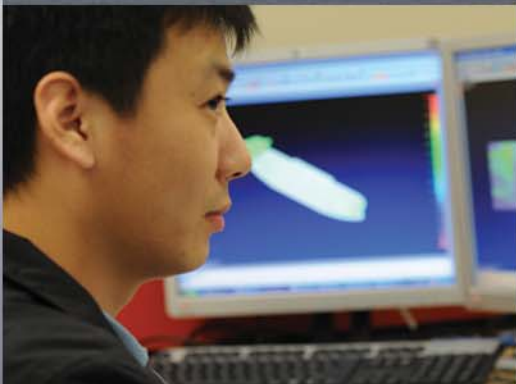
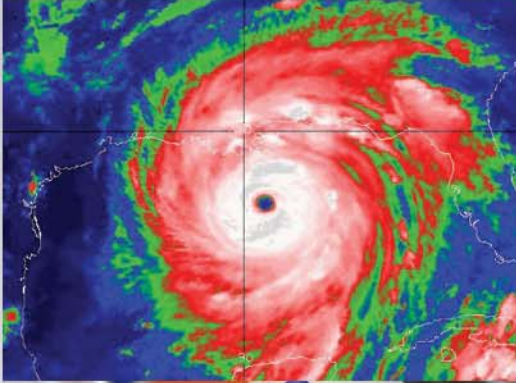




FOUNDED 1862

# ABS

# ANNUAL REVIEW 2011



# 150 years

Tradition in safety

# THINK SAFETY

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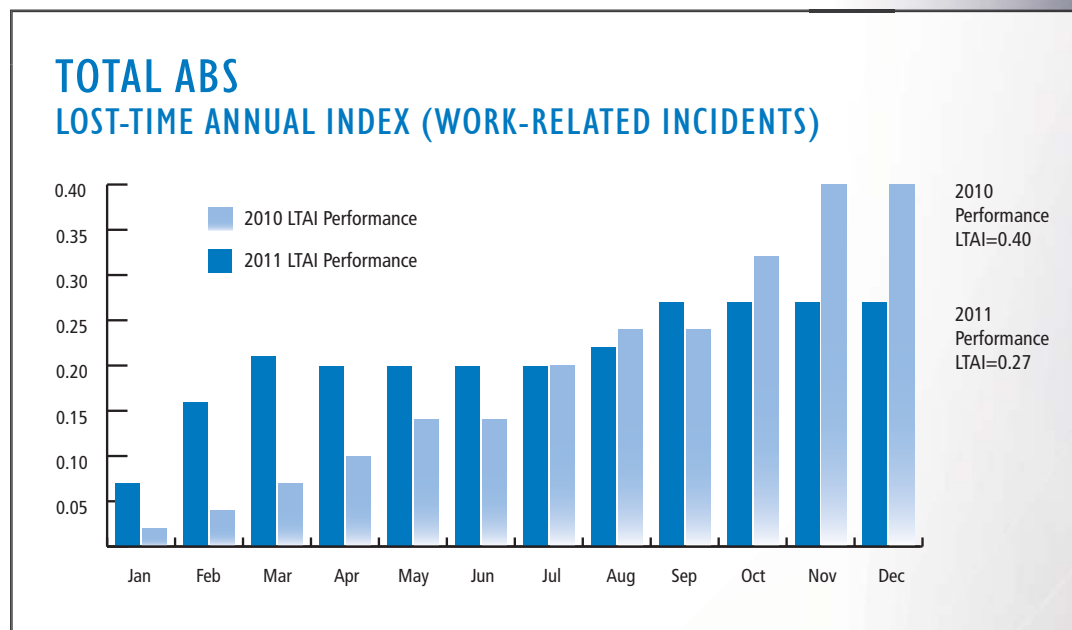


## WELCOME TO ABS & ITS AFFILIATED COMPANIES

Throughout its existence, ABS has dedicated its activities to promoting the security of life, property and the environment. The traditional focus of those activities has been the provision of classification services to the builders, owners and operators of ships and maritime-related facilities. This core classification activity continued at a high level throughout 2011 with the ABS-classed fleet reaching record levels and the ABS organization expanding to meet the increased demand for its services.

In addition to its traditional classification activity, ABS offers its clients a portfolio of related services, primarily in the risk management sector. These services are provided through operating subsidiaries of the ABS Group of Companies, Inc., which is a wholly owned affiliate of ABS, subject to separate Board oversight and management. In 2011, ABS Group secured a record volume of new contract orders placing it in a solid position.

Safety is the cornerstone of our relationship with the industries we serve – it is also the most important factor by which we assess our own performance. In early 2011, ABS strengthened its ability to provide for the safety of its employees by launching its *Always Be Safe* initiative. We are proud of the results the initiative achieved last year, cutting lost-time accidents by 33 percent.



## ABS ACTIVITY



### MARINE

Ship classification remains the core activity of ABS. It is the rationale for an aggressive research and development program and the activity that keeps the preponderance of ABS' team of engineers and surveyors busy in shipyards, ports and offices around the world. ABS prides itself on setting standards of excellence in the provision of classification services to the international shipbuilding and shipowning community.



### OFFSHORE & ENERGY

ABS is the leading provider of classification services to the offshore oil and gas industry. ABS continues to maintain a clear superiority in the exploration, production and support service sectors of the industry based on its unparalleled experience, advanced technology and responsive service delivery. In an industry marked by technical innovation and novel concepts, ABS applies advanced risk analysis to stay at the leading edge of these developments.



### GOVERNMENT

ABS continued its Achieving Service Life Program with the US Navy. The long-term goal is for non-nuclear surface combatants to enter the program to achieve maximum service life. Joint programs have been developed to promote efficient fleet utilization. These standards are attracting increased interest from navies and government maritime agencies of other nations.



### FLEET MANAGEMENT SYSTEMS

ABS Nautical Systems provides advanced fleet management software to clients in the ship, offshore, government and workboat sectors. In addition to its NS5 Enterprise suite of software, the division is also the vehicle through which ABS is able to develop and provide to its clients integrated class and software services that distinguish ABS within a rapidly evolving ship management market.

## ABS GROUP ACTIVITY



### ABS CONSULTING

ABSG Consulting Inc. (ABS Consulting) is a leading independent, global provider of safety, risk, integrity and performance management services to clients in five key sectors: process industries (primarily oil and gas); maritime services; nuclear utilities; renewable energy; and government. Utilizing highly-trained industry experts, risk modeling, practical engineering and technology-based solutions, ABS Consulting helps clients manage their operational security and catastrophic risks to maintain integrity in their business operations and drive organizational performance.



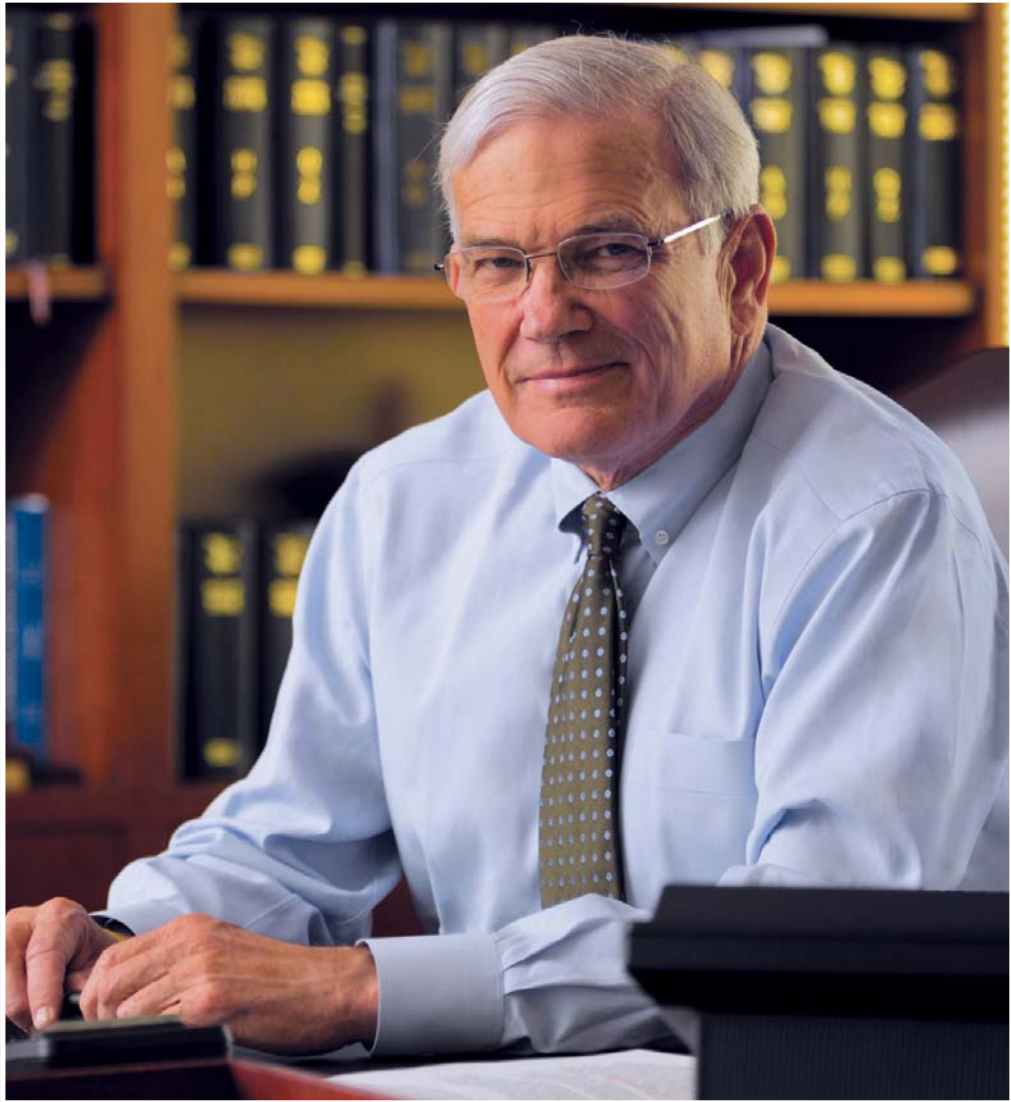
### ABS QUALITY EVALUATIONS

ABS Quality Evaluations, Inc. (ABS QE) is an accredited third-party auditor of management systems to international standards for a wide range of industries, including energy and manufacturing. ABS QE also contributes to the development of industry, national and international quality standards. Demonstrating conformance to an accredited quality management system that supports continuous improvement is vital for companies operating in numerous industries and geographies.



### EQECAT

EQECAT, Inc. is a market leader in providing proprietary catastrophe modeling software and alternative risk transfer expertise to the insurance industry. EQECAT's technology-based approach addresses the management of financial consequences of natural hazard, operational and security risks. Named as the Best Risk Modeling Firm in 2011, EQECAT continues to develop and expand its software, which remains its key differentiator in the market.



**ROBERT D. SOMERVILLE**  
ABS  
CHAIRMAN

## CHAIRMAN'S MESSAGE

**D**ifficult times present heightened challenges for even the most successful organizations as external market forces become the overwhelming dynamic, reshaping carefully prepared strategic plans and future expectations. In retrospect, 2011 will be seen as a watershed year. Economic concerns in Europe, particularly those affecting the maritime nation of Greece, continued to impact the demand for shipping services. The order overhang from the robust contracting of the last few years meant more ships being delivered into a market saturated with existing tonnage, defying the efforts of the scrapyards to restore some semblance of balance.

Reduced operating margins for owners of virtually every vessel type raised concerns about their ability to adhere to maintenance and repair schedules, sufficient for meeting increasingly stringent statutory and class-related safety standards. And a continued political and regulatory focus on the shipping and offshore industries' impact on the global environment – from its contribution to carbon-based emissions to the spread of nonindigenous, aquatic organisms in ballast water – continued to impose new, capital intensive requirements on shipowners already struggling in the depressed market.

Given this very challenging overall scenario – one that affected every aspect of our operations both within the classification sector and our associated industrial activity carried out through the various operating entities of the ABS Group of Companies – it is satisfying to report that, once again, every sector of ABS contributed to yet another record performance in terms of the size of the ABS-classed fleet and the consolidated revenues of the entire ABS family.

There is a very simple explanation for this remarkable performance. ABS has the most able, the most dedicated, the most hard-working and the most knowledgeable team of employees, now some 4,500 strong, that is possible to assemble. Our continued success is entirely attributable to their commitment and efforts, and I extend my personal thanks to each and every one of them.

I also extend my thanks to our clients for the trust that they have placed, and continue to place, in our ability to meet their operational needs and exceed their service expectations. We recognize that, particularly in such difficult times, no contract is a right – it must be earned and that can only be achieved by demonstrating not just the ability to do what is asked of us efficiently and economically, but to go beyond such confines and provide practical solutions that comprehensively address the enterprise risks of the project or of the company itself.

This client-centric approach helped ABS grow its classed fleet by 7 percent year-on-year to yet another record of 185.6m gt, further cementing our position as the second largest class society based on gross tonnage. This continued fleet growth is a result of the orderbook, built up over successive years, which has seen a steady stream of newbuildings enter service to ABS class. Our challenge has been to maintain that order backlog at a time when owners' appetites for new tonnage has slumped to levels not seen for many years. It was inevitable that our orderbook should contract somewhat given these challenging circumstances but, closing out the year at 37m gt of firm orders, with several more million gt of orders pending meant that, once again, ABS could lay claim to the largest share of the worldwide orderbook, including the leading position with shipyards in South Korea, China, Taiwan, Singapore and India.



Activity in the offshore and energy sector was a key contributor to our overall strong performance. From the time the first offshore drilling rig entered service some 60 years ago, ABS has been the leading class society assisting the offshore industry to safely explore for and produce energy resources. It remains a key strategic objective of ABS to retain this position and, by securing a majority share of all the new mobile offshore drilling unit (MODU) orders placed in 2011 – from jackups to deepwater drillships – and a competitive share of all production units ordered, we were able to meet that strategic challenge.

ABS continues to place a great deal of emphasis, committing both financial and manpower resources to maintaining pace with, and wherever practical, leading the development of new technologies that make possible the move of offshore activity into increasingly deeper and challenging waters. These efforts dovetail with the increased regulatory demands for heightened safety and environmental stewardship within the offshore sector in the

aftermath of the Macondo incident of 2010. By developing and issuing new classification standards, supplemented by detailed technical seminars particularly in emerging areas such as China, ABS constantly reinforces its role as the preferred safety partner of the industry.

With the rapid escalation of interest in the offshore generation of renewable energy, particularly from wind, ABS has become active in developing technical standards and providing related services to governments, operators and those contracted to design, build, install and service these new facilities either through classification-defined services or through the newly established renewable energy market sector within ABS Consulting. We view this as a growing area of activity and early evidence and increasing revenue streams support this optimistic assessment. Examples of this type of activity could be found in the research project undertaken by ABS and funded through the US Bureau of Safety and Environmental Enforcement (BSEE), to investigate safety considerations for floating offshore wind turbine structures and the issuance of an approval in principle (AIP) for a renewable energy concept in which a moored spar uses ammonia in a closed-cycle process to produce electrical power for a commercial utility grid.

A particular strength of ABS is this ability to bring together its core competency in marine classification, with the broader spectrum of safety, risk, integrity, quality and performance management services offered through the operating entities within the ABS Group of Companies. We continue to develop synergies, particularly within the marine, offshore and energy sectors including strategic acquisitions, when appropriate. In 2011, we were pleased to reach an agreement with Safetec Nordic AS on such an acquisition, further expanding our market presence in key areas, including the North Sea and the rapidly expanding Australian energy sector.

It was gratifying that, despite the continued softness in some focus sectors of ABS Group activities, principally the government and insurance sectors, all operating entities within ABS Group were able to report increased revenues, expanded operations and strong contract backlog at the close of the year. New offices were established in Perth,




Australia; Lagos, Nigeria; and Trondheim, Norway to better service our energy clients in those regions. The increased level of activity also saw a further increase in the ABS Group employee count to more than 1,700 individuals, a near doubling within just four years.

