Tasneef

هيئة الإمارات للتصنيف
Emirates Classification Society

Rules for the Certification of Sailing Rigs

Effective from 1 January 2025

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Tasneef®
MARITIME

GENERAL CONDITIONS

Definitions:

Administration" means the Government of the State whose flag the ship is entitled to fly or under whose authority the ship is authorized to operate in the specific case.

"**IACS**" means the International Association of Classification Societies.

"Interested Party" means the party, other than the Society, having an interest in or responsibility for the Ship, product, plant or system subject to classification or certification (such as the owner of the Ship and his representatives, the shipbuilder, the engine builder or the supplier of parts to be tested) who requests the Services or on whose behalf the Services are requested.

"**Owner**" means the registered owner, the shipowner, the manager or any other party with the responsibility, legally or contractually, to keep the ship seaworthy or in service, having particular regard to the provisions relating to the maintenance of class laid down in Part A, Chapter 2 of the Rules for the Classification of Ships or in the corresponding rules indicated in the Specific Rules.

"**Rules**" in these General Conditions means the documents below issued by the Society:

(i) Rules for the Classification of Ships or other special units.
(ii) Complementary Rules containing the requirements for product, plant, system and other certification or containing the requirements for the assignment of additional class notations;
(iii) Rules for the application of statutory rules, containing the rules to perform the duties delegated by Administrations.
(iv) Guides to carry out particular activities connected with Services;
(v) Any other technical document, for example, rule variations or interpretations.

"Services" means the activities described in paragraph 1 below, rendered by the Society upon request made by or on behalf of the Interested Party.

"**Ship**" means ships, boats, craft and other special units, for example, offshore structures, floating units and underwater craft.

"Society" or "TASNEEF" means TASNEEF Maritime

"**Surveyor**" means technical staff acting on behalf of the Society in performing the Services.

"**Force Majeure**" means damage to the ship; unforeseen inability of the Society to attend the ship due to government restrictions on right of access or movement of personnel; unforeseeable delays in port or inability to discharge cargo due to unusually lengthy periods of severe weather, strikes or civil strife; acts of war; or other force majeure.

1. Society Roles

1.1. The purpose of the Society is, among others, the classification and certification of ships and the certification of their parts and components. In particular, the Society:
(i) sets forth and develops Rules.
(ii) publishes the Register of Ships.
(iii) Issues certificates, statements and reports based on its survey activities.
1.2. The Society also takes part in the implementation of national and international rules and standards as delegated by various Governments.
1.3. The Society carries out technical assistance activities on request and provides special services outside the scope of classification, which is regulated by these general conditions unless expressly excluded in the particular contract.

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2. Rule Development, Implementation and Selection of Surveyor

2.1. The Rules developed by the Society reflect the level of its technical knowledge at the time they are published therefore, the Society, although also committed through its research and development services to continuous updating of the Rules, does not guarantee the Rules meet state-of-the-art science and technology at the time of publication or that they meet the Society's or others' subsequent technical developments.
2.2. The Interested Party is required to know the Rules based on which the Services are provided. With particular reference to Classification Services, special attention is to be given to the Rules concerning class suspension, withdrawal and reinstatement. In case of doubt or inaccuracy, the Interested Party is to promptly contact the Society for clarification.
The Rules for Classification of Ships are published on the Society's website: www.tasneef.ae.
2.3. Society exercises due care and skill:
(i) In the selection of its Surveyors
(ii)In the performance of its Services, taking into account the level of its technical knowledge at the time the Services are performed.
2.4. Surveys conducted by the Society include, but are not limited to, visual inspection and non-destructive testing. Unless otherwise required, surveys are conducted through sampling techniques and do not consist of comprehensive verification or monitoring of the Ship or the items subject to certification. The surveys and checks made by the Society on board ship do not necessarily require the constant and continuous presence of the Surveyor. The Society may also commission laboratory testing, underwater inspection and other checks carried out by and under the responsibility of qualified service suppliers. Survey practices and procedures are selected by the Society based on its experience and knowledge and according to generally accepted technical standards in the sector.

3. Class Report & Interested Parties Obligation

3.1. The class assigned to a Ship, like the reports, statements, certificates or any other document or information issued by the Society, reflects the opinion of the Society concerning compliance, at the time the Service is provided, of the Ship or product subject to certification, with the applicable Rules (given the intended use and within the relevant time frame).
The Society is under no obligation to make statements or provide information about elements or facts which are not part of the specific scope of the Service requested by the Interested Party or on its behalf.
3.2. No report, statement, notation on a plan, review, Certificate of Classification, document or information issued or given as part of the Services provided by the Society shall have any legal effect or implication other than a representation that, on the basis of the checks made by the Society, the Ship, structure, materials, equipment, machinery or any other item covered by such document or information meet the Rules. Any such document is issued solely for the use of the Society, its committees and clients or other duly authorized bodies and no other purpose. Therefore, the Society cannot be held liable for any act made or document issued by other parties based on the statements or information given by the Society.
The validity, application, meaning and interpretation of a Certificate of Classification, or any other document or information issued by the Society in connection with its Services, is governed by the Rules of the Society, which is the sole subject entitled to make such interpretation. Any disagreement on technical matters between the Interested Party and the Surveyor in the carrying out of his functions shall be raised in writing as soon as possible with the Society, which will settle any divergence of opinion or dispute.
3.3. The classification of a Ship or the issuance of a certificate or other document connected with classification or certification and in general with the performance of Services by the Society shall have the validity conferred upon it by the Rules of the Society at the time of the assignment of class or issuance of the certificate; in no case shall it amount to a statement or warranty of seaworthiness, structural integrity, quality or fitness for a particular purpose or service of any Ship, structure, material, equipment or machinery inspected or tested by the Society.

