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MILESTONES

Focus on: The Pressure Equipment Directive (PED)

Moody International integrates its Certification and Inspection resources to provide clients with competitive "Notified Body" services under the Pressure Equipment Directive

The Pressure Equipment Directive 97/23/EC (PED) is an agreement between European Union (EU) Member States to enact national legislation on those responsible for placing pressure equipment on the market or putting it into service for the first time. This responsibility usually falls on the Manufacturer.

Moody International Certification Limited is an appointed Notified Body, providing services under the Regulations implementing the PED. Phil Eccleston leads the global pressure equipment initiative for Moody from the corporate certification offices in Derby, UK. Phil has extensive experience in engineering, rising to senior positions with prominent engineering contractors, insurance companies, and inspection / certification bodies. Phil's involvement with Moody stretches back to his work with AOTC, the predecessor to AOQC, the essence of Moody's certification business.

Through its nearly 100 years of experience, Moody has a vast working knowledge of pressure equipment technology. More recently, Moody's quality system certification experience has grown to the point where we are one of the largest registrars in the world. These two elements have now been fused and enhanced by specialist training in PED matters. One of Phil's initial objectives has been to ensure the competence of Moody personnel at all levels in accordance with the PED requirements.

Statistically speaking, failures from pressure plants are inevitable. Consequently, when failures do occur they may be catastrophic unless proper consideration has been given to hazard control.

The PED does not set rules, but develops a framework based on the hazards presented by the equipment due to pressure and fluid danger on which applicable Essential Safety Requirements are to be met.

Responsible persons are required to demonstrate via a conformity assessment procedure that their product is compliant, produce a written declaration of conformity and then affix "CE" marking. The level of PED conformity assessment to be applied to a product is in proportion to its classified hazard category. Equipment in the higher categories requires that conformity assessment be carried out under the surveillance of a Notified Body.

It should be noted that "CE" (Conformité Européene) marking is not a statement of quality, but a symbol of safety, embodying degrees of quality, commensurate with the hazards presented by the intended duty. It is also the passport for pressure equipment within and into the EU.

Moody is able to exchange technical information on best practices with client's representatives during all stages of project development, thereby ensuring that the product is right the first time! Moody understands the problems faced by those having to comply with the PED and therefore endeavors to make matters as simple as possible whilst working cooperatively as part of a team.

Moody is now able to offer manufacturers of all types of pressure equipment a range of conformity assessment services. When integrated with ISO 9001 certification, Moody is able to offer its clients substantial savings by eliminating dual assessments and surveillance.

For additional details on Notified Body Services under the PED, contact your nearest Moody office or alternatively, contact Phil Eccleston directly, via e-mail at: phil@moodycert.co.uk.

MI-Japan obtains ISO 14001 and OHSAS 18001 Certification

Kiyo Sakai, Manager of Moody's Japanese Operations, proudly announces the Certification of MI-Japan to the ISO 14001 and OSHSAS 18001 standard.

Tom Ito, Mihoko Kumasawa, Makiko Hayashi, and the rest of MI-Japan's staff are to be commended for their efforts in achieving certification to the ISO Standards 14001 – Environmental Management System and OHSAS 18001 - Occupational Health and Safety Assessment Series (accomplished concurrently). Previously, MI-Japan had been certified to ISO 9001. Both Certificates were received on December 18, 2003 from DNV.

Congratulations on this important achievement.

Pictured (left to right) is Mihoko Kumasawa (EMS Rep.) and Makiko Hayashi (OH&S Rep.)

HYDROGEN SULFIDE AND ITS EFFECTS UPON CARBON AND LOW ALLOY STEELS IN NATURAL GAS PRODUCTION EQUIPMENT

By Lynn C. LeBlanc

Specific Hazards

To keep up with worldwide demand for natural gas, energy companies are continually searching for and finding additional supplies, but the quality is not always optimal in terms of what must be done to it to make it marketable. Frequently these reserves are located 20,000 feet or more below the surface of the earth where they have been found to contain hydrogen sulfide (H2S) - a colorless, flammable and poisonous gas that has the odor of "rotten-eggs" at low concentrations.

When H2S is present, the natural gas is referred to as "sour" and is a concern because of the danger it poses to human and animal life and the environment as a whole. H2S yields poisonous sulfur dioxide when it burns and is explosive in a range of 4.0% to 46% in air. Certain iron sulfide corrosion products, called pyrophores, are created by the reaction of H2S and steel and may also ignite spontaneously in the presence of oxygen when equipment or piping is opened. The ultimate failure in sour gas service would be an atmospheric release of the noxious mixture, which could result in any one, or all, of these occurrences.

Effect on Carbon Steel

Sour natural gas can be especially corrosive when dissolved oxygen, carbon dioxide, and water are also present. The resulting three main failure modes are sulfide stress cracking (SSC), hydrogen induced cracking (HIC) and hydrogen blisters, which are believed to result from the evolution of atomic hydrogen during corrosion and its subsequent diffusion into the interior of the metal resulting in a loss of ductility by hydrogen embrittlement.