An important part of our commitment to the industry is encouraging the next generation of maritime professionals. ABS has proudly dedicated resources to this cause for more than eight decades. Recognizing the needs of our industry to continue to attract high-caliber professionals, in 2008, we intensified our commitment to leading maritime institutions in the US and around the world. ABS' investments in major maritime universities have been used to endow chairs in naval architecture and marine engineering, facilitate masters level programs and support selective capital improvement initiatives. Our vision is to be the catalyst for the global renewal of maritime education.

Many of our employees, whether providing classification-related services in shipyards, manufacturing plants or on board ships and offshore rigs, or as members of the ABS Group of Companies team handling contracts with process facilities and energy-related facilities, find themselves in working environments that demand a heightened awareness of personal safety. The safety of these and every other employee in the ABS family is of critical importance to us. In recognition of this, ABS strengthened its ability to provide for the safety of its employees by launching an *Always Be Safe* initiative early in the year. Key elements of the program included the appointment of a Corporate Safety Director; conducting an independent assessment of ABS' safety culture; and instituting management training to better instill ABS safety values throughout the enterprise. The results were encouraging with lost-time accidents cut by 33 percent compared to the previous year. But there is more to do if we are to reach our safety goal of zero accidents in each calendar year.

In 1861, 150 years ago, a group of prominent marine underwriters met in New York City to discuss how maritime safety could be improved. Those discussions led to the formal founding on 22 April 1862, of the American Shipmasters' Association, which was to become the American Bureau of Shipping. It has been my honor and privilege to commemorate this landmark event with a series of celebrations, held around the world which will include a gala in New York in April 2012 at the exact location of our first meeting.

The occasion is cause for both celebration and reflection on how a fledgling association has grown into the global organization of today. Our Mission remains the same – promoting the security of life and property and protecting the natural environment. The manner in which we pursue that mission has broadened and strengthened, keeping pace with technological developments and changing public perceptions and demands and it will continue to evolve in the future.

Our challenge is twofold – to weather the cyclical vagaries that afflict the global economy and the enterprises of our clients while, at the same time, shaping the future of not just marine classification but the entire concept of enterprise risk management so that ABS will continue to be recognized as the leader in setting standards of excellence for generations to come. 





**CHRISTOPHER J. WIERNICKI**  
ABS  
PRESIDENT & CHIEF EXECUTIVE OFFICER

## ABS CLASSIFICATION REPORT

**D**espite the challenges posed by the tough economic and market conditions of 2011, ABS recorded another year of highly successful operations. We attained these achievements by providing a technologically sound and professionally delivered suite of integrated classification services that assisted industry in conducting their businesses safely, efficiently and in an environmentally sensitive manner.

ABS' goal is to set the standard for class societies in the future, and because of our commitment to succeed, we remain intently focused on this. It is a goal that requires us to identify and be the early responder to trends – whether driven by regulatory pressures, the application of new technologies or underlying movements in the market. We view this role as an opportunity to further enhance safety standards across the marine and offshore industries.

Given the complex challenges that our clients and the industry must face today, it is imperative that we continue to provide practical, timely and comprehensive solutions – it is the hallmark of ABS services. We have put in place an organizational structure that emphasizes the integrated nature of our services and streamlines communications to better serve our clients. The new structure required increased investment in developing and applying new technologies; greater emphasis on training ABS staff; and stronger information technology capabilities to deliver services in a cost-effective and efficient manner.

The effectiveness of our approach is reflected in our 2011 results. ABS closed out the year with yet another record fleet size, reaching 185.6 million gross tons, a growth of 7 percent over 2010's year-end record. ABS had the largest share of newbuilding orders placed with shipyards around the world, amounting to 21 percent of vessels and offshore assets on order. We also had the largest share of offshore-related classification. ABS retained its position as the preferred society for tanker owners with the largest share of both the existing fleet and orderbook and remains the classification society of record for the largest containerships currently in service and on order, including the next generation of 18,000 teu vessels. These results solidified ABS' position as the number two classification society in the world.

Activity in the offshore and energy sector was a key contributor to our strong 2011 performance. Given the continued growth in energy demand and the sustained high price of supplies, the orderbook for the sector remained strong. ABS retained its leadership position in part by being selected to class the majority of mobile offshore drilling units (MODUs) for which orders were placed in 2011. ABS also continued to be the class society of choice for the production sector as well as the offshore support vessel market.

ABS recognized that the complexities on board MODUs in service around the globe have given rise to new issues. The increased sophistication of today's offshore facilities, combined with greater regulatory oversight, called for new standards that focus on such issues as software integration, drilling systems and subsea and associated technologies. In 2011, ABS developed a suite of classification Rules and Guides to address these issues, with enhanced standards and associated notations for drilling system classification. Developed in response to an operator's need for a more comprehensive approach to



asset maintenance, the new standards formalize an integrated systems approach to classification. Operators can use the associated notations to signify compliance with class requirements and demonstrate the effectiveness of their maintenance programs.

As the offshore industry pursued resources in deeper water and more harsh operating environments, it continued to rely on the knowledge and skills that ABS has cultivated and developed through its six decades of experience. In 2011, we were awarded a landmark study to provide the technical and scientific

basis for new testing and maintenance criteria for deepwater drilling systems. In addition, we worked closely with industry to help codify requirements for a more cost-effective drilling process in ultra deepwater.

As the leader in providing classification services for liquefied natural gas (LNG) carriers, ABS' experience and guidance has been greatly valued by the marine industry. ABS worked closely with key stakeholders to evaluate basic design and containment system parameters for LNG carriers operating in an Arctic environment. With the move to offshore, ABS also developed criteria to examine various design aspects for floating LNG vessels. In 2011, ABS classed a number of LNG carriers delivered by Samsung Heavy Industries (SHI) and Daewoo Shipbuilding and Marine Engineering (DSME), and at year-end, ABS had 24 LNG carriers contracted for class.

In 2011, we expanded our network of research centers, which complement the work ongoing in our Corporate Technology department. ABS reinforced its China presence in May with the opening of the ABS China Offshore Technology Center (COTC), created in partnership with Shanghai's Jiaotong University. In October, ABS announced its plans to open the Korea Energy Technology Center (KETC), which will be based in Busan, South Korea. KETC will focus on applied research on a broad range of technology challenges facing the energy sector. Research centers such as these have proven to be effective vehicles for regional partnering with academia and industry in strategic growth areas and thus extends ABS' technological imprint.

ABS classification services for government and military vessels were a key contributor to our strong performance last year. We proudly class the Military Sealift Command's (MSC) fleet of auxiliary and sealift support vessels that provide fuel, food and other supplies to US service men and women around the world. The global reach of ABS survey offices allows us to meet the needs of the MSC in virtually any port of call. In addition to supporting MSC, ABS provided classification-related services to the US Navy combatant fleet for some newbuild and in-service vessels. Our role in life cycle maintenance of the combatant fleet was expanded through the Achieving Service Life Program (ASLP) – a risk-based survey program. In 2011, 15 additional surface combatants entered ASLP and 24 additional vessels are slated to join the program in 2012.

ABS Nautical Systems continues to be an important element in our portfolio of services. The newbuilding initiative, which was introduced in 2009 for the marine sector and expanded to the offshore sector in 2011, was instrumental to Nautical Systems' successful year. By leveraging the capabilities of the NS5 Enterprise software, clients are provided with a comprehensive approach to asset management and the ability to link maintenance and repair strategies with ABS classification data. In 2011, we began work on a new module for NS5 Enterprise to assist clients in monitoring environmental performance indicators and in promoting fuel optimization, with a release date of spring

2012. We achieved significant growth in the offshore sector through the launch of ABS Offshore Asset Integrity Management Program which includes Rapid Response Damage Assessment, the Hull Inspection Management Program and several other resources. These programs support operation, inspection, condition assessment and emergency response.


The ABS Environmental Solutions Group led our efforts to assist clients in addressing the complex and expanding list of environmental challenges. Clients looked to ABS for practical guidance on issues as diverse as antifouling, emissions, cold ironing and various local regulations. ABS continued to assist industry in preparing for compliance with IMO's Ballast Water Convention and released a new Guide to address safety issues related to the installation of ballast water treatment systems.

As regulatory forces push shipowners to reduce their carbon footprint and to eliminate pollutants, technology provides a means to this end, including the use of alternative fuels such as LNG. To support industry in the safe application of gas fuels, we developed and released the new *Guide for Propulsion and Auxiliary Systems for Gas Fueled Ships*, which is the most comprehensive standard for these vessels.

With the soaring price of fuel, energy efficiency has remained at the forefront of the environmental agenda. ABS assisted clients in preparing Company and Ship Energy Efficiency Management Plans that comply with the guidelines of IMO and other entities. The plans provide a mechanism for identifying and maximizing operational efficiencies for one vessel or an entire fleet.

Safety is our watchword at ABS. We are very aware that a commitment to safety starts within our own organization. To further bolster our efforts to provide safer working conditions for all of our employees, we created the new position of Corporate Safety Director, reporting directly to me and responsible for overseeing the continual improvement of safety performance. With increased emphasis on encouraging safe working practices at all times, the new motto, *Always Be Safe*, was disseminated and instilled throughout the organization. We are extremely proud of the achievements we made last year, cutting our lost-time accidents in half, but we have further to go to reach our safety goal. For 2012, we are striving for another 50 percent reduction in lost-time accidents.

I thank the men and women of ABS for their dedication, commitment and hard work as they strive to live up to our exacting mission every day. I am honored to work with such a professional and loyal team and to see that team grow in size, strength and skill year-on-year. I also would like to thank the many clients that place their trust in ABS and continue to work with us toward creating a safer workplace and a safer world.

Our achievements and continued success strengthen our confidence in the direction we have taken. It is evident as ABS celebrates 150 years of serving the maritime industry that its success has been built on the ability to visualize where the industry is moving and to develop the guidance and technology that enables progress to be made in a safe and responsible way. Today's ABS may be a product of 150 years, but it is not a thing of the past. Through its evolution, ABS has set the standards of excellence in marine and offshore classification. As the Class of the Future, we will change the paradigm of classification by offering innovative, informative services that reflect the individuality of our customers, providing a novel iClass experience. 



# CLASS ACTIVITY



**D**espite the continued challenges facing the world's economy, ABS returned another year of solid growth with the ABS-classed fleet increasing 7 percent over the year. Firmly positioned as the world's second largest classification society in terms of tonnage, the ABS-classed fleet closed out the year with 11,621 vessels totaling 185.6 million gross tons.

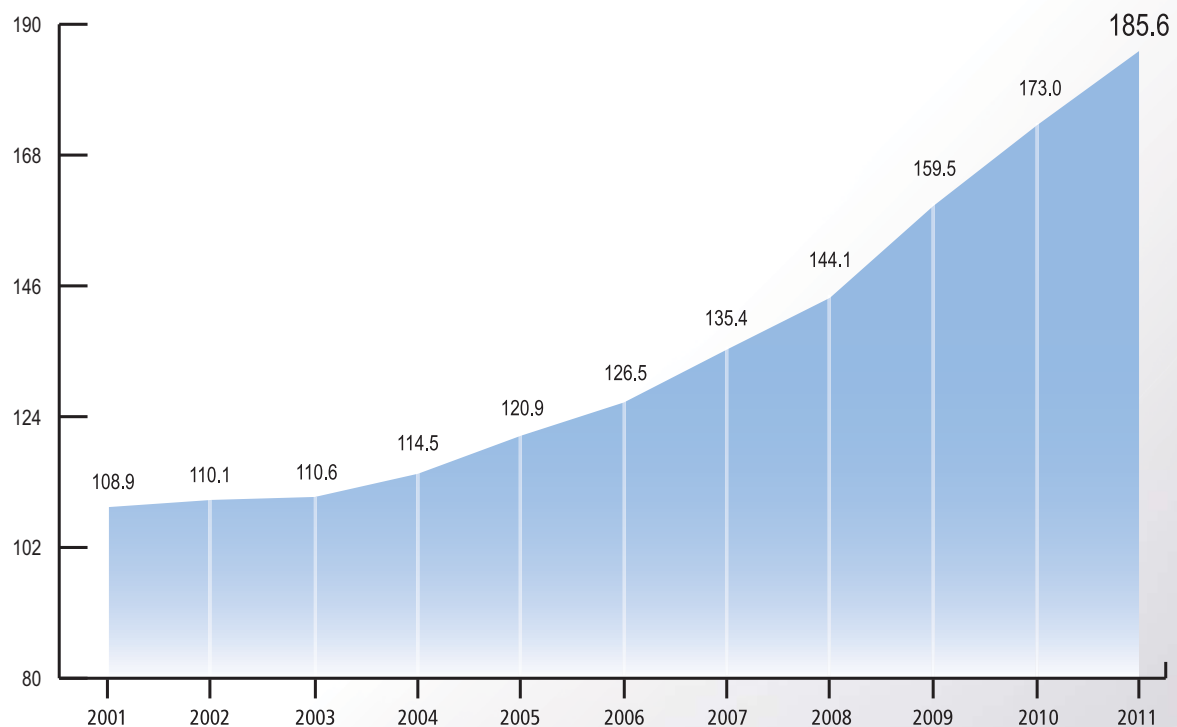
Although overall global newbuilding order gross tonnage was 40 percent lower than contracts placed in 2010, ABS received 15m gt in new construction orders during 2011, and ended the year with requests for class totaling 37m gt. ABS remains positioned as the leading classification society for new construction orders, holding 21 percent of the gross tonnage currently on order.

Containerships played a significant role in the success of the market share captured, with ABS increasing its global share of new construction contracts for container carriers by 12 percent over 2010 figures, ending the year at 23 percent of tonnage on order. This success positions ABS as the second preferred classification society for the construction of new container carriers.

The global energy mix shifted in 2011, with natural gas playing a far greater role than any other period of time. Expectations for long-term growth in the demand for natural gas, driven by the need for lower cost, environmentally clean fuels provided enough incentive for new construction investments. In total, 53 LNG carriers were contracted in 2011, a ninefold increase over ordering levels of the previous year. ABS continued to capture a significant portion of orders placed for gas carriers, particularly LNG carriers, ending the year with 33 percent of the market share.

## ABS FLEET SIZE (2001-2011)

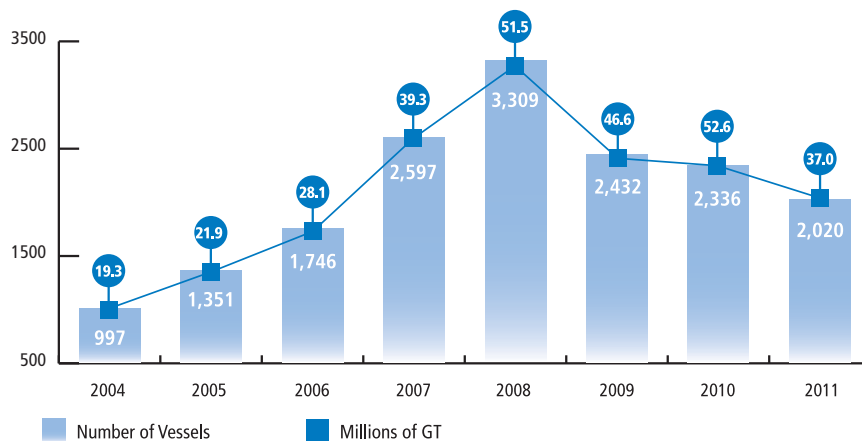
Millions of GT



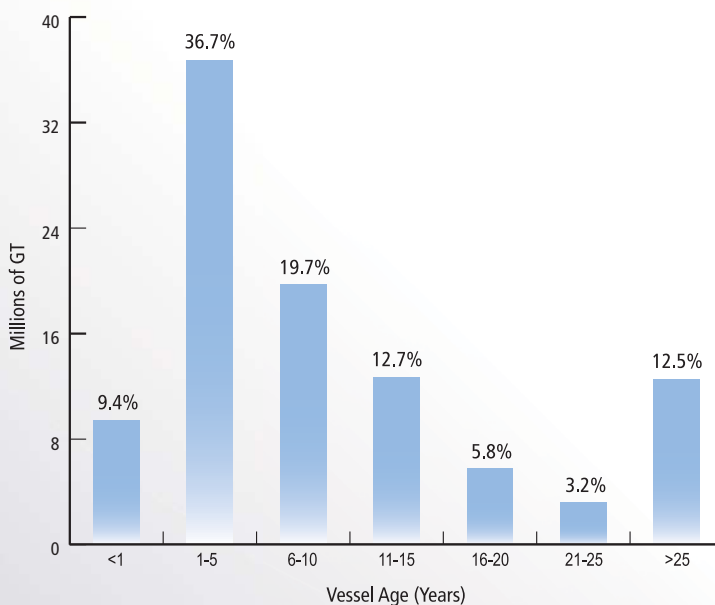


While orders for new tanker construction remained sluggish, ABS continued to capture a significant number of the orders placed. Remaining the preferred society for tanker orders, ABS closed 2011 with 30 percent of the global tanker orderbook, the same percentage as in 2010. At year's end, the ABS-classed tanker fleet stood at 66m gt, a 7 percent increase over the course of the year.

