







WELCOME TO ABS AND 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 marine-related facilities. This core classification activity continued at a high level throughout 2009 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 ABS Group of Companies, Inc., which is a wholly owned affiliate of ABS, subject to separate Board oversight and management. The activities of ABS Group continue to grow, with 2009 being its most successful year of operation.

Headquartered in Houston, ABS and its affiliated companies provide services to clients worldwide through a network of representative offices in 70 countries. This review of ABS activities covers the sectors in which the organization participates and is intended to provide an overview of its performance in 2009 and highlight some of the notable achievements recorded during the year.

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ABS ACTIVITY



MARINE

Ship classification remains the core activity of ABS. It is the rationale for our aggressive research and development program and the activity that keeps the preponderance of our team of engineers and surveyors busy in shipyards, ports and offices around the world. We pride ourselves 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. We continue to maintain a clear superiority in the exploration, production and support service sectors of the industry based on our unparalleled experience, advanced technology and responsive service delivery. In an industry marked by technical innovation and novel concepts, our ability to apply advanced risk analysis keeps us at the leading edge of these developments.



GOVERNMENT

ABS continues to expand its relationship with the US Navy and the US Coast Guard. US Navy combatants are now being built to and retained in conformance with ABS class standards established specifically for these vessels. Joint programs to develop advanced maintenance techniques offer the promise of efficient fleet utilization in the future. These standards are attracting increased interest from navies and government maritime agencies of other nations.



FLEET MANAGEMENT SYSTEMS

ABS Nautical Systems (ABS NS) is a division of ABS. It provides advanced fleet management software to clients in the ship, offshore, government and workboat sectors. In addition to its NS5 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



MARITIME SERVICES

ABSG Consulting Inc. (ABS Consulting) is a subsidiary of ABS Group of Companies, Inc. and an affiliate of ABS. It operates worldwide, offering marine and offshore clients a wide range of technical services that lie outside the strict purview of class. These range from a widely accepted condition assessment program to rapid response damage assessment, to project analysis and technical assistance designed to help clients go beyond compliance and stand out in a challenging market.



NUCLEAR UTILITIES

The experienced professionals in ABS Consulting's Nuclear division have been providing technologybased solutions for managing the operational risks encountered by nuclear utilities for more than 40 years. Their experience is unmatched in the field. As society and governmental concerns over greenhouse gases increase, ABS Consulting has been gearing up to provide assistance to the growing number of new nuclear power projects being contemplated around the world.



PROCESS INDUSTRIES

ABS Consulting helps clients in the process industries to gain compliance with applicable standards and institute procedures that promote sustainable process safety as part of an organization's culture. The approach encompasses the full range of a facility's operations, from design to the testing and maintenance of equipment, and the establishment of effective response procedures, taking into account human factors.



PUBLIC SECTOR

In an uncertain world there is no shortage of demand for services to guide national, state, regional and local government entities in improving security and mitigating natural and man-made hazards that threaten their activities, citizens and environments. ABS Consulting's Public Sector division has a long track record of successfully providing sophisticated risk-based solutions to help the public sector to identify and manage these risks.



CATASTROPHE RISK MODELING

EQECAT, Inc., a subsidiary of ABS Consulting, offers the leading proprietary catastrophe modeling software and alternative risk transfer expertise available to the insurance industry. The technology-based approach addresses the management of the financial consequences of natural hazard, operational and security risks. Continued development and expansion of the EQECAT software remains the key differentiator of its products and services within the market.



QUALITY MANAGEMENT SYSTEMS

The ability to demonstrate conformance to an accredited quality management system that encourages continuous improvement is a requirement for companies across a broad range of industries. ABS Quality Evaluations, Inc. (ABS QE) is established as a respected third-party auditor of management systems to international standards and is also a contributor to the development of industry, national and international standards.

CHAIRMAN'S REPORT



ROBERT D. SOMERVILLE



t a time when so many companies and people around the world were confronting the harsh realities of the global economic upheaval, ABS was fortunate to navigate 2009 with confidence and clarity. Buoyed by a very

strong orderbook for new construction, a result of the almost unbridled enthusiasm of the shipping and offshore industry in the pre-recession period, traditional classification activity remained at an almost historically high level throughout the year.

With no such underpinnings, our non-class activity, carried out through the various operating subsidiaries of the ABS Group of Companies, demonstrated that hard work, superior products, aggressive marketing and outstanding service are the foundations for success. The subsidiaries expanded their business activity during the year, raising revenues and returning an outstanding, record performance in a very difficult business environment.

Elsewhere in this Review, you will find a detailed breakdown of the ABS-classed fleet and orderbook as it stood at the end of 2009. However, certain elements warrant singling out for additional mention. Most notably, the ABS-classed fleet continued to grow to a new, record level of 159.5m gross tons, a remarkable 15.4m gt, or 10.7 percent increase over the previous year. The tonnage increase was not only the largest ever recorded by ABS, outpacing even the rapid expansion that occurred during the previous great shipbuilding boom of the late 1970s, but also the largest percentage year-on-year increase of all of the major societies.

A significant contributor to the increase in the ABS fleet was our success in attracting existing tonnage to transfer class to ABS as a result of the superior products and services we are able to offer. Even so, the primary impetus still came from newly built ships and offshore units delivered from shipyards across the world, with the majority coming from the yards in the three leading shipbuilding nations of Korea, China and Japan.

Inevitably this surge of deliveries resulted in a slight reduction in the ABS orderbook to 46.6m gt. However, once again a concerted effort to bring the integrated package of ABS products and services to the attention of our clients resulted in our winning more than 10m gt of new orders over the course of the year, a really remarkable effort given the stagnant nature of the newbuilding market.

All of these successes – the winning of both new orders and existing fleets – are directly attributable to the outstanding efforts of all of the classification professionals working in the more than 200 ABS offices around the world. Knowing that 2009 would be a difficult year, they literally raised their game, looking for ways to improve service delivery, researching and developing new products and providing faster response to client queries to differentiate ABS within what remained an extraordinarily competitive arena.

Examples ranged from a vastly expanded seminar program that attracted thousands of our clients and potential clients who were looking to better understand the range of regulatory and technical issues that were addressed; to a new web portal that delivered more expansive and targeted survey and engineering services; and detailed technical investigations into operational issues that were of concern to clients,



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including the establishment of a new harsh environment research center on the campus of the University of Newfoundland, among many, many other initiatives.

The world has changed – a different economic environment prevails as a result of globalization and financial uncertainty; a different maritime industry as it adjusts to the wider economic implications and its own over-heated actions of recent years;

and a different classification scenario as shipowners and offshore operators look to their class society of choice for more extensive and responsive support to assist them in adapting to those changes.

ABS is determined to be at the forefront of change. There was no better example of this in 2009 than the changed circumstances of the previously majority-owned subsidiary, ABS Nautical Systems. By acquiring the remaining shareholding, ABS was able to absorb the leading fleet management software provider into its classification activity as a full Division. The change in status meant that ABS could also begin integrating the powerful software from the Nautical Systems suite of programs with the society's classification activities.

The immediate result was the launch of the ABS Newbuild Program. Again, more complete details of the program are available elsewhere in this Review but, suffice it to say here, it was an immediate success. It marries the superior ABS Hull Inspection program with the Nautical Systems Maintenance & Repair and Vessel Drawings modules for newly-delivered, ABS-classed ships. Hundreds of vessels were signed into the program in the few months from its launch to the close of the year.

The program will continue to be expanded in the coming year as this is, without a doubt, the future face of classification. The consequences can be far reaching. By providing programs such as these, each individually tailored to the specific ship in terms of the electronic model, individually targeted inspection and preventive maintenance will contribute to the safety of ships and the marine environment. Without any sacrifice to the key objectives of promoting the security of life and property at sea, the survey regime will become more efficient and flexible, including, for certain ships, the possibility of extending out-of-water drydockings from a five year to a seven and a half year cycle.

There is much still to be done. There needs to be a mutually supportive and open relationship between the class society and the owner where pertinent information is exchanged freely between them if the power and benefits of the system are to be fully realized. Such a relationship may require a change in attitude so that class is seen as a partner in assisting the owner to more efficiently maintain the vessel, rather than as the policeman looking for shortfalls against the Rules.

And it will require changes at the statutory level as age old traditions will need to be adjusted to more appropriately fit the modern, more advanced and data-centric world that is already the norm in many shore-based industries. Individual flag States have already shown a willingness to consider these new approaches to drydocking intervals. But the IMO must also play a role if these advances are to be uniformly applied across this most international of industries. That requires an in-depth understanding of the changes in the marine industries which is, unfortunately, not always present within the legislative and regulatory sectors. In 2009, there was some evidence of the difficulties that can arise in two events associated with the European Commission.

On the one hand, ABS and its nine fellow members of the International Association of Classification Societies were required to devote significant time, energy and financial resources to defending their activities to the EC's Competition Directorate. In 2008, DG Comp launched an investigation into IACS and several of its member societies to determine if they were engaging in anti-competitive behavior. In late 2009, the investigation was, thankfully and finally, brought to an end with no finding of any infringement of any applicable competition laws.

However, to reduce the risk of future disruptive and costly investigations, IACS has decided to change its membership criteria from a quantitative to a qualitative benchmark. This is expected to see an enlargement of the Association in the future. Although the exact consequences of that change have yet to be determined, it is a further indication that the past structure of class will be more fluid in the future.

The second EC initiative, to require mutual recognition of certificates between EC recognized organizations, took formal effect in March of 2009. The European equipment manufacturers and class have been given a five year window by the EC to implement a workable interpretation of the new requirements and both sides are working cooperatively to reconcile the new requirements with the need to preserve existing levels of safety and to address some concerns that have arisen with respect to national sovereignty.

