Late 2012

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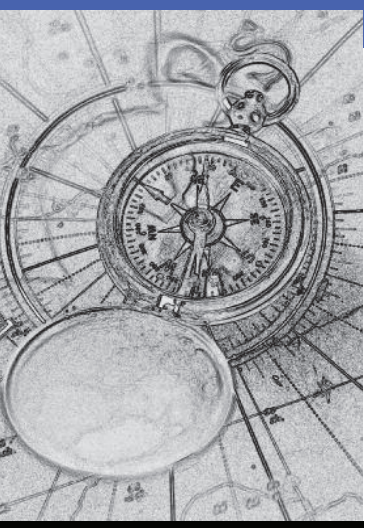
Good Shipbuilding Practice ("GSP")

The Creation of Obligations for Both Parties



Many contracts for projects being executed in a shipyard include the requirement that all engineering services provided, all materials supplied and all workmanship accomplished are consistent with "Good Shipbuilding Practice" or "First Class Marine Practice" or similar lofty-sounding principles. Owner's representatives often use that contractual requirement as a basis for pushing the shipyard to enhance the quality of workmanship, to modify initially-offered design details, or to purchase alternative (i.e., more costly) items of equipment or material. Having analyzed numerous contract disputes over the past 36 years, it has become obvious that many Shipowner's representatives consider that obligation to be one-sided; that is, they perceive that it creates obligations for the Contractor but not for the Owner. That one-sided perception is, in fact, quite erroneous, and often is the underlying cause of disputes that arise during contract execution.

In order to appreciate the extent to which both parties to a contract are bound by the tenets of Good Shipbuilding Practice, a clear understanding of that principle is necessary. As seen below, this analysis is entirely consistent with published treatises on the subject. The several major elements of Good Shipbuilding Practice are these:

- Purchaser's pre-bid development of a comprehensive and internally consistent definition of the ship and bid package, including a clear definition as to where the Owner's design definition rights end and the Contractor's obligation to detail the design for production begins.
- Contractor's quantitative translation of the bid package into a bid sufficient to accomplish necessary engineering, purchasing, production and testing as unambiguously defined by the bid package.
- Purchaser's timely approvals of drawings and

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LESSON LEARNED #50: Post-Work Assessments Do Not Replace Pre-Work Procedures

A builder of small craft undertook the construction of its first aluminum vessel. Although its welders were qualified for aluminum work, they were not familiar with the shrinkages and distortions that result from welding this material, which consequences are far more pronounced than in steel welding. The builder had well-laid-out plans for post-welding alignment checks of the subassemblies, but did not provide its staff with any pre-welding alignment procedures. The consequence was the necessity of considerable re-work of the structural assemblies, leading to significant cost and schedule impacts.

The lesson learned: Builders have to remain keenly aware that post-work confirmation procedures are not a substitute for pre-work provision of appropriate procedures; both are needed, especially when the materials and/or types of components are new to the production departments.

A newsletter for the Maritime Industries from:

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equipment selections made by Contractor (if required by the contract) and timely inspections based on the contractually-defined standards of acceptability.

- Joint identification and cooperative resolution of problems arising from vendors, suppliers, errors, omissions and inconsistencies.
- Contractor's fulfillment of all contractually required objectives, consistent with the identified, well-defined standards.
- Purchaser's acceptance of the vessel or its modifications as contractually defined (not as wished-for by its representatives).

In multiple instances, Owner's representatives have made demands of Contractors under the implicit admonition that the Contractor had to fulfill those demands in order to comply with the Contractor's obligation to use Good Shipbuilding Practice. Often, compliance with those demands has resulted in the Contractor incurring extra costs and/or schedule impacts that the Contractor claimed to be the responsibility of the Owner. Concurrently, however, the Owner's team has ignored its own obligations under the requirements of Good Shipbuilding Practice ("GSP").

