

Customer: **University of Maryland**
Application: **Pumps, Cooling Towers**
Product Used: **MCH Series Drive**

MCH Controls Climate of Oyster Habitat

As a result of over-harvesting, environmental pollution and two new parasites, the famous native Chesapeake Bay oyster population has dramatically decreased. In an attempt to bolster the population, the University of Maryland is conducting a study to assess the effects of introducing the Suminoe oyster, an Asian species that has shown to be resistant to the prevalent parasites.

A University of Maryland 24-month study will examine the Suminoe oysters' eating and reefing habits as well as their vulnerability to the known native oyster predators. The tests will be conducted at the University's Center for Environmental Science Aquaculture and Restoration Ecology Lab. This new facility has the unique advantage of both a closed aquatic system as well as a secure, flow-through system plus experimental temperature and carbon dioxide controls for climate change research and a quarantine laboratory for the safe study of non-indigenous species.

Through their mechanical contractor, J.M. Zimmer, Inc., the University of Maryland chose the **Lenze - AC Tech MCH** variable frequency drive to control their pumps, cooling towers and building HVAC system. The **MCH** drive features a built-in PID set-point controller function as well as the automatic 3-contactor drive bypass, which assures full isolation of the VFD electronics and allows the motor to transfer from 'drive' operation and continue running across the line in 'bypass mode'.

"The advantage of the **MCH** 3-contactor bypass in strictly controlled testing laboratories," explains Joe Zimmer Jr. of J.M. Zimmer, "is an increase in reliability, making sure we maintain uninterrupted performance of the laboratory's entire HVAC system, so research results are not compromised." Having the power and control wiring easily accessible and ample wiring space, the **MCH** is considered one of the simplest to install, set up and use of all the HVAC variable frequency drives on the market. A single-point connection makes the **MCH** drives less error-prone and easy to support.



Process systems often require a system-controlled parameter, such as motor speed, to be able to react to variable situations in order to keep other system attributes constant, such as pressure, flow or temperature. **Lenze - AC Tech** builds the set point controller function into the **MCH** drive to compare the set-point value to the actual value and generate a speed command to the drive to correct the variance or error.

MCH Series Benefits

- Automatic Transfer to Bypass Option
- PID Setpoint Control
- Program Controller: Direct or Reverse-Acting
- Keypad Option for Local & Remote Operation
- Simple to Install
- Proven Performance & Reliability

MCH Series