To date, although highly regulated, the offshore sector has been relatively free of such unwarranted intervention. Quite the opposite in some respects as, early in the year, the Norwegian Maritime Directorate extended its authorization of ABS to include mobile offshore drilling units (MODUs) in its scope as a Recognized Organization (RO). This was significant as it entitled ABS to class Norwegian-flagged rigs without having to perform additional safety equivalencies or a GAP analysis to meet Norwegian law.

And in the US, the Minerals Management Service looked to ABS for assistance as it sought to clarify the requirements that will be needed for the many proposed offshore wind farms in US coastal waters, both fixed and floating.

Offshore energy-related activity, including the growing wind sector, remained an extremely important contributor to ABS' success in 2009. Once again, a very strong orderbook resulted in a steady flow of new drilling rigs entering the ABS fleet, helping to maintain ABS' clear leadership in this sector. Several significant new production units





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were also accepted into ABS class as were a large number of offshore support vessels of various types and complexity.

It became evident during the year that the downturn in the shipping sector was causing some of the other societies to redouble their efforts to make inroads into the offshore energy sector. As the leading society providing classification and certification services to the offshore industry, ABS

increased its activity to maintain its position. Every contract was hard fought but the resourcefulness and perseverance of our staff, coupled with the continued support of our many loyal clients was well rewarded.

The energy sector, both onshore and offshore, is also an important business line for ABS Consulting's Process Industries division with a particular focus on assisting clients with integrating their management of process safety and asset integrity. The release of a new generation of its integrated management software system for integrity and safety, IMSIS, was welcomed by clients. IMSIS can be adapted for any phase of an asset's life cycle, from greenfield or brownfield project execution through operations and maintenance, for any type of asset from FPSOs and offshore fixed platforms to onshore oil and gas and petrochemical plants.

For the onshore energy sector a particular highlight was the training of more than 4,000 personnel at BP's North American refineries in the areas of process safety basics, hazard identification, risk assessment and control of work.

Government entities continued to provide both ABS and ABS Consulting with a steady stream of challenging projects through the year. In the US, the relationship that has developed between ABS and the US Navy was further strengthened with the agreement that combatant vessels built to ABS naval class standards will be retained in class once in operation. This life cycle approach is based on the multi-year development project under which ABS will provide a risk-based naval version of its hull inspection program to these – and to the fleet of existing non-nuclear combatant vessels — to provide a format for better tracking their in-service condition. The first four vessels were modelled and placed into the ABS Service Life Assessment Program in 2009 with an accelerated level of acceptance scheduled for 2010 and beyond.

The US Coast Guard (USCG) continued to turn to ABS Consulting for a wide range of assistance during the year, including maritime security projects for the agency's Port and Facility Security Office; reliability-centered maintenance support and engineering services to the USCG Engineering Logistics Center; and acquisition support for the Special Craft-Shallow Water and the Fast Response Cutter programs.

Support was also provided by the ABS Consulting Public Sector division to other US Government agencies including the Department of Defense, the Department of Energy, the Federal Emergency Management Agency and the US General Services Administration.

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Also within ABS Consulting, the Nuclear and Maritime Services divisions remained very active, each reaching out to provide extended service capabilities and new products to their clientele. The prospect of a resurgence in the use of nuclear power for electricity generation, both in the US and several global locations as a means of curbing the release of carbon emissions, saw the ABS Consulting team expanding its breadth and depth to position themselves to take advantage of these fledgling projects. The team's objective is to both grow existing services in the many countries in which it already has an established client base and to expand to support new areas worldwide, such as the UAE which is currently assessing the nuclear option.

Also recording successes in 2009 were ABS Quality Evaluations, which found that an enhanced focus on customer service helped to increase its market penetration in the US and worldwide, and EQECAT, the leading provider of catastrophe modeling software in the world. New versions of its WORLDCATenterprise[™] modeling software platform and European windstorm model Eurowind[™] that featured significant enhancements helped bring in new business and further cemented its market leading position.

All of the activities and successes cited are but the tip of the iceberg. Even the entire review of 2009 which follows is, at best, a brief summary of some of the highlights. ABS and its subsidiaries and affiliates have grown rapidly in recent years. Wherever we look, whatever the project that it is being undertaken, and whichever entity within this wider ABS family is undertaking the task, the one common thread that ties all of these diverse activities together is safety.

It is at the core of the ABS Mission – promoting the security of life, property and the environment. Everything that we do is tied to that fundamental principle, whether it is using advanced analytical tools to evaluate the structure of a ship or offshore unit, conducting surveys at 2:00 p.m. in a newbuilding yard or at 2:00 a.m. on a 16 year-old tanker in a remote port, whether it is analyzing the blast resistance of a federal government building or assessing the safety management system of a refinery, the focus never changes.

It is also the stimulus behind our very active educational scholarship and support program as we believe that it is not only in our interest but the interest of the entire maritime profession if we can help graduate future generations of top tier new entrants.

This is one of the most rewarding paths that any individual could choose to follow. I am very fortunate to lead more than 4,000 professional, dedicated individuals, drawn from every corner of the globe, who are working constantly to not just exceed each and every one of our clients' expectations but, in doing so, to promote the safety of life, property and the environment. It has been through their efforts that, once again, ABS can close the books on yet another highly successful year and open the pages to write a new story in 2010.

Robert D. Somerville Chairman



CLASS ACTIVITY





lthough 2009 proved to be a challenge for the shipping and offshore industries due to the slumping global economy, including an over-stuffed newbuilding orderbook, ABS still experienced very strong growth of its existing classed

fleet. A steady stream of new deliveries, coupled with a significant upturn in the volume of existing vessels transferring into ABS class, saw the fleet finish the year at yet another record level of 159.5m gt. This represented an increase of 15.4m gt, or 10.7 percent over end-2008 levels.

The number of vessels under ABS class also increased, rising to 10,842 representing a jump of 206 vessels over the prior year. Both growth trends – in gross tonnage and number of vessels in the ABS fleet – are projected to continue through 2010.

As had been expected, the previous record size of the ABS orderbook could not be sustained as the economic recession took hold and shipowners curtailed their interest in new tonnage. The strong pace of deliveries, coupled with a modest number of cancellations as a result of owners readjusting their expectations, saw the orderbook for which formal requests for class had been received decline from 3,309 vessels aggregating 51.5m gt to 2,432 vessels or 46.6m gt.

The decline was offset by the taking of new orders aggregating more than 10m gt over the course of the year, an encouraging performance in what is considered to have been one of the weakest newbuilding markets in many years. The new orders helped ABS retain its position as the favored classification society for new construction with a



ABS FLEET SIZE (1999-2009)



market leading 18.6 percent share of the global orderbook, more than a full percentage point ahead of the nearest competitor.

For the first time in many years the ABS orderbook for bulk carriers exceeded that for tankers, both in terms of number of vessels and

aggregate tonnage. This was a reflection of the overall surge in orders for bulk carriers over the previous two years as owners attempted to position themselves to take advantage of the bull market for these vessels, and the projected continued strong GDP growth of China, which had fueled that market demand.

At the close of the year, ABS held firm contracts for 416 bulk carriers (including ore carriers) to be built to its standards, aggregating 19.9m gt. This represented a slight decline from the 21.1m gt bulk carrier orderbook at the end of 2008 but still represented a very strong 18 percent share of the entire bulker orderbook.



VESSELS ON ORDER - RFCS (2005-2009)

EXISTING FLEET AGE PROFILE (2009)



A breakdown of the orderbook confirmed ABS' traditional strength in the handysize sector with a market leading 23 percent share and a strong performance in the panamax and capesize sectors with a 21 and 17 percent share respectively. In all three sectors, the orderbook share far outpaced the ABS share of the existing bulker fleet.

ABS has always been the preferred provider of class to the tanker sector in which it holds a leading 23 percent share of the existing fleet. End-2009 figures saw ABS not only retaining but strengthening that position with a 28 percent share of the worldwide tanker orderbook, two full percentage points ahead of the second ranked society. Once



SHARE OF WORLDWIDE ORDERBOOK (2009)

again, ABS remained strong in every category of tankers with a 24 percent share of the VLCC orderbook, a 35 percent share of suezmaxes on order, 34 percent of aframaxes, 51 percent of traditionally-sized product carriers and a near-20 percent share of the still active chemical carrier sector. In total, ABS held orders for 399 tankers and chemical carriers aggregating 16.9m gt.

Continuing its resurgence in the gas carrier sector, ABS finished 2009 with a dominating 29 percent share of the orderbook for these specialized vessels, far outstripping its 15 percent share of the existing gas carrier fleet and reflecting the success of its research, training and survey activities that have specifically targeted this sector.

Slumping demand for consumer goods and excessive past ordering of containerships saw this sector weaken dramatically during the year with many cancellations of existing orders. Since much of that excessive ordering had been stimulated by the domestic fiscal policies of Germany, ABS' exposure to the container downturn was limited, with the majority of its traditional clients in this sector having pursued more judicious newbuilding plans. The ABS share of the worldwide orderbook grew marginally to 9 percent but there is some hope that, as this sector recovers, it will prove to be a more open market in the future, creating opportunities for ABS to rebuild its presence.

Throughout the year the offshore sector remained somewhat immune from the worst effects of the recession as projected demand for future energy remained strong, requiring the initiation of projects today to deliver the oil and gas of tomorrow.

Even so, the market for newbuilds for offshore service remained desultory at best and a steady flow of deliveries saw the ABS orderbook for jackups and offshore support vessels in particular softening as the year ended. Even so, ABS retained its leading position as the preferred





class society in the exploration, production and support sectors, closing out the year with orders for 64 jackups, 25 drillships and 462 OSVs on its books in addition to 24 semisubmersibles and many other units from FPSOs to fixed platforms.