In order to appreciate why the costs and schedule impacts of fulfilling the Owner's GSP-based demands are legitimate extras to the contract, the relevant industry custom and practice is reviewed by reference to the marine industry's primary text on ship design and construction, "Ship Design and Construction", published by the Society of Naval Architects and Marine Engineers (Jersey City, New Jersey, USA, September 2003).

The use of GSP is a procedural goal of nearly every shipbuilding contract. Since its use is one of the goals of shipbuilding contracts that are executed by two parties—the Purchaser and the Contractor—it is appreciated that both parties have expectations of benefits arising from its use. Also, however, when the elements of GSP are examined, it is realized that the development of GSP is dependent on a contribution by both parties through achievement or fulfillment of their respective obligations and responsibilities. That is, the achievement of GSP is not solely the responsibility of only one of the parties. This fundamental premise is stated in "Ship Design and Construction" at § 9.1.6, *Purpose of Shipbuilding Contracts*.

> *A shipyard and a shipowner enter into a contract for mutually-beneficial reasons; namely, the shipowner wishes to acquire a ship which is suitable for the shipowner's needs, and the shipyard wishes to construct, for payment, a ship within its shipbuilding capabilities in order to earn a return on its investment in shipbuilding facilities…More formally, the purpose of a shipbuilding contract is to define the entirety of the temporary relationship between the Contractor and the Purchaser. Essentially, the contract in its entirety establishes the rights, responsibilities, rules of conduct and assignment of risks between the two parties pertaining to all foreseeable technical, cost and schedule matters, questions or disputes that may arise between the parties.*

Accordingly, it can be appreciated that GSP begins during the formation of the shipbuilding contract. It starts with the Purchaser developing a well-defined objective of the shipbuilding process, through the use of specifications and plans if it is not a standard design vessel offered by the shipbuilder. Typically, not all details of the vessel that have to be developed for its construction are described by either design or performance specifications and drawings at the time of contract formation; those details have to be developed after the contract is executed. During contract formation the Purchaser has the opportunity to decide which party will be responsible to develop those details. Then, after contract execution, both parties must keep in mind the assignment of rights and responsibilities regarding the development of those details. Again, as described in "Ship Design and Construction" at § 9.3.2, *Non-Included Features*:

> *The Contract Specifications and Contract Plans define the unique features of the vessel and other non-unique features that are not already addressed by the appropriate regulatory requirements and classification rules. …[N]umerous details which are not already defined in the Contract Specifications*

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About the 'Lessons Learned': The brief synopses of lessons learned included in this issue are adapted from analyses presented by participants in the regularly offered training course "Contract Management for Ship Construction, Repair and Design." (Please see back page for list of 2013 training programs.) Lessons Learned numbers 1 – 33 are based on some of Fisher Maritime's project management assignments, and can be found at: http://www.fishermaritime.com/Publications/PDF/FisherProjectInsights.pdf. Other lessons learned (34 - 49) are found in the Fall 2010, Summer 2011, Late 2011, and Summer 2012 editions of *Upright and Afloat* in the Publications section of our website: www.fishermaritime.com.

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and Contract Plans will have to be developed by the Contractor after the contract is executed. … [T]he authority to make those additional decisions as to the form of the numerous details was passed from the Purchaser to the Contractor. The Purchaser's naval architects and marine engineers who are developing the Contract Specifications and Contract Plans must keep in mind that they will have yielded to the Contractor the right to make those decisions. Thus, if the exact form of any lesser details is important to the Purchaser, the Contract Specifications and Contract Plans should describe them to an appropriate level of detail. If such details are not already incorporated into the Contract Specifications and Contract Plans, generally the Purchaser will have to accept the Contractor's solution to those details. The Purchaser's staff should bear in mind that it is most likely the Contractor will be seeking minimum-cost solutions to those technical details when working under a fixed-price contract.

Thus, it is realized that the Purchaser has to decide in advance what features and details are to be defined and described by the contract documents, giving the Contractor little room for variation from them, and which features and details can be determined by the Contractor. Once the contract is executed, the Purchaser cannot unilaterally revoke the authority given the Contractor to make decisions regarding those otherwise ill-defined features and details.

