

# MODERN CONTRACTS FOR MODERN YACHTS

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Dr. Kenneth W. Fisher, FRINA, Fisher Maritime Consulting Group, USA

## SUMMARY

The expectations arising from relationships between designers, purchasers and builders within the modern yacht industry are significantly different from the comparable issues several decades ago. These differences often arise in (a) the owner's participation in continued detailed design development after the contract has been executed, (b) the expectations of the owners regarding comfort, amenities, interior finishing, vessel speed, and use of the latest technologies, and (c) the extent and value of owner-provided equipment and services that are incorporated into modern yachts. Such greater owner participation and expectations result in a greater array of risks that the contractor shipyard faces. In order to limit and contain those newer forms of risks, as well as to be more meaningful to the projects, a modernised form of contract may be appropriate. This paper identifies and addresses several emerging forms of risk and discusses how yacht construction contracts might address those risks.

## 1. INTRODUCTION

The motivation and interest central to the procurement of modern yachts inevitably focuses on the technological, aesthetic, comfort, seakeeping, amenities and user-friendly aspects of the craft that were not available or present in former yachts. However, another "modern" aspect of yachts is the significantly greater, active role taken by owners after the contract is signed, relative to the more passive role taken in prior years. Unless the contract appropriately incorporates the anticipated increased post-contract actions of the owner, both parties will be disappointed in the outcome resulting from the post-contract role taken by the owner. The incorporation of such matters into the contract is what differentiates a modern yacht contract from older yacht contracts.

Persons purchasing large, modern yachts nearly always have had other yachts, from which they learned what new, different and more modern features they would like on their next yacht, which is also often larger and more complex, as well. This is altogether understandable, since the yachts they are purchasing are not necessities, but

are luxuries. The ability to afford such large, modern yachts, however, is not automatically coupled with the desire to spend money recklessly. Yet, from numerous experiences, we have observed that the tremendous efforts that are expended to obtain the latest technological developments, to include the best luxury design elements, and to utilize only the best of the available equipment are, unfortunately, not matched by an equal effort in the development of a suitable contract. The failure of the contract to clearly match and address the expectations and responsibilities of each party inevitably leads to delays, cost overruns and disappointments.

The contract for construction of a modern yacht defines the division of responsibilities that each of the contracting parties have which, when all those responsibilities have been fulfilled, will lead to the timely delivery of the yacht just as it was envisioned by the owner. The contract includes not only the specifications and plans, but also includes the terms, conditions, definitions and standards that will control the construction of the yacht. In theory, once the contract is signed, there should be smooth sailing with minimal waves along the track to contractual fulfillment, leading to timely delivery of the yacht that meets, with few changes, the initial specifications and design.

Unfortunately, there have been a number of occasions when the track to the delivery of the yacht has been through stormy, if not hostile, waters, leading to delays, costly overruns, and reluctantly accepted but reduced expectations of the features and technology incorporated into the craft.

Nearly all of those delays, cost overruns and disappointments can be traced to one of two common problems: (1) the use of an inappropriate contract for a professionally-constructed yacht, or (2) the lack of fulfillment of contractual obligations that each party did not realize it was taking on due to ambiguities and gaps in the contract documents. This paper discusses and describes several contract clauses which, if properly used in the contracts for the construction and delivery of modern yachts, will go far to avoiding the most commonly encountered contractual problems which arise in modern yacht construction. The topics of the clauses discussed and described include these:

- Allowances for Interior Finishing
- Weight Control and Effects on Trial Speed
- On-Site Installations by Owner's Vendors
- Equipment Testing and Commissioning by Owner's Vendors
- Insuring Owner Furnished Materials Before Vessel Delivery
- As-Fitted Drawings
- Certifications and Documentation
- Repair of Damage During Construction
- Abandonment without a Constructive Total Loss
- New Technologies and Materials

There are many other potential topics that could be discussed pertaining the contracts which are suitable for the procurement of modern, high value yachts. For a more complete discussion of the formation of shipbuilding contracts in general, not limited to the special areas of modern yachts, the

reader's attention is directed to Reference [1], *Shipbuilding Contracts and Specifications*. The topics discussed in this paper, however, have been selected due to the relative frequency with which they have been central to disputes between yacht-building Contractors and Owners. The author has seen these disputes and helped resolve them, among many others, while serving as an arbitrator, mediator or expert witness. Accordingly, the discussion of each topic essentially is a lesson-learned approach, not a theoretical approach, to the subject.