Throughout 2009, China continued its inexorable rise up the global shipbuilding table to cement its second place ranking behind Korea. ABS continued to be successful in both these key shipbuilding nations, closing out the year with a firm orderbook for 949 vessels aggregating 21.2m tons from Chinese yards and 318 vessels aggregating 15.3m gt from Korean yards. The Chinese orderbook placed ABS as the clear leader in that country and the Korean orderbook was sufficient to give ABS equal billing as the top class society in Korea.

ABS also retained its position as the leading classification society based on orderbook at the shipyards based in Singapore (a 65 percent share), Taiwan (39 percent) and the USA (97 percent) and maintained its position as the leading non-national class society in Japan.



OFFSHORE EXPLORATION UNITS* SHARE (2009)





CLASS ACTIVITY SUMMARY

	Vessels in Class 31 Dec 2009		Vessels on Order 31 Dec 2009		New Vessels Classed in 2009	
VESSEL TYPE	NO.	GROSS TONS	NO.	GROSS TONS	NO.	GROSS TONS
Barge	2,578	8,991,417	317	1,467,161	412	1,324,002
Barge Carrier	7	261,780	4	175,100		
Barge Type Unit	29	135,016	3	54,645		
Bulk Carrier	728	27,697,967	416	19,862,647	44	2,179,466
Bulk Liquid Carrier	9	39,134				
Chemical Carrier	318	5,490,704	123	1,802,532		
Column Stabilized Unit	149	2,517,323	24		7	144,638
Container Carrier	520	23,958,561	68	3,333,600	18	1,051,106
Dredge	25	104,851				
Drillship	23	847,111	25	1,473,500	2	119,450
Ferry	59	642,261	6	4,332		
Fishing Vessel	16	37,189	2	2,646		
Fixed Platform	64	20,780	23		5	
Floating Dry Dock	18	197,268	2	4,370	1	
FPSO/FSO	75	6,936,266	1	80,000	3	230,114
Gas Carrier	109	7,563,871	19	1,671,612	13	1,356,538
General Cargo Carrier	259	2,492,668	12	179,939	6	69,068
Heavy Lift Ship	17	546,394	2	44,855		
High Speed Craft	263	77,880	78	22,791	44	11,978
Offshore Supply Vessel	960	1,094,796	83	189,312	71	176,845
Offshore Support Vessel	578	1,122,088	379	784,306	5	51,301
Oil Carrier	1,065	56,225,183	276	15,047,517	222	9,881,821
Passenger Vessel	36	289,529	18	16,819	1	17,729
Refrigerated Cargo Carrier	27	301,098				
Self Elevating Unit	448	2,726,196	64	8,000	29	259,996
Ship Type Unit (excl. FPSO/FSO)	25	2,456,923				
Single Point Mooring	58	2,141	11		6	
Spar	14	126,771				
Special Purpose Vessel	459	1,190,043	44	98,385	6	14,851
Subsea Pipeline	12		1		4	
Swath Vessel	8	24,972	1	800		
Tension Leg Platform	9	32,930			2	
Tug/Towboat	1,199	534,420	234	135,264	183	242,898
Underwater System	56	93,866	37	12,344	4	
Vehicle Carrier	112	4,514,053	1	57,000		
Yacht	510	179,280	158	57,679	49	21,653
TOTALS	10,842	159,472,730	2,432	46,587,156	1,137	17,153,454









turbulent year for the maritime industry posed challenges for ABS in 2009 as owners wrestled with decisions relating to their newbuilding orderbooks and endeavored to maintain their existing fleets as rates dropped precipitously

from 2008 highs. Despite all these uncertainties, it remained an extraordinarily busy period for ABS largely as a consequence of its very strong orderbook, built up over the previous years of sustained contracting.

The heightened pace of deliveries throughout the year increased the ABS-classed fleet by more than 15m gt, breaking the 150m gt mark by mid-year and closing out the period at a new record of 159.5m gt. Inevitably this strong pace of deliveries, coupled with a relatively small number of formal contract cancellations due to the market and economic uncertainties, meant a decline in the ABS orderbook. However, a surprisingly solid number of new contracts and a preference by both shipowners and shipbuilders to defer deliveries rather than cancel existing orders helped sustain the backlog at a very healthy, if slightly reduced level.

The continued sustained level of activity placed significant demands on the ABS staff around the world but the market uncertainties recommended the adoption of a cautious approach to recruitment. Overall staff levels remained comparable to those in 2008, but the situation offered an opportunity to review how those staff members were allocated to maintain a superior level of service delivery in support of the ABS Mission.

As a result, management and support teams were adjusted to strengthen client relationships. New engineering centers, opened in Gdynia and Veracruz, brought greater efficiencies and improved response time to ABS' plan review activities. And the establishment of an Assistant Chief Engineer function within each division to complement the existing Vice President of Engineering positions resulted in improved management and administration of the engineering function globally, coupled with increased client focus in resolving technical issues that may arise.

The year also highlighted the growing reliance that vessel owners and operators place on their selected class partners to assist them in understanding and implementing the almost constant flow of new regulations, particularly in the increasingly visible environmental sector. A much expanded global seminar program was initiated to help keep ABS clients up-to-date on the ever-changing status of these requirements and the related technical and regulatory issues.

Supporting these seminars kept members of the Technology department busy throughout the year as they conducted studies on



ABS Offers Newbuild Program to Owners



he landscape for class-related software changed in 2009 when ABS initiated a Newbuild Program offering clients free powerful ship inspection and maintenance management software, data entry and consulting services for vessels newly-built or transferred into its class during the year.

The offer included the new ABS Hull Inspection program, pre-populated with vessel-specific



compartment data and critical areas identified, the Maintenance & Repair module of the well-established ABS Nautical Systems NS5 fleet management system and web access to an electronic file of the core vessel drawings.

The key component of the offer, the Hull Inspection program provides vessel owners and their crews with a means to better control maintenance, repair and drydocking activities. The program helps the superintendent and crew to focus inspection efforts on structurally critical areas, to examine and grade the hull structure and record defects. By identifying potential problem areas, preventive measures can be taken.

The package forms a valuable tool for shipowners to monitor the condition of their vessels, contributing toward owners' efforts in improving the safety of their ships. Receiving enthusiastic response from the industry, the program provides an example of how ABS' competency in integrating its technical capabilities and software sets a new standard in class services.

issues such as ballast water treatment, innovative emissions reduction technologies, cold ironing, optimizing propeller designs for improved fuel efficiency and new designs to produce eco-friendly ships.

A major regulatory change that demanded preparatory action in 2009 was the pending adoption of the new ILO Maritime Labour Convention. To assist shipowners and others within the maritime community in understanding and complying with the new regulations, ABS prepared and issued two new Guides and added the topic to its active seminar program. ABS also offered voluntary pre-certification to the new standard and was the first society to issue such a certificate shortly before the close of the year.

Training services continued to be in high demand and the ABS Academy expanded accordingly, adding a series of courses in Rio de Janeiro to its portfolio. The Academy also constantly refined and expanded its course offerings to relevant topics such as fuel efficiency and coatings. These additions brought the Academy catalog to more than 140 courses, offered in six locations around the world. Customized onsite courses for clients also were conducted by request.

The harsh operating environment of the Arctic was a key focus area for ABS research during the year in preparation for the expected increased pace of energy resource development in the area and the possibility of increased summer navigation by commercial ships. A new expanded edition of the Guidance Notes for low temperature operations was prepared, several joint studies were undertaken with industry and academia and a new Harsh Environment Technology Center was established at Memorial University in Newfoundland.

Information technology initiatives during the year included the release of a new customer web portal that provided easier online submission of drawings for review and expanded capability to request surveys directly with the relevant port office, the release of integrated DLA and SFA structural analysis software, further improvements to the Common Structural Rules software and new Rules calculators for machinery among many others.

2009 was also a year of celebration as ABS marked its 60th year of operation in both Brazil and Japan. With the resurgence of shipbuilding in Brazil, ABS has increased its staff to nearly 50 surveyors and engineers in the country. ABS operations in Japan have grown to more than 100 surveyors, engineers and support staff working in Yokohama, Nagasaki, Kure, Kobe and Imabari.





OFFSHORE & ENERGY





degree of uncertainty and hesitation impacted project thinking on the part of offshore energy producers in 2009 as a consequence of the global economic downturn. However, a full orderbook of exploration units, coupled

with a flood of newbuilding deliveries, meant decisions on additional units could be postponed; while production units were largely unaffected by market and economic fluctuations.

As a consequence, demand for ABS classification services in the production sector remained strong, both in the shipyards that continued busily delivering previously-ordered units, and in the field for surveys of existing units. Developers also showed continued interest in future designs, seeking ABS assessment and approval-in-principle for proposed projects ranging from innovative floating gas concepts to variations on more traditional production facilities.

The exploration side of the industry absorbed a significant increase in the number of units available to it with the delivery of 44 new drilling units over the course of the year, of which all but nine were built to ABS standards. The units ranged from jackups of proven designs, most of which were delivered from KFELS, PPL and Jurong in Singapore, the leading yards for this type of construction, to three sophisticated deepwater drillships from Samsung HI capable of working in water depths of 10,000 ft and drilling depths of 30,000 ft. The deliveries also included eight column stabilized (semisubmersible) drilling units of which both Transocean's *Development*

Driller III from KFELS and Noble Drilling's *Noble Dave Beard* from Dalian Shipbuilding Industries (DSIC) are capable of operating in water depths of 10,000 ft.

China's growing role in offshore construction was also evidenced by DSIC delivering the third Friede & Goldman JU-2000E, the *Noble Scott Marks*, under a contract with Noble Drilling, a F & G L780 ModII unit to CPOE and an MSC CJ46 X 100D for COSL. China Merchants delivered a similar unit to COSL, also ABS-classed.