### VESSELS ON ORDER – RFC (2004-2011)

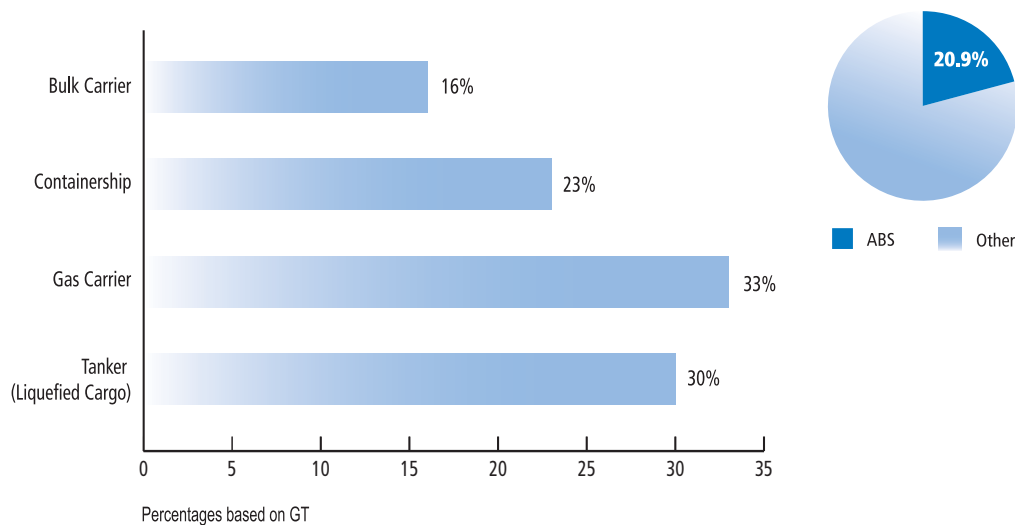


### EXISTING FLEET AGE PROFILE (2011)





## SHARE OF WORLDWIDE ORDERBOOK (2011)



Compared to 2010, bulk carrier activities at scrapyards increased while orders declined, as low market rates driven by oversupply incentivized owners to drop the overheads associated with vintage tonnage. In 2011, scrapping activity for bulkers increased almost fivefold while new construction orders came in 56 percent lower. ABS ended the year with 37.6m gt bulk carriers in class and more than 15m gt on the orderbook.

Examining the orderbook by builder country, ABS was the preferred society for new construction occurring in Korea, China, Singapore, Taiwan, India and Brazil. ABS remained the preferred non-national classification society for orders placed with Japanese shipbuilders. For orders placed throughout the Greater China and Pacific region, the ABS market share for new construction orders increased slightly in 2011, while many other classification societies saw their shares decline during the year.

The high volume of deliveries coupled with increased scrapping activity lowered the overall ABS-classed fleet age profile, with 60 percent of vessels delivered within the past ten years. This moved ABS to the third youngest overall fleet among leading classification societies.

Demand for newly constructed offshore support and supply vessels faced a slight decline in 2011, with 267 orders being placed in the market versus 303 in the previous year. ABS remains a preferred society for these specialized vessels, holding a significant share of the global orderbook for anchor handling tugs (46 percent), crewboats (33 percent), platform supply vessels (35 percent) and offshore support vessels (27 percent).

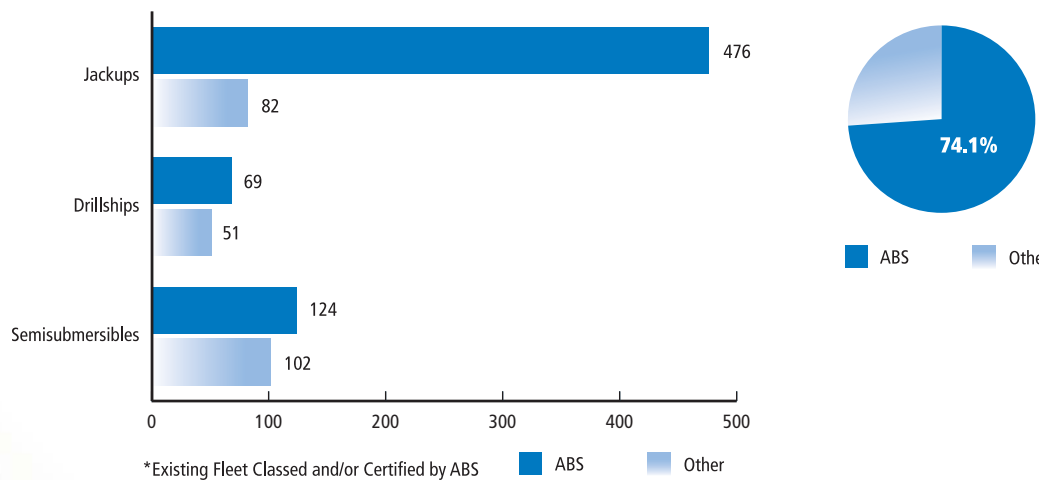




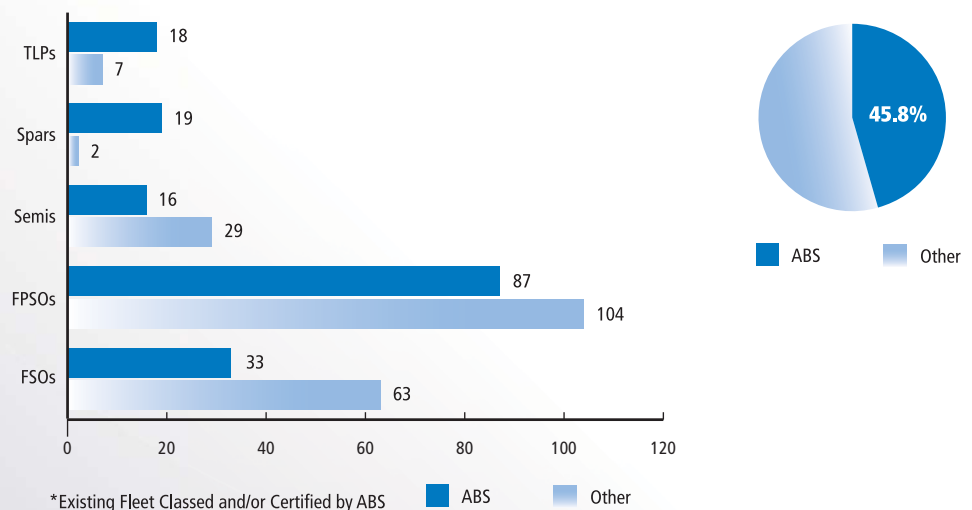
ABS continues to remain the industry-leading society for new construction offshore exploration assets. By year's end, ABS was the requested class for 74 percent of all new construction projects, including jackups, drillships and semisubmersibles.

In the production sector, ABS ended the year with the lion's share for floating production units. Taking both existing and new projects into account, 50 percent of the world's production units, including tension leg platforms (TLPs), spars, production semisubmersibles and floating production storage and offloading units (FPSOs) will be classed with ABS. This represents a market share that is 22 percent greater than that held by the next leading classification society.

### OFFSHORE EXPLORATION UNITS SHARE (2011)



### OFFSHORE PRODUCTION UNITS SHARE (2011)



## CLASS ACTIVITY SUMMARY

VESSEL TYPE	Vessels in Class 31 Dec 2011		Vessels on Order 31 Dec 2011		New Vessels Classed in 2011	
	NO.	GROSS TONS	NO.	GROSS TONS	NO.	GROSS TONS
Barge	2,726	9,709,574	401	1,505,746	347	1,025,506
Barge Carrier	4	154,364	1	24,000		
Barge Type Unit	31	133,486	3	136,615	5	137,431
Bulk Carrier	868	37,636,601	332	14,601,094	155	7,749,017
Bulk Liquid Carrier	6	26,213	3	7,830		
Chemical Carrier	258	4,629,211	27	364,806		
Column Stabilized Unit	164	2,864,514	13		8	151,653
Container Carrier	527	25,365,902	61	3,972,811	15	758,920
Dredge	20	99,881	1	484		
Drillship	43	1,993,441	22	1,230,057	11	683,869
Ferry	51	471,707	2	2,036	3	1,137
Fishing Vessel	13	34,925	1	2,226		
Fixed Platform	86	9,917	23		8	
Floating Drydock	19	219,970	3		1	5,856
FPSO/FSO	84	7,811,583	9	1,320,800	1	77,064
Gas Carrier	127	9,176,662	9	733,677	5	230,944
General Cargo Carrier	162	1,694,512	30	318,620		
Heavy Lift Ship	21	683,763	3	49,663		
High-Speed Craft	293	93,601	102	40,528	38	12,150
Ice Breaker			1	8,000		
Offshore Supply Vessel	940	1,138,341	31	58,044	12	18,158
Offshore Support Vessel	866	1,779,825	294	696,983	55	156,470
Oil Carrier	1,238	67,033,445	171	10,987,216	116	5,964,146
Ore Carrier	13	764,478	4	635,910	2	233,910
Passenger Vessel	19	168,614	3	2,600	1	4,508
Refrigerated Cargo Carrier	23	264,843				
Self-Elevating Drilling Unit	403	2,742,945	66		16	130,432
Self-Elevating Unit	76	303,574	26		7	40,535
Ship Type Unit (excl. FPSO/FSO)	20	2,058,597				
Single Point Mooring	59	2,071	17		1	
Spar	14	126,771	1			
Special Purpose Vessel	440	1,147,535	27	160,209	7	51,209
Subsea Pipeline	13					
Swath Vessel	9	25,781	1	2,484	1	809
Tension Leg Platform	9	32,930	3			
Tug/Towboat	1,263	585,902	185	99,231	148	185,394
Underwater System	73	98,650	24		10	
Vehicle Carrier	99	4,314,085	1	700		
Yacht	541	205,032	119	53,969	36	17,530
<b>TOTALS</b>	<b>11,621</b>	<b>185,603,246</b>	<b>2,020</b>	<b>37,016,339</b>	<b>1,009</b>	<b>17,636,648</b>

# MARINE



A theme often repeated during 2011 was the need to strike a balance – between the often competing drivers of safety and innovation; energy efficiency and performance; and today's financial security versus future investments. During the year, ABS launched several initiatives aimed at supporting owners, operators and builders as they endeavored to find the right course to navigate the economically turbulent environment while remaining well-positioned for the future.

Principal among this support was the expansion of the ABS environmental program, providing guidance, practical solutions and responsive service to operators seeking to meet regulatory requirements and optimize energy consumption. The *Ballast Water Treatment Advisory*, initially released in 2010, was updated and expanded to reflect the current state of regulations and available approved systems. The document became a leading industry resource on the topic, providing operators a comprehensive overview of design and operational considerations to take into account when retrofitting ballast water treatment systems to existing vessels or when specifying designs for a newbuild.

With the release of the new *ABS Guide for Ballast Water Treatment*, ABS developed criteria for the installation and use of ballast water treatment systems to assist owners in understanding the classification requirements pertaining to the IMO Ballast Water Management Convention. In addition to the installation parameters required for ABS-classed vessels using a ballast water treatment system approved by an IMO member State, the Guide offers owners of ABS-classed vessels two optional notations to demonstrate further due diligence in ballast water management practices.

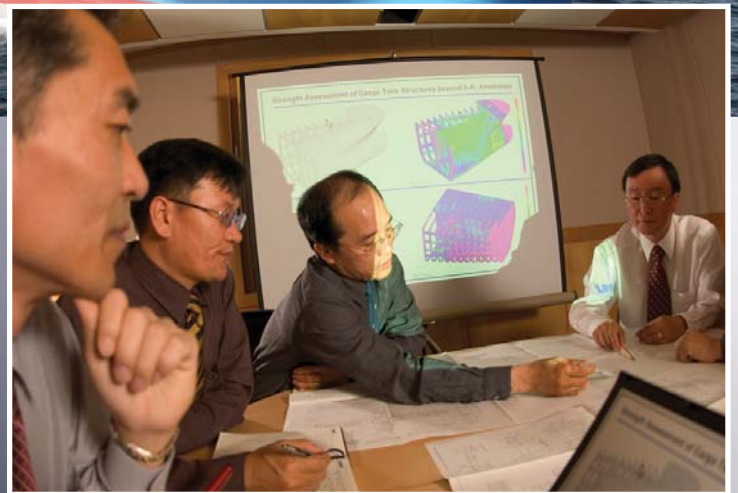
Rising fuel costs and a growing global interest in emission reduction led to an examination of LNG as an alternative fuel for all types of ships. In response to the industry's need for technical guidance for new construction and existing vessel conversion, ABS released its *Guide for Propulsion and Auxiliary Systems for Gas Fueled Ships*. The new ABS Guide, considered to be the most comprehensive available to the industry, provided criteria for the arrangement, construction, installation and operation of machinery components and systems for vessels fueled by natural gas. The objective of the Guide is to minimize operating risks in order to safeguard the vessels, their crews and protect the environment.



# Classing the World's Largest Containerships



Early in 2011, Maersk Line selected ABS to class its landmark containerships, the Triple-E series – standing for economy of scale, energy efficiency and environmentally improved. Ten Triple-E class vessels are to be built by Korea's Daewoo Shipbuilding and Marine Engineering Co. Ltd. with deliveries scheduled for 2013 to 2015. Maersk Line also has an option to order an additional 20 vessels built for Asia-Europe trade.



According to Maersk, the design will produce 20 percent less CO<sub>2</sub> per container moved compared to its *Emma Maersk*, launched in 2006, and 50 percent less compared to the industry average for the Asia-Europe trade route. Each vessel in the series also has a heat recovery system that captures and recovers energy from the exhaust gas to generate increased power with less fuel consumption. Estimates are that the Triple-E series containerships will consume 35 percent less fuel than the super post-panamax ships currently in service.

At 400 meters long, 59 meters wide and 73 meters high, the Triple-E series is slightly longer than the *Emma Maersk*, which holds the present position as the largest containership currently in operation. Each vessel in the Triple-E series is 18,000 teu and 165,000 dwt. They will also be the longest and widest container vessels possible based on port restrictions.

As the first classification society to work with containerships in 1966, and the current leader in classing modern larger containerships, ABS offered Maersk Line the combination of technical knowledge and practical experience necessary for this endeavor. ♦

Significant contributions to the Guide came from a joint research project between Daewoo Shipbuilding & Marine Engineering (DSME) and A.P. Moller Maersk to develop an LNG-fueled containership. Concluded in 2011, the project addressed the design and technical issues presented by a 7,000 teu containership burning LNG as fuel for both propulsion and power generation, with ABS providing approval in principle for the resulting design. The study also assessed operational, economic and regulatory impacts from the use of LNG as a fuel source.