If a contract fails to adequately address all the obligations and risks that are inherent in a project, the contracting parties essentially are hoping that some of those unaddressed risks do not eventuate, and are implicitly assuming that the other party will fulfill the intended-but-not-defined responsibilities. It is not suggested that this above list includes all the topics of contractual distress that have been encountered in the construction and delivery of large yachts. Other organizations and individuals in the industry have had different experiences that indicate the need for a more-relevant contract in other areas, as well. Nevertheless, by calling attention to the several areas of problems that are addressed in this paper, readers will become more sensitive to the need to ensure that the contract under which a modern yacht is being constructed must fully address the obligations and risks that each party must cope with during the project. This is necessary to ensure that there is only a minimal possibility of disappointment and insufficient fulfillment of contractual obligations.

## 2. ALLOWANCES FOR INTERIOR FINISHING

In many instances, the intention of the contracting parties is to provide for the Owner to appoint a specialist to design several of the interior spaces (within the compartment boundaries that are established by the contract plans) and select the materials and finishes for those spaces. Often this detailed design responsibility involves the finishes to the bulkheads, overheads, portlight treatments, built-in cabinetry and flooring, as well as the selection of the

furniture and lighting fixtures. Many contracts assign to the Contractor the duty to install the finishing materials and the selected lighting and furniture, as well as to procure some or all of it per the specifications and selections that are provided by the Owner's interior specialist. In order to budget for the Contractor's efforts to procure and install those materials selected by the Owner's interior specialist, a contract might include an allowance clause akin to, "Allow £xx,000 for finishing the Master Stateroom." Thus the troubles have begun, because each party has a clear idea of what that requirement means, but the interpretation by each is inconsistent with the other party's interpretation.

The Owner typically believes that the allowance will be sufficient for the procurement of the materials as well as the installation of them, under the direction of the Owner's interior specialist. The basis of the Owner's interpretation is that he wants to have a budget for all the materials being procured and workmanship of installation being achieved by the Contractor. The use of an allowance serves to give meaning to the concept of such a budget, according to the Owner.

From a Contractor's perspective, this is already short-sighted if any of the equipment being provided has to be integrated into the Contractor's work of supporting systems, examples of which are hydra-massage towers in the master shower, and television and audio systems that simultaneously serve several compartments.

Moreover, in contrast to that Owner's interpretation, the Contractor typically believes that the allowance is for materials only, and that all labor for installation will be additional on an hourly basis. Without knowing what the materials, furniture and lighting will be, the Contractor's perspective is that he cannot reasonably estimate the man-hours that will be needed for the installation of those undefined materials. The Contractor does not know, for example, how many individual lighting fixtures will have to be installed. Thus, the Contractor interprets the allowance as being for materials only, and expects that the Owner understands that the labor for installation will be extra. Hence,

a dispute over the cost for the labor of installation ensues. Further compounding this problem is that of schedule; the selection of materials, furniture and lighting to be procured, and/or the earliest delivery date for them, is often far later than the Contractor anticipated when he committed to a certain Delivery Date for the completed yacht.

The avoidance of such disputes over the cost of labor for installation and any delays in receipt of the materials specified by the Owner's interior specialist after the contract was executed by the parties is through proper contract language, additional to the otherwise brief allowance such as "Allow £xx,000 for finishing the Master Stateroom." An example of such language is given below. (The reference to the weights of the Owner-provided or Owner-Specified items is addressed in the next section, dealing with weight control.)

*"The Contract Price includes an allowance of £xx,000 for the procurement of materials, furnishings and outfitting of the Master Stateroom, and includes an allowance of zzz labor hours for the installation thereof, commencing after receipt of the materials, furnishings and outfitting.*

*Contractor shall keep detailed records as to the labor for such installation, and on a weekly basis, advise Owner's Representative of the accumulated totals. If additional labor hours are required for such installation, they shall be achieved on a time card basis at the hourly rate for growth work indicated elsewhere in this Agreement and/or Specifications. The time cards for all installation labor, whether included within or beyond the allowance, shall be submitted to Owner's Representative weekly for review. Owner acknowledges that the timeliness of delivery of the materials, furnishings and outfitting for installation in the Master Stateroom is an essential element of Contractor's pricing, and agrees that all such items must arrive at Contractor's facility*