Drydocks World was active in the jackup sector building two ABS-classed units of the MSC CJ46 X 100D design at its Batam yard in Indonesia. In the Middle East, Lamprell delivered the first jackup to be built in the region, the Super 116C design *Offshore Freedom* to Scorpion Offshore.

Also notable was the beginning of construction of the first jackup to be built in a Vietnamese shipyard. The LeTourneau Super 116E design, dual classed by ABS and the Vietnam Register,



Keeping a Weather Eye on the Wind



ith development of offshore wind farms attracting increased attention, two ABS-classed vessels, delivered in 2009, are capable of handling the unwieldy and heavy wind turbines, platforms and blades but take a quite different approach to the challenge.

The OSA Goliath is one of the world's largest multi-purpose offshore construction vessels (OCVs). Built by



Drydocks World at its Dubai yard and delivered to Singapore-based Coastline Maritime, the vessel is 590 ft by 39.5 ft with a deadweight of 22,000 tons. It is equipped with a dynamic positioning rating of DPS-3 and features a very large open deck and a 2,000 ton crane to facilitate the construction and servicing of offshore platforms. A sister ship, the *OSA Samson*, will also be ABS-classed when delivered in early 2010.

Finding immediate employment in the offshore wind installation market was the ABS-classed harsh environment self-elevating liftboat *Seajacks Leviathan*, built by Lamprell at its Sharjah yard. The unit was quickly taken on extended period charter by Fluor Corp. for installing wind turbines in the North Sea. The Gusto MSC design incorporates dynamic positioning (DPS-2) and is designed to meet the Northern European offshore construction codes and practices.

is under construction at the PV Shipyard in the southern part of Vietnam in Vung Tau for PetroVietnam.

The 2009 drillship deliveries were the *Dhirubai Deepwater KG1* and *KG2* drillships for Transocean Pacific Drilling and the *Petrobras 10000* – all Saipem 10000 designs. ABS was also selected to class the first of a new compact design drillship for Noble Drilling to be built at STX in China and fitted with a Huisman drilling package to be installed in Europe.

Deliveries of new ABS-classed production units continued through the year. These included a deep draft semisubmersible, the *Opti-Ex* for Exmar, a TLP, the *Shenzi* for BHP Billiton and MODEC for service in the Gulf of Mexico, and five FPSOs, two for service offshore Brazil with the others intended for offshore Vietnam, Australia and Nigeria.

Of particular note was the delivery of the *ATP Titan*, the first spar-type unit to have been built to the novel MinDoc design and the *Yuri Korchagin*, the largest ice class FSO, now in operation in the Caspian Sea for Lukoil. ABS was involved with both projects from the outset. For the MinDoc design, ABS reviewed the earliest iterations of the design and used its approval-in-principle approach to clear the way for the development of the concept. The unit is 726 ft from its base to the top of the derrick and can be deployed in a range of water depths from 1,500 ft to 9,500 ft. For the *Yuri Korchagin*, ABS worked closely with the Russian Maritime Register of Shipping (RS). The unit can withstand ice conditions of 0.6 meters and minus 20 degrees C.

Within the gas sector, the year saw the drawing down of the recent big LNG carrier newbuilding programs for Qatar, including the Q-Flex and Q-Max designs, to be replaced by growing industry interest in floating LNG production, storage and offloading units. ABS evaluated several groundbreaking floating LNG (FLNG) and floating storage and re-gasification unit (FSRU) project concepts ranging from the conversion of smaller, older LNG carriers to serve in a new role, to technically novel concepts for newbuildings that could handle both LNG and liquefied petroleum gas (LPG). It also conducted extensive studies into LNG carrier structural design considerations for trading into the Arctic in preparation for expected large energy developments in the region.

Many other notable offshore vessels were either ordered or delivered to ABS class during the year including new generation offshore supply vessels, and a wide range of offshore support vessels including pipelay, workover and construction vessels. These were delivered or on order from yards in Italy, the US, Malaysia, Indonesia, India, China and Korea among others, indicating the geographic spread and continuing high level of ABS offshore activity.









ncorporating classification into the government ship operating process took another major step forward in 2009 as the US Navy requested ABS to help develop a risk-based inspection program that could be applied to the existing

non-nuclear surface combatant ships in its fleet. What started as a pilot program on four existing Navy ships has turned into ABS' most robust support program for government ships since the development of the ABS *Naval Vessel Rules*.

The resulting ABS Service Life Assessment Program takes existing risk-based survey programs developed for commercial ships and tailors them to the specialized needs of naval vessels. ABS engineers approached the development by conducting a special survey, strength analysis and fatigue analysis on each ship in the pilot program. The ships included an amphibious support craft, a destroyer, a frigate and a cruiser. With the data obtained, ABS then applied risk-based inspection techniques keeping in mind the unique nature of naval ship spaces and their nomenclature. The resulting program will be applied to an additional ten ships in 2010.

Further alignment of classification into the government shipbuilding and operating process was illustrated with the ABS Navy Summit held in Washington, DC at which nearly 50 stakeholders from both the Navy and ABS sat down to build on their relationship and develop future plans.

A highlight of recent US Navy work involving ABS was the start of construction of the Joint High Speed Vessel (JHSV). This is a cooperative effort for the Department of the Navy and Department of the Army for a high speed, shallow draft vessel intended for rapid intra-theater transport of medium sized cargo payloads. The JHSV will reach speeds of 35 to 45 knots and allows for the rapid transit and deployment of conventional or Special Forces as well as equipment and supplies. It is projected that there will be a total of nine or ten of these large, high speed catamarans built.

Still under construction in 2009 was the next generation warship, the DDG 1000 series of destroyers. These are the largest and most sophisticated naval combatant vessels to be built to the classification standards established in the ABS *Rules for Building and Classing Naval Vessels*. Noteworthy is the deckhouse of the *DDG 1000*, the most complex marine composite



GOVERNMENT

ABS Classes a New Breed of Warship



he US Navy accepted delivery of the ABS-classed USS Independence (LCS 2), its second littoral combat ship and the first to be built by the Austal shipyard in Mobile, Alabama. The 417-foot high speed aluminum trimaran has been built to offer operational flexibility, able to conduct open-ocean operations in addition to its specific capabilities for coastal missions. The warship is also designed to handle mines, ocean surface warfare and anti-submarine warfare. The LCS concept emphasizes speed, flexible



mission module space and a shallow draft. ABS also classed the first littoral combat ship, the single hull *USS Freedom*, built by Marinette Marine. Both vessels are not only built to ABS class but will be retained in ABS class in service.

structure to have been built anywhere in the world. ABS Naval engineers say its complexity surpasses that of any commercial vessel and it is the first composite deckhouse the Navy has built. Work also began on its sister ship, the *DDG 1002*, in 2009.

Other naval-related work included the multi-ship T-AKE class shipbuilding program which continued at NASSCO with the keel laying for three ships and delivery of another two ships from the total of 14 in this program. And ABS continued its involvement with the sea-basing projects under the auspices of the Office of Naval Research. These units primarily focus on the transfer at sea of vehicles, cargo and people using a mix of ramps and cranes designed for operation in Sea State 3 conditions.

ABS worked with the United States Coast Guard (USCG) on its advanced National Security Cutter, considered the flagship of the cutter fleet designed for maritime homeland security. Plans call for a total of eight of these vessels with two already delivered. This year the third vessel was under construction with ABS involvement. Also construction started on the first of dozens of USCG Fast Response Cutters at Louisiana-based Bollinger Shipyard, all of which will be ABS-classed.

ABS surveyors in Mobile, Alabama were busy verifying work to the T-AGM(R) Navy mono-hull vessel as well as several foreign military vessels. Various naval and government organizations around the world selected ABS standards for the specialized military or government vessels they require.

For Kuwait, ten patrol craft have been specified to be built to the ABS *Guide for Building and Classing High Speed Naval Craft*. Two were under construction during the year. In addition, the last in a series of three patrol craft for Oman was completed while project coordination and engineering reviews continued in anticipation of steel cutting for three high speed missile craft for the Egyptian Navy.

The US National Oceanographic and Atmospheric Administration (NOAA) took delivery of two ABS-classed fisheries research vessels, the *Pisces* and the *Bell M. Shimada*, while work continued on a NOAA SWATH research vessel, *Ferdinand R. Hassler*, due to be delivered in the

spring of 2010.

The US Military Sealift Command (MSC) provides important support to the US Navy ships at sea. These ships provide fuel, food, ordnance, spare parts, mail and other supplies. In 2009 the total number of MSC vessels in ABS class totalled nearly 100 with an additional five specialist Naval Auxiliary fleet vessels in the process of being classed.

Led by a dedicated Assistant Chief Surveyor for Naval Programs, and a large Naval Engineering department, the ABS naval vessel staff provide responsive, specialty services to meet the demands of a steadily increasing level of naval activity.



FLEET MANAGEMENT SYSTEMS





customer-centric approach differentiates ABS Nautical Systems (ABS NS) from its competitors. ABS NS' customers are its strongest asset and, as such, they continually assist in developing expanded functionality of the existing fleet management modules and identifying new products to better serve

the maritime industry.

A crucial element in this feedback loop is the annual user conference which brought together more than 125 clients representing 47 companies from around the world. Breakout sessions covered each of the NS5 module areas: Maintenance Management, Workforce Management, Safety Management and Supply Chain Management. The focus was on identifying ways to further improve current programs, as well as identifying new features for future NS5 releases.

The 2009 conference had an added stimulus as it represented the first gathering since ABS NS had become a wholly-owned and fully-assimilated operating division of the parent, ABS. It was an opportunity to introduce the new leadership of the NS division and to explain the new, client-oriented management structure that had been adopted. It has provided every client with a single point-of-contact and strengthened the account management and consulting functions. The account managers will coordinate activities on behalf of their clients with NS' product development, support, sales and consulting departments.