ABS also contracted with Maran Tankers Management Inc. and other operators to assist in developing, reviewing and revising Company and Ship Energy Efficiency Management Plans (CEEMP/SEEMP) in accordance to requirements from the IMO. Developing a new industry model for environmental performance management, ABS' services provided a means of identifying measures for maximizing fleet operational efficiency for vessel operators.

Several services were launched in 2011 to aid operators in understanding or managing issues such as piracy, energy efficiency and the pending International Labour Organization's Maritime Labour Convention, 2006 (ILO MLC, 2006). Nearly 10,000 copies of a pocket-sized quick reference publication for ships' crews were distributed. The booklet provides a summary of the industry's *Best Management Practices for the Protection of Seafarers from Somali Based Piracy*, commonly referred to as BMPs.

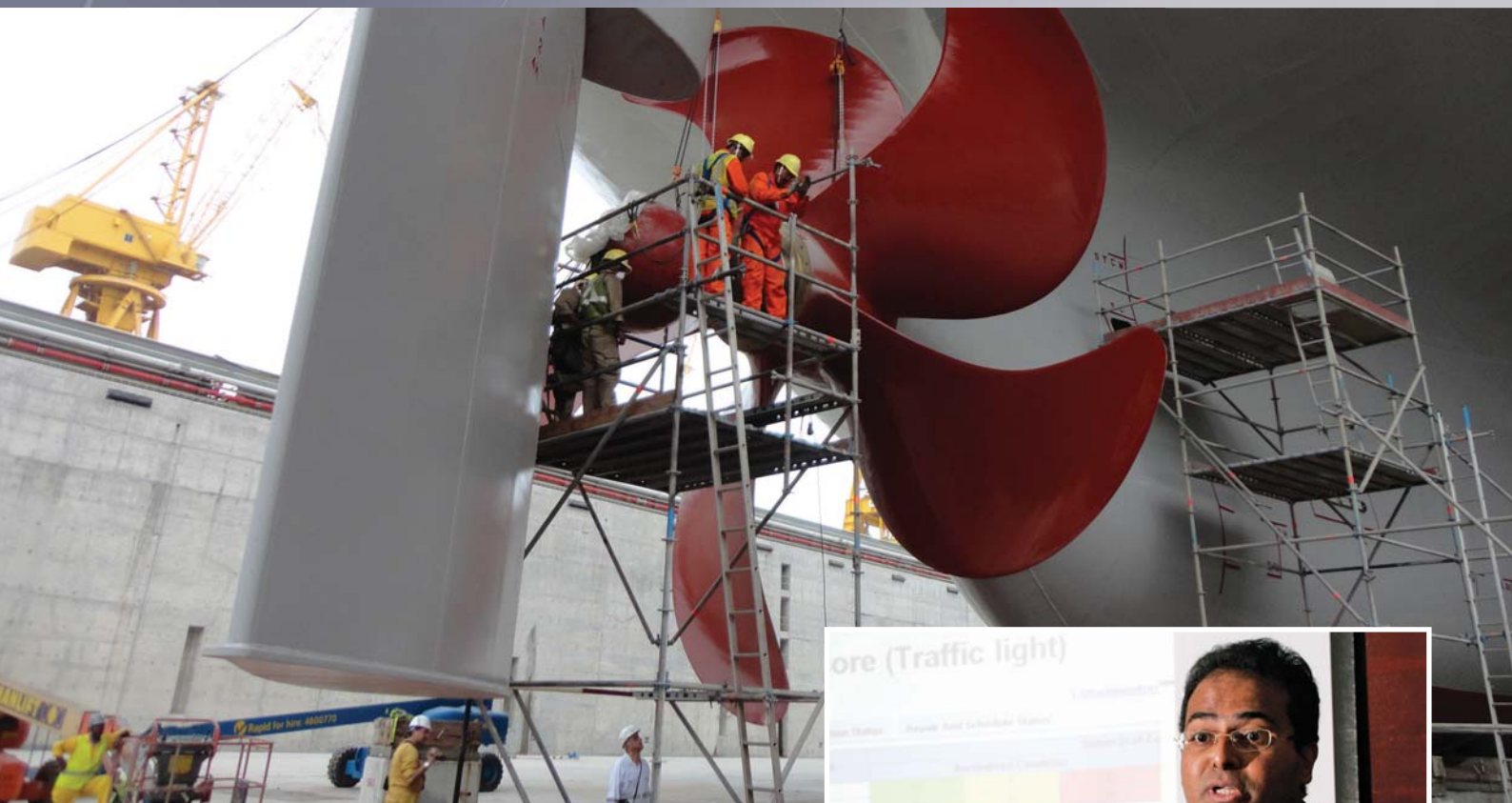
Ahead of the ratification of the ILO MLC, 2006, ABS provided voluntary certification services for forward-thinking ship operators such as Greece-based Consolidated Marine Management, the first operator in Europe to receive the certification from ABS.

The momentum of the harsh environment program continued with the release of a new Guide that assists ship operators in selecting, installing and using systems to monitor local ice belt stresses and alert crews to the severity of potential ice impacts. The *ABS Guide for Ice Loads Monitoring Systems* describes the monitoring process and procedures for collecting and recording ice load data. It also provides criteria for gathering, processing, evaluating and presenting the data so that crews can improve their measurement of vessel performance in ice.

The ABS collaboration effort with Lloyd's Register to develop a single software solution to support common structural rules achieved a milestone with the release of jointly developed software to assess bulk carriers and oil tankers designed to comply with the IACS Common Structural Rules.



# Offering Energy Efficiency Guidance



**A**BS works closely with owners to help them be recognized as environmentally responsible operators. ABS brought forth several new or updated industry-leading services in 2011 including hosting seminars on environmental regulatory compliance and energy-efficient technology; conducting in-depth owner workshops; and publishing criteria on implementing practical solutions to operational issues.



A prime example of these services was the collaborative efforts between ABS and Maran Tanker Management (MTM) in the development, review and revision of its Company and Ship Energy Efficiency Management Plans (CEEMP/SEEMP). The plans provided a mechanism for identifying measures aimed at maximizing operational efficiency throughout MTM's fleet.

The goal in developing these plans is to continually improve the energy efficiency of all seaborne operations. The plans are linked to MTM's Energy Efficiency Management Policy and to its relevant Environmental Program on Energy Efficiency which had been established, maintained and implemented in accordance with ISO 14001 procedures. It is expected that the plans, which comply with the current IMO SEEMP Guidelines and also take into account Intertanko's *Guide for a Tanker Energy Efficiency Management Plan* and OCIMF's *Guide for Energy Efficiency and Fuel Management*, will serve as an industry model for environmental performance management.

While there are a variety of environmental issues and regulations up for discussion, energy efficiency is particularly interesting because it is about reducing CO<sub>2</sub> emissions with a commercial focus. MTM had already incorporated fuel-saving measures and energy-efficient technology across its newbuilding specifications and ship operations. However, having in place the CEEMP and SEEMP allows for these measures to be documented and monitored for further improvement. ♦




The ABS Container Certification department made significant gains in international recognition during 2011, with Transport Canada granting ABS a Certificate of Registration as an independent inspector and the European Union providing accreditation for the Transportable Pressure Equipment Directive. In addition, several electronic applications for customers were released to facilitate the certification process while maximizing internal control and efficiencies.

In a move to achieve better balance within the organization, the ABS management team was restructured to provide greater alignment with shifts in customer needs and expectations. Closely following the appointment of Christopher J. Wiernicki as the new Chief Executive Officer, the new leadership team positioned ABS to improve the management of the evolving role of class and the accelerated pace of change in the industry. Key appointments were made to the newly created positions of Chief Learning Officer and Senior Vice President, Quality and Service. Together, these leaders perpetuate the ABS hallmark of providing quality services through the best trained surveyors and engineers in the industry.

In 2011, there was a renewed emphasis on improving employee safety performance. The effort was led by the new Corporate Safety Director, who was directed to continuously improve ABS' safety performance by increasing safety awareness and enhancing safety training initiatives.

Commitment to safety was evident not only in the more than 180 Rules, Guides and Guidance Notes published by ABS, but in the outreach efforts of ABS' active training and seminar programs. In 2011, approximately 4,000 industry professionals attended ABS training courses and thousands more participated in the nearly 100 free seminars provided during the year on topics such as LNG as a fuel, environmental compliance, harsh environment operations and regulations for trading in US waters.

In 2011, more than 150 research and development projects originated with the ABS Technology programs in the US, Canada, Brazil, Korea, China and Singapore, reflecting a commitment to providing the industry with practical solutions to current and longer-term challenges. The scope of projects ranged from cooperating with leading ship operators to identify common hazards among reported seafarer injuries to developing new computational fluid dynamics methodologies for advances in energy-saving ship propulsion technologies.

Work is continuing on many leading-edge projects started in 2011 that could result in truly game-changing technologies. ABS remains mission-focused as it collaborates closely with the industry in developing and selecting technologies that will maintain vessel, crew and environmental safety. 



# OFFSHORE & ENERGY



The year 2011 proved to be an active year for offshore exploration newbuild orders and deliveries. In the course of the year, 13 sixth-generation ultra deepwater drillships, many with optional notations, including the CDS notation, were delivered to ABS class from major Korean shipyards. Deliveries were made to major drilling contractors including ENSCO, Ocean Rig, Petroserv, Odebrecht, Schahin and ETESCO. Ordering activity remained brisk with 13 additional drillships contracted for construction to ABS class, most incorporating new post-Macondo industry initiatives and optional notations focused on enhanced system availability.

The jackup sector also was extremely active in 2011, with ten deliveries and 47 new orders to ABS class. Five of the deliveries were in China, two each in the Middle East and Singapore and one in the US. ABS classed two Friede & Goldman Super M2 design jackups at the Maritime Industrial Services Sharjah yard. In China, CIMC Raffles delivered two Friede & Goldman Super M2 units, the COOEC yard completed two Friede & Goldman M2 units and DSIC delivered one Friede & Goldman JU2000 unit. The last of four newbuild EXL jackups was completed for Rowan Companies at the Keppel AmFELS yard in Brownsville, Texas. In Singapore, PPL completed a Pacific 375 design unit and handed over the first of its new Pacific 400 Class series to Transocean.

The year also saw the delivery of eight column-stabilized drilling units (CSDUs) at various shipyards in Asia and the Middle East; five of the units were built in Singapore, one in the Middle East and two in China. The *Hai Yang Shi You 981*, a 10,000 feet water depth rated CSDU for CNOOC, was the first drilling unit built in China primarily for use in an ultra deepwater domestic exploration program; the other China-built CSDU *SS Amazonia* was delivered from CIMC Raffles for Brazilian owner Schahin. Delba, another Brazilian owner, took delivery of the *Delba III* from GPC/IMAC. JSL in Singapore delivered three units – *West Capricorn* to Seadrill, *Atwood Osprey* to Atwood and the *Songa Eclipse* to Songa – while Keppel FELS delivered *Alpha Star* to Brazil's Querioz Galvão as well as the fifth in a series, *ENSCO 8504*, to ENSCO.

The floating production market was robust in 2011 showing a strong recovery. ABS conducted full regulatory compliance services to the UK-HSE scheme for the first time on the *ATP Octabuoy* dry-tree semisubmersible. ABS also issued approval in principle (AIP) for two SSP monohull FPSO designs and carried out design review and issued an AIP for FloaTEC's dry-tree extended draft semisubmersible. ABS continued its involvement in the latest round of facilities that will work in the US Gulf of Mexico, including the Olympus, Bigfoot and Jack/St. Malo developments. ABS supported Shell's *Olympus TLP* acting as a certified verification agent (CVA). For Chevron, ABS provided review of FloaTEC's extended tension leg platform, to be used on the Big Foot Field, as well as the moored deepwater semisubmersible that will be used on the operator's Jack/St. Malo development.



# Leading Class Society for Drillships



The expanding drillship fleet is a reflection of an upswing in deepwater exploration. At the end of 2011, utilization rates hovered around 90 percent, with day rates around half a million dollars. Utilization rates for deepwater drillships are expected to rise slightly in 2012 and level off, ending the year slightly higher than year-end 2011.

ABS has led the field in classing the world's drillships, with nearly 57 percent of the drillships built to ABS-class around the globe. Among those classed last year were two built by Korea's Samsung Heavy Industries, Co. Ltd. (SHI), the *Ocean Rig Corcovado*, which is contracted to work offshore Brazil, and *Ocean Rig Olympia*, now working for Tullow Oil PLC offshore Ghana, West Africa.

These DPS-3 drillships, built to the Saipem 10000 design, are capable of dual activity drilling in water depths to 10,000 feet and can accommodate about 200 personnel. The units feature six azimuth thrusters, four knuckle boom cranes and a dual activity 1,000 metric ton derrick.

The SHI yard was contracted to deliver four deepwater drillships in this series. Eleven ABS-classed drillships have been delivered from the SHI yard since the *West Capella*, built for Seadrill in 2008 and contracted to work on Total's Usan Field on OPL 222 in the Gulf of Guinea offshore Nigeria through March 2012. ♦

The world of offshore exploration and production is continually changing. Innovation and advancement in technology have allowed the industry to meet the challenges related to the operating environments. ABS worked with industry in a variety of ways in 2011 to provide unique solutions and to advance technology in ways that add value and promote safety for its clients.

A solution developed in response to the industry's need to reduce nonproductive time was the publication of the *ABS Guide for Integrated Software Quality Management (ISQM)*, which addresses software development and maintenance. As the offshore industry increasingly relies on computer-controlled systems, validating software programs, including integration, has become vital to safe and efficient operations. Built on internationally recognized standards, ISQM validates software installation on the unit and monitors for consistency when software updates or hardware changes occur, providing a process for managing software over the life of the asset.

Operations in deeper water introduce challenges for mooring systems. In 2011, ABS worked with major oil companies, rope manufacturers and designers and regulatory agencies to update the *Guidance Notes on the Application of Fiber Rope for Offshore Mooring*, which focused on fiber rope stiffness.

The growing focus on deepwater exploration and production in Asia led to a meeting in Beijing jointly organized by ABS and China Classification Society (CCS) in mid-2011. The meeting, titled "Deepsea Developments in the China Offshore Industry," brought together more than 100 representatives from shipbuilders, designers, research institutes, energy corporations, universities and the Chinese Government to discuss a range of energy development issues.