3.4. Any document issued by the Society about its activities reflects the condition of the Ship or the subject of certification or other activity at the time of the check.
3.5. The Rules, surveys and activities performed by the Society, reports, certificates and other documents issued by the Society are in no way intended to replace the duties and responsibilities of other parties such as Governments, designers, shipbuilders, manufacturers, repairers, suppliers, contractors or sub-contractors, Owners, operators, charterers, underwriters, sellers or intended buyers of a Ship or other product or system surveyed.

These documents and activities do not relieve such parties from any fulfilment, warranty, responsibility, duty or obligation (also of a contractual nature) expressed or implied or in any case incumbent on them, nor do they confer on such parties any right, claim or cause of action against the Society. With particular regard to the duties of the ship Owner, the Services undertaken by the Society do not relieve the Owner of his duty to ensure proper maintenance of the Ship and ensure seaworthiness at all times. Likewise, the Rules, surveys performed, reports, certificates and other documents issued by the Society are intended neither to guarantee the buyers of the Ship, its components or any other surveyed or certified item, nor to relieve the seller of the duties arising out of the law or the contract, regarding the quality, commercial value or characteristics of the item which is the subject of transaction.
In no case, therefore, shall the Society assume the obligations incumbent upon the above-mentioned parties, even when it is consulted in connection with matters not covered by its Rules or other documents.
In consideration of the above, the Interested Party undertakes to relieve and hold harmless the Society from any third-party claim, as well as from any liability about the latter concerning the Services rendered.
Insofar as they are not expressly provided for in these General Conditions, the duties and responsibilities of the Owner and Interested Parties concerning the services rendered by the Society are described in the Rules applicable to the specific service rendered.

4. Service Request & Contract Management

4.1. Any request for the Society's Services shall be submitted in writing and signed by or on behalf of the Interested Party. Such a request will be considered irrevocable as soon as received by the Society and shall entail acceptance by the applicant of all relevant requirements of the Rules, including these General Conditions. Upon acceptance of the written request by the Society, a contract between the Society and the Interested Party is entered into, which is regulated by the present General Conditions.

4.2 In consideration of the Services rendered by the Society, the Interested Party and the person requesting the service shall be jointly liable for the payment of the relevant fees, even if the service is not concluded for any cause not pertaining to the Society. In the latter case, the Society shall not be held liable for non-fulfilment or partial fulfilment of the Services requested.

4.3 The contractor for the classification of a ship or for the services may be terminated and any certificates revoked at the request of one of the parties, subject to at least 30/60/90 days' notice, to be given in writing. Failure to pay, even in part, the fees due for services carried out by the society will entitled the society to immediately terminate the contract and suspend the service.
For every termination of the contract, the fees for the activities performed until the time of the termination shall be owned to the society as well as the expenses incurred in view of activities already programmed, this is without prejudice to the right to compensation due to the society as a consequence of the termination.
With particular reference to ship classification and certification, unless decided otherwise by the society, termination of the contract implies that the assignment of class to a ship is withheld or, if already assigned, that it is suspended or withdrawn, any statutory certificates issued by society will be withdrawn in those cases where provided for by agreements between the society and the flag state.

5. Service Accuracy

5.1. In providing the Services, as well as other correlated information or advice, the Society, its Surveyors, servants or agents operate with due diligence for the proper execution of the activity. However, considering the nature of the activities performed (see **Rule Development, Implementation and Selection of Surveyor** 2.4), it is not possible to guarantee absolute accuracy, correctness and completeness of any information or advice supplied. Express and implied warranties are specifically disclaimed.

6. Confidentiality & Document sharing

6.1. All plans, specifications, documents and information provided by, issued by, or made known to the Society, in connection with the performance of its Services, will be treated as confidential and will not be made available to any other party other than the Owner without authorization of the Interested Party, except as provided for or required by any applicable international, European or domestic legislation, Charter or other IACS resolutions, or order from a competent authority. Information about the status and validity of class and statutory certificates, including transfers, changes, suspensions, withdrawals of class, recommendations/conditions of class, operating conditions or restrictions issued against classed ships and other related information, as may be required, may be published on the website or released by other means, without the prior consent of the Interested Party.
Information about the status and validity of other certificates and statements may also be published on the website or released by other means, without the prior consent of the Interested Party.

6.2. Notwithstanding the general duty of confidentiality owed by the Society to its clients in clause 7.1 below, the Society's clients hereby accept that the Society may participate in the IACS Early Warning System which requires each Classification Society to provide other involved Classification Societies with relevant technical information on serious hull structural and engineering systems failures, as defined in the IACS Early Warning System (but not including any drawings relating to the ship which may be the specific property of another party), to enable such useful information to be shared and used to facilitate the proper working of the IACS Early Warning System. The Society will provide its clients with written details of such information sent to the involved Classification Societies.
6.3. In the event of transfer of class, addition of a second class or withdrawal from a double/dual-class, the Interested Party undertakes to provide or to permit the Society to provide the other Classification Society with all building plans and drawings, certificates, documents and information relevant to the classed unit, including its history file, as the other Classification Society may require for classification in compliance with the applicable legislation and relative IACS Procedure. It is the Owner's duty to ensure that, whenever required, the consent of the builder is obtained about the provision of plans and drawings to the new Society, either by way of the appropriate stipulation in the building contract or by other agreement.
In the event that the ownership of the ship, product or system subject to certification is transferred to a new subject, the latter shall have the right to access all pertinent drawings, specifications, documents or information issued by the Society or which has come to the knowledge of the Society while carrying out its Services, even if related to a period prior to transfer of ownership.