The exact failure mode will depend on strength level, hardness, applied and residual tensile stress. Accordingly, weldments may be particularly susceptible due to high local weld and heat affected zone (HAZ) hardness, microstructures with lower toughness, and residual stresses often approaching the yield strength. Therefore, effective preventative measures such as steel chemistry and processing, correct welding procedures, post weld heat treatment, and thorough nondestructive examination (NDE) are absolutely necessary.

Editor's Note:
Lynn LeBlanc is a Vice President in Moody International's Amelia, LA (USA) office.

PERSONNEL / ADDITIONS – T. ITO

MI-Japan is pleased to announce that Tomonori (Tom) Ito has been appointed Operations Manager of Moody International's Tokyo office.

Tom, a Graduate of Kitakyushu University in Kokura, joined Moody International in January 2003. He possesses over 27 years of experience in sales and the provision of technical services with several international companies.

Tom is responsible for managing the day-to-day activities of MI-Japan's inspection services division. Tom's English skills are excellent and this will be beneficial as MI-Japan coordinates assignments for and on behalf of all Moody International offices. These skills have already proven to be useful as MI-Japan undertakes a challenging assignment covering ten (10) Japanese mills with over seventy (70) Inspectors on the Sakhalin II Development project.

The Group welcomes Tom to his new position and looks forward to his contribution to the continued development of our Japanese office.

MI-KOREA CELEBRATES 25 YEAR ANNIVERSARY

Moody International is proud to announce the twenty-five (25) year anniversary of the Korean office. MI-Korea was formally registered in August of 1978 on a joint venture basis with J. D. Lee serving as President.

The first real project of note for MI-Korea was the supply of ex-patriate QA/QC personnel for the Korean Nuclear Authority on Korean Nuclear Power Plant construction programs. From there, the company quickly expanded and began to provide a variety of quality related services to a diverse clientele.

During the 1980's, MI-Korea was heavily involved in the construction of many offshore oil and gas projects, including the Exxon - Floating Seawater Treatment Plant, Aramco Zuluf and Marjan Projects, and Exxon USA Harmony and Heritage - Platforms.

In the 1990's MI-Korea became heavily engaged in providing various procurement support services including supplier surveillance, expediting, supplier assessments and audits, etc. Through years of project related work, MI-Korea's local workforce now possesses significant commodity experience with pressure vessels, heat exchangers, columns, drums, structural steel, etc for a wide range of industries including mining, petrochemical, transportation (bridges), civil (building construction), refining, and more.

In October 2001 the Moody Group purchased the remaining JV Shareholding and MI-Korea became a 100% foreign invested, Korean registered company.

With the growing competitiveness of the Korean economy, the future looks bright for MI-Korea.

Pictured (left to right): H. K. Jeong – Director, H. S. Oh – President, Kerry Richards - Regional Manager, Far East Asia, K. Y. Jeong – Project Coordinator, C. H. Lim – Sr. Project Coordinator

MI-SAUDI ARABIA COMPLETES DE-BOTTLENECKING PROJECT

Keith Hawker, General Manager of MI-Saudi Arabia (pictured to the right), is pleased to announce the successful Mechanical Completion of the PVC DBN Project in Jubail, Kingdom of Saudi Arabia by National Plastic Company (Ibn Hayyan). Ibn Hayyan is an affiliate company of Saudi Basic Industries Corporation (SABIC) and produces Vinyl Chloride Monomer (VCM), Polyvinyl Chloride and PVC Paste.

The project involved the addition, upgrade and replacement of critical equipment. It also involved the simultaneous upgrade of existing DCS Systems.

Mr. Luai M. Al-Tayeb, Project Manager of Ibn Hayyan PVC DBN extends his appreciation and thanks to Moody International and to all companies who participated in the project for the marvelous performance, especially for the dedication of each and every individual involved.

In addition to the above, MI-Saudi Arabia has an ongoing contract for SABIC to provide worldwide supplier surveillance services. SABIC consists of 16 world-class manufacturing sites in Saudi Arabia and today SABIC is among the leading international petrochemical companies in terms of sales and products diversity. They are also the Middle East's largest non-oil industrial company.

NIGERIAN DEVELOPMENTS

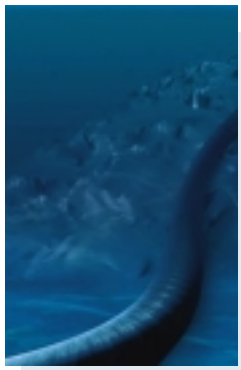
In 1996, MI-Nigeria was established to bring the renowned expertise of the Moody Group to West Africa. As the political landscape in Nigeria continues to influence the contracting policies of large multinational oil companies, MI-Nigeria can play a key role. By offering Nigerian clients access to worldwide services while still being able to satisfy stringent local content requirements, MI-Nigeria is poised for significant expansion. Recent developments include:

• In 2003, MI-Nigeria was awarded a Manpower Supply Umbrella Contract from Shell Petroleum Development Co. (SPDC) and several expatriate employees have been deployed under this agreement. Pictured to the left is one such employee, Hans Lagerwaard, a Senior Pipeline Engineer, shown with Niyi Ademuson, MI-Nigeria's General Manager. A satellite office is now being established in Port Harcourt to support the project.

