Dear Die Casting Industry Professional,

NADCA has worked over the past year to build several new platforms and programs that will be necessary to sustain our excellence in assisting the die casting industry. One of our focuses for 2007 was the development of comprehensive design services for OEMs and purchasers. Additionally, we worked with our corporate members on design problems of existing customers. Our goal is to become a resource for designers and our members in the area of value analysis and design efficiency. Our published design standards in print and on the Web are going through major revisions to support our design service.

Online education for all aspects of die casting will be a major future requirement of our industry. NADCA and the Harvill foundation teamed up in 2007 to develop and disseminate online educational courses in melting and safety. Additional areas in die casting design, principles and energy will be available early in 2008. Once complete, NADCA will move towards placing all of its educational courses online. This is another major goal for 2008.

In mid-2007, NADCA began funding a major effort to conduct a census of the die casting industry in North America. The results of the study will include shipments, employment, machine numbers/sizes and markets served for every die casting operation in North America. The results will be published in 2008 and serve to create a new industry index program that will help accurately predict business conditions in the industry on a month-by-month basis.

Our government affairs efforts in 2007 included negotiating an applicability determination from the EPA on painted ingots and conducting discussions with OSHA on proper PPE for die casting operations. One of our main thrusts was our efforts to secure research funding from the DoD and DoE. Both areas of research are meant to help the military (DoD) with efficient die cast parts and create a more energy-efficient (DoE) process and/or materials to compete in the global marketplace.

There is much more that you will read about in the next 14 pages or so. All of this is done through the guidance of the NADCA committees and Board of Governors and supported with the annual membership dues from the industry.

Thank you for your time and commitment to the industry. I look forward to working with you in 2008.
Those Who Lead

NADCA 2007 Executive Officers

Robert Wilson, Chairman
Callen Manufacturing Corp.

Michael Stroh, Vice Chairman
Stroh Die Casting Co. Inc.

Leonard Cordaro, Secretary/Treasurer
Premier Die Casting Co.

NADCA Board of Governors

Andrew Behler
Blue Ridge Pressure Castings Inc.

Paul Brancaleon
Premier Tool & Die Cast Corp.

Kelly Brannick
Alternative Methods Inc.

Greg Brown
Ace Precision Castings LLC

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Quad City Die Casting Co.

Tim Foley
West Irving Die Casting

Scott Frens
Fort Recovery Industries Inc.

Doug Gross
Tek Cominco

Doug Harmon
Twin City Die Casting

William Hiegel
Custom Alloys Light Metals Inc.

Tom Hoskin
Metal Conversions Ltd.

Tom Johnson
Ryobi Die Casting (USA) Inc.

Gary Klockowski
Klockowski & Associates

Robert Marconi
RCM Industries Inc.

John Mudrak
Carteret Die Casting Corp.

Bret Miller
Chem-Trend Ltd. Partnership

Mark Petro
ICG Castings

Neal Shapiro
Modern Die Casting

Leon Suttles
Progressive Components

Douglas Taylor
Del Mar Industries Inc.

Dave Thomas
DTP Diecast Solutions LLC

Eric Treiber
Chicago White Metal Castings

John Walker
Walker Die Casting Inc.

Bill Walkington
Walkington Engineering

Jack Wright
Xite Inc.

NADCA Interns

Allison Conlon
Publications & Accounting

Alexander Monroe
Research & Development

Jason Soderlind
Graphic/Web Designer

NADCA Staff

Andrea Anderson
Managing Editor

Ashley Bernard
Graphic Designer

Donna Hutchins
Meetings & Membership Manager

Angelique Landini
Director of Finance & Administration

Tricia Margel
Director of Information Systems

Vicky Mazur
Education Manager

Daniel Meyer
Design Engineer

Andy Ryzner
Computer Graphic Artist/Animator

Daniel Twarog
President

Melisa Twarog
Advertising & Promotions Manager

Stephen Udvardy
Director of Research, Education, & Technology

www.diecasting.org/information/annual

Annual Report 2007/A3
Membership — the Reason for Being

Individual membership held steady and even increased slightly over 2006’s numbers, showing that the benefits of NADCA’s membership continue to be a highly regarded investment to the industry at large. In fact, the value of a NADCA membership remained an important investment in the future to over 2,994 individuals and corporations in 2007. Individual membership numbers increased and were up 1.35% over 2006 totals, while Corporate Membership dipped 1.5%, dropping from 2006’s number of 271 to 267 die casters and suppliers in North America. There were a total of 15 dropped Corporate Memberships in the first and second quarters of the year, augmented by the steady addition of 18 Corporate Memberships throughout the year.