7. Health, Safety & Environment

7.1. The clients such as the designers, shipbuilders, manufacturers, repairers, suppliers, contractors or sub-contractors, or other product or system surveyed who have a registered office in ABU Dhabi; should have an approved OSHAD as per Abu Dhabi OHS Centre, or, if they do not need to have an approved OSHAD, they shall comply with TASNEEF standards and have procedures in place to manage the risks from their undertakings.

7.2. For the survey, audit and inspection activities onboard the ship, the ship's owner, the owner representative or the shipyard must follow TASNEEF rules regarding the safety aspects.

8. Validity of General Conditions

8.1. Should any part of these General Conditions be declared invalid, this will not affect the validity of the remaining provisions.

9. Force Majeure

9.1 Neither Party shall be responsible to the other party for any delay or failure to carry out their respective obligations insofar as such delay and failure derives, directly or indirectly, and at any time, from force majeure of any type whatsoever that lies outside the control of either Party.

9.2 The Party that is unable to fulfil the agreement due to Force Majeure shall inform the other party without delay and in all cases within 7 days from when such force majeure arose.

9.3 It is understood that if such force majeure continues for more than 30 days, the Party not affected by the event may terminate this agreement by registered letter. The rights matured until the day in which the force majeure occurred remain unaffected.

10. Governing Law and Jurisdiction

This Agreement shall be governed by and construed in accordance with the laws of Abu Dhabi and the applicable Federal Laws of the UAE.
Any dispute arising out of or in accordance with this Agreement shall be subject to the exclusive jurisdiction of the Abu Dhabi courts.

11. Code of Business conduct

The **CLIENT** declares to be aware of the laws in force about the responsibility of the legal persons for crimes committed in their interest or to their own advantage by persons who act on their behalf or cooperate with them, such as directors, employees or agents.
In this respect, the **CLIENT** declares to have read and fully understood the "**Ethical Code**" published by **TASNEEF** and available in the **TASNEEF** Web site.
The **CLIENT**, in the relationships with **TASNEEF**, guarantees to refrain from any behaviour that may incur risk of entry in legal proceedings for crimes or offences, whose commission may lead to the enforcement of the laws above.
The **CLIENT** also acknowledges, in case of non-fulfilment of the previous, the right of **TASNEEF** to unilaterally withdraw from the contract/agreement even if there would be a work in progress situation or too early terminate the contract/agreement. It's up to **TASNEEF** to choose between the two above mentioned alternatives, and in both cases a registered letter will be sent with a brief sum-up of the circumstances or of the legal procedures proving the failure in following the requirements of the above-mentioned legislation.

In light of the above, it is forbidden to all employees and co-operators to:
- receive any commission, percentage or benefits of any possible kind;
- Start and maintaining any business relationship with **Clients** that could cause conflict of interests with their task and function covered on behalf of **TASNEEF.**
- Receive gifts, travel tickets or any other kind of benefits different from monetary compensation, that could exceed the ordinary business politeness.

Violation of the above-mentioned principles allows **TASNEEF** to early terminate the contract and to be entitled to claim compensation for losses if any.

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1 GENERAL

1.1 Purpose of the Rules Scope

1.1.1 These Rules illustrate the general criteria and the procedures adopted by Tasneef for the issue and maintenance of the certification of sailing rigs.

1.2 Assumptions and Interested Party's responsibility

1.2.1 Operation of rigs

The certification service is performed on the basic assumption that all parties involved (designer, builder/yard, manufacturer, design-owner, sub-contractor, owner, etc.) fulfil their individual obligation. Therefore, the certification service is not performed in substitution of other parties' role or obligations.
The certification of a rig is based on the understanding that the rig is operated in a proper manner by competent and qualified crew according to the environmental and operating criteria on which certification is based.
In particular, it will be assumed that the speed and course of the ship are adapted to the prevailing sea and weather conditions according to normal prudent seamanship.

1.2.2 Maintenance of rigs

Any document issued by Tasneef in relation to its interventions reflects the condition of the rig as found at the time and within the scope of the survey.
It is the Interested Party's responsibility to ensure proper maintenance of the rig until the next survey required by the Rules.

1.2.3 Maintenance of the certification

It is the duty of the Interested Party to inform the Surveyor when he boards the ship of any events or circumstances affecting rig certification.
Any damage or defect which could invalidate the conditions for which the rig certification has been assigned is to be communicated to Tasneef without delay.

1.3 Field of application

1.3.1 General

These rules are applicable on a voluntary basis.
Mandatory rig certification will be applied depending on specific Flag administrations requirements.
Rig certification is assigned to a ship upon a survey, and / or the associated operations, which is held in order to verify whether it is eligible to be certified on the basis of the Tasneef Rules.
This may be achieved through:

- the completion of the new sailing rig building, during which a survey has been performed;
- a specific admission to initial survey, in cases where a rig is certified with another Society or is not certified at all.

When a rig is surveyed during construction, it is to comply with those requirements of these Rules which are in force and applicable depending on the certification scheme.

1.3.2 Type of ships

These Rules are generally applicable to yachts of normal monohull type.

Yachts of multi-hull or of unusual design will be considered on a case-by-case basis.

1.3.3 Type of rig

These Rules are generally applicable to single or multiple masted Bermudian or gaff rigs (reference to [1.3.7]).

Scantlings of square riggers are to be based on the requirements of the Tasneef Rules for the Masting and Rigging of Sailing ships.

