COMMERCIAL FISHING

- > Gillnet line
- > Purse seine line
- > Trawl or bridle line

PRODUCT CODE:
506/806

Stable Braid
DOUBLE BRAID CLASS I

SIZE DIAMETER INCHES	SIZE CIRC. INCHES	WEIGHT PER 100 FT. POUNDS	SAMSON MBS* POUNDS	SIZE DIAMETER MILLIMETERS	WEIGHT PER 100 m KILOGRAMS	SAMSON MBS* METRIC TONS	ISO 2307 STRENGTH** METRIC TONS
1/4"	3/4"	2.1	2,000	6	3.1	0.89	0.99
5/16"	1"	3.2	3,100	8	4.8	1.4	1.5
3/8"	1-1/8"	4.5	4,800	9	6.7	2.2	2.4
7/16"	1-1/4"	6.1	6,500	11	9.1	3.0	3.3
1/2"	1-1/2"	8.2	8,800	12	12.2	4.0	4.5
9/16"	1-3/4"	11.0	11,300	14	16.4	5.1	5.7
5/8"	2"	14.0	13,900	16	20.8	6.3	7.0
3/4"	2-1/4"	18.0	17,300	18	26.8	7.9	8.7
7/8"	2-3/4"	27.1	25,400	22	40.3	11.5	12.8
1"	3"	34.0	33,300	24	50.6	15.1	16.8
1-1/8"	3-1/2"	45.3	41,000	28	67.4	18.6	20.6

SPECIFICATIONS¹

FIBER (CORE/COVER):
Polyester / Polyester

SPECIFIC GRAVITY: 1.38

STANDARD COLORS:
UNCOATED (506): White with blue ID, black
COATED (806): Black, blue, green, orange, red, yellow, and clear with blue ID

ELASTIC ELONGATION PERCENTAGE
At % of break strength

1-1/4"	3-3/4"	53.9	48,700	30	80.2	22.1	24.5
1-5/16"	4"	60.8	55,000	32	90.5	24.9	27.7
1-1/2"	4-1/2"	73.3	63,800	36	109	29.0	32.2
1-5/8"	5"	85.9	74,100	40	128	33.6	37.4
1-3/4"	5-1/2"	104	88,400	44	155	40.1	44.6
2"	6"	124	105,000	48	185	47.8	53.1
2-1/8"	6-1/2"	147	123,000	52	219	55.9	62.1
2-1/4"	7"	173	141,000	56	257	64.0	71.1
2-1/2"	7-1/2"	198	162,000	60	292	73.3	81.4
2-5/8"	8"	225	180,000	64	335	81.7	90.8
2-3/4"	8-1/2"	246	199,000	68	366	90.2	100
3"	9"	300	236,000	72	446	107	119
3-1/4"	10"	375	292,000	80	558	132	147
3-5/8"	11"	450	346,000	88	670	157	174
4"	12"	525	400,000	96	781	181	201
4-1/4"	13"	589	453,000	104	876	208	228
4-5/8"	14"	689	524,000	112	1025	238	264
5"	15"	788	593,000	120	1173	269	299

10%	1.10%
20%	1.70%
30%	2.70%

SPLICE/CLASS:
Double Braid Class I

¹Due to our continued research and development of product performance, the specifications listed herein are subject to change. For the most current sizes, weights, and strengths, go to SamsonRope.com.

*Spliced strength ** This standard replaces BS EN 919 and ISO 2307:1995 and is for unspliced strengths.