*within WW weeks after contract execution. If the materials do not arrive within that allowed time, contractor shall be allowed an extension of the vessel's Delivery Date at the rate of £ddd per day payable to Contractor, which extension shall be at least one-half the number of business days that the materials are late in arriving at Contractors' facility, but may be a greater extension if Contractor reasonably demonstrates the materials were essential for the timely completion of the vessel. If the installed weight of these items exceeds KK kilograms, the consequences of such excess weight is addressed in the Weight Control section of these contract documents."*

Among other features of this suggested allowance clause is that the Owner is purchasing the majority, if not all, the labor for installation at the competitively bid rate used for basic work in the contract, not at the higher hourly rate attendant to growth work. Also, this suggested allowance clause clearly gives the Owner incentive to ensure the timely actions of his appointed interior specialist to select the items that are to be purchased and/or delivered to the Contractor's facility. That is, the interior specialist must complete his decision-making in time to allow for the timely delivery of those items his specifies; otherwise there will be an automatic delay in vessel delivery as well as extra compensation to the Contractor for having to manage a prolonged construction.

### **3. WEIGHT CONTROL AND EFFECTS ON TRIAL SPEED**

There often are instances of yachts not achieving their intended trial speed, resulting in both the Owner and Contractor ascribing that failure to the other party. From the outset, it has to be appreciated that prediction of speed is not an exact science, but is instead the result of a series of calculations based on assumptions and feedback from prior actual measurements for comparable hull forms. Thus, risks regarding speed targets will be greatest when there are variations from prior hull forms,

and variations from prior sets and arrangements of hull appendages. This is often a cause of disappointment in vessel speed.

These fundamental risks can and should be addressed in the contract by including allowance for a variance of actual results from the target speed. For example, the Contract Specifications can state a target trial speed, but allow for a variance of, say, two percent variance from that target with neither penalty if below, nor bonus if above the target speed. Accelerating penalties can be imposed for greater variance below the target, and a cut-off point can be specified below which the Owner does not have to accept the vessel, with all progress payments being returnable if the Owner declines to accept the vessel if the trial speed is below that lower limit. If the vessel achieves greater than the target speed, a bonus can be provided if the speed is more than, say, two percent above the target, with a maximum bonus being specified to ensure the Contractor does not mislead the Owner just to earn a disproportionate speed bonus.

Another cause of disappointing trial speeds is the growth of the displacement of the yacht in a standard condition. Contract Specifications often state that the yacht shall achieve the expected trial speed when the vessel has aboard certain amounts of fuel, consumables and other variable loads. This is a recipe for a dispute because it does not address the situation that will determine the outcome of the speed trial. Namely, it is not the variable loads alone that will affect the trial speed. The yacht's displacement is the determinant, regardless of the relative proportions of lightship weight and variable loads. Thus, the expected or target trial speed should be predicated on total displacement, not just variable load.

From an Owner's perspective, the Contractor is constructing a yacht which is supposed to achieve the target speed. After contract execution, the Owner and his supporting interior specialists continue to add features to the vessel which, in the end, will add to the lightship weight, and hence to the displacement. But unless the Owner has been advised to the contrary, he believes the

additional weights of those appointments are of no consequence, since they are only a few kilos here, a few kilos there, which in his estimation are nothing compared to the vessel's total displacement, and certainly are within any margin allowances under the Contractor's control.

Naval architects know all too well, however, that particularly for high speed yachts, weight control is crucial to achievement of target speed. Thus, there is a burden on the Contractor to advise the Owner, in advance of any purchasing decisions by the Owner or his interior specialists, of the potential effects of excess weights. For example, an owner required an enlarged topside swimming pool, and was later surprised that the enlargement reduced maximum speed by a significant amount. When negotiating the cost and schedule impact of incorporating a larger swimming pool, nothing was said by the Contractor about impact on speed. The Owner later stated that he thought the consequence of such additional weights were within the speed and weight margins of the original design because the Contractor said nothing about a speed impact of the enlarged pool.