1.3.4 Materials

These Rules generally apply to:

- Spars made by composite materials (e.g. carbon fibre) alluminum or Stainless Steel;
- standing rigging made of steel wire, rod, man-made Aramidic fibers, carbon fibers or other advanced fibers.

Where other materials of novel types are used, they are to be individually considered on the basis of equivalent strength and quality.

1.3.5 Type of navigation, operational limits

These Rules apply to yachts sailing in unrestricted navigation.
Rigs with design assumptions based on specific operational limitations will be considered on a case-by-case basis.
Any operational limitations (e.g. short-range navigation) should be explicitly made known to the crew.

Yachts operating as short-range navigation need to carry storm canvas or alternative system to sailing safety in case of storm.

All other yachts should either be provided with separate storm sails or have specific sails designated and constructed to act as storm canvas.

1.3.6 Novel features

Tasneef may consider the certification of sailing rigs based on or applying novel design principles or features, to which the Rules are not directly applicable, on the basis of experiments, calculations or other supporting information (CFD analysis, wind tunnel tests) to be submitted to Tasneef for appraisal. The specific limitations may then be indicated on the relevant rig certificate.

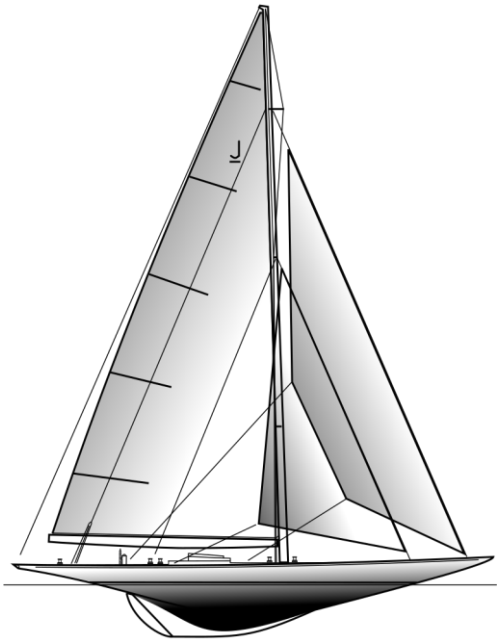
1.3.7 Terms and definitions

The following definitions of terms apply throughout this document.

BABYSTAY – is a structural component of a sailing vessel's rigging system. It serves to provide additional support to the mast, enhancing its stability and rigidity. It typically runs from a designated point on the mast, usually below the masthead, to a specified attachment point on the vessel's foredeck, often near the bow.

BACKSTAY - is a standing rigging element that runs from the top of the mast to the stern (rear) of the vessel. It provides essential support to the mast, particularly in countering the forward forces generated by the sails.

BERMUDA RIG - it consists of a triangular sail located aft of the mast. Its head angle is fixed to the upper part of the mast while the clew angle is fixed to the base of the same. The tack angle is lastly fixed to the end of the boom which also regulates the foot of the sail.



BOOM - Horizontal spar, attached to the Mast, designed to controling, supporting, containg the sail.

CHAINPLATE - Structural plates designed to connect standing/running rigging to the hull.

DIAGONALS - Shrouds attached from the side face of the mast to the tip of the spreaders or the deck chain plate.

DOWNWIND – refers to the direction that a vessel is sailing in relation to the wind. When a vessel is sailing downwind, the wind is coming from behind the vessel, pushing the sails forward.

FORESAIL(s) – type of sail set on the forward part of a sailing vessel, typically ahead of the mast. Foresails come in various shapes and sizes, each suited to different wind conditions and sailing manoeuvres.

FORESTAY(s) - is a primary standing rigging component on a sailing vessel that runs from the top of the mast towards the front of the boat. It provides crucial support to the mast, helping to counteract the forces generated by the sails.
The forestay is typically tensioned to maintain the proper angle of the mast and to control its bend under sail load. It may be attached to a fitting at the masthead and then extends downward to a point on the boat's bow, where it is secured by a turnbuckle or other tensioning mechanism.
Overall, the forestay plays a crucial role in the stability, performance, and safety of a sailing vessel, particularly under sail.

GAFF RIG - is a sailing rig in which the sail is fourcornered, fore-and-aft rigged, controlled at its peak and, usually, its entire head by a spar (pole) called the gaff.

HALYARD(s) - They are line(s) (ropes) used to hoist or raise sails and other rigging elements, such as flags or spinnaker poles, up the mast. Halyards typically run from their attachment points on the sail or rigging element to the masthead or other designated hoisting points on the mast.
Halyard can be used to hoist people on the Rig.

HARDWARE – such as cleats, blocks, winches, and travelers are used to secure and control the rigging lines and adjust the position of the sails and spars.
These components facilitate sail handling, trimming, and reefing operations.

HEADSTAY(s) – It is a standing rigging element that runs from the masthead to the bow (front) of the vessel. The headstay plays a crucial role in supporting the mast and controlling its forward bend or rake.
The headstay is typically attached to a fitting at the masthead and extends downward to a point on the vessel's bow, where it is secured by a turnbuckle or other tensioning mechanism. This allows for adjustments to be made to the tension of the headstay, which can affect the shape and performance of the headsail or jib.

HEEL ANGLE – it refers to the inclination or tilt of a vessel from its vertical axis, typically measured from the perspective of someone standing on the vessel.
It is an important parameter in assessing the stability and performance of a vessel, particularly under sail. The heel angle of a vessel can be influenced by various factors, including wind, waves, sail configuration, and the distribution of weight on board.

MAST – is a vertical spar or structure that supports the sails and rigging. The mast provides the main vertical support for the rigging system and serves as a point of attachment for the sails, spars, and rigging components.

