Hydraulics | Pneumatics Assessment

NFPA Discusses Innovations, Challenges and the Future of Fluid Power

Matthew Jaster, Associate Editor

The National Fluid Power Association (NFPA) is an organization consisting of manufacturers, distributors, suppliers and educators working together to strengthen the fluid power market. Its mission is to serve as a forum where all fluid power channel partners can advance fluid power technology and successfully compete in the global industrial market. The organization just held its 2012 Annual Conference in Hawaii from March 6–10. *PTE* recently caught up with Eric Lanke, CEO of the NFPA, to discuss the conference, the state of fluid power in 2012 and the latest technologies that are changing the industry.

Eric Lanke, CEO, NFPA.

Q: What role does the NFPA play in sharing the latest fluid power technology with the industry?

NFPA doesn't develop technology directly. NFPA does, however, bring members together to support efforts that lead to technological developments beneficial to our industry. For example, NFPA was a key player in bringing members and academic research institutions together to secure a multi-year National Science Foundation grant that supported creation of the Center for Compact and Efficient Fluid Power (CCEFP). The Center is a group of universities working with industry to advance such areas as energy efficiency and storage, reduction in size of fluid power systems, and portable sources of power to drive these smaller and more efficient systems. At the same time, a core benefit of the CCEFP is that young engineering students are now being attracted to study fluid power. This is creating a broader pipeline of engineers trained in fluid power for our manufacturers and their customers.

Q: How are the latest fluid technologies changing the industry today?

There are many examples of technology breakthroughs, from both industry and from the CCEFP, that hold the potential to transform the fluid power industry by strengthening its position in existing markets and opening new ones. Hydraulic hybrid technology is being used on delivery trucks and garbage trucks to deliver major energy savings, and research is advancing to make these systems more compact for use on passenger vehicles. Variable speed drives are being used in industrial settings to achieve energy savings on many ap-

plications. Hydraulics promises energy savings and reduction in downtime and maintenance when used to transmit power in wind turbines. Pneumatics is making strong and innovative progress in fast growing medical markets, where it is being used to power anything from artificial hearts to oxygen concentrators. Innovations like these are expanding the reach into our industry. They speak well of our member companies and create a new image for our technology. That spurs more interest among customers, generates new customer markets, and attracts talented people to this industry.

In 2011 NFPA launched our Innovation Award program to recognize the innovative use of fluid power technology by engineers and technicians working in our end-use markets. We recently recognized two engineers at GenTech Global for a hydraulic application that reduces energy consumption and emissions on commercial fishing boats. Their innovation eliminated an additional engine typically used to power the boat's electrical systems, reducing overall fuel consumption by up to 25 percent. Applications are now being accepted for the 2012 NFPA Innovation Award. If your readers have an innovative fluid power application that increases energy efficiency, system reliability or reduces environmental impact, I would encourage them to submit an application for consideration at *http://www.nfpa.com/ourindustry/nfpa_innovation_award.asp.*

Q: Describe the greatest challenges to those involved in fluid power in 2012.

The last few years have certainly been interesting ones for the fluid power industry. The global economy has been reshaped in the wake of the Great Recession, and many businesses are rethinking their approach to global markets and global competitors to stay profitable. A historic downturn, followed by a vigorous rebound has pushed the fluid power industry—unlike many other sectors—to heights in excess of the industry's pre-downturn highs. Many fluid power companies have experienced growth and a return to profitability; but many challenges remain. Globalization has accelerated, the supply chain struggles to meet demand, and although the country is experiencing a period of high unemployment, many fluid power companies are having trouble finding the talent they need to drive success in their organizations.

Q: What are the big stories coming out of the NFPA Annual Conference?

NFPA's 2012 Annual Conference was themed around Global Product Development and Differentiation—providing members with innovative resources and tools to better prepare them for taking advantage of opportunities associated with doing business in today's global economy.

One of the speakers at this conference focused on the changing macroeconomic landscape, with the idea that our fundamental business cycle is becoming more volatile. This makes NFPA's efforts to provide predictive data and tools for members more important in helping them anticipate and manage the ups and downs of the industry and key customer markets.