NADCA pursued membership drives, both individual and corporate, throughout the year, using e-mail, direct mail and the distribution of applications to the Chapter courses.

In 2007, NADCA added its OEM lead service to the list of complimentary benefits that NADCA Corporate Members receive. The service provides members with real-time access to a special list of OEM contacts generated by the NADCA marketing program. A valuable addition to any company’s sales and marketing efforts, these individuals, along with their demographic information, can be extremely useful in reaching a specific company involved in the designing, buying or specifying of die castings, as well as formulating a better understanding of the geographic distribution of OEMs, their various end markets, what type of information they have requested/received, along with the publication/media that lead them to NADCA. Formerly, an additional “subscription only” service, it is now available to all Corporate Members in good standing.

NADCA Chapters — Reaching the Industry

NADCA continued to be strengthened through the hard work of its Chapters around the country. The 16 active NADCA Chapters held local meetings, supported die casting educational courses, hosted social events and organized tours. NADCA staff spoke at least one meeting of most Chapters in 2007. Presentations varied from industry marketing to die casting research activities. The state of the industry speech was presented by NADCA President Daniel Twarog to seven Chapters, and Board vice chairman Leonard Cordaro presented it to Chapter 7.

2007 Membership Numbers

![Graph showing membership numbers]

NADCA Mission

To continue as the worldwide leader in stimulating growth and improvement in the die casting industry.

Strategic Areas of Concentration

**Chapter Relations:** Determine the role of the chapter in NADCA.

**Research and Development:** Maintain and expand funding sources while identifying industry needs and placing tangible results on the factory floor. Focus efforts on obtaining all applicable and available technology.

**Education:** Create programs for new markets and upgrade delivery systems while measuring the effectiveness of the training. Ensure that the most recent research information is incorporated into the standard education curriculum.

**Meetings and Expositions:** Review NADCA’s meetings schedule and explore options to coordinate with other groups.

**Marketing:** Develop a plan to effectively market die casting as the process of choice.

**Government Affairs:** Foster strategic alliances and increase grassroots efforts to further strengthen the program. Effectively communicate the ongoing efforts and impact that the program is having.

**Globalization:** Develop a plan to define NADCA’s global presence.
NADCA continued to support the active Chapters through membership rebates that were used for scholarships and for providing continuing education to Chapter members.

The representation of NADCA Chapters on NADCA’s Board of Governors was also improved through the formation of the Chapter Board Selection Committee. This committee works with the existing Chapter Board members to strengthen representation on the national Board. The Chapter/Membership Committee, led by Jack Biel, continued its efforts to help Chapters with ideas for meetings, special events and different venues that are aimed at increasing meeting attendance.

In 2008, a special group will be working to develop a long-term plan for the NADCA Chapter structure. The goal of the group is to start transitioning the activities of local Chapters into formats that are meaningful and will provide for the needs of future NADCA individual members.

Education — Upgrading the Workforce

Attendance for the NADCA educational courses has stabilized at a strong level. There was a drop-off in attendance five years ago and a few years prior to that; however, attendance has been maintained at high levels for the past four years. National, Chapter, in-plant, in-house and Train-the-Trainer class attendance in 2007 totaled 1,150 students for 99 course offerings extended by NADCA. There were 47 national courses with 260 students, 19 Chapter courses with 288 students and 28 in-plant courses with 561 students. The in-house program was completed by 38 students at four facilities, and three new trainers for the in-house program were trained. With the 7 NADCA courses offered by Southwestern Michigan College (SMC) generating an attendance level of 54, coupled with 34 students that completed the Operator Training through SMC, the grand total for 2007 attendance was 1,238. The attendance numbers for in-plant courses include two courses that were extended through Dalus in Nuevo Leon, Mexico, for 64 students, as well as five OEM design seminars held at companies in the U.S. for a total of 111 participants.

Contributing to the overall strong level of attendance was the increase in targeted promotions and higher interest in OEM courses.