INNERSTAY – is a secondary standing rigging component on a sailing vessel. It is positioned closer to the centreline of the vessel compared to the primary forestay. The innerstay runs from a point on the mast, typically below the

masthead, to a designated attachment point on the boat's bow, usually near the stem or forward of the primary forestay attachment.

PANEL (of Mast) – "mast panel" typically refers to a section of a ship's mast structure. The mast of a ship is a vertical spar rising from the hull and supporting sails, rigging, or other equipment essential for sailing.
A mast panel, therefore, would be a segment or component of the mast. These panels could vary in size and shape depending on the specific design and requirements of the ship.

REACHING - refers to a point of sail where a vessel is sailing with the wind coming from the side of the boat, at an angle that is neither directly upwind (close-hauled) nor directly downwind. Reaching represents a broad range of angles between close-hauled and downwind sailing.

REEF (of a Sail) - refers to the process of reducing the area of a sail by partially lowering or securing it. This is typically done to decrease the sail's surface area in response to increasing wind speeds or adverse weather conditions, thereby reducing the amount of force exerted on the vessel's rigging and hull.

RIG - refers to the system of masts, spars, sails, and rigging components used to support and control the sails of a sailing vessel. The rig is an essential part of a sailing vessel's design, as it determines the vessel's sailing characteristics, performance, and capabilities.

RIGGING - refers to the system of wires, ropes, and lines used to support and control the mast/spars and sails. Rigging components include standing rigging (fixed components such as shrouds and stays) and running rigging (movable lines used to control the sails and spars).

RUNNER/CHECKSTAY - is a structural component of a sailing vessel's rigging system. It serves to provide additional support to the mast.
The runner/checkstay is positioned to control the forward bend or "rake" of the mast, especially when sailing upwind or in heavy wind conditions. It runs from attachment points on the mast, usually above the spreaders, to attachment points on the deck or hull of the vessel, often aft of the mast.
Runners/checkstays are typically adjustable to allow for fine-tuning of the mast's shape and alignment. Tensioning mechanisms such as turnbuckles, hydraulic cylinders, or tackles may be used to adjust the tension in the runner/checkstay as needed.

RUNNING RIGGING - refers to the system of lines (ropes) used to control the movable parts of a sailing vessel's rigging, such as sails, spars, and other equipment. Running rigging is contrasted with standing rigging, which consists of fixed elements.

SHEET - refer to the lines (ropes) used to control the angle or trim of sails. Sheets are essential components of the running rigging system on a sailing vessel and play a crucial role in adjusting the position of sails relative to the wind to optimize performance.

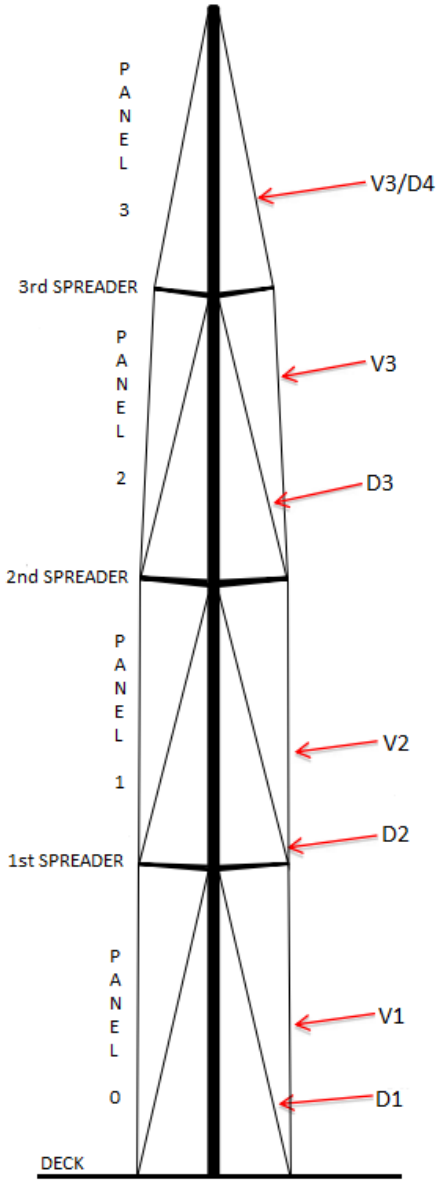
SHROUD(s) - is diagonal rigging wires or rods that extend from the mast to the sides of the vessel (port and starboard). They provide lateral support to the mast, helping to prevent it from bending or buckling sideways under the forces exerted by the sails and wind. Shrouds are typically attached to chainplates or other fittings on the hull or deck.

SPREADER(s) - is horizontal support(s) attached to the mast of a sailing vessel. They are typically positioned perpendicular to the mast and extend outward, usually at a slight upward angle. Spreaders are an essential component of the mast rigging system and serve several important functions. Structurally speaking Spraders support mast tube to prevent bending and/or buckling, Prevent mast pumping

STANDING RIGGING - refers to the fixed, non-movable components of a sailing vessel's rigging system. Standing rigging provides essential support and stability to the mast and other rigging components and helps to distribute the loads exerted by the sails and wind forces.

UPWIND - refers to the direction that a vessel is sailing in relation to the wind. When a vessel is sailing upwind, it is sailing as close to the wind direction as possible or directly against the wind. This means that the wind is blowing towards the front of the vessel, creating an aerodynamic force against which the vessel must sail.

VERTICAL(s) - refers to a component of the standing rigging system on a sailing vessel. Vertical shrouds are rigging wires or rods that run vertically from the mast to the deck or hull of the vessel. They provide lateral support to the mast, helping to prevent it from bending or buckling sideways under the forces exerted by the sails and wind.