The integration of ABS Nautical Systems into the classification activities of ABS has opened up significant areas for cooperation in developing and introducing new, software-based approaches to traditional classification functions, including class surveys. These new opportunities are complementary to Nautical Systems continuing to position its integrated fleet management system as the preferred operational management tool for ship and rig owners of all types and class affiliations.

The immediate example of how the class-Nautical Systems relationship not only addresses safety but can be of benefit to owners of ABS-classed vessels was the launch, in mid-2009, of the unique ABS Newbuild Program. Available free of charge to the owner of every newbuilding delivered or transferred into ABS class from 1 January 2009 forward is a sophisticated suite of three programs for shipowners (two programs for small vessel owners), that is intended to provide them with the tools for more

efficient and targeted maintenance of the vessel's structure and principal machinery and equipment.

The offer includes the new Hull Inspection program, provided with an electronic model of the vessel with vessel-specific compartment data and critical areas identified; the NS5 Maintenance & Repair module loaded with the ABS equipment hierarchy,



Successful Data Migration from Legacy Program



ranspetro of Brazil operates 48 tankers, one tugboat and an FSO unit. Due to the size of both the company and the fleet, the company adopted an integrated fleet management program in 2001 to store the vast amount of information being produced daily on its vessels, to assist in maintaining regulatory compliance and to efficiently maintain critical equipment on board its vessels. The system adopted was the SafeNet version of ABS Nautical Systems.



Transpetro recently underwent a massive migration from this legacy program to the latest suite of Nautical Systems' software, NS5. It was essential to minimize downtime during the migration from the old to the new program. In preparation, Transpetro upgraded the hardware of the PCs across its entire fleet. Once the data migration was completed, both ABS NS and Transpetro assigned teams to the vessels to conduct the installation and training on board, and to carry out the system upgrades and interfaces onshore. Consequently, Transpetro was fully operational on the NS5 software in a matter of weeks.

As a result of the migration, Transpetro has seen a substantial return on its overall investment. It is able to convert the data coming in from the fleet to one central location for better decisionmaking and technical assessment. It has also been able to reduce satellite communications' costs and, through the ODBC connection, it can build external applications to evaluate data and diagnose vessels with minimal impact to its bottom line. Since the completion of the migration process, Transpetro has requested additional software customization to further optimize the modules it is using. determined during the plan review process; as well as a web-based drawings management tool. This new vessel maintenance management program brings together the power of ABS' technical capabilities, the requirements of the ABS survey regime and the functionality of the NS5 fleet management system to provide clients with integrated programs that are not available from other class societies or fleet management software providers.

Shipowner response to the new program was enthusiastic with so many clients signing up for the program that, by the end of the year, ABS Nautical Systems was able to announce it had become the fastest growing marine software provider.

This response also confirmed the growing demand within the maritime industry for new technologically-based assistance for everyday operational challenges as vessel owners seek ways to balance maintenance, repair and drydocking expenses with the increased regulatory and vetting challenges.

Examples of product improvements introduced by Nautical Systems over the course of the year to meet increased client expectations included a maintenance dashboard, a "My Tasks" upgrade, system and equipment column additions to job queries, and visual indicators for purchase and work order attachments. In addition to the new features, four new modules were also released: drydock, web-based drawing management, the hull inspection program and an on-demand reporting tool. The upgraded functionalities were all designed to enhance customer experience, as key elements of each were tailored from customer feedback.

The rapid growth in ABS Nautical Systems' activities throughout the year occasioned an expansion of its global workforce so that it could continue to offer responsive, customer-focused service to its clients. The expansion resulted in the opening of a new office in Hong Kong and a relocation and expansion of its European Headquarters from London to Greece.



MARITIME SERVICES ABS CONSULTING





rom certifying gaming vessels to undertaking life extension studies, ABS Consulting's Maritime Services division remained busy throughout 2009, helping clients go beyond compliance and differentiate themselves in what proved to

be one of the more challenging markets of recent years. The division marries comprehensive, integrated risk management, sophisticated engineering, analytical and technology-based approaches with practical operational experience to develop solutions for its clients' business and technical needs.

Although a long-standing activity, the division's Condition Assessment Program (CAP) continues to be an active area. Initially developed by the oil industry for charterers, the program is focused on assessing and rating the structural condition of older tankers, of 15 years of age and above. The CAP rating provides a charterer with a technical evaluation that indicates the manner in which an older vessel has been maintained and allows for a clearer assessment of the risk that may be attached to using the vessel to carry an oil cargo.

The ABS Consulting's Maritime Services team, carried out with assistance from the ABS survey staff as necessary, involves a detailed survey, including gauging of the vessel's structure and a sophisticated strength and fatigue engineering analysis. It also includes extensive testing of the vessel's machinery, equipment and cargo systems. In 2009, the Maritime Services' CAP team completed ratings on 41 tankers.

Exposure to potentially-excessive claims arising from the spillage of either an oil cargo, or bunkers in the event of a casualty or grounding, can be managed through the establishment of a contract with ABS Consulting's Rapid Response Damage Assessment (RRDA) program. Enrolled vessels have access to 24 hour, 365 days


Life Extension Studies for Structures



rontier Drilling, an independent supplier of drilling and production services for the oil industry, operates and manages a seven-ship fleet of drillships, semisubmersibles and floating production, storage and offloading (FPSO) vessels. For the *Frontier Duchess*, a conventionally-spread, moored drillship, Frontier Drilling turned to ABS Consulting's Maritime Services for a detailed structural and fatigue assessment to determine what,



if any modifications would be required for an effective life extension of the hull structure. The study was intended to identify areas that could possibly lead to unexpected project downtime in the future.

Engineering support work included the determination of the needed structural repairs to the vessel for an additional 15 years of service. ABS Consulting's Maritime Services team of engineers and naval architects reviewed the vessel's survey records and hull gaugings to identify the past history of hull repairs and structural modifications. The analysis helped determine the past corrosion rate of the hull structure. The group then performed a local buckling check of the structural members and determined the renewal projections required to meet the Rule minimum renewal criteria. The hull girder section modulus of three representative transverse girth belts in as-built and as-gauged conditions were also compared with minimum applicable class requirements.

The study revealed that the *Frontier Duchess* continued to meet structural requirements and renewal projections were made for the individual plating and stiffeners by location within the hull that can be expected to receive attention at five-year increments for the remainder of the vessel's projected service life.

a year emergency support services provided by an experienced team of engineers and naval architects able to provide vital technical assistance in the event of an incident. The program was successful in signing up a significant number of additional ships in 2009 and, although called upon to respond on several occasions, the number of incidents was, fortunately, small.

The Maritime Services division operates worldwide with the clients' needs varying quite significantly by location. For example, in the US, certification of casino gaming vessels remains an important activity. ABS Consulting is an authorized representative for the states of Missouri, Mississippi, Illinois, Indiana and Louisiana to provide assessment, inspection and certification of these specialist vessels. The year saw particular activity in Indiana and Louisiana.

Europe and the Middle East regions remained busy in 2009. For example, the Project and Financial Due Diligence Services group of the Maritime Services division performed a market analysis and financial feasibility study for a Middle East shipyard interested in implementing a facilities expansion program. As part of the market analysis, ABS Consulting identified a select group of vessel types that could be serviced by the client and performed an analysis of the world fleet for these types of vessels. The analysis utilized extensive proprietary marine industry databases available to ABS Consulting. The financial feasibility analysis considered the past revenues generated by the existing floating dock at the facility over the past 11 years, developed best and worst-case scenarios and base-case projections.

Responding to the recent rapid growth in the application of dynamic positioning (DP) systems to offshore assets, the Maritime Services team delivered a variety of analyses in response to client requests. These included failure mode and effect analysis and criticality analysis, DP trials and system design verification to industry and regulatory requirements. Additional activities included preparing and verifying DP operations manuals, assessing system risks, performing HAZIDs and providing training to help clients meet industry requirements.

ABS Consulting offers a wide range of training courses to the process and safety sectors and is well positioned to assist the ABS Academy in preparing and presenting courses tailored specifically for the marine and offshore industries through its Maritime Services group. Much of this activity is concentrated in

Greece where the number of courses offered rose to 140, with other training conducted in Hamburg, Dubai, Singapore and onsite for customers requesting more customized presentations. In response to strongly positive feedback, the team continued to work with ABS Academy to review course offerings, make enhancements and develop new subject matter, particularly addressing regulatory changes affecting the industry.



NUCLEAR UTILITIES ABS CONSULTING





n 2009, the nuclear industry was positioned for rapid global expansion with early licensing and development activities underway throughout the world including 23 new units in the US regulatory pipeline. Primary drivers

were the minimal carbon footprint of nuclear power and the need for large base-load generating capacity to support economic expansion and the eventual decommissioning of older nuclear plants.

The worldwide financial crisis dampened much of the enthusiasm, with projects delayed or cautiously moving forward in response to lower electricity demand and the substantial capital needed to develop new plants. This temporary slowdown provided an opportunity to build ABS Consulting's business development team and firmly establish the brand as the nuclear renaissance builds momentum.

During the year, the ABS Consulting Nuclear Utilities division embarked on a growth strategy that included adding junior and mid-level staff to its team and recruiting resources to develop new business and establish an engineering team on the US Eastern Seaboard. The group also assigned resources to develop business and establish a presence in the UAE. The sector's objective is to grow existing services and branch into related areas to service the worldwide nuclear marketplace. A concentrated effort for the division in 2009 was a focus on engineering support services for existing plants.