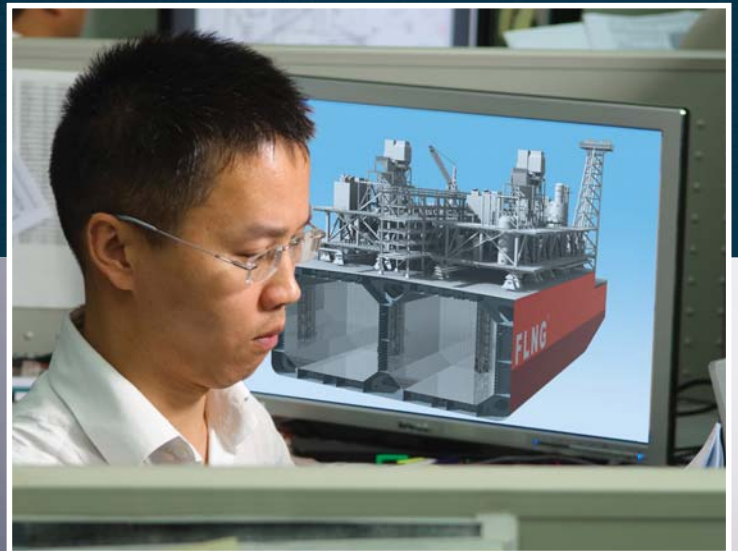
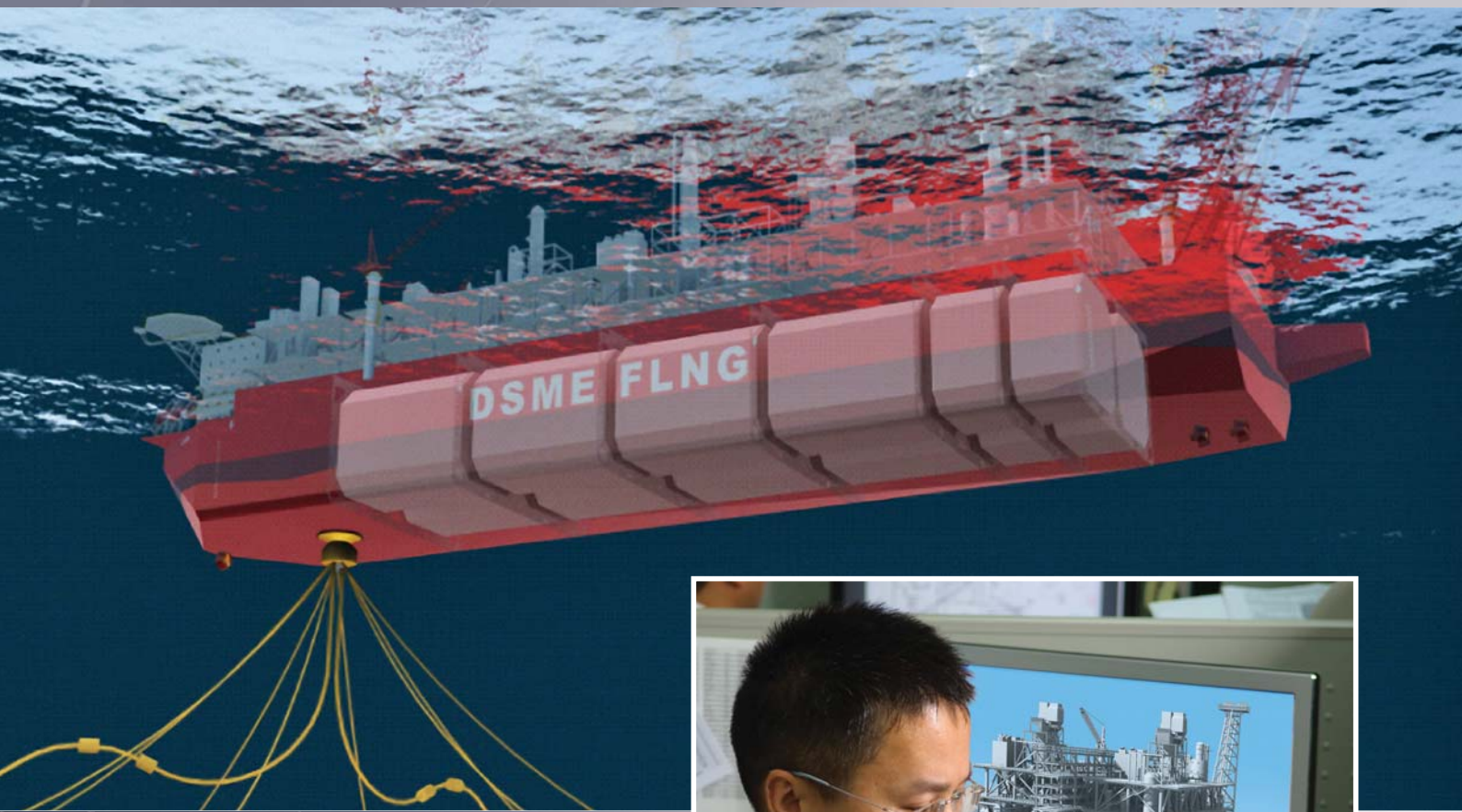
ABS added to its existing network of technology centers in 2011, expanding its presence in the Asia-Pacific region with new centers in Korea and China – augmenting ABS' existing centers in Singapore, Brazil and Canada and leveraging the organization's technology resources to service its clients around the globe. Each center focuses on key technology areas while supporting local development needs.

The Arctic was one key focus for research and development that involved more than one Technology Center in 2011. Interest in Arctic technology was the impetus for creating the ABS Harsh Environment Technology Center (HETC) in 2010 at Memorial University of Newfoundland (MUN) in St. John's, Canada.

In February 2011, HETC released its first comprehensive research study, which examined the management of water produced from oil and gas operations in Arctic environments. The Sustainable Technology for Polar Ships and Structures (STePS2) also housed at MUN, developed design tools for the next generation of polar ships and structures.



# New Methodologies for FLNG



**F**loating solutions for importing and exporting liquefied natural gas (LNG) are gaining ground. In early 2011, ABS moved into the final stages of design review for a number of floating LNG (FLNG) concepts, and it continued to invest in research to support further progress in FLNG technology.

In conjunction with Korea's Daewoo Shipbuilding and Marine Engineering (DSME), ABS concluded a year-long joint development program examining critical wave conditions for sloshing model tests and computational fluid dynamics in the cargo tanks of FLNG vessels. Study results will provide a new, more efficient methodology for determining critical sloshing conditions.

Technologies such as those being developed by ABS and DSME today will be critical as concepts for FLNG projects move forward. As the industry moves toward broader commercialization of FLNG, research will focus on developing reliable offloading systems particularly in harsh environments and qualifying and testing components that will be used in LNG transfer systems.

The fact that more than one-third of global gas reserves are stranded as a result of their location or field size without commercially viable access to world markets increases the attractiveness of FLNG installations, which can deliver lower overall project costs and reduce the environmental footprint of facilities because long pipelines to shore, onshore development and offshore compression platforms are not needed.

ABS continues to be involved in research and development efforts that will be invaluable in transforming FLNG from an undercurrent to the mainstream. ♦


ABS' Arctic research was not confined to North America. A project conducted by the ABS Singapore Offshore Technology Center (SOTC) applied ABAQUS/Explicit software to examine interaction between ice sheets and the supporting legs of a platform. ABS also reviewed and issued an AIP for a new multidraft drilling semisubmersible, the *JBF Arctic*, developed by Huisman. The unique design of this semisubmersible combines the advantages of the very low motions of a conventional semisubmersible with heavily strengthened ice resistance when operating in ice at deep draft. Designed to drill in sub-Arctic conditions, it will be moored in ice-infested areas with ice thickness up to 2.0 meters. In addition, ABS conducted collaborative research with Hyundai Heavy Industries (HHI) to evaluate the basic design and containment system parameters for an LNG carrier that will operate in the Arctic on a trade route from the Kara Sea and Barents Sea to Europe or the US.

Increased sophistication within the offshore support vessel (OSV) market prompted ABS to develop standalone guidance for the specialized multifunctional vessels that are entering the market. The *Guide for Building and Classing Offshore Support Vessels* took a comprehensive approach toward OSV design. Criteria and explanations of notations reflecting specialized capabilities were included in the Guide.

ABS had the distinction in 2011 of becoming the first classification society to be granted authority to issue Certificates of Fitness on behalf of the US Coast Guard to US-flagged OSVs that transport or handle limited amounts of hazardous and noxious liquids outside US jurisdictional waters.

In the second half of 2011, ABS classed three 160,400 m<sup>3</sup> dual-fuel, diesel-electric MK II system LNG carriers, delivered by Samsung Heavy Industries (SHI) in Korea and chartered to Angola LNG Supply Services. An additional three LNG carriers were delivered to Sonangol from the DSME yard in Korea. By year-end, ABS had 24 carriers contracted for class at DSME, HHI, SHI and Hudong shipyards.

Increased interest in alternative energy within the US gave rise to a number of projects funded through the US Department of the Interior, including a project awarded to ABS focusing on design standards for offshore wind farms. Another wind energy milestone was classing Keppel FELS' *Seafox 5*, a multipurpose self-elevating platform wind turbine installation vessel owned and managed by the Seafox Group. When the vessel is completed in 2012, it will begin work installing offshore wind foundations in the 288 MW DanTysk wind farm in the German sector of the North Sea. ABS also was selected to class the *Seajacks Zaratan*, a self-elevating unit designed for harsh environment offshore wind farm installation.

ABS was involved as well in a novel renewable energy concept that uses warm ocean water to generate energy. ABS awarded an AIP for a floating renewable energy plant called the Ocean Thermal Energy Conversion (OTEC) system, which converts liquid ammonia into gas in a heat exchanger using surface water. The system uses an energy production plant installed on board an offshore spar to produce electrical power. 



# GOVERNMENT





In 2011, as ABS maintained its focus on delivering high-quality services to meet the needs of its government clients, there was increased recognition of the benefits classification and class-related services provide. These services expanded across the entire life cycle of government and military vessels through design review, surveys during construction, and survey and engineering support after delivery.

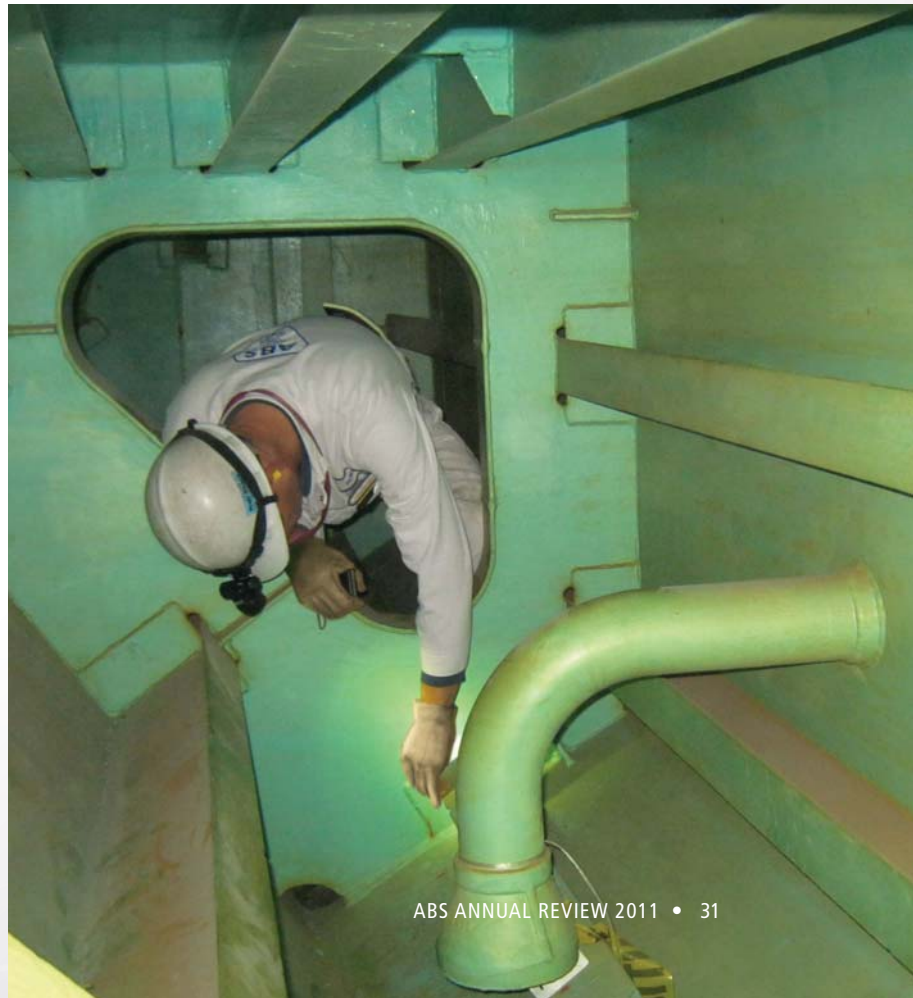
With more than 160 auxiliary and sealift support vessels providing fuel, food, ordinance and other necessary supplies to military personnel around the world, the Military Sealift Command (MSC) of the US Navy retained its vessels in ABS class. The global reach of survey offices allows ABS to meet the needs of MSC in virtually any port-of-call. In addition to its existing fleet, ABS provided classification services for MSC's newest vessels under construction including the Lewis and Clark class cargo ships (T-AKE), oceanographic research vessels (AGOR 26 and 27), the oceanographic survey vessel *USNS Maury* (T-AGS 66) and the missile range instrumentation ship *USNS Howard O. Lorenze* (T-AGM-25).

Within the combatant fleet of the US Navy, ABS expanded its role in the area of life cycle maintenance through its Achieving Service Life Program (ASLP). ASLP uses risk-based survey programs developed for commercial ships and tailors them to the specific needs of Navy vessels. In 2011, 15 additional surface combatants entered the ASLP program and 24 additional vessels were slated to join the program in 2012.

At the end of 2011, in light of new budget limitations, Naval Sea Systems Command (NAVSEA) and ABS reassessed joint efforts regarding the construction of new non-nuclear surface combatants. These discussions resulted in a realignment of priorities in order to make sure ABS' experience is used in the manner most beneficial to the NAVSEA shipbuilding program.

As part of this realignment, the *ABS Rules for Building and Classing Naval Vessels* will be transformed into a new document that will be managed by the Navy. ABS will continue to provide technical engineering and survey support to the Navy during design and construction when needed. Upon completion, newly built non-nuclear surface combatants will be entered into the ASLP program. The shift in activities will allow ABS to continue to assist NAVSEA in building and maintaining a combatant fleet that meets the current and future operational needs of the US Navy under today's budget realities.

The Office of Naval Research continued to use ABS in the development of future technologies that could be employed on its combatant and sealift fleets. These



# Assisting Navies Around the World



While ABS can trace its history of working with the US Navy back over 100 years, ABS has recently begun working alongside international naval forces to assist in the development of their maritime defense assets. As the value of classification in naval and defense shipbuilding becomes more apparent, international naval forces have begun to rely on the experience of ABS in their acquisition programs.

One example of a partnership between ABS and an international navy is the Egyptian Fast Missile Craft (FMC) currently under construction at VT Halter Marine in Pascagoula, Mississippi. The mission of the FMC will be to conduct independent and joint surveillance and strike operations against surface shipping and armed surface adversaries in the littoral waters of the Mediterranean and Red seas. Of particular focus will be the patrol and defense of the Suez Canal in order to keep this vital global shipping lane open for commerce.

The FMC has been designed and built to the requirements established in the ABS *Guide for Building and Classing High Speed Naval Craft*. The program has benefited greatly from a high degree of design and process maturity due to a strong working relationship between the US and Egyptian Navies, VT Halter Marine and ABS.


In response to interest by international navies in acquisitions like the FMC, ABS has begun developing new Rules for the design review and construction of international safety, security and defense vessels. The new Rules will leverage ABS' 150 years of commercial sector experience and its decades of working with the US and Allied Navies to develop a best-in-class international standard for building naval vessels. ♦



include advanced mooring systems, transfers at sea as part of the High Capacity Alongside Sea Base Sustainment concept and interface ramp technology for possible use aboard the new Joint High-Speed Vessel (JHSV). Currently under construction, the JHSV class is a high-speed, shallow-draft vessel intended for rapid intra-theater transport of medium-sized cargo payloads. The JHSV class is being designed and constructed under the *ABS Guide for Building and Classing High Speed Naval Craft*. The onboard systems will be based on the requirements in the *ABS Rules for Building and Classing Steel Vessels*.

Outside of the US Navy, ABS assisted the US Coast Guard (USCG) in its acquisition of the National Security Cutter, considered the flagship of the fleet which is designed for maritime homeland security. ABS also began to assist the USCG with the fast response cutters and the forthcoming offshore patrol cutter – the latest class of vessels, that will modernize and expand the USCG mission capabilities. By the end of 2011, construction began on five fast response cutters, to be known as the Sentinel class, including the first-in-class *USCGC Bernard C. Webber*.