2 RIG CERTIFICATION

2.1 General

2.1.1 When applicable, mention of rig certification is made on the yacht's class certificate.
Rig Additional Class notations **RIG**, **RIG gold** or **RIG platinum** may be assigned in accordance with Pt A, Ch 1, Sec 2, [6.25] of Tasneef Rules for Yachts to a yacht upon a survey, with the associated operations, which is held in order to verify the compliance with the present Rules.
RIG / **RIG gold** / **RIG platinum** additional class notations are assigned to a Rig new building.
Voluntary certification schemes can be established upon request such as selection and combination of different certification modules**.**

2.2 Rig certification schemes

2.2.1 General

A summary of the certification schemes is given in Table 1.

2.2.2 Rig certification scheme

This certification scheme refers to the examination and acceptance, or approval, of the following aspects:
a) Rig design approval
b) Rig Booklet approval
c) periodical survey.
Further requirements may originate be applied from the relevant Flag Administration requirements.

2.2.3 Rig gold certification scheme / Plan Approval, Surveillance and Workshop Approval

This certification scheme refers to the examination and acceptance, or approval, of the following aspects in addition to those already required for the additional class notation **RIG**:
a) Mast & Rig workshop approval
b) Rig stepping survey
c) Sea trials survey

2.2.4 Rig Platinum certification scheme

This certification scheme refers to the examination and acceptance, or approval, of the following aspects in addition to those already required for the additional class notation **RIG gold**:
a) Spars building surveys
b) Rig fittings testing.

Table 1: Rig Certification Schemes

Module	Rig	Rig gold	Rig platinum
Rig design approval	x	x	x
Spar maker workshop approval		x	x
Rig maker workshop approval		x	x
Spars & Rigs survey			x
Rig fittings testing			x
Stepping survey		x	x
Sea trials		x	x
Periodical surveys	x	x	x
Rig Booklet approval	x	x	x

2.3 Rig certification modules

2.3.1 General

Depending on the rig certification scheme (RIG, RIG gold, RIG platinum) chosen, the requirements of the following certification modules are to be complied with.

2.3.2 Rig design approval

A rig design certificate will be issued following the successful completion of the design review and approval.
The submitter must provide a detailed explanation of the methodology used in designing and sizing the mast and the rig components.
The designer is to demonstrate that all mast and rigging components are adequately sized for the intended route and service.
A detailed description is to be provided of the methodology used to determine the loads acting on the mast and rig. This description is to support decisions to use a particular mast and rig design and include engineering methods used to adequately size the mast/rig design.

2.3.3 Sparmaker workshop approval

The certification of the quality of construction of the spars is to be obtained through recognition of the manufacturer's workshop.

Procedure is generally based on Pt A, Ch 2, App 3 of Tasneef rules for Yachts.

All spars are to be built using working processes approved or accepted by Tasneef.
The Sparmaker is to obtain the approval or acceptance of the methods and facilities used.
When the verification ascertains that the shipyard workshop has a system of production and quality control that satisfies the Tasneef requirements, so as to ensure a consistent level of quality, Tasneef may grant the Sparmaker or shipyard special recognition of suitability for the construction of sailing rig spars.
Additional tests may be required by Tasneef on a case by case.

2.3.4 Rig-maker workshop approval

The certification of the spare and/ or rig Manufacturer is obtained through a quality survey at the Manufacturer's workshop. The Procedure is generally based on Pt A, Ch 2, App 3 of Tasneef rules for Yachts.
All Rigs are to be built using working processes approved or accepted by Tasneef.
The Rig-maker is to obtain the approval or acceptance of the methods and facilities used. When the verification ascertains that the shipyard workshop has a system of production and quality control that satisfies the Tasneef requirements, so as to ensure a consistent level of quality, Tasneef may grant the Rig-maker or shipyard special recognition of suitability for the construction of sailing rig spars.
Additional tests may be required by Tasneef on a case by case.

2.3.5 Spars building surveys

When required by the yard or when deemed mandatory by Tasneef or the Gold & Platinum scheme has been adopted, the construction of spars will be carried out under supervision of a Tasneef surveyor.

2.3.6 Rig fittings testing

The following requirements are to be fulfilled under the Platinum scheme.

a) General

Testing of rig fittings may be requested on a voluntary basis by interested parties also when the Platinum Certification Scheme is not required.

The manufacturer is to demonstrate the methodology used to determine working loads and ultimate loads of critical standing rigging fittings (e.g. turnbuckles, terminals, chainplates etc.).

The documentation is to include at least the following:

- design criteria
- material mechanical properties
- internal testing procedures
- internal quality control method
- internal NDT procedures.

In general, the testing operations and the inspections indicated in these Rules are to be carried out in the Manufacturer's workshop. However, the testing operations and acceptance tests to be carried out on board during and/or after installation are also considered for those products which are completed on board or for which tests are to be carried out in connection with the final trials of the on-board items.

In general, the following rig components are to be designed and tested in compliance with the requirements given in these Rules:

- Metal chainplates, turnbuckles and associated items (e.g. pins), terminals
- Hydraulic rams, when deemed necessary (e.g. backstay cylinders)
- Standing rigging wires, rods and cables.

b) Safe working load testing

When deemed necessary, safe working load of all standing rigging components should be proof tested in the presence of a Tasneef surveyor.

c) Breaking load testing

When deemed necessary, ultimate load of prototype fitting are to be tested in the presence of a Tasneef surveyor. Additional tests may be required by Tasneef on a case by case.