To ensure quality and that courses are kept current, the review and revision cycle continues. Courses that were reviewed and revised include EC-211 Dimensional Repeatability (presentation), EC-700 (presentation book) and EC-902 Operating the Die Casting (presentation and book). In addition, a new course, EC-430 Process Monitoring was released, which was based on the book A Guide to Process Monitoring and Control. A fifth course presentation was translated to Spanish (EC-515 Die Casting Defects), adding to the existing Level I courses in Spanish. Lastly, a new Metal Melting & Handling video was produced in English, and a Spanish version will be released in early 2008. The video was produced with Harvill funds.
Working Smarter with New Technology

Twenty-one projects were in the 2007 NADCA Research and Development Program portfolio. This is two less than the number of projects in 2006, as five new projects were initiated but six were completed and one was discontinued. Two of the new projects are under the AMC Castings for Improved Defense Readiness (CIDR) Program, which is supplementary to the Castings for Improved Readiness (CIR) Program initiated in 2006 and funded by the Department of Defense through the Defense Logistics Agency. These two new projects are targeted at developing premium-grade alloys and tooling for higher production rates. Two more of the new projects come by virtue of NADCA’s participation in two United States Council for Automotive Research (USCAR) projects. Both of these projects are focused on developing magnesium casting processes — one for structural automotive chassis components and one for automotive front-end components. These two projects contain large teams of participants and provide for a high level of industry cost share/in-kind contributions in addition to funding. USCAR is funded by the Department of Energy (DOE) Freedom Car Program. The fifth new project is targeted at developing the relationship between thermal fatigue, impact and microstructure of new grades of steel that have been added to the NADCA die material specification, which covers recommended procedures for die material procurement and heat treatment.

The remainder of the R&D project portfolio consists of projects which were initiated prior to 2007 and include those under the AMC CIR Program, the DOE/CMC ENERGY-SMARRT Program and those funded directly by NADCA. The total leveraged value (funding plus in-kind contributions) of the NADCA portfolio increased from about $10 million in 2006 to nearly $20 million in 2007.

Transfer of research results and technical information to the industry is made through many channels. One can find the fruits of NADCA’s research and technology efforts through the Web site, magazine articles, publications, conferences and congress sessions. For instance, “Turn Research into Action” brochures were initiated in 2006 as a means of disseminating research project results to Corporate Members. In 2007, an updated and second release of the Cast Materials brochure and Computer Modeling and Design Aids brochure were constructed. These brochures contain summary reports and implementation strategies for completed projects, and where applicable, success stories. Publications such as #529 A Guide to Die Release Agents and Their Applications, #531 User’s Guide for Relieving Stresses in Die Casting Dies and #532 Cleaning Techniques Used for Die Casting Dies were also released in 2007.

In addition, the 111th Metalcasting Congress transferred information through 11 NADCA Congress sessions. Seven of the sessions were standard format sessions with presentation of Transactions papers. Twenty-one papers were presented. Four of the sessions were of the new format type, comprised of a keynote presentation, success stories from die casters and suppliers and a panel discussion. The topics of the four new format sessions were rough machining of dies, rapid tooling, energy and environmental issues. The 2007 NADCA Transactions CD, another 2007 publication, contains the Transactions papers and presentations, the keynote papers and presentations and success story presentations.

Contributions to the above have been made by the technical committees and task forces, which continue their efforts in identifying areas for future research, selecting new projects, providing oversight of current projects and assisting with the transfer of technology for the betterment of the industry.
Maximizing Knowledge through Industry Events

The 111th Metalcasting Congress was May 15-18, 2007, in Houston, TX. The annual event showcased the latest technology and research available to the metalcasting industry. Approximately 1,800 people attended the event, which featured more than 200 companies exhibiting their most innovative products and services.

This year marked the third year AFS and NADCA have combined their annual meetings. The combining of the shows has created an event that represents every facet of the metalcasting industry. One of the most recognizable benefits of the joint show is the amount of research and technology presented. During the four days of Congress Sessions, more than 50 technical presentations were delivered by leading researchers, professors, and industry representatives.

During the Congress, NADCA branched off from AFS this year to host a separate Awards Luncheon for individuals who have made a significant technical contribution to the industry this year. Several NADCA awards were presented at the event. Michael Cox from GM Powertrain was chosen for the NADCA Technical Committee Member of the Year Award. Henry Bakemeyer of Die Casting Design and Consulting was awarded NADCA Instructor of the Year. “Optimizing of a Graded, Multilayer Die Casting System for Use in Aluminum Pressure Casting” was named Best NADCA Congress Paper, and it was written and submitted by Dr. John J. Moore, trustees professor at the Colorado School of Mines. Co-authors were Jianliang Lin student Sterling Myers, research associate Sudipto Bhattacharyya and associate director Brajendra Mishra, all of the Advanced Coatings and Surface Engineering Laboratory at the Colorado School of Mines, and Peter Ried of Ried & Associates LLC.