One of NFPA's key strategic priorities is helping our members thrive in this environment by expanding and diversifying their global operations. New programs have and are being launched that focus on three key objectives: (1) Helping NFPA members connect with needed international partners; (2) Providing education and resources on topics related to international business; and (3) Augmenting our existing market information reports with information necessary to make smart decisions about international business opportunities.

Q: How are the educational portions of the NFPA doing today, particularly engaging young students in the career opportunities in fluid power?

The NFPA Education and Technology Foundation is very focused on this issue, and has successfully developed several programs that will improve fluid power's attractiveness to students and enhance our ability to make further inroads in the future. One of our key programs in this regard is project grants offered to universities and technical schools to add or augment the fluid power educational materials used by their students. A total of 24 such grants—all valued at a maximum of $5,000—have now been awarded to the 17 different schools. This past year saw five new awards, including two to new schools, further broadening the reach of fluid power instruction. We also focus on exposing young students to fluid power and the benefits of working in our industry. Our marquee program here is the NFPA Fluid Power Challenge—a design competition for eighth graders that teaches both engineering and fluid power. In its fourth successful year, more than 1,500 students have participated in this program.

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NFPA members discuss new marketing technology at the 2012 Annual Conference recently held in Hawaii (courtesy of the NFPA).

Q: Many associations don't offer the levels of market research and industry data that the NFPA gives to its members. Why is this information so important and how does the NFPA provide the best (and most recent) statistics to its members?

NFPA's information services are important because they help members plan ahead for changes in the industry and customer markets. To the extent that fluid power companies can anticipate changes, they can make adjustments that create competitive advantage. This is beneficial to individual companies, and also to the competitive position of the industry as a whole.

For example, if you can look at our data sources and use our tools to see a downturn coming, you may be able to make adjustments early that make it possible to retain more employees through the downturn. This is key to success and profitability because companies that are able to do this are better prepared to take advantage of upward movements in customer markets than their competitors. And retaining trained staff is vitally important in an era of growing workforce scarcity. It's going to be harder to hire when everyone else is hiring…after the economy has obviously begun to improve.

Q: Is membership up or down in 2012? What steps is the NFPA taking to increase membership in 2012?

Membership has been ticking upward in 2011 and 2012, reflecting the recovery of the industry. And, participation in association activities, such as conferences and our statistical programs, is on the uptick as well. Our membership focus is to develop services that support our members directly in their daily jobs. For example, we are making it easier to use our industry statistics programs by creating an interactive and customizable web-based dashboard so they get the information they need, how they need it, and when they need it. And we're developing more global sources of information to support member efforts to develop business overseas.

Eric Lanke, CEO of the NFPA, discusses the agenda at NFPA's 2012 Annual Conference (courtesy of the NFPA).

Q: Some people become members of associations by name only. What advice can you offer NFPA members to play a larger role in the association? What tools are available to help them become more involved?

Members who become more involved in the association have the opportunity to shape the services and benefits they receive, and can help generate greater value for their companies and themselves personally. NFPA members can participate on committees that create programs they benefit from, and many also benefit just from being able to work as a team with industry peers. We make it easy as possible to participate and balance respect for the time pressures they face with the value they need to generate. Committee participation is often a stepping stone to subsequent levels of involvement in NFPA governance, up to and including service on the NFPA board of directors.

Q: What does the future hold for the NFPA and for fluid power in general?

Fluid power will continue to be a major force in motion control. Our members have a track record of developing innovative products and uses for fluid power, and we're helping support development at the industry level. We look to see our technology compete strongly in traditional markets, and see new markets open up. 2009 was a tough year for this industry; but we are back standing tall in 2012. Many manufacturing industries can't say that, and it's a testament to our members and their leadership. We like to think it says something about the relevance of the services NFPA provides as well. There will almost certainly be another downcycle in this five year time period, but with NFPA's help, our members will be ready. We encourage you to learn more about NFPA's initiatives and other programs being launched over the upcoming months by visiting our website.