The Rig maker may request, on voluntary bases, a dedicated Type Approval (according on Pt A, Ch 2, App 3 of Tasneef rules for Yachts) for the single Components of the Rig.

2.3.7 Rig stepping survey

Under the Gold and Platinum scheme, a physical survey on the rig stepping procedure is to be carried out in the presence of a Tasneef surveyor, the presence of a Certified rigger (see Annex 2 of Rules for the certification of service suppliers) may be valued case by case.

2.3.8 Sea trial survey

Under the Gold and Platinum scheme, a survey of the rig behaviour during sea trials is to be carried out in the presence of a Tasneef surveyor, the presence of a Certified rigger (see Annex 2 of Rules for the certification of service suppliers) can be valued case by case.

2.3.9 Rig Booklet manual approval

A Rig Booklet is a Manual, to be approved by Tasneef, which is to contain sufficient information to enable the Master and the crew to operate the yacht in compliance with applicable requirements.

The format of the Rig Booklet and the information included vary depending on the certification scheme (RIG, RIG gold, RIG platinum).

2.3.10 Standing Rigging Type Approval

When the Standing Rigging installed on board is covered by a dedicated Type Approval, Tasneef may add to the notation **RIG** or **RIG gold** also the additional feature TA Rig (e.g. Rig-TARig).

Reference for Type Approval may be found in Pt A, Ch 2, App 3 of Tasneef rules for Yachts.

2.3.11 Deck hardware

When the hardware installed on board to manage the sails (Furlers, winches, car & tracks…) is covered by a dedicated Type Approval, Tasneef may add to the notation **RIG** or **RIG gold** also the additional feature TA Hard (e.g. Rig Gold-TAHard).

Reference for Type Approval may be found in Pt A, Ch 2, App 3 of Tasneef rules for Yachts.

2.3.12 Safety equipment on the rig

When the Sparmaker defines a safety system to climb on the rig in safety in compliance with Class guidelines for safety and/or international guidelines (eg IRATA) Tasneef may add to the notation **RIG** or **RIG Gold** or **RIG Platinum** also the additional feature Safe (e.g Rig Platinum-Safe).

2.4 Individual approval/inspections

2.4.1 General

Upon request of the Interested parties, one or more of the following verifications may be performed by Tasneef:

- Rig design approval (A1)
- Rig booklet review (A2)
- Visual dressing inspection (A3)
- Attendance to stepping (A4)
- Sail sea trial (with assistance of certified or qualified Rigger) (A5).

At good result of the above a Statement will be issued.

3 INSPECTIONS AND MAINTENANCE

3.1 General

3.1.1 Tasneef will verify, by attending tests and trials, that the scantlings and construction meet the Rule requirements in relation to the approved drawings.
In general, all surveys outside the Manufacturer's facilities are to be carried out with the attendance of a Tasneef surveyor supported by a Certified Rigger.
Under the Platinum scheme, spars or rigging inspection reports issued by Manufacturer personnel are to be submitted to the Tasneef attending surveyor for his endorsement.
Under the Platinum scheme, the rig's component replacements are to be recorded in the approved rig booklet and undersigned by the class surveyor and the appointed rigger.

3.2 Initial surveys

3.2.1 General

The surveyor in charge or a Certified Rigger is to be satisfied with the sparmaker's overall conditions of construction, capability and workmanship.

3.2.2 Construction survey

The requirements below apply to the Platinum scheme.
As part of his interventions during the rig's construction, the surveyor will:

- examine the construction methods and procedures covered by these Rule
- conduct an overall examination of the parts of the rig when required by these Rules
- check selected items covered by these Rules
- attend tests and trials where applicable and deemed necessary at Tasneef judgement.

3.2.3 Mast stepping

The requirements below apply to the Gold and Platinum scheme.

a) General
   A physical survey of the rig stepping procedure and the rig behaviour during sea trials is to be carried out by or on Tasneef behalf.
   Any adjustment at the standing rigging and/or any change to the fittings after the dock tune must be reviewed by Sparmaker, RigMaker and this Tasneef.
   The pre-tensioning of the rigging is to be specified by the designer and reviewed by Plan Approval, otherwise pre-tensioning is set to avoid slack cap shrouds with an appropriate reserve, when sailing at heeling angles at or below the SWA.
b) Dock tune setup report
   The following information are to be provided:
   - Mast rake
   - Cylinder data:
     - Model
     - Capacity (T)
     - Area (cm^2)
     - N° cylinders (i.e. 2)
     - Total cylinder area (cm^2)
   - Tuning sequence:
     - Step number of the jacking sequence
     - Jack load (including rig weight, for each step)
     - Required pressure, for each step (psi / bar)
     - Action, for each step (i.e.: tighten V1)
   - Headstay tension at dock (with slack backstay, runners, inner forestay) (kg)
   - Mast prebend:
     - Elevation above deck (m)
     - Prebend at dock (mm)
     - Offset from aft face to main halyard pulled down to BAS (mm)
     - Prebend Offset to main Hal.

3.2.4 Sea trials

The requirements of this item [3.2.4] apply to the Gold and Platinum scheme.
Sea trials are to be completed as for any new rig and rigging package; the rigging is to be gradually loaded up starting first with just the mainsail, then if the rigging and mast are performing correctly, moving onto jibs and finally wind sails.

The test must previously be discussed with the Yard and accepted by the Surveyor in charge. Sail sea trials must permit to test the Rig at the most significant Load Cases.
The rig tune is to be monitored as changes in tune can indicate the need for more detailed inspection.

3.3 Periodical surveys

3.3.1 Application

The requirements of this item [3.3] apply to the Gold and Platinum Certification schemes.