In order to avoid these forms of dispute, target weights of materials that are identified after contract execution through Owner purchases, selection or direction, have to be established at the outset of the contract. The approximate the speed impact of exceeding those weights can and should be identified in advance, so that the Owner, his appointed interior specialists and his Representative understand the consequence of exceeding those target weights. Because such materials may be installed at locations affecting the longitudinal center of gravity of the vessel, which is also a significant consideration in high speed craft, weight targets should be given for each appropriate space, not just for the total of all such weights being installed in the yacht.

Thus, the Contractor has to maintain a weight control spreadsheet, including LCG, VCG and TCG, starting with estimated weights, and constantly updating it with actual weights once materials and equipment are selected. Then, when the Owner is

considering a change or addition, the Contractor will promptly be able to advise of the approximate speed impact of that decision. The Change Order<sup>1</sup> to incorporate those features, or the notification that selected materials exceed their target weights, should include a corresponding contract amendment to the target speed, as well as to the lightship weight, cost and schedule of the vessel. Further, the Changes clause of the Contract should remind the parties of this matter by requiring that each Change Order address workscope, cost impact, schedule impact, weight impact and speed impact of the Change.

In addition to the reduced speed that will result from the additional weights, an Owner may incur further disappointments as to vessel handling and seakeeping which have been adversely affected by those weight increases. Related to the vessel handling and seakeeping impacts that arise from additional weight, yacht owners may expect that the inclusion of fin stabilizers will keep the yacht rock-steady while underway, which may not be the case, especially if the additional weights are high in the vessel. The naval architect and the Contractor may wish to consider correcting any such mis-impressions the owner harbors prior to contract execution, and to point out from the outset that additional weights likely will adversely affect the boat's hydrodynamic, motion and stability characteristics.

#### 4. ONS-SITE INSTALLATIONS BY OWNER'S VENDORS

In view of the significant customization of modern yachts, it is reasonable to expect that the installation of materials and items of outfitting specially selected by the Owner may require a matching expertise for the installation of those materials and items. Accordingly, Owner's vendors, as distinct from Contractor or subcontractor personnel, may be responsible for the installation of those materials and items. Problems in communications, access to spaces, availability of support services and other

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<sup>1</sup> Change Order is also known, variously, as Contract Amendment, Arising, Emergent Work, New Work, or Growth Work, among other possibilities.

issues commonly arise from this imposition into the Contractor's routine of personnel that the Contractor does not directly control. In order to avoid such problems, or at least minimize the likelihood and/or extent of them, the Contract has to address them by defining the rules of conduct of all the involved parties. Such a set of rules has to define, among other matters, the conditions under which the Owner can and cannot exercise his right to use vendors and other services at the shipyard.

For these situations, there are three or four parties involved: the Contractor, possibly a subcontractor, the Owner, and the vendor. In the theory of traditional contracts, the subcontractor reports only to the Contractor but does not communicate directly with the vendor or Owner. Similarly, in theory, the vendor reports only to the Owner, but does not communicate directly with the Contractor or subcontractor. Practically, such barriers to communication are often counterproductive resulting in extra costs and possibly delays and other adverse consequences. Accordingly, the need for open lines of communication has to be acknowledged, but the responsibilities for utilizing those means of communications also need to be addressed.

Often the vendor brings in the materials that he is going to install. Thus the Contract must address the necessity of having the vendor participate in timely providing the Contractor with data for the weights and centers of the materials the vendor is installing. If lighting and/or electrical equipment is being vendor-provided, those electrical loads need to be incorporated into the Contractor's electrical load and fault current analyses. Similarly, heat loads generated by any vendor provided equipment may have to be factored into the HVAC calculations.

The scheduling of the availability of spaces for access by the vendor needs to be coordinated between the Contractor, any subcontractors in that same space, and the vendor who also needs access to that space. In addition, the storage and handling of vendors' materials must be coordinated. Lead times advising when such vendor

access will be possible need to be defined to avoid having the vendor arrive on scene but be denied access to the space due to delays incurred by other parties. Support services that will be needed by the vendor have to be defined as well, so the cost of providing them can be included in the basic contract price, and not become a surprise addition to the contract price later on.

