2017 was a milestone year.
HI launched new programs, increased member engagement, expanded its portfolio of technical resources and training, reached a record number of Pump End-users, and celebrated its centennial anniversary.

Celebrating Industry Excellence
The Pump Industry Excellence Awards were presented at the Centennial Gala and Awards Dinner. These inaugural awards recognized the overall impact, improvement, advancement, engineering and timeliness of industry/end-user projects in several categories:

The Energy Efficiency Award (sponsored by Taco Comfort Solutions) was presented to Con Edison

The Environmental Impact Award (sponsored by Xylem) was presented to Portland General Electric/Clean Water Services

The Technology and Innovation Award (sponsored by Sulzer) was presented to TechnipFMC

Visit www.pumps.org/100 to learn more.
MEMBERSHIP

HI Membership grew to 114 companies and divisions – an all-time high by adding new Members and Partners:

**New Members**
- Flowrox, Inc.
- Great Plains Industries, Inc.
- Colfax Fluid Technology
- Netzsch Pumps North America
- INDAR Maquinas Hydraulicas

**New Associate Members**
- General Rubber Corporation
- Clarke Fire Protection Products, Inc.
- Applied Flow Technology
- Badger Alloys, Inc.
- US Pump Corp.

**New Standards Partners:**
- HDR
- Russell Industries, Inc.
- Carollo Engineers
- Metropolitan Water District of LA
- PumpMan LLC

**Pump User Forums**
A newly created PD Working Group began an initiative in early 2017 to provide a forum for PD pump users and manufacturers to discuss challenges and identify resources to benefit those working with these pump technologies. Following the PD Pump User Forum at the Annual Meeting, a project list was created that includes expanding the training resources for PD Pump End-users.

**Helping Members into Markets:**
A visible HI, present at numerous conferences and trade shows helped increase awareness of pump system efficiency and reliability; and created visibility for HI’s Pump System suite of training and certification programs. The connection boosted Member’s visibility and contributed to the program success.
ENERGY EFFICIENCY

HI launched its first product label for energy efficiency - the HI Energy Rating Label which works alongside the HI Approved Pump Test Lab Program to provide an Energy Efficiency rating for pumps falling within scope of the 2016 DOE Commercial and Industrial Pump Efficiency Regulation. This program was designed to recognize manufacturers who go “above and beyond” the DOE minimum and help utilities seeking to incentivize energy efficiency through rebate programs.

This project required the development of an online database to share HI rated products with Utilities and the public for verification purposes and to support incentive program managers as they seek energy efficiency through market transformation. Pacific Gas and Electric, PG&E was the first utility to share news that pumps “listed in the HI Database that meet set performance levels qualify for incentives of $25/HP starting in January 2018”.

Energy Rating Portal
Utilities can use the HI Energy Rating Label and the searchable database as a means to quickly identify pumps and systems that qualify for rebates.

PSAP Personal Certification
HI launched its first personnel certification program for Pump System Assessment Professionals (PSAP).

The PSAP credential establishes clear criteria for professionals who assess hydraulic systems behavior and its effect on energy, reliability and productivity; collect and analyze equipment data; and recommend proposals for pump system optimization opportunities. PSAP certification will provide a high level of confidence to end-users and other stakeholders that pump system assessors have the experience and expertise to perform high-quality assessments which will lead to more energy efficient and reliable pumping systems.

Energy Rating (ER) Label
The Energy Rating Label is designed to clearly indicate the power savings obtained from pump system upgrades and changes. The savings is calculated over the baseline established by the U.S. Department of Energy (DOE) according to HI Performance Test Standards.
HI Standards and technical committees met frequently at HI meetings and in web-based teleconferences to review, maintain and grow the portfolio of 32 ANSI Standards and over a dozen additional guidebooks and technical documents.