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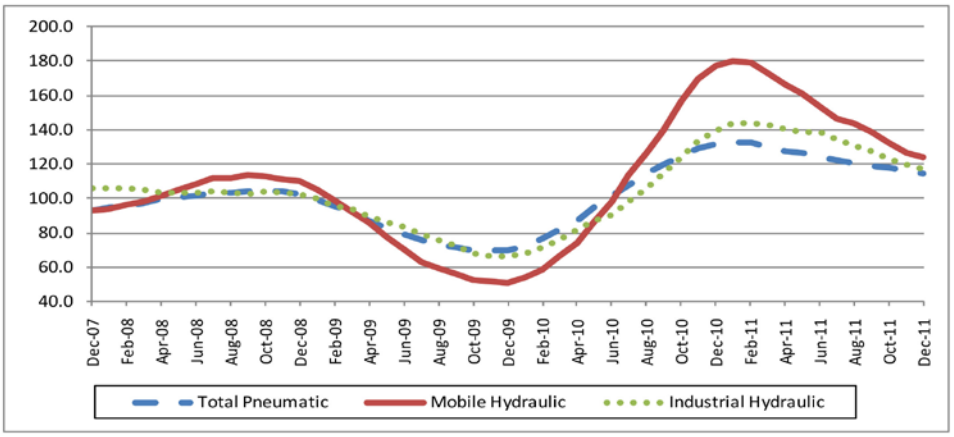
Fluid Power Industry Growth Trend

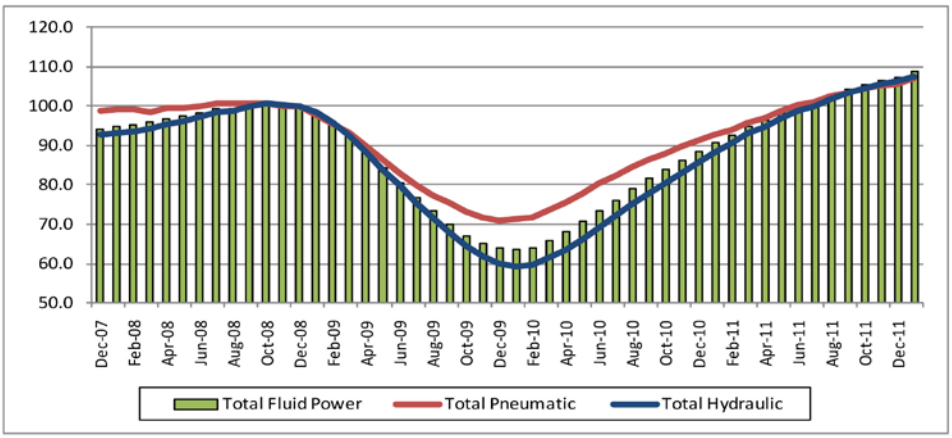
The latest data published by the National Fluid Power Association shows industry shipments of fluid power products for January 2012 increased 17.3 percent compared to January 2011, and increased 13 percent compared to last month. Mobile hydraulics, industrial hydraulics and pneumatics all showed growth in January 2012 when compared to January 2011, and also increased when compared to last month. The charts and table are drawn from data collected from more than 80 manufacturers of fluid power products by NFPA's Confidential Shipment Statistics (CSS) program. For more information, contact Eric Armstrong at (414) 778-3372, or email at *earmstrong@nfpa.com*.

Pneumatic, Mobile and Industrial Hydraulic Orders Index



Each point on this graph represents the most recent 12 months of orders compared to the previous 12 months of orders. Each point can be read as a percentage. For example, 117.3 (the December 2011 level of the industrial hydraulic series) indicates that industrial hydraulic orders received from January 2011 to December 2011 were 117.3% of the orders received from January 2010 to December 2010. (Base Year 2008 = 100)

Total - Hydraulic and Pneumatic Shipments



This graph of 12-month moving averages shows that in January 2012, both pneumatic shipments and hydraulic shipments increased. (Base Year 2008 = 100)

Shipments - Cumulative year-to-date % change (2011 vs. 2010)

	Total Fluid Power	Total Hydraulic	Total Pneumatic
	Shipments	Shipments	Shipments
Oct. 2011	22.8	26.5	17.2
Nov. 2011	22.1	25.4	16.6
Dec. 2011	21.2	24.2	15.8

The table above is expressed in terms of cumulative percent changes. These changes refer to the percent difference between the relevant cumulative total for 2011 and the total for the same months in 2010. For example, the December pneumatic shipments figure of 15.8 means that for the calendar year through December 2011, pneumatic shipments were up 15.8% compared to the same time period in 2010. (Base Year 2008 = 100)