

Important Lessons Learned



*A newsletter
for the Maritime
Industries from:*



Consulting Naval Architects
Marine Engineers
Project Managers



*We appreciate your
comments. You can
reach us at:*

800 732 3476
+1 973 660 1116
Fax: +1 973 660 1144

e-mail:
email@fisher-maritime.com
www.fisher-maritime.com

LESSON LEARNED #74: Analysis Instead of Hope and Prayer

A semi-submersible drill rig was to be modified for the next charterer. In order to avoid paying shipyard fees and higher labor rates, the owner arranged for the vessel to be anchored in an exposed anchorage several kilometers from the nearest dock. This required using a second vessel anchored nearby as an assembly staging area and accommodation for the labor staff. The actual project schedule far exceeded expectations due to delays in transporting workers between vessels, and delays arising from the need to use man-lifts that were affected by vessel motions in the seaway. This significantly reduced the daily productivity of workers.

In addition, the use of the heavy-lift ship that placed new modules onto the rig was stretched over many extra, very expensive days due to the same ship motions. Nearly all that reduced productivity and the encountered delays would have been avoided by having the project undertaken at a shipyard in protected waters.

The lesson learned: A carefully considered pre-project risk analysis would have identified the likelihood of such delays and extra costs. Sea conditions during the planned refit period, and the anticipated vessel motions resulting from such conditions could have been addressed by professionals. The decision to use the exposed anchorage with no dock and no shore-based accommodations is a clear example of mismanagement: substituting a prayer and/or hope for detailed analysis and planning.



LESSON LEARNED #75: The Value of an Early, Complete Risk Analysis

A ship owner contracted with a vendor of ballast water treatment systems for supply and installation of one such system. The selected system uses seawater as part of the 'catalyst' of the system. As the installation was being completed, the ship owner's team realized that seawater would not be available when the ship routinely made calls upriver to inland ports. At the last minute, a cargo tank had to be converted to a seawater tank, so that seawater would be available even when at fresh water ports. This reduced the vessel's cargo capacity by three percent—a costly but unforeseen impact.

The lesson learned: Although the sales staff of vendors often describe the installation of their supplied equipment as a simple exercise, that focus is not a substitute for complete analysis of the impact on all the ship's systems and its functional capabilities. A comprehensive project planning meeting with the participation of many different professional interests is a necessary part of any project's risk analysis that should be completed prior to making commitments.



On-Site Contract Management Training Course

Enhancing Professional Management Capabilities for Shipyard Projects

Our very well-attended training course, *Contract Management for Ship Construction, Repair and Design*, is designed to enhance the professional project management skills of personnel involved in shipyard projects. The invaluable information, not readily available in any other single syllabus, will enable participants to measurably increased cost benefits by enhancing the professional management capabilities of ship owners, shipyard personnel, consultants, regulatory experts, contractors and subcontractors alike. More specifically, port engineers, project managers, project planners, project engineers, production managers, estimators, senior purchasers, and senior inspectors will benefit the most.

Based on lessons we have learned from a multitude of situations affecting shipyard projects, this program provides attendees an in-depth understanding and assessment of the most beneficial approaches of managing, controlling, developing and/or using the language of the contract. Our 5500+ “graduates” have employed their newly honed skills to avoid the pitfalls of ship construction, repair and design.

Improved contract management skills result in the ability to identify potential issues before the fact that may not be readily obvious—i.e. problems and misinterpreted clauses in contracts and agreements. With knowledge beforehand, course participants will be better prepared to identify “hidden” costs and changes, and properly assign responsibility for them. Having this addressed properly,

should a situation arise, shipyards will be in a better position to recover additional costs.

Trevor Blakeley, the CEO of the Royal Institution of Naval Architects, has introduced the course as follows. “We have all heard of disasters involving ships, ships that have run aground, broken in half in severe storms, impacted vehicular bridges in fog, or even experienced fires. But there is another form of disaster involving ships; namely, contractual disasters, situations in which the shipyard and shipowner are both terribly harmed due to mismanagement of the shipbuilding contract. This course is fundamental to avoiding such contractual disasters.”