In addition, ABS' longstanding support of the Army Corps of Engineers' fleet remained strong. The Corps classes all of its new construction vessels with ABS and several of the District Commanders have chosen to retain class on the vessels assigned to them. Typically, ABS engineers and surveyors are involved in a half-dozen new construction projects at shipyards located throughout the US including the inland waterway system. ABS continued to support the Maritime Administration Ready Reserve Force, which currently has 50 vessels maintained to ABS class. The National Oceanographic and Atmospheric Agency is also building its small water-plane-area twin hull (SWATH) coastal mapping vessels and its fisheries research vessels to ABS class.

ABS works with interested naval and coast guard officials from several foreign nations that wish to design, construct and maintain new patrol craft under the *ABS Guide for Building and Classing High Speed Naval Craft* as well as identifying appropriate Rules that can be utilized for larger vessels. This includes support for the vessels in the Canadian Navy as well as with the fast missile patrol craft for the Egyptian Navy. By the end of 2011, ABS began developing new Rules for the design review and construction of international safety, security and defense vessels. This Rule development will look to leverage ABS' commercial and government sector experience with existing standards in order to support international navies, coast guards and maritime government clients. 



# FLEET MANAGEMENT SYSTEMS



**F**or ABS Nautical Systems Division, 2011 was another outstanding year that resulted in an annual growth rate of 30 percent. By year-end, there were 50 new clients installing the NS5 software on an additional 700 vessels worldwide. New contracts for Nautical Systems included Abu Dhabi Ports Company, Atlantic Bulk Carriers, Diamond S Management, LLC, Donnelly Tanker Management, Empremar, Essar Shipping Ports & Logistics Ltd., Formosa Petrochemical Corporation, SAAM Remolques, Samco Shipholding Pte Ltd., SeaSpan Ship Management and Zakher Marine International, Inc.

Continuing to meet the needs of industry, in September, Nautical Systems released the next generation of its industry-leading suite of asset management software, NS5 Enterprise. The versatile design allows all users – from senior management to crew members – 24/7 access to relevant data to assist in the operation of vessels and the management of fleets.

Substantial improvements were implemented to make this user-friendly software a first-of-its-kind application on the market and establish it as the must-have tool for the global maritime industry. Shortly after its release, work began on a new module to assist clients in monitoring environmental performance indicators and promoting fuel optimization, with a release date of spring 2012.

The newbuilding initiative for the marine and workboat markets, which was introduced in mid-2009, was instrumental to Nautical Systems' successful year. The number of vessels enrolled in the program since its inception neared the 1,000 mark. The highlight of Nautical Systems' activity was its expansion into the offshore and energy sector. The newbuild program was extended to offshore operators and includes all mobile offshore drilling units (MODUs) contracted after 1 January 2011.

Clients not only received the powerful maintenance management software, but also the Survey Planning Document which is used by ABS surveyors to inspect areas of the hull structure. A requirement of the *ABS Rules for Building and Classing Mobile Offshore Drilling Units*, this document identifies critical structural areas and stipulates the minimum extent, location and means of close visual inspection, giving owners a means for



# Launching the Next Generation Software



In 2011, Nautical Systems, the software development division of ABS, introduced the newly redesigned, next generation version of its industry-leading asset management software, NS5 Enterprise. Nautical Systems follows a customer-centric approach in regards to incorporating new functionality into its suite of products and the creation of NS5 Enterprise was no different.

Recognizing the value of client feedback and the importance it played in this process, NS5 Enterprise was developed based on considerable input from its user base. Significant improvements were made to critical elements of the application, such as usability, speed and overall performance.

NS5 Enterprise is now more than just software. This fully integrated information network is a business analysis tool that serves as the backbone for improved planning and decision-making for all levels within an organization. Customized dashboard views of company or user-defined key performance indicators include fleetwide access to the latest maintenance, supply chain, safety and personnel data. Data that senior management would normally request from managers regarding the status of their fleet is directly available to them anytime, anywhere. In addition, crews can see how their job functions tie into the overall success of the organization. These are significant steps to improving communication on all fronts.

NS5 Enterprise continues to provide the same standardized, yet flexible solution for asset management with its complete suite of integrated software. In addition to a mobility and portability application, as well as flex-form functionality, updated dashboard views and new modules for energy and environmental efficiency are in development for 2012. ♦

maintaining compliance with the *ABS Rules for Survey After Construction*. Seadrill Management and Hercules Offshore were among the offshore companies that enrolled to take advantage of the program's benefits.

The ABS Offshore Asset Integrity Management (OAIM) program, which takes a comprehensive approach towards managing risk throughout the life of an offshore asset, was also introduced last year. The capabilities of this program include stability monitoring, load management and rapid response damage assessment. The configuration management program provides clients an industry-proven load management program (LMP) that tracks ongoing configuration changes to meet offshore stability, operational monitoring and weight management requirements. The program provides the capability to evaluate the weight management and operational limits of various situations for the offshore unit. The OAIM program leverages ABS' classification services as well as the fully integrated asset management software of Nautical Systems.

In another move to enhance offering to the marine and offshore industries, ABS joined forces with Herbert Engineering to develop software solutions that bridge design, classification and operational management aspects of vessels and offshore units. A product that received increased interest from industry during 2011 is CargoMax™. The shipboard loading calculation program is used for planning and evaluating ship loading. It quickly and precisely calculates ship stability and stress characteristics based on any loading condition specified by the user. Given the high cost of fuel, CargoMax has proven to be a valuable tool in maximizing vessel utilization, increasing cargo loading efficiency and increasing crew productivity.

In 2011, Nautical Systems formed a project management team with a dedicated manager, and executed a formal project management process directly aligned with the ISO certification process. A strong emphasis was placed on project management for NS5 Enterprise implementations. [enr.com](#)





**TONY NASSIF**  
ABS GROUP OF COMPANIES, INC.  
PRESIDENT & CHIEF EXECUTIVE OFFICER



# ABS GROUP REPORT

**W**hile market challenges persisted in 2011, operating entities within the ABS Group of Companies delivered another year of growth, setting new records for both revenue and contract orders. These accomplishments were achieved despite the ongoing softening of the global market, particularly in business lines serving governments and the financial and insurance industries. Although this uncertainty remains, ABS Group is well positioned for renewed spending with multiple contract vehicles in place with key government agencies. Numerous opportunities are being actively pursued with new products launching for the insurance industry.

With growth directly tied to the ability to deliver safety, risk, integrity, quality and performance management services, building the ABS Group workforce remains a key priority. In 2011, ABS Group again achieved a new milestone with the global workforce exceeding more than 1,700 employees in 32 countries. This, in addition to the expanding base of contract resources for key services in inspection, independent verification and project quality management, gives ABS Group a truly global presence capable of delivering services in a majority of regions.

The creation of a global network of prequalified resources in the various regions for procurement and in-service inspection, with more than 1,000 active candidates in the database, gave ABS Group new flexibility to respond to opportunities without delays in service. This extra resource pool augments ABS Group's full-time complement of engineers, allowing the organization to adapt staffing approaches to meet customers' demands and market conditions.

In 2011, ABS Group expanded its global presence by establishing operations in Western Australia and West Africa with new offices in Perth, Australia and Lagos, Nigeria. These offices have already begun to produce new project opportunities in these very active locations. Additionally, ABS Group invested in building its presence in the United Kingdom and Europe, with added business development resources in London and the acquisition of Safetec Nordic AS in Trondheim, Norway. This investment positions ABS Group to capitalize on projects in the North Sea, from both Norway and Aberdeen. Bringing Safetec into the organization will fortify the move into Australia with Safetec's existing operations in Perth. This was the first of several key acquisition investments planned as a catalyst to propel ABS Group's growth and performance for the next several years.

This global strategy continued the trend that began in 2010, when ABS Group first received more than half of its revenues from outside of the United States. In 2011, ABS Group again saw an increased proportion of revenue and activity from its non-US operations. Operations in the US performed admirably in 2011, rebounding from the prior year's soft performance to nearly double margins and beating revenue forecasts. This upward trend for the US is expected to continue in 2012, particularly with the emphasis ABS Group has placed on building core capabilities in inspection, integrity management and project quality management services. These services have also been the foundation for growth in other regions including the Middle East and the Asia-Pacific region. These capabilities will allow ABS Group to tap



into both capital project and operating expense budgets, providing added revenue stability and broader access to larger projects.

The global market sector alignment initiated in 2010 was in place throughout 2011 and provided ABS Group with a new perspective on customers' business challenges. As a result,

ABS Group was able to improve its understanding of clients' requirements, assess their needs and formulate new solutions to respond to their ever-changing priorities and challenges.

Perhaps the most recent example of this market-focused strategy is with the Renewable Energy sector within ABS Consulting. This sector, launched in the previous year, completed its first full year of operation in 2011. Building on the momentum from a few initial contracts, the Renewable Energy sector has now outgrown its start-up status and is delivering growing revenues with a solid backlog of new contract opportunities. Its delivery of full project life cycle services helps build strong customer relationships and secure long-term contracts with key offshore and onshore wind farm developers and operators in the US and Europe. In the coming year, this global sector will continue to establish key resources in Latin America and China, enabling it to pursue new projects in both of these growing markets.

ABS Consulting delivered a solid performance in 2011 and began the year with a new organizational alignment along five global market sectors – Process Industries, Government, Maritime Services, Nuclear Utilities and Renewable Energy. This new structure changed the way ABS Consulting managed its operations and also how it approached key markets and clients. ABS Consulting realized positive results from this approach with new contract opportunities from several key global accounts.

Early successes in West Africa stemmed from opportunities with Chevron resulting from the global network that originated with contacts in the US. ABS Consulting is also actively working on a multiyear contract with Petrobras Americas in Houston, building on its long-standing relationship with Petrobras in Brazil. As this model continues to evolve, ABS Consulting will be better-positioned to compete for more of these large, multiyear global contracts. Interestingly, these global contracts leverage worldwide resources with projects in West Africa using resources in Korea and Singapore.

Another global customer for ABS Consulting is Saudi Aramco, for both the Process Industries and Maritime Services sectors. In 2011, Maritime Services was contracted to develop a Basic Marine Fleet Program Study for Saudi Aramco Fleet Assessment Planning. This project involved a condition assessment of the current fleet of vessels to support decisions to add new assets, retain or decommission existing vessels and develop a newbuild program for asset replacement. Additionally, the Process Industries sector continued to receive multiple major contracts to provide third-party inspection services, safety training as well as both building and seismic risk assessments.

Another exciting addition for ABS Consulting is a new In-Service Inspection Competency Center that will be staffed initially in the US. This unit will focus primarily on the extensive downstream refining and petrochemical market in and around the Houston Ship Channel and extending into Louisiana. This capability will allow ABS Consulting to tap into the facilities' OPEX budgets and provide a foothold to support clients' needs in other ongoing opportunities for safety, risk and integrity services. Together with our initiatives in third-party inspection and project quality management, ABS Consulting is expected to play a major role in supporting clients' integrity management-related services around the world. Obtaining this role will result in the transfer of competencies from regions including the Middle East and Asia-Pacific to the United States.

EQECAT continued to face the challenges of an uncertain global financial market in 2011 and focused on its major re-architecture project for WORLDCATenterprise™. This project is scheduled to be completed in late 2012 and EQECAT should begin to leverage this investment with increased sales, improved market penetration and growth in market share for catastrophe modeling. With a new product launch and a solid sales infrastructure, the future is promising for EQECAT to capitalize on the rebounding insurance market opportunities in the coming year.

In 2011, ABS Quality Evaluations (ABS QE) continued to outline and execute several key global marketing initiatives including webinars, enhanced pricing and new programs for key market sectors such as aerospace and supply chain audits to sustain performance and increase overall business volume. ABS QE also established itself with a dedicated Canadian presence and is working to secure a leadership position in China. In the US, ABS Quality Evaluations worked with the Center for Offshore Safety to position itself as a key auditor for the new Safety and Environmental Management Systems regulations for offshore operators and contractors in the Gulf of Mexico.

ABS Group continues to build capabilities across a range of market sectors, strengthening its position and its ability to adjust and adapt to changing market conditions. Combining its current product offerings with those of newly acquired companies such as Safetec expanded the ABS Group brand globally, as well as its reputation as a leading US-based provider of safety, risk, integrity, quality and performance management services. ABS Group embraces the challenges of a new year with a solid team of dedicated men and women, all talented professionals, with a clear understanding of the mission and the opportunities that the future holds. I extend my appreciation for their contributions.

I would also like to extend my appreciation to our clients worldwide for their continued support of ABS Group of Companies in 2011 and for the opportunity to serve them across town and all around the world. 



# ABS CONSULTING



**F**inishing 2011 with another year of solid financial and organizational growth, ABS Consulting maintained the successful track record and momentum that began in 2006. ABS Consulting emerged as a leading provider of professional management, engineering and other related technical and support services for key market sectors in high priority geographic locations around the world.

Strategic investments in the Process Industries sector (focused on the oil and gas business around the world) and Renewable Energy sector (focused on wind energy in the US and Europe) fueled expansion throughout the year. Financial gains were achieved despite major setbacks on government-related projects due to budget uncertainties and cutbacks. Even with those challenges, each sector reported notable progress with a wide range of new projects.

The Process Industries sector achieved development in each geographic region, with its strong performance coming from the Asia-Pacific region, the Middle East and Latin America. A solid pipeline of project quality management and inspection and verification-related work across the Asia-Pacific region drove these results. In the Middle East, inspection and verification work for Saudi Aramco was the keystone for substantial growth. ABS Consulting was recognized as one of the top inspection service providers for Saudi Aramco, not only in the quality of work, but also in its execution of “Saudization initiatives” – initiatives designed to increase the percentage of Saudi labor in large contracts. In Brazil, ABS Consulting was awarded major new program support contracts with Petrobras for health, safety and environmental (HSE) services, environmental consulting services and inspection-related support.

ABS Consulting also saw growth in local content verification services – providing independent verification to certify that companies are complying with specific local content percentages. The Process Industries sector was successful tying together resources and building client relationships in the US, Central America and Latin America on several high-profile incident investigations and root cause analyses for Petrobras and PEMEX. These projects helped address immediate needs and also furthered trusted partnerships.

The Renewable Energy sector made the transition from a formative start-up operation in 2010 to a well-performing business unit in 2011. Throughout the year, this global market sector was awarded major new projects with wind farm developers and operators such as Vattenfall and RWE Innogy; equipment manufacturers such as Gamesa; and engineering design, construction and maintenance contractors such as Fluor.



# Inspection & Advisory Services for Wind Farm



In late April 2011, AES Wind sought inspection and evaluation services from ABS Consulting, to assess conditions related to the design of its 140 wind turbines at the company's Lake Benton, Minnesota wind farm. As part of the services, ABS Consulting provided independent advice regarding the actual condition of the turbines and the best course of action for any potential repairs of the blades.

The majority of the wind farm has operated for the past 13 years and the turbines will continue operating for nearly two more decades, according to a contract between AES Wind and a local utility company. Safety was an overall concern addressed during the project since the structural integrity of the blades is a critical factor affecting long-term, safe and reliable operation.



ABS Consulting conducted a systematic inspection and provided both general and specific findings and recommendations to AES Wind on the actual physical conditions and recommended turbine repairs. These recommendations enabled AES Wind to evaluate the quality and cost of several service providers, thereby providing a basis for an overall repair strategy for at the Lake Benton wind farm.

As a result of the investigation and subsequent guidance, AES Wind is on track to complete repairs at Lake Benton, so that the local area will continue to receive the benefits of safe and reliable wind power. ♦

Renewable energy projects included a wide range of services from design verification and HSE management support to various quality, inspection and condition assessment activities for turbines, blades, structures and related equipment. While many of these services were common for both US and European operations, the US business was primarily focused on onshore wind farms, while the European business was primarily focused on offshore wind farms.