In addition to those forms of communication, there are technical aspects to be considered in preparation for the arrival of the vendors. The expected condition of the space that will become available for the vendor, including the status of each bulkhead, deck and overhead, has to be defined in advance so the vendor clearly understands what the foundation of his work will be. This also enables the Contractor to include in his pricing and scheduling the preparation of those spaces up to the level of completion that the vendor requires. For example, the contractor has to know in advance how many separate lighting circuits he must provide for use by the vendor in the space. Similarly, the Contractor needs to know what other distributive systems and drains need to be available for that space.

Another example is if resilient decking or bulkhead materials or floating decks and bulkheads are going to be installed, there has to be a clear understanding of the base that is to be provided by the Contractor. A further example is if special hull coatings are going to be vendor applied, including the use of one or more layers of filler, there has to be a clear understanding, expressed in the Specifications, of the level of structural finish, the accuracy of fit-ups and the maximum allowable depressions between frames that are to be achieved by the Contractor. Moreover, to ensure appropriate application of the fillers and coatings, the Specifications could include a requirement that the manufacturer's representative approve in writing the suitability of the surface preparation and environmental conditions prior to application of the next layer of either filler or coating.

## 5. EQUIPMENT TESTING AND COMMISSIONING BY OWNER'S VENDORS

After installation, each item of equipment has to be tested and, if more complex than a simple item, may have to be commissioned to validate its warranty, among other reasons. The parameters that need to be addressed to minimize the likelihood of problems include (a) which party is supervising the testing and commissioning, (b) which party is performing it, (c) the extent of support services and (d) other system functions that have to be on hand, and (e) the required duration of the testing and commissioning.

Whether equipment is Contractor furnished or Owner furnished, it will have to undergo testing and commissioning prior to sea trials. When the equipment is Owner furnished, it may not be clear from the Specifications as to which party has responsibility for the testing and commissioning of it, even if the Contractor is installing it. This can be more confusing if the Owner's vendor is guiding or accomplishing the installation of it.

The period of time necessary to test and commission the equipment may be more than an hour or two, and may require support services as well. The Contractor will have to allow sufficient time in the testing schedule to support the testing of that particular item of equipment. This becomes a greater concern if the testing is being done by or under the guidance of the Owners' vendor.

Having thus identified potential problem areas associated with Owner furnished equipment, it is apparent that the Specifications should address each of those parameters for each major item of Owner furnished equipment. It may be essential for scheduling and pricing purposes for the Contractor to have a clear understanding of all those requirements well in advance of performance, and preferably prior to contract execution.

## 6. INSURING OWNER FURNISHED MATERIALS BEFORE VESSEL DELIVERY

The use of Owner furnished materials in modern, custom yacht construction is quite common. This is often done by the Owner to ensure that the exact materials and items of equipment that are desired are, in fact, utilized, rather than risk having to accept Contractor selected materials and equipment consistent only with generic specifications.

(Considering the risks that may eventuate when large amounts of Owner provided materials are being considered, the motivation to save money by avoiding the shipyard's mark-up should not be the sole basis for deciding to provide such materials. Owner-provided materials can easily lead to problems originating with any of (a) the time of delivery, (b) the form in which they are delivered, (c) the integration of each item into the rest of the vessel, (d) the integration of multiple Owner-provided components of a system, (e) the testing, commissioning and grooming, as well as (f) the warranty. If any of these problems arise in association with Owner-provided materials, the Owner's responsibility for costly delays and/or extra costs will quickly overcome any savings that may have been achieved by avoiding the Contractor's mark-up.)

Regardless of whether the Contractor is going to install those Owner-provided items or the Owner's vendor will be installing them, they have to be insured from the time they arrive at the Contractor's facility until the vessel departs from the facility. The risks that are to be covered range from minor damage during handling, to constructive total loss of the vessel during the later stages of construction.

A further aspect of this may be that the Owner has procured custom materials and items that are not yet installed in a vessel which is totally destroyed by fire while under construction. Even though those materials have not been damaged by the fire, the fire has rendered them valueless as they cannot be fitted to any other vessel. This scenario describes another form of risk that an Owner

may wish to have addressed by an appropriate insurance policy.

The Contractor normally carries a form of insurance known as Builder's Risk coverage. The matter of concern is whether that coverage, purchased by the Contractor, also includes risks for materials not purchased by Contractor, and for any labor of installation that will be achieved by the Owner's vendor. The insurance carrier will provide coverage only for the risks that are defined by the insurance policy. Thus, if an Owner wants the Contractor's Builder's Risk policy to cover Owner furnished materials, whether installed or only delivered, this has to be spelled out in the insurance clause of the Contract. While this is not a difficult concept to understand, it is surprising how often it is overlooked.