The program is accredited by both the Royal Institution of Naval Architects and the Society of Naval Architects and Marine Engineers.

Contract Management for Ship Construction, Repair and Design can be presented at your organization’s facility. Choose between three full days or four partial days. If you have 10 or more employees who deal with shipyard projects, you will benefit greatly from in-house training. We have already presented this program on-site 260 times to over 150 organizations in 21 countries. Over 5,500 persons from 24 countries have benefitted from this course.

A description of the course is available at <http://www.fisher-maritime.com/projecttraining/cm.html>. For detailed cost and schedule information, email: register@fisher-maritime.com.

Special Note: Why is it “better”?

Often during development of a part of the contract specifications or drawings by one person, another person in the same organization suggests an alternate detail or alternate process because the alternate is “better”. Taking that advice without inquiry creates risk. The inquiry should focus on the criterion that is being used to make the judgment that the offered detail or process is better. Is the basis of “better” due to one of these considerations: weight, size, noise, cost, power requirements, maintenance requirements, ease of construction, duration, ease of integration, ease of maintenance, earlier availability, easier access, or use of local suppliers/subcontractors? The initially-conceived element of design or specification may have been selected based on a different criterion than that behind the new suggestion. Thus, before finalizing that decision about design or specification, a determination has to be made as to which criterion is more important to the success of the project.



Important Lessons Learned *(more)*

LESSON LEARNED #76: Inadequate Performance Requirements and Trial Conditions

A particular nation's navy sought to acquire a new auxiliary vessel that could fulfill a variety of performance requirements. One of the major requirements was for the vessel to be able to transfer vehicles (personnel carriers, ambulances, police) from the vessel to landing craft, thereby allowing the landing craft to bring the vehicles ashore. The contract specifications required that such vehicle transfers could be accomplished when the ship was in the presence of "Beaufort Sea State 4" conditions, and further, the Contractor had to demonstrate that the vehicle transfers could be accomplished in those conditions.

The contract's technical specifications did not define the means by which the ability to transfer vehicles was to be demonstrated. Citing the difficulty in planning trials exactly when Sea State 4 conditions would exist within a reasonable location, the shipbuilder asserted that the contractual responsibility could be demonstrated by a computer simulation. This was the source of one of the several disputes that arose.

Another source of dispute was the definition of the sea's conditions, inasmuch as Beaufort Sea State 4 is, by today's standards, very loosely defined. "Moderate Breeze; Small Waves 1-4 ft. becoming longer; Numerous whitecaps; Wind Speed 11-16 knots; Wave Height 4 ft." Did that mean the maximum observed height was to be four feet, or was the mathematically defined "significant wave height" to be four feet?

The most significant omission, however, was a definition of the average wave length at which the vehicle transfers could be made. An existing ship of the same hull form was found to be fairly stable in pitching, which would allow the vehicle transfers. That vessel operated in a short-crested sea. This naval vessel was intended to operate in an area of long ocean swells and long-crested seas. During trials it was found that pitching motions in those ocean conditions would prevent vehicle transfers except in nearly-calm conditions.

The vessel is essentially unable to meet that particular performance requirement—vehicle transfers at sea—although it was perhaps the single most important reason for acquisition of the ship.

The Lesson Learned: All physical factors potentially affecting the ship during tests and trials have to be considered and concisely defined in the contract specifications. In the absence of such definitions, there will be disputes as to how the contractor is to demonstrate that the performance requirements have been achieved. Also, the durations of such tests and trials have to be defined to avoid comparable disputes.

Another Lesson Learned: That particular navy had not purchased a new vessel for many years. No members of the team that developed the contract specifications and vessel performance requirements had relevant experience in dealing with a mature, sophisticated builder of military vessels, and thus did not appreciate the importance of defining these criteria with much greater specificity. The loss of that vessel's intended mission capabilities created multi-year impacts on the navy's budget and performance. Accordingly, it is recommended that draft specifications, naval or commercial, be given a Quality Assurance Review by Fisher Maritime's highly-experienced team (email@fishermaritime.com), or some well-qualified team that understands the many sources of risks associated with new ship construction or major conversion.