Also, of course, when making those decisions, the Purchaser has keep in mind that, under fixed-price contracts, the Contractor will inevitably seek minimum-cost solutions that are otherwise consistent with the contractual requirements. This means that in developing a fixed-price bid for the vessel, the content of the Purchaser-developed specifications and plans have to be amenable to being quantitatively translated into the expected cost components that the successful bidder will encounter. This has also been addressed in "Ship Design and Construction" at § 9.3.6, *Defining the Complete Scope of Work:*

A Purchaser should not rely on requirements such as first class marine practice or best marine practice or other ill-defined phrases in order to ensure quality of material selection or quality of workmanship. Highly subjective requirements, phrased as those, are not conducive to quantitative estimating, and thus cannot be included in the price of the shipbuilding contract.

It should be remembered that, in soliciting bids or requesting pricing from a potential Contractor, the Purchaser is seeking quantities; quantities of production hours, material costs, subcontractor costs, facility and equipment costs, and schedule days. Accordingly, all aspects of the Contract Specifications and Contract Plans must be suitable for translation into such quantities. Broad concepts … are not directly translatable into quantification prior to accomplishment of most of the remaining design development, and thus do not constitute well-defined specifications.

Accordingly, it is appreciated that for the fixed price and fixed schedule of the contract, the Purchaser is entitled to receive only that which was quantitatively translatable from the specifications and plans. When the specifications require the Contractor to comply with certain standards or incorporate features required by contractually identified standards or regulations, the Contractor has to factor in the costs to achieve compliance with those contractual requirements, as well. But for the fixed price and fixed schedule, the Purchaser is not entitled to receive the benefits of features, standards, methods or performance capabilities that are not unambiguously defined in the contract documents.

Nevertheless, in numerous contractual situations the Contractor has been directed by the Owner's representatives to provide features that were not quantitatively knowable at the time of bidding. Also, Contractors are often directed to utilize the Owner's more-expensive interpretations of contractual requirements than the lesser-cost solutions that the Contractor incorporated into its bid for items that were ambiguously defined in the bid package.

In summary, the accomplishment of Good Shipbuilding Practice creates responsibilities for both the Owner and the Contractor. Implementation of GSP starts before the contract is executed, when the Owner's team commences defining the technical requirements of the ship being constructed, converted or repaired. The Owner's team's GSP-based obligations continue through the contract execution, requiring the Owner to respond promptly to questions, to resolving ambiguities, and to recognizing that the contract establishes both obligations and rights of both parties.

Although these Owner GSP-based obligations do not serve to reduce the Contractor's GSP-based obligations, the Owner's representatives have to remain mindful that the persons who prepared the technical requirements for the Owner ceded certain detail design development rights and equipment selection rights to the Contractor, for which minimum-cost solutions are an expectable goal of the Contractor. The costs and/or schedule impacts of such Owner-directed variations from those Contractor-selected solutions are a proper basis for contractual modification.▲

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a newsletter for the Maritime Industry
Late, 2012

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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

2013 Essential Management Training Programs

193 In-House Presentations & 159 Open Registration Programs Already Completed

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Program Details can be seen at:
www.fishermaritime.com/Project_Training/projecttraining.html

C&CM: 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.

Houston, TX, USA	Tues.-Thurs.	April 2 - 4, 2013
Aberdeen, Scotland, UK	Wed. – Fri.	May 29 - 31, 2013
Seattle, WA	Tues.-Thurs.	June 11 - 13, 2013
London, UK	Tues.-Thurs	Sept. 10 - 12 2013
Boston, MA, USA	Tues.-Thurs.	Oct. 15 - 17, 2012

TPEC: 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.

Philadelphia, PA, USA	Tues.-Thurs.	May 7 - 9, 2013
Tampa, FL, USA	Tues.-Thurs.	Nov. 12 - 14, 2013

SMCC: 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.