Winners of the 2007 International Die Casting Competition were on display throughout the duration of the show and NADCA Corporate Member Companies that were recipients of Safety Awards were also recognized.

During 2007, NADCA also conducted the CEO Conference, Government Affairs Briefing, the Plant Management Conference and the Marketing Conference.

The CEO Conference was Feb. 18-22 on the Kohala Coast, HI. Topics covered during this conference included global economics, the automotive industry, economic outlook, and the metals industry and protecting a company against customer bankruptcies.

The Government Affairs Briefing was April 24-25 in Washington DC. The conference provided attendees time to meet one-on-one with their members of Congress. Some topics covered were currency manipulation, HyperCAST R&D funding and health care reform initiatives.

The Plant Management Conference was Sept. 19-21 in Milwaukee, WI. Presentations included defect tracking, vacuum systems and air treatment systems. Attendees also had the opportunity to visit Kohler and Master Lock facilities in Kohler, WI, and Milwaukee, WI.

The final conference for 2007 was the Marketing Conference in Indianapolis, Oct. 23-24. Nine presentations were given, including “Surfing the Globalization Tsunami,” “New Strategies for the New Century” and “Considerations for Establishing or Expanding Your Presence in Asia.”
NADCA’s Integrated Marketing Efforts Improve OEM Awareness of Die Casting

During the past year, the North American Die Casting Association increased understanding of die casting’s value to key audiences, including OEMs, using an integrated marketing approach that combined a variety of communications techniques.

The 2007 marketing program covered a range of vital topics, from specific technical information that die casters and OEMs could use to improve production, to important industry issues such as environmental responsibility and the need for skilled workers. These initiatives resulted in increased requests for NADCA information and greater overall awareness of the North American die casting industry among multiple manufacturing segments.

Five marketing techniques were used together to help achieve NADCA’s objectives. The program elements were advertising, direct mail, public relations, op-ed columns and white papers. Frequently, messages were reinforced by using multiple techniques to reach audiences in several ways. For example, white papers were created to provide direct, actionable information for die casters and manufacturers. Then, the availability of the white papers was advertised and promoted with news releases, reinforcing NADCA's role as an industry authority.

The advertising program continued a shift started in 2006 to greater emphasis of online advertising rather than traditional printed trade media. Advertising on the Web sites of key trade media was reinforced with selected advertising in print, providing greater exposure and more effective use of advertising funds.

Online advertising included banner ads on the Web sites for Design News, Design Product News, Machine Design, Global Spec and NASA Tech Briefs. Another online initiative was a URL link program connecting NADCA’s Web site with three major associations: ASM International, the Society of Automotive Engineers and the Society of Manufacturing Engineers.

Reinforcing the advertising was a direct mail program intended to promote specific product offerings as well as showcase the annual Die Casting Design Awards Competition. In addition to generating requests for product information, such as new die casting specs, using mailing lists from key publications also increased overall die casting industry visibility.

Public relations efforts resulted in the creation of 13 news releases or stories emphasizing three primary topics:

• NADCA developments and products
• Industry issues and positioning
• Case histories and special features

Stories appeared in newspapers, trade publications and on major Web sites, including Yahoo! News, Google News and similar services. There were more than 5,000 public page views for tracked releases, as well as major feature placements in OEM Off-Highway and Machine Design.

In a similar vein to the more general news releases and features, four op-ed columns were created expressing NADCA viewpoints. These highly focused opinion pieces included “Skilled Workers Vital to Vibrant Economy,” which was published in Design News and Machine Design, and “North American Die Casters Fulfill Environmental Responsibilities” that became the basis for a “Renderings” column in Design Product News.

The final element in the marketing program was the development of five white papers that resulted in a greater appreciation and understanding of die casting among OEM product designers/specifiers, manufacturing engineers and operations management. The white papers also created follow-up inquiries among trade press editors who developed the themes into stories for their readers.
Industry Facts and Figures
The Wage and Benefit Survey, published annually by NADCA, was conducted in December of 2007. The survey represents 40 companies in the die casting industry nationwide. The participating companies table defines the group of facilities in terms of annual sales, number of die casting machines, number of employees, etc. Information is provided both nationally and by region.

This year, the typical participating company had annual sales of $22 million per year; utilized 15 die casting machines and employed 134 full-time direct labor employees. Eleven (28%) were union shops. Less than 1% of the total production employees reported were temporary. Nearly 78% of the survey participants' total employees were hourly production employees. Most companies (73%) reported a general wage adjustment in the last 12 months. The median value of the adjustment was 3%.