• Chevron Texaco awarded MI-Nigeria a contract to provide site construction inspection services during the construction of the living quarters for the Dibi & Delta Project. This is being managed by MI-Norway and the work is being conducted at the prime supplier in Norway and at a sub-supplier in Poland.

• MI-Nigeria is also actively involved with the Shell Bonga FPSO Project. Working in close cooperation with MI-USA's Amelia Division, seven (7) ex-patriate and one (1) local staff have been assigned to the project in various capacities. The strong support of MI-Nigeria, with visas/work permits, meet and greet services, local logistics and transportation, etc. has been instrumental in the efficient execution of the project. The assigned personnel are expected to be engaged through the completion of the installation and hookup phase of the topsides.

STATOIL AWARDS MI-NORWAY ORMEN LANGE INSPECTION CONTRACT



MI-Norway and Statoil recently entered into a frame agreement for the supply of global pipe mill and coating inspection services. This agreement will allow Statoil access to Moody's services on the Ormen Lange Project and this is a tremendous boost for the Moody Group.

The Project has recently signed contracts for approximately $700 Million USD with leading pipe mills in Europe and Asia for over one million tons of steel pipe. With the large majority of the pipe coming from Europipe in Germany and France, Moody will mobilize personnel from the UK, France, and Germany to the Mullheim and Dunkerque mills where production will be closely monitored to ensure compliance with Statoil's requirements. Moody's extensive previous experience with these two mills, most notably on the ExxonMobil Chad/Cameroon Pipeline Project, will be invaluable.

The project scope entails the construction of two separate pipeline systems. The shorter pipeline will run from the large Ormen Lange sub-sea gas field outside the Norwegian coast to the shore. The second phase calls for the gas to be transported to Easington, England through a 1,200 KM export pipeline via the offshore platform "Sleipner". This portion of the project has been named the Langeled Pipeline, and it will be the world's largest sub-sea pipeline.

PERSONNEL / RETIREMENTS – E. BLAKE

One of Moody International's largest growth areas over the past several years has been the Middle East. Ed Blake has spent over twenty years in the UAE; the last ten of which were spent with Moody. As Regional General Manager of Moody's offices in Abu Dhabi, Dubai, Qatar, and Saudi Arabia, Ed has worked tirelessly to expand Moody's services and grow the business.

On January 1, 2004, Ed officially began his well-deserved retirement. Ed and his wife Trisha, who also worked for MI-UAE as a Project Coordinator, relocated back to their home on the beautiful island of Cyprus. John Chester, previously the Manager of MI-Qatar, has now assumed the responsibility for Moody's Middle Eastern operations.

Congratulations to Ed on the conclusion of a very successful career with the Moody Group and best wishes for a stress-free retirement with plenty of golf, sunshine, and the like.

MOODY'S WELDING INSPECTION TRAINING AND AMERICAN WELDING SOCIETY CWI EXAMINATION PROGRAMS PROVIDE ACCESS TO WESTERN CERTIFICATIONS.

In today's competitive environment, project procurement personnel continue to seek new sources of supply, often in emerging countries or economies where product quality has traditionally been a concern.

Recognizing the absence or shortcomings of widely accepted qualification and certification programs in developing countries, and the lack of reliable, credible validation of them, Moody has taken some giant steps in bringing standardized programs to the local market.

Inspectors and engineers attend a recent training and examination venue in Shanghai, China.

Early on, these programs were offered only in the West meaning interested candidates had to incur expensive travel costs to obtain training and certification. A further obstacle was the language barrier as the training materials and exams were typically offered only in English. Later on, courses were offered abroad but typically this was done with English-speaking trainers, meaning the language barrier was still a problem. Site translation was time consuming and costly.

Through an agreement signed with the American Welding Society in 2001, Moody has undertaken the objective to translate the Welding Inspection Technology Training Course into local languages. Although this entails a significant effort, the program is now complete in Mandarin Chinese and Russian. Other translations are in the works. This CWI preparatory course has proven extremely popular. Independently, the CWI examination is administered following the training and to date, the program is thriving.

One might ask, "How does this affect the procurement process"? It means that buyers now have some methods of ensuring that compliance to welding codes and specifications is monitored by an individual known to have met standardized training and testing.

Perhaps a small piece of the puzzle but a giant step forward in setting examples of what can be.

For more information contact your nearest Moody office for further details on the training or certification programs.

Moody International

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