Accordingly, the Owner should ensure that the specific risks to be covered that are associated with Owner furnished materials and equipment are concisely spelled out in the Contract. Further, to be certain that the risks have been carried forward by the Contractor to the underwriter, the Owner should require that the certificate of insurance coverage specifically addresses the risks, and that the Owner is entitled to review a copy of the certificate of insurance prior to arrival of the materials at the Contractor's facility.

## 7. AS-FITTED DRAWINGS

As-fitted drawings are a necessary part of the engineering data base needed to maintain and repair a vessel that incorporates complex systems, as do modern yachts. Accordingly, it is the Owner's expectation that such drawings will be made available at about the time of vessel Delivery. Contractors, on the other hand, find that the development of as-fitted drawings is an additional burden on their already-too-busy and limited engineering staff. Accordingly, an unnecessary risk is being taken if the delivery of the as-fitted drawings is only implied by the contract documents. That is, there should be an explicit, unambiguous requirement within the Specifications that the as-fitted drawings are a contract deliverable.

An associated matter that needs to be addressed is when the as-fitted drawings are to be delivered. In some parts of the world, industry custom and practice is to deliver them several months after the vessel has departed the builder's facility. From an Owner's perspective, that may not be appropriate since the drawings may be needed within those first few months during the vessel's shakedown period.

Often there is a need to modify the last set of construction plans to become the as-fitted drawings due to alterations made by the production department to resolve interferences, achieve efficiency of installation, and/or incorporate last-minute Owner directed alterations. Consequently, the requisite modifications of the last set of construction plans require the Contractor's engineering personnel to examine the vessel, mark up those drawings to reflect as-fitted conditions, and then modify the drawings back in the engineering office.

However, if it is the intent of the Owner to take the vessel to a location distant from the builder's facility soon after Delivery, the Contractor's engineers would not be able to conduct an examination of the vessel at that distant location. Thus, to ensure that the modifications to the drawings reflect actual conditions, under that anticipated situation, the contract could require the as-fitted drawings to be completed within a shorter time after vessel Delivery.

## 8. CERTIFICATIONS AND DOCUMENTATION

Recently, a large custom yacht intended for personal use, not for chartering, was being constructed in accordance with the Builder's contract form that the Owner accepted with only minor alteration. As the vessel was nearing completion, the owner learned that the yacht would not fulfill the requirements for chartering under current UK regulations. The Owner believed that the yacht's resale value would be adversely affected by that lack of chartering compliance. The Contract, however, did not explicitly require that the vessel be eligible for such certification. The Contract only required that the vessel would



be designed and completed in accordance with the "highest standards." But since that Contract did not address whether the vessel was to be suitable for chartering, the Builder contended that the highest standards did not include such chartering requirements. The Builder declined to accept a change order to modify the yacht to satisfy those chartering requirements because it would have interfered with the production schedule of the Builder's backlog.

From the Owner's perspective, this was an issue that merited the use of consultants and lawyers at great expense. It would have been more useful, of course, to have used the services of appropriate consultants during contract formation, at lesser expense. (The outcome was that the Owner took delivery of the Vessel without the changes.)

Another Owner contracted for the construction and delivery of a high speed vessel that was, per the Contract, to be a "low wake" vessel. After delivery, the Owner realized that there was no common understanding between himself and the Builder of what constituted a low wake. The lesson learned from that example is that such terms have to be defined by reference to a published standard, or by a definition within the contract documents.

The contractual obligations of the builder are to ensure the vessel is eligible for the certifications and documentation that are identified at the time of contract execution, and that it will achieve the performance as defined within the contract documents. If those requirements are not explicitly stated, a risk is being taken that the Builder's interpretation of "best marine practice" and "highest standards" may not be the same as the Owner's interpretation. A builder's outstanding reputation and prior satisfactory dealings may not be sufficient substitutes for explicit requirements. Acceptance of a contract form proposed by a builder usually does not provide the requisite assurances for an owner. Professional vessel construction consultants and naval architects who are engaged on behalf of the owner are needed to ensure that the owner's requirements are satisfactorily integrated into the contract.