The report also covers how hourly employees are compensated, what benefits they receive and how practices vary by company size and location.

In 2007, NADCA participated in the Metalcasting Operational Cost Study. The survey is conducted every two years. The study was published jointly by the American Foundry Society and the NADCA. In 2007, more than 64 companies participated in the survey, and the results were combined for the entire industry as well as broken down by metal type, process type, employment size and sales dollars. The sales of the participants amounted to approximately $1.45 billion and covered 9,249 employees. Net profit as a percent of sales for the 64 companies was 5.72%. Sales per employee amounted to $156,772, and accounts receivable as a percent of sales amounted to 15.14%.

Publications – Documenting Technology
NADCA introduced several new and revised publications and software in 2007 that will continue to spread the information and technology that is being developed. The following publications were revised or new in 2007.

- 2007 Transactions CD-ROM
- Cleaning Techniques Used for Die Casting Dies
- Confidential Metalcasting Operational Cost Survey – 2007
- Die Casting in the U.S. – 2007 (The Buyer’s Perspective)
- Die Casting Environmental Management Manual
- Die Release Agents and Their Applications
- Guidelines for Personal Protective Equipment in Die Casting Operations
- Guidelines for: Rough Machining of Dies
- Metal Melting & Handling DVD
- Safety in the Die Casting Workplace DVD – Spanish
- User’s Guide for Relieving Stresses in Die Casting Dies

www.diecasting.org/information/annual
The magazine’s purpose is to act as a vehicle to promote the industry. It does so by featuring upcoming educational courses, conferences, industry news and technical articles submitted by the industry’s leading educators, scientists and suppliers. The past year featured approximately 40 technical articles throughout the six issues. The themes for 2007 included computer modeling & simulation, zinc, design, die lubricants/plunger tips, magnesium and post-casting/secondary operations. One-third of 2007’s technical articles were contributed by NADCA Corporate Members, and one-third were contributed by NADCA individual members.

The year of 2007 marked the 50th anniversary of DCE. The November issue celebrated the 50 years that DCE has been serving the die casting industry. The issue included a special article by Norwin Merens, who also wrote the anchor article in DCE’s 25th anniversary issue. It also included pictures highlighting the last 50 years in the industry and interviews with NADCA Distinguished Lifetime Members. A special Web site was also launched to highlight the anniversary, which included many of the features in the November issue and more, including select articles from the past 50 years.

Die Casting Industry LINKS finished its seventh year of publication for Corporate Members only and continued to provide a diverse content to satisfy the needs of many different levels of upper management, sales and marketing departments, as well as presidents and CEOs of die casting companies and suppliers. Because the magazine only targets these individuals — the key contacts of all NADCA’s corporate member companies — much of the information is very sought-after and is available only to these companies. Recipients of LINKS look forward to the full State of the Industry Report, in-depth industry marketing updates, Wage & Benefit Survey results, Financial Survey results and many other features stories addressing ways to improve a company’s bottom line. A large portion of LINKS content is derived from NADCA staff and another portion comes from business consultants, some involved with the industry and some from outside the industry.

Monthly e-Newsletters, DCE Update and LINKS Update, were also sent out to those who receive the magazines. DCE Update started in May 2005, and LINKS Update started in January 2006. These electronic newsletters are designed to provide a quick look at the most recent issue of magazines and link
the readers to the online magazine. Every month, snippets of select stories are sent so the recipients can get a sneak peak at the top features. The e-mail newsletter also helps to keep readers informed, in case news comes out between issues that might need to be immediately reported, such as EPA regulation notices.

The magazines online were consistently updated on the first of the month. Preparation began in 2007 for a redesign of their Web sites. Currently, before logging in, one can view only the cover of the current and the last six issues. DCE’s magazine online will be formatted so that possible for new subscribers to view “teasers” of the current issue. The goal of this is to give more exposure to the magazine to help increase circulation.

**NADCA Online — www.diecasting.org**

NADCA took the first step in moving to a more efficient way of handling dues, orders and meeting registrations online. In June, during the annual individual membership renewal period, members were able to log onto the special Members Only Web site and pay their dues in real time. Members automatically received e-mail confirmations of the process, eliminating the prior years’ waiting period.

Continuing for a second year, Corporate Members were able to request complimentary copies of NADCA’s newest publications. They could also purchase them for a discounted price.