ABS Consulting has served the nuclear industry for over 40 years, providing specialty engineering and consulting services such as probabilistic risk analysis (PRA), probabilistic safety analysis (PSA), emergency planning, seismic engineering, safety cases, ASME inspection services, reliability engineering, specialized structural

mechanics, blast analysis and security consulting. Clients include nuclear utilities and suppliers in the US, UK, Switzerland, Hungary, Bulgaria, France, Japan, Finland, Canada and the UAE.

For STP Nuclear Operating Company (STPNOC), ABS Consulting contributed to the low power and shutdown PRA project for the STP Electric Generating Station, scheduled to be complete in 2010. ABS Consulting helped STPNOC implement a comprehensive, risk-informed, performancebased asset management decision support process for the Generating Station. The process encompasses the integrated broad scope of plant profitability-influencing factors, including generation availability, efficiency, the operational, maintenance and decommissioning costs of fuel, power market pricing and nuclear safety.



Building on Success with STP Nuclear



Since beginning PRA work and training for STP Nuclear Operating Company (STPNOC) in 1983, ABS Consulting has forged a strong foundation with the company that manages the South Texas Project. From a 1989 comprehensive plant PRA report and subsequent Individual Plant Examination and Individual Plant Examination of External Events report in 1992 to a current STP Electric Generating Station project, ABS Consulting's Nuclear Utilities division has proven to be a dedicated partner to STPNOC.



Because of its intent to apply the PRA over the remainder of the Generating Station's life cycle and because of its highly technical quality, STPNOC was granted a safety evaluation report from the US Nuclear Regulatory Commission. The PRA report cleared the way for subsequent applications of the plant PRA and resulted in significant pay-back of PRA work to date. ABS Consulting also has been contracted to expand the PRA to support future expansion, such as the Generating Station's low power and shutdown PRA project.

With ABS Consulting's support, STPNOC expanded the scope of its risk-informed applications to include a graded quality assurance program, a significant historical precursor to industry implementation of 10 CFR 50.69. A risk management technical specifications program enables risk-informed modifications of allowed outage times for plants based on real-time configuration risk management. And a surveillance frequency control program, developed under the NEI risk-informed technical specifications initiative 5B, enables risk-informed modification of plant surveillance tests and inspection intervals.

In addition to programs that have a direct interface with plant licensing and nuclear safety issues, ABS Consulting utilizes PRA and risk-informed applications to promote improved prioritization of STPNOC plant resources to support its balance-of-plant equipment performance and other processes. This has included helping STPNOC to establish an outage schedule cost-benefit-risk analysis approach to planning and scheduling refueling outages for the plant.

Other work undertaken in 2009 included a commission from HSE Nuclear Installations Inspectorate in the UK to analyze the safety margins of the boilers in the Heysham/Hartlepool Nuclear Power Station closure unit against catastrophic failure using a defined set of low probability fault loading conditions. The work was also required to independently validate similar analyses performed by British Energy in support of its continued operation safety case.

In the study, ABS Consulting developed a finite element model of the boiler closure unit and assessed lifetime and fault condition loads using the ABAQUS/Standard. Results from the analyses were compared with data measured onsite during the construction phase of the BCU and from lifetime records during operation.

This data was used to benchmark the different stages of the assessment, including development of an appropriate concrete material model; development of a coarse FE model for load testing including wire windings and bolt loads; development of a detailed model using the concrete material model and lessons learned in the coarse modeling phase; assessment of construction and normal operation loads to establish the BCU state after 30 years of operation; assessment of three fault conditions, including progressive loss of pre-stress, pressure overload and complete loss of pre-stress and loss of cooling and partial loss of pre-stress; and sensitivity analyses, material properties and contact parameters. The results and conclusions from the assessment were found to be consistent with those derived by British Energy, which support the safety case for continued operation of the facilities.



PROCESS INDUSTRIES ABS CONSULTING





principal focus of ABS Consulting is assisting the oil, gas, chemical and petrochemical industries to remain competitive within a rapidly changing business environment. In 2009, ABS Consulting's Process Industries

division helped many of these companies to better identify and manage risk and maintain stable business operations.

A key development was the deployment of its new generation software tool, IMSIS, for integrated management of process safety and asset integrity. In development for three years prior to its 2009 release, the IMSIS concept brings together the cornerstones of operational assets, asset integrity, assessment of safety critical elements (SCEs) through independent verification, identification of process safety hazards and barrier management.

The uniqueness of IMSIS is its ability to manage the overlaps among HSE, asset integrity and the independent SCE verification process. IMSIS services can be adapted for any phase of an asset's life cycle – from greenfield or brownfield project execution through operations and maintenance and for any type of asset from FPSOs and offshore fixed platforms to onshore oil and gas and petrochemical plants.

Within the offshore sector, Sinopec Star Petroleum Company awarded a contract to ABS Consulting for engineering review support and project management services for its F & G jackup rig design JU-2000E. Acting as an independent consultant to the owners, ABS Consulting carried out the engineering review of the design and assembled an experienced project management team to oversee construction activities in China. The multi-year project began in January 2009.

For Egyptian Offshore Drilling Company SAE, ABS Consulting carried out engineering design reviews, project management, vendor factory acceptance tests and final delivery related services for two Baker Marine Pacific Class 375 design offshore jackup drilling rigs at yards in Singapore. The contract included advisory, supervision and management services for procurement, construction and delivery of the jackups. The first rig is expected to be delivered in late 2010.

Operational successes were gained in every region in which the division operates. The sector's North America team was selected as one of the training providers to deliver the courses and workshop in the BP Operations Essentials program.



Investigating a Refinery Explosion



n November 2009, the Silver Eagle Refinery (SER) outside Salt Lake City, Utah, experienced a large hydrogen release from a dewaxing unit. While no significant injuries occurred, this release created a vapor cloud explosion that damaged some homes in the nearby community. As a result of the accident, community concerns about refinery safety increased, and several regulatory agencies began an investigation into the process safety practices at the refinery.

ABS Consulting was selected by SER to provide a wide range of services to assist SER in recovering from this accident. ABS Consulting supplied several process safety personnel onsite to aid in the refinery recovery and restart. This work involved accident investigation, root cause analysis,



development of a mechanical integrity program, fitness for service inspections, pre-startup safety review, process hazard analysis, blast analysis and facility siting reviews, upgrades to occupied buildings, procedure review and development, action item completion, risk assessment and communication with legislators, regulators, local city officials and the public.

ABS Consulting has assisted the investigations into a number of significant industrial accidents at refineries, chemical plants and other process facilities. Its goal is to provide value to companies seeking to learn from their experiences to manage future risk, improve HSE performance, and strengthen their safety culture and stakeholder relations.

As a result, BP embarked upon a multi-faceted, multi-year development and implementation of a range of high quality safety and operations capability programs across all levels of the organization. Seven ABS Consulting personnel were certified to deliver three types of training workshops targeted at first level leaders. Workshops included Process Safety, Hazard Identification and Task Risk Assessment, together with Isolations for Control of Work. In 2009, this training reached over 4,000 BP personnel.

Anglo American, one of the world's largest mining groups, was awarded the 2009 Innovation and Excellence Award in Health and Safety by the Institution of Chemical Engineers. The company received the award for its Safety Risk Management Program in which ABS Consulting had played a role. As part of Anglo American's Process Safety Management program, ABS Consulting trains its managers and supervisors that work at sites in Chile, Peru, Venezuela and Mexico.

In the Middle East, a major gas company contracted with ABS Consulting to develop a gap analysis report, internal verification checklist and awareness workshops for its operating assets. The company subsequently extended the contract to cover the establishment of a comprehensive asset integrity management system, including the development of a safety-critical system contingency procedure, KPI monitoring procedure, maintenance and inspection characteristics, safety-critical element management system and performance standards for a sulfur granulation plant.

The Extreme Loads and Structural Risk group within the Process Industries division provided guidance for an update of OSHA facility siting regulation API RP 752. The new 2009 edition significantly changes how the industry evaluates hazards. Two employees from the ABS Consulting San Antonio office served as active members of the committee and provided significant input.

The European operations of the division successfully expanded its business activities despite the uncertain economic conditions, providing managed safety case consultancy services for a major client. New offices in Derby and Helensburgh were opened to meet project quality requirement demands.

The European team also expanded its portfolio of services, including safety, integrity and risk management services for a major Middle Eastern oil company. These included third-party inspections, natural hazards risk reduction management, blast risk evaluations and risk mitigation options to maintain business continuity. The division has also performed several design verification projects for major oil and gas companies' assets in the North Sea and additional global locations.









BS Consulting's Public Sector expanded its activities during 2009, successfully assisting local, state, national and international government agencies in managing risk. The division offers solutions that can help these

agencies evaluate exposure to natural, man-made and operational risk, for national critical infrastructure as well as their own assets and operations.

Within the US, the division continued to serve the Department of Homeland Security (DHS), the Department of Defense (DoD) and the Department of Energy (DoE), as well as the Federal Emergency Management Agency (FEMA) and the General Services Administration (GSA).

For DHS, ABS Consulting continued to provide subject-matter expertise to support the implementation of the Chemical Facility Anti-Terrorism Standards (CFATS) program. The CFATS program regulates facilities that handle chemicals that pose a significant security risk. ABS Consulting's support to DHS for this program included security risk assessment, physical security consulting, consequence analyses and training services. ABS Consulting developed the curriculum for the DHS Chemical Security Inspector Academy and provided instructors to address regulatory requirements, chemical industry introduction and equipment, physical security concepts and risk-based performance measures.

The DHS Office of Risk Management and Analysis recognized ABS Consulting for its support of the Risk Assessment Process for Informed Decision-making (RAPID) project. RAPID is a national level risk assessment that evaluates the extent to which DHS and its individual programs are managing homeland security risks including terrorism, natural disasters and transnational crimes The overall goal of the project is to inform planning and budgeting decisions across DHS.