## 9. REPAIR OF DAMAGE DURING CONSTRUCTION

The commission of errors is part and parcel of the process of vessel construction. Errors in workmanship and the selection of materials is not unexpected. The Contractor must, of course, correct the consequence of those errors prior to vessel delivery. Some vessel builders include in their estimates allowance for such rework as a small percentage of the planned labor hours. Under normal circumstances, this does not present a special problem to either the Contractor or the Owner. Occasionally, however, the form of error, the extent of rework, the type of damage, or the impact of corrections become quite noticeable, especially for a high value custom yacht.

The contract for a custom yacht requires that the vessel be new, except for a reasonable and customary extent of repairs that may be necessary due to errors during construction. Of course, the extent of repairs that may be accepted as reasonable and customary for construction of, say, a tugboat may be significantly greater than those that are acceptable for a high value custom yacht.

Contracts have rarely addressed this matter, simply allowing the Contractor to determine the means of accomplishing the repairs and rework that are necessary to create a vessel that is, for all practical purposes, new. However, in the case of very high value custom yachts, this may merit reconsideration. As an example, consider when structural damage to the steel hull was incurred during launching. The contractor was going to crop out and renew certain structural areas and straighten other areas to achieve the corrections. The Owner's representative halted that form or rework, pointing out that with many postage-stamp size inserts and straightened structural members, the vessel would not have the service and fatigue life of new steel. The rework had to be in the form of new, large structural sections with no straightening instead of small sections of renewals and straightened structural members. Similarly, when damage occurs to the high-gloss coatings of high value yachts, it may not be

possible to present a new vessel if small sections of the coating have been repaired, rather than replacing large areas of the coating, including the multi-layer fillers beneath the top coatings.

It may be useful if, during contract formation, the parties discuss what types of repairs the Contractor can and cannot undertake without interaction by the Owner's representative. These may be divided into types of repairs, areas of repairs, extents of repairs, or a combination thereof. Obviously, it will have to be vessel specific, since no general requirement would adequately serve each possible variation of Owner's perceptions of what constitutes a new vessel. For example, regarding only the extent of rework, a contract may require that the Contractor inform the Owner's representative of any errors or damage that likely will exceed a certain number of labor hours for rework, and that the means of correcting the damage has to be agreed upon in advance. Other limits or constraints can address the types of repairs and the areas of repairs.

#### 10. ABANDONMENT WITHOUT A CONSTRUCTIVE TOTAL LOSS

Consider the situation of a high value custom yacht catching fire and experiencing significant damage during the last stages of construction. This brings into focus the question of whether the vessel will be declared a constructive total loss ("CTL"). Constructive total loss is an insurance term pertaining to a significantly damaged vessel. Specifically, if a vessel is declared a CTL it means that the insurance underwriter believes it more expedient to pay off the insured value of the vessel rather than pay for the restoration of the vessel. Thus, absent any contract language to the contrary, the Owner has abdicated to the insurance interests the determination of whether the significantly damaged vessel has to be reconstructed for delivery to the owner, or if it will be abandoned.

From an Owner's perspective, he believes he is entitled to take delivery of a new vessel, not a significantly repaired one. Even if, from an insurance perspective, the vessel is not a constructive total loss due to fire

damage while under construction, the Owner may not wish to be burdened with a vessel that has such an ominous start, and for which the resale value may be seriously compromised due to being, in his opinion, a repaired vessel, not a new one. However, absent any contract language to authorize the Owner to abandon the vessel to the builder, the decision will rest solely with the insurance interests.

Consider, for example, a £15 million yacht (including Owner furnished materials) which experiences a fire. If the estimated cost of corrections are less than, say, £10 million, including all indirect costs, the insurance interests may not declare a CTL, but instead pay for those corrections. However, because the vessel will actually have undergone substantial repair by the time of vessel delivery, the Owner may not wish to have to take delivery of it. Accordingly, it may be useful to include in the contract language the right of an Owner to abandon the vessel, and have all progress payments returned in full, if the cost of restoration of a vessel damaged while under construction exceeds a certain percentage of the Contract Price. If that language is included, the Owner will also have to ensure that the costs of Owner furnished materials that have been damaged or otherwise rendered valueless are recoverable through an appropriate insurance policy.