Items currently available for corporate members include:

- 2007 Transactions CD-ROM
- Cleaning Techniques Used for Die Casting Dies
- Die Casting in the US – 2007 (The Buyer’s Perspective)
- Die Casting Environmental Management Manual
- Die Release Agents and Their Applications
- Guidelines for Personal Protective Equipment in Die Casting Operations
- Guidelines for: Rough Machining of Dies
- Metal Melting & Handling DVD
- Safety in the Die Casting Workplace DVD – Spanish
- User’s Guide for Relieving Stresses in Die Casting Dies

The online training area was also expanded. Added to this section were video samples from the new Metal Melting and Handling DVD.

The OEM section of the Web site continued to evolve in preparation for its move to a new Web site specifically for OEMs in 2008. Many die casting design resources and literature are available for OEM product designers, engineers and purchasing specifiers from NADCA.

Advertising revenue for the Web site in the year 2007 continued to offset the expenses of the Web site.
Government Affairs — Priority Issues & Key Projects

Priority Issues

During the first session of the 110th Congress, NADCA’s legislative agenda reflected the new Congress and focused on the importance of retaining a strong manufacturing base in the United States. NADCA worked with lawmakers to develop policies and legislation that enhance the die casting industry’s ability to compete in the global economy. For 2008, NADCA will keep the following issues in front of key policy-makers as we head into a critical election year with control of the White House and Congress at stake.

Level Playing Field for Trade — Numerous trading partners have been allowed to undervalue their currencies to the detriment of American manufacturers. Such currency manipulation artificially acts as a subsidy that boosts our foreign competitors’ exports and significantly curtails their imports. NADCA continues to seek reform of China’s exchange-rate policies to achieve a market-based yuan value and enactment of legislation to provide relief to U.S. manufacturers that are harmed by undervalued currency. Specifically, the NADCA Washington Office:

• Met with lawmakers and staff to secure co-sponsors to the Currency Reform for Fair Trade Act — legislation which defines currency manipulation as a prohibited export subsidy and would allow countervailing duty cases to be brought against individual products or industries.
• Provided examples to the Speaker of the House and chairmen of the House Ways & Means Committee containing specific examples of how die casters have been directly impacted by Chinese currency manipulation and subsidies.
• Facilitated a meeting between NADCA Iowa members and the ranking member of the Senate Finance Committee in Washington to discuss currency legislation.
• Helped secure signatures for a Dear Colleague letter to the Ways & Means Committee highlighting importance of passage of strong currency bill this Congress — more than 100 lawmakers signed onto the letter.
• Sent out a trade alert requesting NADCA members to write their House lawmakers urging them to co-sponsor the currency reform bill and to contact Ways & Means Committee members to act on a strong currency bill.
• Worked with Senator Stabenow’s (D-MI) staff to successfully include four amendments in the Finance Committee currency legislation, which was approved by 20-1 in July.
• Participated in the China Currency Coalition which seeks to reform China’s exchange rate policies.

OSHA Reform Legislation — NADCA member companies know that their employees are their most valuable resource and work hard to ensure their workplaces are safe. OSHA reform legislation has been introduced in the House and Senate. The bills, Protecting America’s Workers Act, would, among other items:

• Impose new criminal penalties (an employer could go to jail if a serious accident or death occurs — even if an employer did everything possible to prevent a workplace accident);
• Update OSHA civil penalties, with a minimum fine of $50,000 (maximum $250,000), if a willful OSHA violation leads to a worker’s death;
• Provide for felony (rather than misdemeanor) criminal sanctions for willful violations that lead to death or serious injury of a worker;
• Require expanded communications during accident investigations; and,
• Require employers to provide workers with all safety equipment, including personal protective devices.

OSHA should continue to work with employers and their employees to increase awareness about workplace hazards and provide information to avoid those hazards. In November, OSHA published a final rule stipulating that the employer must pay for required PPE, except in the limited cases specified in the standard. The final rule must be implemented by May 15, 2008.

Magnesium Tariff — With continued pressure from foreign competition and fuel-economy standards tightening, NADCA members remain concerned about the high price of metal — particularly magnesium. Tough new U.S. fuel economy regulations are forcing the auto industry to utilize more magnesium and aluminum to make vehicles lighter and therefore more fuel-efficient.
There remains one sole domestic magnesium producer, and the U.S. imposes a tariff on foreign-produced magnesium. The tariff adds about 50 cents a pound to the cost of the magnesium, bringing it to as high as $3 a pound.

In 2005, the U.S. International Trade Commission (ITC) instituted reviews of the anti-dumping duty on pure magnesium from China. As a result of these reviews, the ITC determined that revocation of the anti-dumping duty on pure magnesium from China would likely lead to a recurrence of material injury. As a result, the existing order on imports of this product from China will remain in place for five years.