For the office of Port and Facility Security of the US Coast Guard (USCG), ABS Consulting provided maritime security plan review and management. Work included policy, plans and program development associated with maritime transportation

security, ferry and terminal security policy, state and local interface with the Area Maritime Security Committees, port closures and subsequent recovery activity, canine assistance and Homeland Security Presidential Directives.

ABS Consulting also provided reliabilitycentered maintenance (RCM) support and engineering services to the USCG's Engineering Logistics Center to manage the preventive maintenance system for the Surface Forces Logistics Center (SFLC). Since assuming sole responsibility for this effort in January 2009, ABS Consulting has reduced the open backlog of feedback items by more than 28 percent.



Supporting USCG's Unmanned Aerial System



n July 2008, the USCG Research and Development Center (RDC) awarded ABS Consulting Inc. a fiveyear Indefinite Delivery/Indefinite Quantity (IDIQ) contract to augment the RDC's capacity, acquisition experience and technological expertise. This long-term partnership builds on the sector's role as advisor and consultant to the USCG Acquisition Directorate and its sponsors. Under the agreement, ABS Consulting and its team of 19 partners will provide Systems Engineering and Technical Assistance (SETA) support.



As part of the contract, in 2009 ABS Consulting assisted the USCG in studying several aspects of

ship-based Unmanned Aerial Systems (UAS), including project studies to mitigate acquisition risk and, where possible, leverage other organizations' UAS development and non-recurring engineering investments. Subject matter experts evaluated UAS candidates on the basis of performance, cost, schedule and human systems integration factors. Based on this analysis, the SETA team recommended three UAS candidates to the RDC for further evaluation, to include land-based advanced technology demonstrations.

Additionally, the SETA team supported the USCG with dry-fit testing of the Navy's RQ-8 Fire Scout aboard the National Security Cutter *Bertholf*. Although launching and recovery from the cutter's flight deck were not included, the tests showed an unmanned aircraft could be loaded, moved and stowed aboard the NSC.

ABS Consulting also supported the SFLC in maintaining the data required to manage the process, producing cycle time measures and developing an electronic file system to manage the Maintenance Procedure Card (MPC). The MPC online tool provides a comprehensive search capability of applicable maintenance data to continuously track documents and measure process cycle time performance.

ABS Consulting's Public Sector team plays an integral part in the SFLC design interface process, conducting detailed reliability-centered maintenance analysis to support each engineering change proposal. More than ten RCM analyses were performed. In addition, the group's role in design interface includes reviewing logistics data, specifically RCM-related materials to support acquisition programs. In 2009, the work supported the Special Craft-Shallow Water and the Fast Response Cutter programs.

The GSA recognized ABS Consulting with a citation for its modernization efforts during the recent renovation of the Richard Bolling Federal Building in Kansas City, Missouri. The citation was one of only two awarded by GSA in the modernization category for work performed in the US. The focus of ABS Consulting's scope was the seismic analysis and design of selected non-structural elements.

ABS Consulting also completed numerous progressive collapse evaluations for the GSA. These evaluations resulted in the development of selected structural retrofits utilizing the *Progressive Collapse Analysis and Design Guidelines for New Federal Office Buildings and Major Modernization Projects*. These guidelines specify requirements for the analysis and load combinations to be utilized as well as the acceptance criteria by which to judge the vulnerability of the structures.

The year saw significant growth in the relationship with FEMA. ABS Consulting provided risk methodology support for the FEMA Preparedness Grant Program award allocations and assisted with the development of metrics for measuring the impact of FEMA's programs.

Other 2009 projects included a comprehensive seismic risk assessment of the Central Utah Water Conservancy District system which provides municipal, industrial and agricultural water for ten of the 29 counties in Utah. A screening

study was performed to determine critical system components and facilities. The top 48 facilities were then analyzed to determine seismic deficiencies for 475-year and 2,500-year earthquakes which could prevent the District from delivering water or pose life safety concerns. Seismic retrofit solutions were developed together with a cost/benefit analysis to determine the most costeffective solutions. A strategic plan was prepared detailing retrofit project priorities and a multi-year funding plan to support implementation of the mitigation projects.





CATASTROPHE RISK MODELING EQECAT, INC.





rom software updates to new licenses and renewals, EQECAT, Inc., a subsidiary of ABS Consulting, worked tirelessly during 2009 to remain the leading authority on catastrophe risk modeling. In addition to its Hurricane

Ike Chase Tower report and updated US Offshore Energy Model (OEM), both direct results of Hurricane Ike and the 2008 hurricane season, EQECAT released new versions of its WORLDCATenterprise[™] (WCe) modeling software platform and European windstorm model Eurowind[™] that featured significant enhancements.

WCe version 3.13 incorporated new peril data and functionality, delivering faster access to data. Enhancements were based on new science and data as well as relevant information about North Atlantic hurricanes, European floods, and earthquakes, particularly those in the Himalayan Frontal Thrust region and South America. In the new version, EQECAT's EuroFlood model was moved to the WCe platform from a related software platform, reducing run times. EQECAT also added to its US Offshore Energy Stock, enabling users to import data directly into the US OEM.

With improved accuracy and increased scope, the latest version of Eurowind becomes the most comprehensive European windstorm model available in terms of geographic coverage and resolution. The update, which doubled the number of countries covered to 22, is the result of collaboration with the Freie Universität Berlin's meteorology department. The release, which incorporated a hybrid stochastic event set, combining the most suitable aspects of measured and modeled wind storm characteristics, was based on input from a state-of-the-art, third-party Atmosphere-Ocean General Circulation Model (AOGCM) and presents a robust representation of European windstorm hazards.

EQECAT was selected to provide critical assessments for its clients' Gulf of Mexico assets. One site assessment involved quantification and mitigation of financial risk for the organization's pipelines and associated assets in the Gulf. In another, EQECAT performed a full risk assessment for a floating production unit in the Gulf, evaluating the effects of windstorms and collision, as well as analyzing wreck removal and business interruption issues.

For another project, the CME Group selected EQECAT as the calculation agent for its CME Hurricane



Utilizing Storm Data to Build a Safer Future



future similar events.



In January 2009, EQECAT released its preliminary report, the Wind Effects of Hurricane Ike on the Chase Tower in Downtown Houston, which detailed extensive glazing damage to the 75-story J.P. Morgan Chase Tower and an adjacent parking garage. The report cited a number of factors that contributed to the event, including the angles and tall flat surfaces of the building's design, the redirecting flat wall surface of the mid-rise parking garage and the angle of attack of extreme winds combined with the shape and orientation of Chase Tower and the nearby Calpine Center office tower.

In addition to developing the Chase Tower report, EQECAT utilized data from Hurricane lke and other storm activity during the 2008 hurricane season to update its US OEM with refined hazard and vulnerability modeling, including analysis of wave height and damage data.

The updates were based on data collected from various sources, including energy operators in the US Gulf of Mexico, the National Oceanic and Atmospheric Administration's National Data Buoy Center and the US Department of the Interior's Minerals Management Service. EQECAT's OEM is part of the WCe catastrophe management software suite. Refinements to the model reflect high resolution wave-model analysis conducted during a hurricane; changes to energy operators' extra expense vulnerabilities, including re-drilling of wells, 'plug and abandonment' and control of wells; and physical damage vulnerabilities for fixed platforms, as well as floating platforms and pipelines.

Index, which allows hurricane risk to be traded on the Chicago Mercantile Exchange (CME), enhancing the ability of the CME Group to tailor new products for this marketplace. Weather Risk Solutions, LLC also signed an agreement with EQECAT to provide probabilistic and historic hurricane landfall modeling in the Eastern and Gulf Coast US to support option trading on the CME. Following a hurricane, EQECAT will provide post-event loss estimates for both insured and estimated economic loss in affected counties.

EQECAT provided assistance to CDS Business Mapping, LLC (CDS) and many other customers. CDS, a digital mapping sales and consulting company, contracted with EQECAT to utilize its earthquake model as a source model for RiskMeterTM, an online tool used by property underwriters and agents to perform geographical property reports. And a leading insurance manager licensed EQECAT's eCAT model to analyze the quality and risk of its pending investments and expand its horizons.

A handful of companies expanded agreements with EQECAT, including ICW Group Insurance Companies. ICW Group will use additional capabilities and functions of the US earthquake model. The company selected EQECAT's proprietary Integrated Catastrophe Management System to incorporate catastrophe modeling into its underwriting workflows and aggregate risk management, while integrating the automation of catastrophe modeling into existing underwriting workstations.

Another customer renewed its license agreement with EQECAT on a multi-year basis to cover all EQECAT Eurowind countries and key earthquake countries in the Mediterranean and Latin America regions, in Taiwan and New Zealand. Many customers expanded their licenses for EQECAT's WCe platform or licensed EQECAT's US Offshore Energy and Asia Typhoon models.

In addition to expanding WCe licenses, one of the customers added the newly expanded EQECAT Eurowind catastrophe model. Another customer renewed its WCe platform license and expanded it to include the US OEM and four additional earthquake models.



QUALITY MANAGEMENT SYSTEMS ABS QUALITY EVALUATIONS, INC.



QUALITY MANAGEMENT SYSTEMS ABS QUALITY EVALUATIONS, INC.



n 2009, many companies that had viewed management system certification as a future business enhancement began recognizing it as a competitive necessity, creating new opportunities for ABS Quality Evaluations, Inc.

(ABS QE), a subsidiary of ABS Group of Companies, Inc., to expand its activities.

Service remains a key element in winning and retaining business in this competitive market, and ABS QE took several steps to improve service delivery during the year. These included establishing a broader account management program that provides clients with a single point of contact to help them receive optimal service in each phase of the certification process. In addition, ABS QE launched a customer satisfaction survey program. Surveys are issued at the completion of each audit; the results indicate where further improvements in service delivery can be made.