For the Maritime Services sector, engineering verification and certification continued to be in high demand, including life extension-related projects for semisubmersible offshore units and a number of tanker conversion projects. Owner's representation work was a bright spot for Maritime Services, with staff assigned to a number of projects in the US and Singapore. In addition by the end of 2011, a number of projects were underway to provide oil response services in the event of environmental incidents related to drilling activities and transportation of oil and gas around the world. For several of these, Maritime Services supported the provision of oil spill containment response equipment and vessels with project quality management, inspection, maintenance management, project certification and owner's representation related to the design and construction of assets.

The Nuclear Utilities sector continued to face an environment of uncertainty created by the Fukushima catastrophe in Japan. Many newbuild initiatives were cancelled or deferred, as new requirements for existing plants were defined. Specializing in natural hazard risk and vulnerability assessment for power plants, the Nuclear Utilities sector expects strong future demand for services even in the midst of this ongoing uncertainty. Several notable projects in 2011 helped establish a foundation for ABS Consulting to capitalize on renewed opportunities in this sector as they emerge. In the US, the Nuclear Utilities sector began work on a multiyear support contract with STARS Alliance to provide Risk-Informed Surveillance Frequency Control Program (RI-SFCP) development and implementation support.

Specifically, ABS Consulting developed the associated Surveillance Test Risk Informed Documented Evaluations (STRIDEs) for targeted surveillance tests at multiple commercial nuclear plants. In December, the Nuclear Utilities sector won another major multiyear support contract with FirstEnergy Corp. to perform seismic hazard's analyses and seismic probability risk assessments in response



# Expanding Service Offerings



In late 2011, ABS Group of Companies entered into an agreement to acquire Safetec Nordic AS (Safetec) a leading provider of integrated risk and asset management services based in Trondheim, Norway. This strategic move adds significant strength to the existing safety, risk and integrity management services provided to offshore customers through ABS Consulting, an ABS Group company.



Safetec has provided integrated safety, risk and asset life cycle management services to customers in the offshore, marine and land-based industries for almost 30 years from their offices in Trondheim, Oslo, Stavanger and Bergen in Norway, and through subsidiary companies Safetec UK Ltd. in Aberdeen, AP Safetec Sdn Bhd. in Kuala Lumpur, Malaysia, and Risk Management Pty. Ltd. in Perth, Australia.

Safetec has a longtime relationship with Teekay Petrojarl Production on FPSOs. Since the late 1980s, Safetec has cooperated with Teekay (then Golar-Nor Offshore) on the development of the company's FPSOs, contributing to improved safety for Teekay's fleet of FPSOs as well as most other advanced FPSOs operating in the North Sea. The latest Teekay project is a newbuild FPSO for BG Norway that will operate on the Knarr Field in the North Sea, with Safetec conducting safety studies for all phases of its construction.

ABS Consulting is appropriately positioned to deliver turnkey solutions to offshore oil and gas, maritime and transportation industry customers. ♦




to the new US Nuclear Regulatory Commission requirements for existing plants in the Central and Eastern US. The outlook for these services in the US and internationally is positive and the Nuclear Utilities sector is well-positioned for future opportunities.

While ongoing budget challenges for the US and other nations continued to influence existing work and new opportunities, the Government sector maintained its position with existing clients and remained focused on innovative ways to assist with their needs in these uncertain times. Throughout the year, this team started several notable projects. As part of a team led by Lockheed Martin, ABS Consulting began a multiyear effort supporting US Coast Guard (USCG) training commands. With ABS Consulting staff members working full-time on site at the USCG's training center in Charleston, South Carolina, training specialists assisted with needs analyses, curriculum development and program administration.

Additionally, when the ABS Technology department won a new research contract with the US Department of the Interior's Bureau of Safety and Environment Enforcement (as it was renamed), the agency with responsibility for oversight of safety and environmental enforcement for offshore oil and gas activities, ABS Consulting was brought in as a subcontractor to ABS. Under this contract, ABS Consulting will be working directly with industry partners to perform reliability analyses of blowout preventer (BOP) systems and to evaluate the effectiveness of maintenance, inspection and test strategies.

As ABS Consulting continues to build strong relationships serving major global customers, particularly in the oil and gas sector, it sought to position itself for opportunities in locations where those clients are most active. In 2011, ABS Consulting focused on several key locations for expansion including Australia, West Africa, China, the UK and Europe. Among these, a new wholly owned entity in Shanghai, China, focused on building the renewable energy and industrial services businesses in that country, while the acquisition of Safetec Nordic AS in Norway allows ABS Consulting to serve the numerous oil and gas customers operating in the North Sea and Europe.

Moving forward, the global market sectors and key locations within ABS Consulting are constantly looking for new ways to help customers manage risk, sustain safety, optimize asset integrity and deliver operational and business performance excellence. 



# ABS QUALITY EVALUATIONS



**A**BS Quality Evaluations, Inc. (ABS QE) continued to build on its commitment to become a global “best in class” auditing and management system services organization. Core competencies in certification, auditing and training were continuously improved and benchmarked in order to deliver market-leading services to customers worldwide. In 2011, the company delivered solid revenue despite difficult market conditions in the US and Europe and after the natural disaster impacting Japan.

ABS QE continued its efforts to be a pioneer, contributing to the development of industry and global standards. It was selected by the Center for Offshore Safety to take part in the development of an accreditation and third-party audit certification program. In addition, ABS QE is actively involved and holds positions in various industry groups around the world, particularly the Independent International Organization for Certification, American Chemistry Council Responsible Care Technical Board, Brazilian Association of Certification Bodies and the Independent Association of Accredited Registrars. Geographically, ABS QE expanded its global presence with a new office opening in Canada, allowing for greater coverage to serve its client base within this market.

While the Americas continued to be the foundation for ABS QE and remained the most active region, investments and additional resources were added within the Asia-Pacific region and the Middle East in 2011. Core programs offered globally included ISO 9001 (quality), ISO 14001 (environment), OHSAS 18001 (health and safety), AS 9100 (aerospace), RC 14001 (responsible care), TS 16949 (automotive) and training.

North American teams further penetrated the aerospace market with large contracts secured from Aerojet, Oberg Industries, ATK Space Systems, Scot Forge and SGT Inc. ABS QE continued to serve large corporations within the automotive sector including Nemak, Grupo Gonher, ThyssenKrupp, Delphi and Johnson Controls. Global specialty chemical manufacturer Ashland Chemicals expanded its responsible care contract to add additional global sites, while the city of San Diego and a Home Depot Center (located in California) requested ISO 14001 audits. Ricoh selected ABS QE to perform ISO 9001 audits in Canada and Brazil, with the expectation of expanding the contract into additional regions and programs.

Supply chain audits have become a global necessity. ABS QE certifies the management systems for supply chain operations for companies



# Energy Management System Assessments



Organizations are under pressure now more than ever to reduce their overall energy consumption, limit greenhouse gas emissions and promote energy efficiency. In 2011, the UN Industrial Development Organization recognized the industry's need to respond to climate change and develop effective energy management standards.



To that end, the International Organization for Standardization identified energy management as a priority area, meriting the development and promotion of ISO 50001, which provides organizations with requirements to establish and operate energy management systems.

This standard establishes a framework for industrial plants as well as commercial, institutional and government facilities to manage their energy consumption. In addition, ISO 50001 provides public and private sector organizations with management strategies to increase energy efficiency, reduce costs and improve energy performance.

ABS Quality Evaluations provides energy management system assessment services (EnMS) to verify that companies have established necessary systems and processes to improve energy performance. The assessment includes an optional gap analysis, which assesses the readiness and completeness of management systems, and a two-stage certification audit, which includes a readiness review to verify that the organization is prepared for certification, followed by the evaluation of implementation plans.

An energy management system is a tool that can have a positive impact on a business' bottom line. The ISO 50001 standard, if implemented properly, can result in actual savings and return on investment for large energy users, particularly in the oil, gas, chemical and marine sectors. ♦

that produce products to meet quality expectations. During 2011, North American operations secured a contract to perform audits for Lincoln Electric's supplier base. In Mexico, ABS QE renewed a three-year contract with the Panama Canal Authority to provide ISO 9001 certification services. Likewise, Exportadora de Sal (a Mexican Government and Mitsubishi industrial-grade salt production joint venture) selected ABS QE for certification to ISO 9001.


In Latin America, ABS QE provided integrated ISO 9001, ISO 14001 and OHSAS 18001 certification for Saint-Gobain do Brasil Ltda, Petrobras – Petróleo Brasileiro S/A – Manaus Unit and AES Tietê. The mining sector showed promise as the region secured a contract to perform ISO 9001 audits for TNT Express Brasil Ltda. Operations in Chile included an integrated audit contract for Siemens in which ISO 14001 and OHSAS 18001 were performed with a focus on its mining projects. In addition, Komatsu Chile contracted the services of ABS QE to perform an audit of its mining operations in accordance with the Komatsu HSEC standard.

In Europe, ABS QE performed supply chain audits in accordance with internal protocols of Repsol with suppliers being audited in 12 countries, including its first Corporate Social Responsibility Audits in China, Spain, Morocco and Peru. In addition, the region generated growth in the IT sector with more than 25 new clients contracted for certification to ISO 27001 (information security), ISO 20000 (service provider) and ISO 15504 (software process improvement).

In the UK, the contract with Nabors Drilling International continued allowing the company to perform internal audit services of worldwide rig operations to verify that offshore platforms operated in compliance with the Nabors Rig Management System. These audits addressed areas including safety, environmental, operations, maintenance and procurement.

New markets were tapped into and programs were developed in the Asia-Pacific region. In India, ABS QE positioned itself within the market to expand its portfolio in social audits, successfully signing over 100 contracts toward the Business Social Compliance Initiative. ABS QE also secured prestigious contracts involving ISO 9001 certification of Nehru Centre in Mumbai and a management system training contract with Shree Cement Ltd.

In China, ABS QE expanded its market share in the maritime sector and worked closely with clients interested in integrated assessments. New ISO 9001 certificates were issued to shipyards and offshore companies such as Yantai CIMC Raffles Offshore and Fangzheng Valve Group. ABS QE also issued the first ISO/TS 29001 (quality for petroleum, petrochemical and natural gas industries) certificate to Qingdao McDermott Wuchuan Offshore Engineering Co. Ltd. The objective of this standard is to prevent defects and reduce waste within the oil and gas supply chain. ABS QE has decades of experience assisting organizations in the oil and gas sector to achieve certification and demonstrate quality to their clients and vendors.

Looking to the future, ABS Quality Evaluations plans to continue to expand its global presence and portfolio of services by focusing on customers' business objectives. 



# EQECAT



In 2011, EQECAT continued its transformation, making investments in people, processes and technology. As one of the leading catastrophe risk modeling firms in the world, EQECAT develops products and services for the global insurance and reinsurance industries and financial clients. EQECAT provides clients with a robust assessment of their catastrophic risk profile and ultimately helps them manage their “risk of ruin.”

In 2011, EQECAT focused on developing models to operate in clients’ decision-making environments that could handle the complexities of the various financial structures found in today’s insurance and reinsurance contracts.

The release of WORLDCATenterprise™ 3.16 provided an upgrade to the global, multi-peril, catastrophe risk modeling software platform. Version 3.16 featured updates to the industry exposure databases for US hurricanes and Canadian earthquakes. Improvements were also made to event-loss table outputs, while model updates included the North Atlantic Hurricane, Canada Quake and Asia Typhoon models. These updates allowed clients access to the most up-to-date view of risk and utilized EQECAT’s science for their day-to-day business decisions.

Highlights in business development for 2011 comprised new client acquisitions and a number of significant renewals. Selected highlights included: a three-year agreement with a reinsurance and risk solutions intermediary to license the WORLDCATenterprise platform for US North Atlantic hurricane and US earthquake perils; and a three-year license of the US Offshore Energy Model and associated insured exposure dataset to help a specialty reinsurer build its offshore energy business.

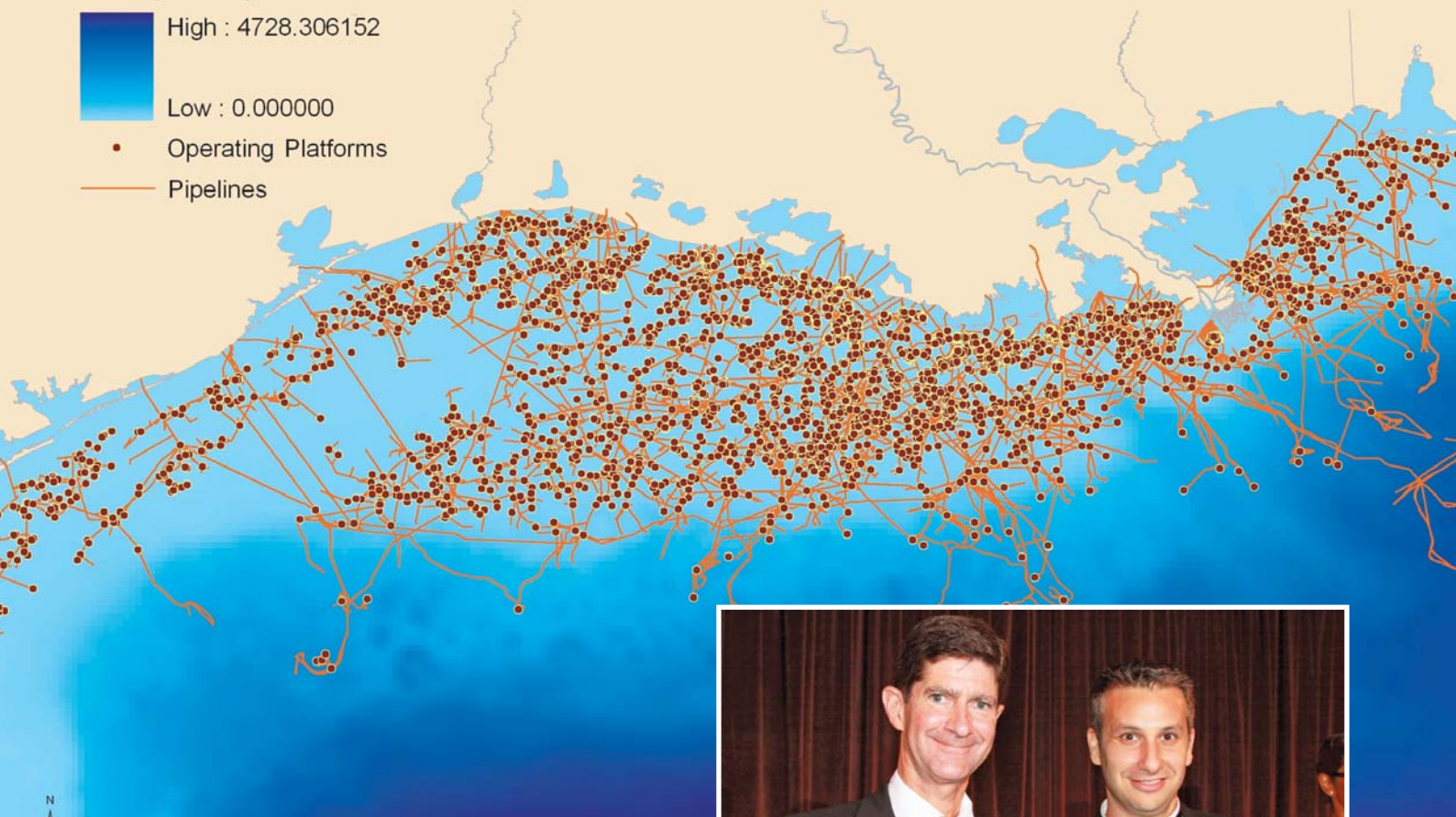
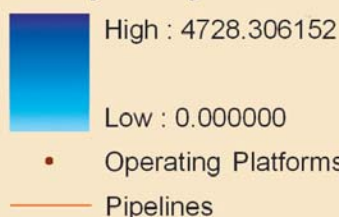
A Bermuda-based reinsurer signed a renewal of a three-year contract of WORLDCATenterprise for a selection of Eurowind countries as well as the underlying insured exposure database. One of Canada’s leading property and casualty insurance companies renewed its WORLDCATenterprise Canada earthquake model license. A critical part in their decision to move forward with the renewal was the update of our Canada Quake model, which was promised and delivered in 2011. The successful penetration into the retail broking sector of the Asia-Pacific region initiated with a three-year license agreement from a Japan-based global reinsurance broker.