Standards that were revised and updated in 2017 include:

- ANSI/HI 9.6.1 Rotodynamic Pumps Guideline for NPSH Margin
- ANSI/HI 9.6.3 Rotodynamic Pumps - Guideline for Allowable Operating Region
- ANSI/HI 4.1-4.6 Sealless, Magnetically Driven Rotary Pumps for Nomenclature, Definitions, Application, Operation, and Test
- ANSI/HI 11.6 Rotodynamic Submersible Pumps: for Hydraulic Performance, Hydrostatic Pressure, Mechanical and Electrical Acceptance Tests
- ANSI/HI 7.1-7.5 Controlled-volume Metering Pumps for Nomenclature, Definitions, Application, and Operation

In addition to maintaining additional HI and ANSI Standards for further updates, HI continues to represent the U.S. in the ISO committees as secretary of ISO TC 115/SC 3 and the U.S. Technical Advisory Group to TC 115

HI published four additional technical guidebooks in 2017 including:

- Application Guideline for Variable Speed Pumping
- Flexible Coupling Basics Guideline
- Water Treatment Plant Pumps: Guidelines for Selection, Application and Operation
- Pump Systems Assessment: Body of Knowledge

**Pump System Assessment Professional (PSAP)**

The Pump System Assessment Body of Knowledge (PSA-BOK) outlines and describes the knowledge and skills necessary to conduct successful and quality pump system assessments. It was developed to support the knowledge requirements for the Pump Systems Assessment Professional (PSAP) certification program.

The pump system assessment professional should have a thorough understanding of:

- Hydraulic systems behavior and its effect on energy, reliability, and controllability
- Pump performance characteristics and their relationship to overall systems operation
- Identification, qualification, and quantification methods for estimating potential cost savings
- Process and equipment data collection and analysis techniques
- Analysis tools to conduct and manage pump systems assessments
- Reporting and documenting results to build a business case
The first annual edition of the new World Pump Market Report in collaboration with Oxford Economics and Euro-pump was issued, providing pump industry data, analysis, and forecasts for over 70 countries and a dozen end-use industries. The report estimated growth in the world pump market ranging from 2.7 to 6.5% over the next 4 years. Additional intelligence was shared by sector experts at the Market Outlook Conference and Fall conferences, with ITR Economics providing business cycle trend analysis at the Annual Conference.

The 2017 HI Conferences brought valuable opportunities to network, share and pursue technical discussions. In addition to market outlooks and economic updates, invited speakers shared updates and insights on technology, trade and domestic policy; and how to position our industry for an uncertain future. Workforce development was a theme throughout the year as speakers from Gallup and the Center for Generational Kinetics inspired the audience with actionable ways to build leadership traits and manage a multigenerational workforce.

With the 2016 Commercial Industrial Pump Rule now in place, HI regulatory work continued in 2017 through the ASRAC negotiated rulemaking for circulator pumps which now awaits the Administration’s approval for a final rule. Legislative work began following the HI Board decision to engage government relations firm, Alpine Group to help extend HI’s voice and influence in Washington, D.C. Following a series of letters and visits, the Securing Required Funding for Water Infrastructure Now (SRF WIN) Act was born. Through proven leveraging of federal water infrastructure dollars - the SRF WIN Act has the potential to provide over $50B during the next five years for improvements to America’s water infrastructure.

In December HI was recognized in both the House and Senate for their 100th Anniversary and contributions to society.
HI Training impacted touched over 2,500 course attendees in 2017. This 44% increase over 2016 was achieved by targeting and serving end-user needs, particularly among end-users in the municipal, energy and utility sectors which totaled 78% of Pump Systems Matter (PSM) training course attendees this year. The PSM sponsor community grew around the globe with new sponsors offering courses in Canada, Israel, Mexico and Saudi Arabia.

**New Courses Developed:**
HI’s 501c3 training subsidiary added new courses to its training portfolio to better meet the increasing demand.

- Improving Performance through Flow Modeling
- Pump System Optimization Methodology for Greater Efficiency and Reliability
- Pump System Maintenance and Operations
- Variable Speed Pumping
- Vibration NPSH
- Condition Monitoring
- PSO for Building Services
- Expansion Joints
- Motors, Pumps and Drives
- DOE ECS/TP & Field Benchmarking
- Pump Efficiency and Energy Rebates

**More Delivery Formats:**
- Live instructor led (both public and in-house)
- Webinar (public and exclusive for Members)
- E-Learning (individual and company hosted portal)

The qualified PSM Instructor base continues to grow, with Members and Partners qualifying 13 new instructors in 2017.
HI activities rely on the generous time and support of Member Companies and the employees. In 2017, over 400 volunteers helped the Hydraulic Institute achieve our goals.

HI Awards were presented to:

**Lifetime Achievement**
Albert Hubert, Patterson Pump

**Member of the Year**
Michael Coussens, Peerless Pump

**PSM Leadership Award**
Ray Hardee, Engineered Software, Inc.

**Young Engineer of the Year**
Jared Wageman, Sundyne