As a global leader in accredited management systems certification, ABS QE recognizes that, while certification is to a series of standards, each client may have unique requirements, challenges and objectives. To meet those needs, ABS QE is positioned to offer accredited management systems certification under a variety of standards, including Quality (ISO 9001), Environment (ISO 14001), Aerospace (AS 9100), Automotive (TS 16949), Information Technology (ISO 27000) and Health and Safety (OHSAS 18001).

In North America, Lund International, a designer and manufacturer of metal fabricated automotive accessories, selected ABS QE as its service provider for ISO 14001 and TS 16949 certification. In addition, ABS QE continued to support the Federal Aviation Administration (FAA) aviation system standards, specifically ISO 9001, ISO 14001 and AS 9100 certification.

In Europe, ABS QE certified the oil, gas and chemicals management system business within SGS United Kingdom Ltd. to OHSAS 18001:2007, and renewed its ISO 9001:2008 certificate. SGS United Kingdom Ltd. is part of the SGS Group, the world's largest inspection, verification, testing and certification company. In addition, ISO 27001 began to attract support in Europe, with ABS QE issuing 11 certificates in Spain.

In the Pacific, ABS QE was selected by Kirloskar Oil Engines, a leading manufacturer of generator sets, to certify its service dealers across India. ABS QE expects to complete approximately 90 service dealer audits by the end of 2010. In Japan, ABS QE performed its first ISO 27001 certification for HumanWare Corporation, a global designer and manufacturer of innovative products for the visually impaired.



Committing to Continuous Improvement



By focusing on specific market segments with high growth potential in commercial, defense and executive aviation, Embraer has become one of the world's largest aircraft manufacturers. Embraer regards quality, environmental, health and safety management systems as important within its operations program, aimed at creating awareness and guiding its more than 16,000 employees.



Embraer selected ABS QE to conduct third-party certification audits of its management systems in accordance with ISO 9001:2008, SAE AS 9100:2004, ISO 14001:2004 and OHSAS 18001:2007. As part of the project, ABS QE conducted ISO 14001 and OHSAS 18001 audits of four Brazilian plants.

In the US and France, ABS QE performed ISO 9001 and AS 9100 audits for overall effectiveness of the organization's management system. The team reviewed processes and any significant changes in the organization that may have affected the management system. The audits verified Embraer's continued system compliance, effectiveness and continual improvement.

In Latin America, ABS QE was awarded contracts from Multiserv Ltd., Arjo Wiggins Ltda., Brasilit Ltda. and Potencial Engenharia S/A to perform certification toward ISO 9001, ISO 14001 and OHSAS 18001. Companhia Siderurgica Nacional (CSN), the largest fully-integrated steel producer in Brazil, called on ABS QE for certification to TS 16949. Lexmark, a global provider of printer technology solutions, selected ABS QE to perform certification audits for ISO 9001, ISO 14001 and OHSAS 18001. ISO 14001 and OHSAS 18001 in Mexico.

Although certification remains the core focus of ABS QE's business activities, new product offerings and market segments are constantly being evaluated and developed to build sustainable growth and to help clients adapt to the changing global marketplace.

As one of the few certification bodies chosen by the US Green Building Council to offer the Leadership in Energy and Environmental Design Green Building Rating System, ABS QE provides independent, third-party verification that a building project meets specified green building and performance measures.

The emergence of corporate social responsibility (CSR) reflects a global environment that increasingly expects values and often demands accountability and responsibility for an organization's actions. ABS QE developed its first CSR project for Sandigan Ship Services in the Philippines.

The ABS QE team performed second-party audits for the United Nations Development Program (UNDP) in Costa Rica. The company was also awarded a contract to perform NADCAP and SAE 9100 first-party audits to a cluster of 40 automotive suppliers expanding into the aerospace sector.

Unilever, a provider of many of the world's consumer product brands in food, beverages, cleaning agents and personal care products, recognized ABS QE as a qualified provider to assess its supply chain under its vendor performance program. During the year, ABS QE performed second-party audits for Unilever in North America and Latin America.

Nabors Drilling International extended its contract with ABS QE, in which the group conducted quality audits on ten exploratory drilling rigs in the following countries: Romania, Mexico, Russia, Saudi Arabia and Yemen. The audits focused on the Nabors Rig Management System, including areas such as drilling, operations, health and safety and environment management.

ABS QE was also accredited by the ESD Association to perform ANSI/ESD S20.20-2007 facility certification audits. This thirdparty certification program has been developed to meet the global electronics industry's need for technically sound electrostatic discharge (ESD) control programs.



COMMUNITY INVOLVEMENT





believe that children are our future..." are the opening lyrics of a popular song that resonates throughout the world. In 2009, ABS employees worldwide sang this tune as they committed to making a difference in the lives of

children and young adults as well as the community at large.

From ABS' headquarters in Houston to London and Singapore and the far outreaches of the organization's global network of offices, a multiplicity of efforts were made that resulted in the financial sponsorship of events and individual participation in activities that were aimed at enhancing the lives of children.

In Azerbaijan, a children's educational book project, intended to re-introduce Azerbaijani children to their heritage and language, was co-sponsored by ABS and the Rotary Club of Baku International. The first in a series of eight books, *Magic Flight*, is a 96-page illustrated book in Azerbaijani, about the customs, culture, flora and fauna of the Lenkoran region of the country. The series is designed to familiarize Azeri children with the customs and traditions of all the regions in the now-independent republic. As a result of corporate sponsors such as ABS, the book has been distributed to schools, libraries and orphanages throughout the country.

From books to toys, the employees in the United States participated in toy drives to benefit children that may not have had a very merry Christmas without the help of secret Santas. In Houston, more than 228 families benefited from gifts ranging from small treats to bicycles. Houston staff stocked the toy store for Mission Greenspoint, an organization dedicated to enriching the lives of individuals of all ages and educational, cultural and economic backgrounds. The Thanksgiving holidays were also made brighter with ABS-sponsored gift bags of food for disadvantaged families.

Offering support to children and adults with cancer, US-based employees participated in the Leukemia & Lymphoma Society's "Light the Night Walk" to raise funds for lifesaving research and patient services. Dozens of other charity organizations benefited from ABS' community involvement stemming from the annual United Way Campaign. The agency helps fund numerous charitable and social services for children, the homeless, underprivileged and disabled. Humanitarian aid was also provided to our neighbors to the south as kits with protective safety supplies such as hand sanitizers, gloves and masks were sent to help control the outbreak of swine flu in Mexico.

In many countries, ABS staff took time to participate directly in children's education. Just one example was the two Houstonbased engineers who contributed to the success of a local school's career day by stopping by to tell the students about the challenges and rewards of following an engineering path. Students learned about the maritime industry and the role that naval architects and engineers play. Other educational efforts



Making a Difference with Brazil's Project Ponto BR



BS' successful work in the classification of offshore production units means the office in Rio de Janeiro, Brazil, is very busy. But not too busy to notice that youth in the city that live in the local favelas, or slums, may literally have to fight daily to live an ordinary life. In particular, youth from the favela of Vila Alianca face the everyday struggle of being raised in an area plagued by violence, poverty and extreme social inequality.



A unique program called Ponto BR recognizes that many of these creative and talented youth want to break free from this environment. Ponto BR aims to offer children a positive alternative to the influence of the drug gangs that control their community.

This grassroots initiative introduces children into the community outside of the favela by involving them in social and cultural activities through access to music, art and culture. The goal of the program is to combine creativity with professional skills training and to build self-esteem.

Members of the ABS Energy Project Development team used their participation in Subsea Rio 2009, a prominent industry conference which addresses technical issues related to the production of oil and gas in deepwater arenas around the world, to join with other attendees to provide much needed funding for the Ponto BR program. The money raised helped Ponto BR purchase computers and cameras for their media arts program as well as to refurbish the percussion group's instruments and purchase new uniforms.

included 'job shadowing' where students could follow engineers through their typical work days to gain a more hands-on feel for the tasks undertaken.

Some efforts were focused more on maintaining a healthy planet for our children and grandchildren. In Singapore, more than 50 ABS employees and family members twice volunteered their time to help clean up Singapore's beaches. Since there are no more landfills in Singapore, domestic refuse is incinerated and transported to a manmade landfill island, but the lifespan of this landfill is running out. ABS Singapore staff teamed up with members from the Jane Goodall Foundation and the Ocean Minded Committee on the clean up. Several employees found it a great opportunity to work alongside their own children to help them better understand environmental stewardship.

Education remains a centerpiece of ABS' formal community investment program. The very active global scholarship program which provides support for students at colleges as diverse as the World Maritime University to the Sir John Cass Business School at the City University in London to technical universities in Korea, China and many other countries, continued throughout 2009. US maritime academies are particular beneficiaries of the ABS educational outreach program. In 2009, ABS provided funding to endow a Chair in Naval Architecture and Marine Engineering on the campus of New York's Webb Institute. This top-ranked undergraduate institution offers a double major in Naval Architecture and Marine Engineering. Donations were also made to endow a Chair in Ocean Engineering at the University of California Berkeley and fund improvements at the California Maritime Academy.

ABS Nautical Systems also contributed to the educational outreach effort in 2009 with a donation of its NS5 Fleet Management software to the International Maritime University of Panama. The donation included the Maintenance & Repair, Purchasing & Inventory, Crew Management, Quality & Compliance and Replication Manager modules. The University will incorporate the software into existing student courses to provide them with real-world examples.

These are only a tiny number of the countless contributions made by the many selfless ABS employees to their local communities, wherever in the world they may be. Similar stories could be told and retold of assistance provided to those in need in so many of the countries in which ABS maintains a presence. These are the true unsung heroes, not just of ABS but of the global community of which we are all a part.



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