LESSON LEARNED #77: "We know where it is" Hastened Work Creates Risks

While a vessel was on drydock, classification required that a previously weeping crack on the shell plating be gouged and welded. The owner's representative said that the weeping was from lube oil that had already been pumped out of the tank inside the shell, and the tank had been cleaned. The tank boundary was not marked on the exterior shell plating. Pressured to save time on drydock, the shipyard relied on the owner's information and commenced the work. A major fire of many hours duration ensued, almost in the form of a flame thrower, due to the fact that the weeping crack was on a fuel tank that still had significant fuel in it. Clearly, the owner's representation as to tank boundary location was wrong. Fortunately, there were no personal injuries.



The lesson learned: Mistakes get made when actions are taken in response to pressure to save time. Persons managing the processes that are being hastened have to proceed deliberately, assessing the risks of ignoring normal procedures. Sometimes this appears to interfere with the good business relationship between the parties. Nevertheless, before any hastened activities are commenced, take the same safety procedures that would be taken if the work was not being hastened.

upright & afloat



a newsletter for
the Maritime Industry
Late-2018



FISHER MARITIME

Consulting Group

Consulting Naval Architects and
Marine Engineers, Project Managers

PRSRT STD
U.S. Postage
PAID
Permit No. 59
Louisville, KY

147 Columbia Turnpike, Suite 203
Florham Park, New Jersey 07932 U.S.A.

Address Service Requested

The Management of Shipyard Projects

Any project at a shipyard is certain to involve a complex relationship between the Owner's and Yard's organizations, as well as multiple supporting organizations. Cost controls, schedule impacts, changes, unexpected conditions aboard the vessel, engineering problems, and supplier delays, among many other factors, create a very challenging situation for all parties. To obtain more insights into the management of these many types of problems, consider reading the on-line articles and papers that are available at the Publications section of the Fisher Maritime website: www.fishermaritime.com

2019 Essential Management Training Programs

260 In-House Presentations & 196 Open Registration Programs Already Completed



FISHER MARITIME has been offering these popular training programs since 1988, scheduled for open-registration in 2019 on the dates and locations shown below. Outlines of the programs can be viewed on our website, www.fishermaritime.com, or you may call to request a detailed brochure via fax or mail. Each of the programs can be presented on-site at your organization's facility for seven or more persons at less

cost than sending your staff to an open-registration presentation. Over 150 organizations in 21 countries have had these programs presented on an in-house basis 260 times over the past 29 years. To receive details for arranging an on-site presentation of any of the programs listed below, contact us: tel. 800 732 3476 or +1 973 660 1116, fax +1 973-660-1144; or email to: register@fishermaritime.com. Program Details can be seen at: www.fishermaritime.com/projecttraining/projecttraining.html

Contract and Change Management for Ship Construction, Repair and Design. This 3-day course is designed for all members of the contract management team for ship owners, shipyards, design firms, vendors, subcontractors, regulatory agencies, whether commercial or government. Senior and middle management of all those types of organizations benefit from the

"lessons learned" approach to managing all contractual commitments.

London, UK	Wed.-Fri.	Apr. 3-5, 2019
Seattle, WA, USA	Tues.-Thurs.	May 21-23, 2019
Boston, MA, USA	Tues.-Thurs.	June 11-13, 2019
London, UK	Wed.-Fri.	Oct. 23-25, 2019

The Port Engineer's and Owner's Representative's Course. This 3-day course is designed for shipowner's personnel who prepare specifications, who accompany the ship to the shipyard, and who arrange for new/growth/change work during contract performance. This course helps assure getting maximum value for money spent. Presented in-house only. Contact Fisher Maritime for details: register@fishermaritime.com. Use above link for course descriptions.

Shipyard Management of the Customer and Contract. This 2-day course for project managers, production supervisors, estimators and planners is the only training program specifically developed for mid-level managers of shipyards and subcontractors. Presented in-house only. Contact Fisher Maritime for details: register@fishermaritime.com. Use above link for course descriptions.