From the Contractor's perspective, if an Owner is allowed to abandon the damaged vessel, the Contractor will have to utilize the Builders' Risk insurance money to restore and finish the vessel and sell it on the open market. Some contractors are not in a position to accept those risks, and thus may not be willing to allow the Owner to abandon the vessel unless it is declared a CTL. In that event, agreement between the Contractor and insurance provider has to be achieved in advance to bring into alignment the Owner's right to abandon the damaged vessel and the underwriter's declaration of a CTL.

#### 11. NEW TECHNOLOGIES AND MATERIALS

High value custom yachts are often the leaders in the use of new technologies and

new materials. Thus, it should be appreciated that the construction and testing of such a vessel carries with it risks that are not attendant to projects that utilize only already-proven technologies and materials. A contract that does not separately recognize the risks associated with the use of such new technologies and/or materials, when they are central to the yacht's construction, is thus setting the stage for potential disputes.

A Contractor may agree to incorporate new materials into the vessel. The incorporation of those materials into the design of the vessel will have been addressed by the Owner's naval architects. But the Contractor may not have the experience to know the special procedures required to integrate them into production, including rework or correction of damage. For example, suppose a new form of material is being used for a component, but the pre-formed component is slightly damaged during transfer onto the vessel. If the component had been made of traditional materials, the Contractor could undertake to effect a repair. But due to the unique material involved, the Contractor is not able to effect the repair, and the component has to be returned to the manufacturer for repair. Without appropriate contract language, a debate will ensue regarding responsibility for the delay and extra costs that are incurred because the repair could not be effected at the Contractor's facility.

Perhaps the Builder's Risk insurance will cover the costs of repair, but likely only if the underwriters were aware from the outset of the special nature of the materials involved and the special costs of repair that would be incurred. However, insurance will not address the delay. Although the Contractor does not consider that such an extraordinary delay is his responsibility, under ordinary contract clauses the Owner may not be of similar mind, believing the delay to be compensable to the Owner as liquidated damages. This points out the need to have the contract identify the various forms of special risks that are associated with the use of such new materials and technologies, and identify the party that is accepting each form of those special risks.

## 12. CONCLUSIONS

The planning, design and construction of modern yachts are significantly different processes than those which attended yachts one or more decades ago. The currently greater participation of the Owner in those processes, and the enhanced expectations of the Owner upon vessel delivery, are some of the reasons why the yacht industry has changed. Additional factors central to these changes are the greater use of Owner furnished materials and the involvement of the Owner's vendors during production. The incorporation of rapidly changing materials and technologies into those yachts further underscores the differences between modern yacht construction and that which occurred only a decade ago.

These changes in the underlying components of the planning, design and construction of high value yachts have served to alter the form, magnitude and consequences of risks associated with the various processes which are necessary to achieve the delivery of a completed yacht. Unless the contractual arrangements under which those risks are being taken are appropriately addressed by the contract itself, the parties will be turning to older forms of contracts to deal with the consequences of newer forms of risks. This is certain to result in surprises and disappointments as well as possibly financial ruin.

Hence it is apparent that the contract for construction of a modern, high value yacht has to be consistent with, and address all the risks associated with, the changes in these processes of planning, design and construction. The prior sections of this paper address some of the forms of risk that have been significantly altered in the yacht construction industry in the past decade or two. There are other forms of risk that have also been altered but not specifically addressed. The allocation and/or sharing of the risks should be commensurate with the ability of each party to control the risks for which it will be held responsible. In order to minimize the likelihood of misunderstandings and disagreements associated with those new forms of risk, the

contract documents should address each of these matters in a methodical and unambiguous manner, without attempting to prejudice the ability of the parties to reasonably pursue their rights.

The planning, design and construction of modern, high value yachts is professionally challenging. Those activities should not become financially challenging merely because the contract was unsuitable for the project.

### 13. REFERENCES

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### 14. AUTHORS BIOGRAPHY

**Dr. Kenneth W. Fisher** holds the current position of president at Fisher Maritime Consulting Group in the USA. He is responsible for the firm's assignments involving advising vessel owners, shipyards and attorneys on shipyard contracting practices and contract management methodologies. As an expert witness and arbitrator, he has participated in the resolution of numerous contract disputes between any of ship owners, shipyards, major vendors, and consultancies. He also developed and presents worldwide a training program on contract management for ship construction, repair and design.