The Commission’s public report Pure Magnesium from China (Inv. No. 731-TA-895 [Review], USITC Publication 3908, March 2007) contains the views of the Commission and information developed during the hearing.

**Emerging Issues** – Given the ever-changing political climate in the months leading up to the 2008 elections, NADCA is monitoring several important industry issues, particularly in the labor and health care arena. NADCA members received updates on issues such as:

- Expansion of the Family Medical Leave Act (FMLA) and paid sick leave requirements;
- Expansion of the Americans with Disabilities Act (ADA);
- Comprehensive immigration reform and worksite enforcement; and
- Mental health parity legislation.

NADCA will alert the membership to any new developments on these issues or other issues of concern to the die casting industry.

**NADCA Government Partnerships**

Over the years, NADCA’s government affairs program has identified opportunities for the die casting industry to partner with federal agencies to achieve mutually beneficial goals. NADCA has enjoyed the benefits of a longstanding partnership with the U.S. Department of Energy (DOE) through the Industrial Technologies Program, and in 2007 made strides toward establishing a new program with the Vehicle Technologies Office.

**DOE HyperCAST Technology** – NADCA has worked to initiate a new research partnership with the DOE Vehicle Technologies office. The HyperCAST program will develop materials for high strength lightweight cast components that reduce the weight of motor vehicles and improve fuel efficiency without compromising safety. Through its advocacy efforts, NADCA secured Congressional approval for this research program in the Energy Bill (H.R. 6) that was signed into law by the President on Dec. 19, 2007. This authorization puts NADCA in a stronger position to obtain future federal funding.

**DOE Industrial Technologies Program (ITP)** – NADCA has participated in Cast Metals Consortium (CMC) since its inception in 1989. In 2007, NADCA and CMC continued to advocate for metalcasting research funding through the Industrial Technologies Program. In December 2007, Congress approved $65 million for the industrial technology research programs, an increase of $19 million over the budget request. Metalcasting will receive only about $1 million for Fiscal Year 2008. This funding continues to be far short of what is needed to fund ongoing metalcasting research at various universities across the nation.

**Outreach**

The NADCA Washington Office staff made a presentation on politics and government NADCA affairs at the 2007 CEO Conference in Hawaii. In addition, NADCA secured a spot in October for NADCA member, Joanne Stockdale of Northern Iowa Die Casting, to participate in one of six “Keep it Made in America” Town Hall meetings, sponsored by the Alliance for American Manufacturing. The event was to educate the public about the importance of domestic manufacturing and to keep elected officials accountable to their manufacturing base.

Be sure to mark your calendar and attend the Metalcasting Government Affairs Conference in Washington, DC, on April 9-11, 2008, at the Madison Hotel. NADCA industry leaders will gain unique insight into current political issues that will affect their bottom line, hear from key political leaders and advocate for the metalcasting industry’s legislative agenda on Capitol Hill.
Comprehensive Design Assistance

NADCA design assistance is provided through a few different channels and mediums. The basic goal of NADCA design assistance is to provide information to help a designer select the die casting process to manufacture their product when appropriate, and — when the die casting processes is selected — to maximize its performance level for the product design. The ultimate goal is to enable a designer to operate at a high level of independent proficiency in die casting design.

OEM Design Assistance

Many times, NADCA design assistance starts with very basic and closely supported help with a product design project, such as reviewing part designs for die casting compatibility and even developing example die casting designs in CAD. Quite often while assisting a designer, they are guided in the direction of existing NADCA design materials such as the Product Standards and Specifications and Product Design for Die Casting, which are excellent sources of design information. Currently, the Product Design for Die Casting book is being revised and updated and will be available in print and online in 2008.

Die Casting Design Seminars

Many designers taking advantage of design assistance are encouraged to take part in a Design for Die Casting seminar, which can be given at the designer’s location. The day before the seminar, a value analysis is conducted, typically during a tour of the plant where the designers work. During the analysis, various parts and assemblies are identified that may be good candidates for die casting. Then, those candidates are discussed during the seminar, which often leads to the designers suggesting other parts or completely new products for conversion to die casting.

“NADCA Design” – The Die Casting Design Web Site

Starting in 2007, NADCA began to develop the design Web site, which is still in process. The NADCA Design Web site has a focus on providing the practical information a designer needs and can use in the day-to-day development and design of die cast products. During the development stage of the Web site, it was determined that the format for presenting information should be three-pronged, using text, animation and voice together. This approach allows for the most effective learning of the complex topics.