A leading reinsurer was issued the first formal license for the Insurance Loss Data (ILD) project. ILD was licensed for Japan Wind and Quake, as well as for Eurowind. The client integrated these databases within its proprietary processes and systems for use by both catastrophe modelers and underwriters.



# Accolades from the Industry

## Bathymetry



**E**QECAT was named “Best Risk Modeling Firm” at the 2011 *Reactions* Global Awards Dinner held in September in New York City. The *Reactions* Global Awards identifies the leading insurance, reinsurance and broking firms, as well as the industry’s leaders and service providers, through a vote open to industry professionals.

EQECAT was recognized for its commitment to the global reinsurance industry by helping clients set rational expectations about risk. In addition to responding to the natural catastrophes that struck Australia, New Zealand and Japan in the first quarter of 2011, EQECAT advised clients through dozens of other CatWatch™ reports. EQECAT develops and distributes CatWatch reports – detailed natural hazard catastrophe reports – before, during and after natural catastrophe events. These reports provide critical event information including spatial distribution of damage, potential post-event effects and, in many cases, insured and economic loss estimates.

*Reactions* magazine also highlighted EQECAT’s incremental approach to model updates and advocacy for a multiple-model approach. In 2011, EQECAT continued to encourage clients to use blended models and multiple analysis tools in order to challenge the results of data and improve the firms’ understanding of risk. EQECAT also won praise for its strategy to implement more frequent and smaller updates over time, thereby limiting the risk of leaving property insurers reeling from a sudden and dramatic shift in their modeled exposures. ♦



A specialty investment management firm licensed EQECAT's ILD product for all currently available peril regions. The firm signed a subscription for a 12-month term of professional commentaries. The product allowed the client access to the most up-to-date output from EQECAT and a view of risk for evaluation and analysis of catastrophe (CAT) bond tranches, portfolio management and critical business decision-making.

Long-time client Tokio Millennium Re expanded its relationship with EQECAT by signing a five-year license agreement to utilize EQECAT's models on a global basis. The company will now be automating its utilization through the use of EQECAT's Integrated Catastrophe Modeling System offering.

EQECAT created a buzz within the global insurance and reinsurance industry by publishing a series of white papers on the phenomenon of "mega-earthquake clustering." This theory posits that large earthquakes (in excess of magnitude 8.8) are not randomly distributed temporally, but instead tend to occur in a relatively short and tight time series.

In September, *Reactions* magazine honored EQECAT with the distinguished award, Best Risk Modeling Firm, in September. EQECAT staff attended the annual awards banquet in New York City to receive and celebrate the recognition with reinsurance industry professionals.

The annual US client conference held in Miami also saw the highest attendance in recent history with 85 attendees. In addition, EQECAT hosted multiple release events for WORLDCATenterprise 3.16. New client acquisitions and providing turnkey solutions top the list of 2012 initiatives. The first delivery of the three-year Apollo Initiative is slated for a third-quarter 2012 release.

Looking ahead, EQECAT will maintain its commitment to provide clients with products to quantify and manage potential financial impacts of natural hazards, including services that solve catastrophic risk business problems and innovative and customized solutions. [EQ](#)



# COMMUNITY INVOLVEMENT



Supporting local communities goes hand-in-glove with ABS' 150 year commitment to the maritime industry. Part of that commitment is to encourage the next generation of maritime professionals. The goal of ABS' community service is to have a meaningful impact by targeting efforts on initiatives close to key operations and maritime education.

Two significant natural disasters in Asia prompted ABS to offer humanitarian aid to local organizations. In February 2011, ABS responded to the earthquake in Christchurch, New Zealand, with a \$5,000 donation to the Christchurch Earthquake Appeal. The fund complemented emergency support provided by other charitable agencies and the government by investing in efforts to restore local communities affected by the disaster.

The following month, the world watched as the massive Tohoku earthquake and tsunami took its deadly toll on Japan. In a gesture of support to those who were suffering, ABS and employees in Japan and Korea donated close to \$50,000 to the Japanese Red Cross Society and other aid organizations for relief efforts.

In Houston, ABS employees donated a record amount of money to the annual giving campaign for the United Way of the Greater Houston area. The United Way received a total of \$211,450 from ABS, which included a corporate donation. The United Way, made up of more than 60 member agencies, impacts daily one of every two lives in the Greater Houston area and focuses on strengthening the community by developing children and youth to their full potential, creating strong families and safe neighborhoods, sustaining senior independence and rebuilding people's lives in times of crisis.

ABS Europe employees joined in a one-day regatta of Clipper 68 racing yachts to raise funds for the Sailors' Society, which provides a personal lifeline for seafarers on board ships and when they step ashore. A total of £15,840 (nearly \$25,000) was donated to this organization that has been assisting seafarers for close to 200 years.

The ABS Greater China Division donated two ship models to the Shanghai Maritime Museum. The models are of the first LNG carrier and the first 10,000 teu ultra large containership built to ABS class in Chinese shipyards.

ABS' most significant contributions were directed to the area of education. With universities facing the challenges of increasing costs and reduced government support, ABS recognized the need to support the next generation of well-trained young professionals ready to enter the maritime industry. ABS' continued goal is to renew interest in maritime education.



# ABS Gift Funds Progressive Academic Facility



**W**ith the tap of a hammer, ABS Chairman Robert D. Somerville placed his Maltese cross surveyor stamp on a brass plaque at the entrance to the ABS Information Commons on the campus of Massachusetts Maritime Academy (MMA). This extraordinary academic facility emphasizes collaboration for study, research and training supported by the latest information technology advances.



The library houses the Academic, Learning and Writing Resource Centers supported by multimedia SMART classrooms, media production facilities and an Information Technology Service Desk. In the classrooms, professors can capture the attention of cadets through the use of streaming video while a 360-degree ship bridge simulator allows cadets to experience real world conditions in a controlled setting.

Twice the size of the previous library, the 42,000-square foot building includes a conference room dedicated to ABS which features a mural depicting the society's 150-year history as well as surveyor tools and historical documents. Currently, 52 MMA graduates are ABS employees working in various roles in engineering, survey and management positions throughout the world.

The ABS Information Commons also contains energy-saving environmental features such as a geothermal system and chilled beam technology for temperature control, skylights and light sensors to reduce the need for artificial lighting and water-conservation features. As a result, the building received a Leadership in Energy and Environmental Design (LEED) Gold Certified award. ♦

To this end, ABS aided maritime universities and students via the ABS Scholarship and Educational Funding Program. In 2011, ABS contributed funds for individual student scholarships at leading universities in the field of maritime studies and other related programs. These universities cover the globe from the US maritime academies to the University of Trieste in Italy to the Malaysian Maritime Academy.


With a multiyear grant that established an endowed chair in Naval Engineering at the Massachusetts Institute of Technology (MIT), ABS supported an outstanding junior faculty member with a focus or specialization in naval architecture and ship design in the school's Center for Ocean Engineering.

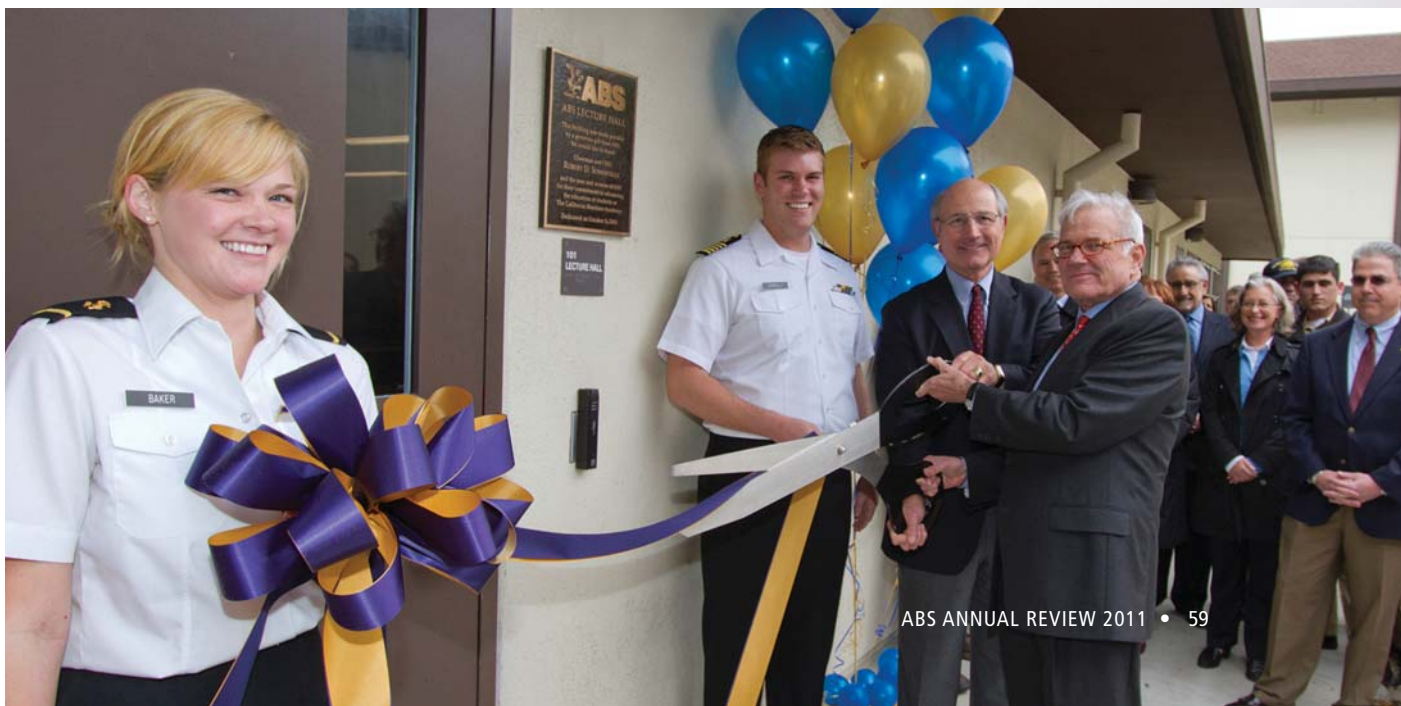
A donation to the Webb Institute resulted in Matthew R. Werner being named as the ABS Professor of Naval Architecture and Marine Engineering. And funding from ABS at the State University of New York (SUNY) Maritime College supports two academic chairs – one in Naval Architecture and Marine Engineering and another in Marine Transportation. ABS also continued to fund graduate fellowships at the University of California, Berkeley, in the Ocean Engineering department.

ABS also makes donations to institutions for investment in infrastructure and equipment that support education. In September 2011, Massachusetts Maritime Academy dedicated the ABS Information Commons on its campus. This facility will be at the center of the Academy's rigorous program and includes a Learning and Writing Resource Center and a 360-degree Bridge Simulator.

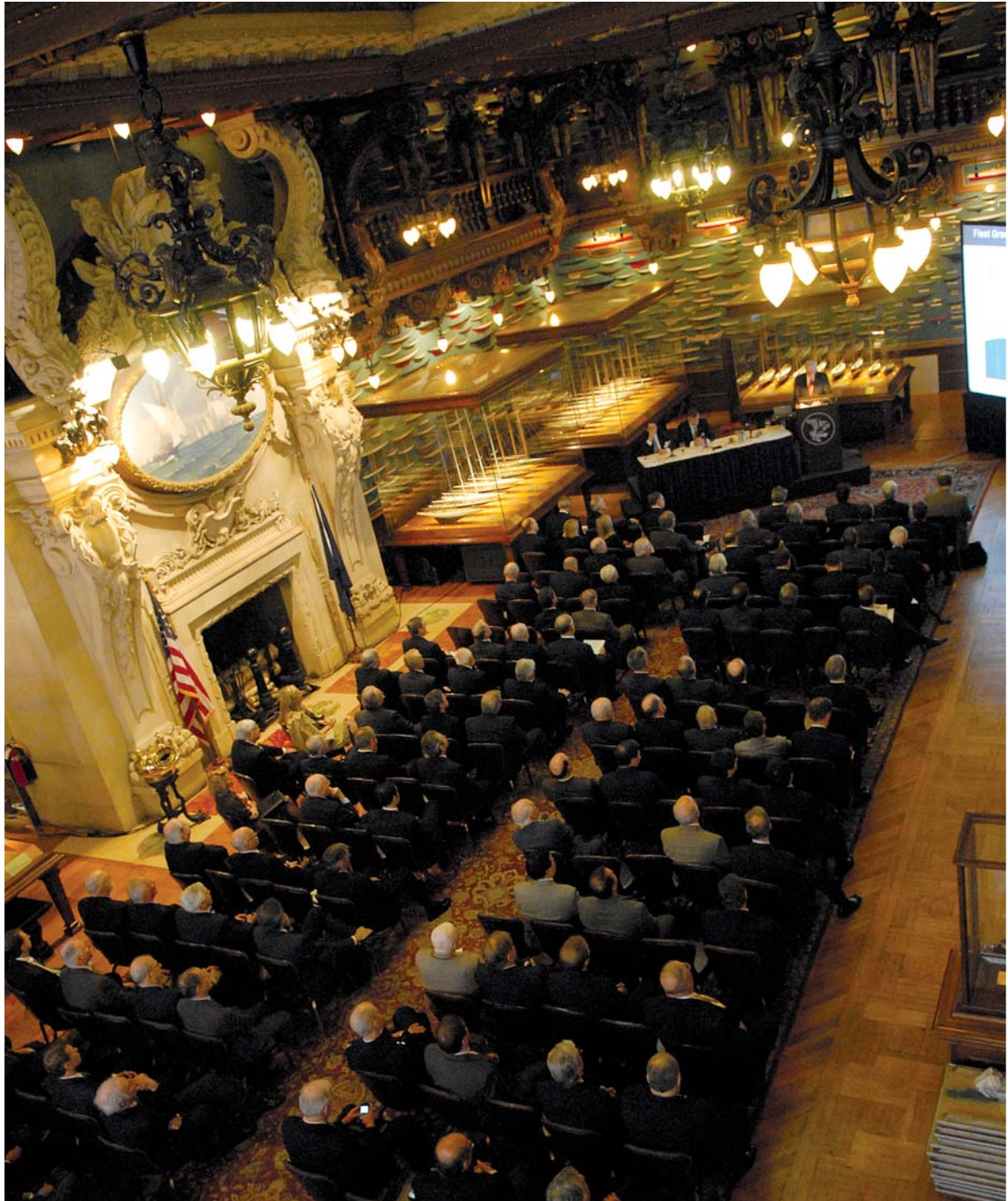
On the West Coast, the ABS School of Maritime Management and Policy at the California Maritime Academy was dedicated in late March 2011 and opened for academic use during the fall semester. The school emphasizes the “soft” management skills needed by students today to manage not only ships, but also shipping companies. These skills include critical decision-making, project management, logistics, ethical judgment and an understanding of the broad commercial and social context of which technology and shipping are a part.

At the prestigious Cass Business School at the City University in London, ABS provided funds to endow two core masters level modules at the renowned Coastas Grammenos International Centre for Shipping, Trade and Finance.

ABS recognizes the value in investing in the future of the industry and will continue to contribute the resources needed to achieve this important goal. 



# CORPORATE GOVERNANCE



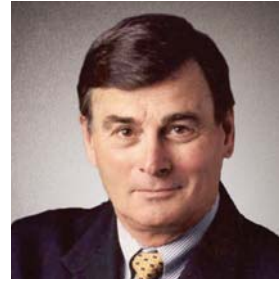
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