

The Inland Perspective

Lake Erie Diving's **Pat Murphy** describes how this inland diving company expanded its commercial prospects by adding ROVs to its arsenal, becoming a true full-service underwater contractor.

Lake Erie Diving was founded in 1981 on the south shore of Lake Erie in Painesville, Ohio, approximately 30 miles east of Cleveland. We provide commercial underwater contracting services throughout the eastern United States. In addition to complete commercial diving services, Lake Erie Diving has expanded our capabilities to include ROV services, becoming known as specialist in pipe and tunnel inspections.

We have patented an autonomous system for inspecting pipe and tunnels with no limits on length or diameter. The longest tunnel we have inspected to date was 32,000 feet in length, 16 feet in diameter, and 206 feet (62m) deep. Lake Erie Diving also has proprietary equipment to inspect pressured pipes, while maintaining service and pressure during the complete inspection.

We currently own and operate three vehicles, a Phantom HD-2 and a Phantom XTL (both from Deep Ocean Engineering), as well as a Yellow Jacket. In addition, we have an Inukton crawler inspection system with a 1,100-foot umbilical, as well as a proprietary video inspection system with a 3,900-foot umbilical for pipes to 6-inches in diameter.

We have worked with numerous ADC companies over the years as subcontractors to perform difficult inspections that require an ROV or other specialized pipe or tunnel inspection equipment. Our in-house machining and fabricating capabilities allow Lake Erie Diving to build or modify equipment to job-specific needs in a short period of time.

This flexibility has been instrumental in our success, and sets us apart from most other commercial diving companies. With the ROVs, Lake Erie Diving offers our customers a truly full-service underwater contractor. The ROVs are designed to stay at depth under the ice, for days if necessary. A dive crew cannot match a vehicle for inspection and light work under those conditions.

Our growth into the ROV arena started in 1997, when we were approached by a consulting firm regarding a large inspection contract. The inspection required many long penetrations and we felt it best to use an ROV for the project.

Suddenly, we had expanded our contracting capabilities and made ourselves available to a vast new pool of potential customers.

All of our work with the ROVs has been in the eastern US so far. Some of the jobs we've performed include a two-day external inspection of a 12,500-foot raw water intake pipe (including crib), which started in 20 feet (6m) of water and ended at a depth of 248 feet (75m). Lake Erie

Diving also performed a massive two-year preventative maintenance inspection contract, in which numerous long ROV penetrations led to contracts for repair. We've also performed numerous internal inspections of intake and outfall pipes over the past five years.

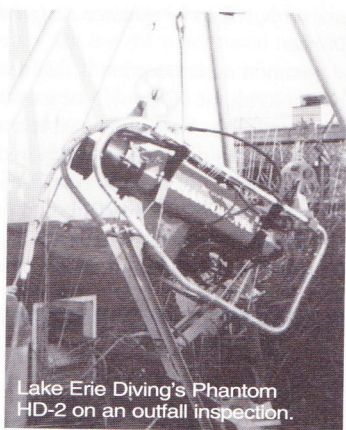
Our Phantom HD-2, with a 2,200-foot umbilical and 1,000-foot (300m) depth rating, can inspect a tunnel up to 4,200 feet long in one day with a three-man crew. The XTL, with its 550-foot umbilical and 500-foot depth rating (150m), is more suited to smaller projects and can be mobilized with two men off a small boat. Options such as imaging sonar, lateral thruster, rear-viewing camera, and manipulator all add enhanced the vehicle's capabilities.

Lake Erie Diving, while an established commercial diving contractor, was new to the ROV services industry. We found that a major contributing factor to our success was having a dedicated ROV operator. We have one person on staff who is specifically responsible for the vehicles, which helps extend their longevity and reliability.

Naturally, most small diving companies cannot afford an employee strictly dedicated to ROVs. We are no different, and the our dedicated operator does perform other duties, quoting jobs, working as a dive crew member when needed, performing maintenance, etc. Our ROV pilot received three days of maintaining training at Deep Ocean Engineering in California. Open water training for our inspection class vehicles was done in-house. We have found that experience is the most important factor for successful operation, followed by common sense to know where to go and where not to go with the vehicle to avoid becoming fouled or rapped in an obstruction.

The vehicles are fragile, yet durable if handled responsibly. We have developed a preventative maintenance program that allows us to arrive on a project with all equipment properly maintained. This approach to operating and maintenance has led to no project downtime, resulting in numerous clients using us on an annual basis.

The only planned expansion to our ROV capabilities is to increase the umbilical length of the HD-2 to 3,300 feet. At this point, approximately 40 percent of our ROV work is with other ADC companies. This is an area we would like to expand on for deepwater and pipe/tunnel penetration inspections. For more on Lake Erie Diving's ROV capabilities, call 440-352-9472 or email pmurphy@lakeeriediving.com. **uw**



Lake Erie Diving's Phantom HD-2 on an outfall inspection.



Join the ADC

...and join forces for safety and practical regulation within our industry.



For membership information contact:

Association of Diving Contractors International, Inc.

5206 FM 1960 W., Suite 202
Houston, TX 77069
(281) 893-8388
Fax (281) 893-5118

www.adc-usa.org

Public Service Announcement

EASON

DIVING & MARINE CONTRACTORS, INC.

Dive Supervisor Wanted

Must have at least 5 years experience in inland diving work including power plants, industry, and vessels. Must be capable of supervising divers and implementing managements' policy. Pay commensurate with experience and outstanding benefits including paid vacation, holidays, major medical/dental health and retirement plan.

Apply in confidence to:
Eason Diving & Marine Cont., Inc.
PO Box 70040
Charleston, SC 29415
Fax 843 747-2728
tom@easondiving.com

An Equal Opportunity Employer