It was also determined during Web site development that the site should be broken into logically ordered modules covering various topics. The module arrangement also allows for a designer to progress through each module one after another or to jump directly to an exact module on a specific topic. To create each module, a NADCA design engineer and a graphic artist/animator are utilizing the latest CAD Solid Modeling and Video Editing software. This team approach allows the creation of a Web site that contains the text, animation and voice combination to convey module content. The end result is a very dynamic Web site that presents information directly affecting die casting design to OEM Designers.

Subject Overview of the NADCA Design Web Site Content

Die Casting Process: Updated animations of the cold chamber, hot chamber, miniature, semi-solid and squeeze casting processes will be presented. Understanding the die casting process is very important to die casting design and product development because it gives the designer insight into how the physical mechanics of the die casting process affect product design and development. A better understanding of the die casting process allows the designer to communicate better with a die caster as well as develop designs that are innovative and use the die casting process to its full advantage.
**Product Development:** During this stage, a designer must determine if the various properties of a die casting will meet the product requirements. The designer will be informed how to abandon the traditional form associated with other more restrictive manufacturing processes as well as determine if the wide range of die casting material properties match the true performance requirements of the product. The capabilities and limits of die castings in the product’s working environment will also be presented for consideration. For die castings that must meet structural criteria, die casting properties related to structure are presented for consideration.

**Part Design:** How to best create die casting geometry such as draft, fillets, ribs, fins, threads and undercuts (if truly needed) will be presented. Assemblies and the related topics such as inserts, bearing applications and galvanic potential are covered.

**Alloy Selection:** The properties and specific advantages of each die casting alloy will be presented.

**NADCA Standards:** An overview and link to the “NADCA Product Specification Standards for Die Castings” will be provided.

**Secondary Processes:** Trimming, machining, surface finishing, over molding and impregnation will be covered.

**Prototyping:** The many options for prototyping and their resulting properties related to production die castings as well as advantages and disadvantages will be displayed.

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**Statistics on 2007 Assistance**

Twenty-nine OEMs were assisted in 2007. In addition, five OEM Design for Die Casting seminars were given. Much support was also given to NADCA Corporate Members and individual members.

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**Opportunities for Interns — David Laine Scholarships**

For more than 30 years, NADCA has encouraged studies in the many disciplines related to die casting with David Laine Memorial Scholarships.

Internships in 2007 gave opportunity for students to be involved in various projects, such as creating a new floor plan for a die caster to fit OSHA standards, developing steps and methods to allow for completing a die change in eight hours or less and designing gating systems and performing flow analysis for those systems. Established in 1975, the scholarships honor David Laine, who served for 29 years as secretary of the American Die Casting Institute (ADCI), a forerunner of NADCA.

Helping retain students in the die casting industry is one of the cornerstones of the Laine Scholarship program, which is why the applicants must have internship or co-op experience before applying.

In order to expand the scholarship benefits, the Laine trustees plan to more aggressively promote the program and increase fundraising. The trustees also agreed to goals of raising the scholarship fund to $1 million by 2010, providing an endowment that would allow significant scholarship amounts annually; seeing the industry retain 90% of the students; and, awarding up to 20 scholarships annually.

Other significant changes include an increase in the scholarship from the $2,000 per student in 1995 to $3,000 in 2006. The Laine funds now exceed $700,000, which are distributed in a more die casting specific manner.

The scholarships provided by the Laine Fund are supported entirely by contributions and pledges from the die casting community. For more information, visit www.diecasting.org/students/scholarship.
**Bottom Line**

In 2007, NADCA ended well above expectations financially. Although net revenue before net investment revenue at Dec. 31 was at a loss at $402,281, it was $271,530 above budget. Gross revenue came in 5% under budget with department expenses coming in 17% under budget and general and administrative expenses also well under budget. Overall, expenses were $401,464 under budget.

In May of 2007, NADCA, in conjunction with the American Foundry Society hosted a very successful Metal-casting Congress in Houston Texas. NADCA’s share of revenue from exhibit sales was 17% above expectations. The expense side saw a negative variance of 4%. Overall, NADCA’s profit of $136,447 from the Metalcasting Congress was $23,974 above budget.

The education department was also profitable in 2007. At year end, total revenue from education classes was $275,301 with expenses at $160,218. The department had a net profit of $115,082.

In 2004, NADCA revised its investment strategy and continued to see a positive outcome in 2007. Net investment income was 5% above budgeted numbers. We continue to anticipate healthy growth in this area.