

Company Spec Sheet: KIS Oceaneering



Zack Liddiard, Michael Hanano, Isabelle Tayo, Nikolette Argyris, & Logan Graham (L to R) with ROV Voyager

KIS Oceaneering:

Kealakehe Intermediate School

74-5062 Onipa'a St., Kailua-Kona, Suite G-1, HI 96740 USA

Distance traveled to MATE Int'l ROV Competition: 7,625 Km from Kona, HI to Orlando

K.I.S. Oceaneering Corporation Positions:

CEO and Head of R & D Engineer:	Nikolette Argyris	(14 years, 8 th grade) returning member
CFO & Systems Engineer:	Zack Liddiard	(14 years, 8 th grade) returning member
Government & Regulatory Affairs:	Talen Heinicke	(11 years, 6 th grade) new member
Media Outreach Engineer:	Isabelle Tayo	(11 years, 6 th grade) new member
Testing & Operations Engineer:	Logan Graham	(12 years, 6 th grade) new member
Design Integration Engineer:	Michael Hanano	(12 years, 6 th grade) new member

History at Competitions: KIS Oceaneering/Kealakehe Intermediate has competed at Hawaii's BIRR competition since 2006 & at MATE's Int'l in 2007, 2008, 2009 & 2010. This will be our 5th Int'l competition.

ROV Voyager Vehicle Specs

Total Cost: \$4749.64 less \$4284.00 in grants, donated & reused items = \$515.64 new costs.

KIS Oceaneering is donating R & D and free tech support to MATE for the 2012 Voyager prototype

Primary Construction Materials: PVC: (poly vinyl chloride)

Dimensions: 59 cm long, 41 cm wide and 26 cm high **Total Weight:** 10.0 kilograms

Safety Features: 4 custom motor safety housings prevent entanglement & injury.

A 25 amp fuse & 2 heavy-duty banana plugs wired into a tether safety harness plug that connects to a 12 V battery. A current limiter reduces DC to 20 amps for added safety. Five 3-amp camera fuses are wired into the tether's electrical safety harness.

Special Features: designed to carry out 2012 MATE Missions:

High Speed Propulsion: 4 Johnson1250 GPH motors spin at a rate of 4732 LPH with custom designed, angled, brass propellers for maximum thrust. 1 Johnson 500 GPH motor that spins at a rate of 1,890 LPH with a two blade plastic propeller is used for lateral movement. **Advanced Sensor System:**

2 high-resolution, wide-angle cameras provide clear topside views of deep sea shipwrecks, detailed real-time monitoring of wreck structure, and the surrounding benthic environment. *Voyager's* advanced sonar, and marine compass provide accurate readings to navigate deep water missions.

Payload Tools: Multi-Purpose Claw: collects and transplants coral

Ferrous Tester: determines if debris pile content is metal or non-metal.

Lift Bag Cradle: transports lift bag to fallen mast.

Fuel Oil Collector: collects precise volumes of fuel oil.

Metric Line: provides secondary measurements to verify sonar

Marine Compass: assists in navigation for wreck surveys

Furuno Sonar Sounder: measures distance & aides navigation for ship-wreck surveys