3.3.2 General principles

The primary purpose of regular rigging inspection is to determine, with some level of confidence, component service life in order to prevent equipment failures and related marine casualties.

The condition of the rig is to be monitored in accordance with a Maintenance Manual and a planned maintenance schedule as per approved Rig Booklet.

3.3.3 Survey schedule

The first rig class notation renewal survey is to be completed within 5 years from the date of the initial certification survey and thereafter 5 years from the credited date of the previous renewal survey.
However, consideration may be given by Tasneef to grant an extension for a maximum of three months after the limit date, in exceptional circumstances and provided that the yacht is attended and the attending surveyor so recommends.

3.3.4 Annual surveys

In the five-year period of class, five annual surveys are to be carried out.

The first to fourth annual surveys have a six-month window, i.e. from three months before to three months after each anniversary date, while the fifth annual survey has only a three-month window, i.e. from three months before to the fifth anniversary date.

Annual surveys are to include reviewing records and history of rig maintenance measures against the specifications provided by the maintenance manual.
Full RIG visual check is to be carried out by a Certified Rigger (see Annex 2 of Rules for the certification of service suppliers).
This is to be performed on all craft after any major ocean voyage or at least once a year regardless of age or usage.

3.3.5 Intermediate surveys

Intermediate surveys are to be carried out within the window from three months before the second to three months after the third anniversary date, i.e. two and a half years after the delivery or anniversary date with a survey time window plus/minus nine months.
The intermediate survey is not applicable in the first period of class.
When the intermediate survey is applicable, it can replace the (second or third) annual survey if it is carried out in the window in which the second or third annual survey is due.
Along with a full mast check, the rig is to be jacked down to enable the surveyor to verify the lubrication of terminals such as cold heads.
A dock pre-tensioning check is to be undertaken as the mast is being jacked up, to ensure the rig tensions are correct and the spar is centered.
The RIG check is to be carried out by a Certified Rigger (see Annex 2 of Rules for the certification of service suppliers).

3.3.6 Renewal surveys

The renewal survey requires unstepping and dismantling the spar.
A thorough inspection of all mast components is to be undertaken, including composite rigging which is tested according to the manufacture's guide line.
The survey is to be followed by a sea trial.
The survey must be carried-out by Tasneef surveyor supported by a Certified Rigger.

3.4 Occasional surveys

3.4.1 General

An occasional survey is any survey which is not a periodical survey.
Occasional surveys are carried out at the time of, for example:

- damage or suspected damage (e.g. due to grounding, overload sailing etc.)
- repair or renewal work
- alterations or conversion
- postponement of surveys or recommendations.

3.4.2 Damage and repair surveys

In the event of damage which affects or may affect the rig certification, the Owner is to apply to Tasneef for a survey. This application is to be made as soon as possible to enable the surveyor to ascertain the extent of the damage and necessary repairs, if any.
All repairs to rig which may be required for a yacht to retain its class are to be to the satisfaction of the surveyor.
During repairs or maintenance work, the Owner is to ensure that any damage, defect or non-compliance with these Rules is reported to the surveyor during his survey.
Damage and partial or temporary repairs considered acceptable by the surveyor for a limited period of time will be the subject of an appropriate recommendation.
Damage or repairs required by the surveyor to be re-examined after a certain period of time will be the subject of an appropriate recommendation.

3.4.3 Alterations and repairs

Alterations or repairs of/to structures and arrangements affecting the rig certification are to be carried out with the agreement and to the satisfaction of the Tasneef Surveyor.
Where necessary, documentation is to be submitted to Tasneef and/or made available to the attending surveyor.
Materials and equipment used for alterations or repairs are generally to meet the requirements of these Rules for new rigs built under survey.

4 DOCUMENTATION TO BE SUBMITTED FOR APPROVAL

4.1 General

4.1.1 Documentation

Documentation relevant to the rig certification applied for is to be submitted for approval to Tasneef. The rig documentation to be approved is to consist of:

a) Verification of scantlings
b) Rig Booklet with the instructions for master and crew

If it is necessary for some of the key parameters to be mentioned in both parts, a consistency check is to be performed and verified by the Tasneef surveyor.

Tasneef may also call for additional information according to the specific nature of the rig to be certified.

The documentation submitted to Tasneef is examined in relation to the certification scheme applied for in the request for certification.

As a rule, modifications to the approved plans regarding items covered by certification are to be submitted.

It is the responsibility of the Interested Party to ascertain that the design data are correct, complete and compatible with the use of the yacht and rig.

Design calculations are to be provided, when called for, as supporting documents to the plans submitted.

Design data and calculations are to be adequately referenced.

The plans submitted are to contain all necessary information to check the compliance with the requirements of these Rules.

In the case of conflicting information, the documentation submitted will be considered in the following order of precedence: design data, plans, design calculations.

4.1.2 Alternative certification procedures

In addition, Tasneef may base its judgement on documentation such as certificates issued or accepted by another Classification Society, if any, and statutory certificates issued by the flag Administration or by a recognised organisation on its behalf; moreover, other documents and/or plans may be specifically required to be supplied in individual cases.

4.2 Rig geometry and properties

4.2.1 General

Calculations and drawings relevant to the sizing of the global mast tube are to be sent to Tasneef for approval.

Tasneef will review the calculations with a dedicated software in order to verify the Safety Factors and the Allowed Loads.

The documentation is to include the geometrical data of the rig and the information needed to ascertain the forces applied on the structures.

4.2.2 Rig Geometry

Length, distance and angles relevant to the parts of spars, standing rigging and runners. Typical measures are listed below.

a) Mast
   - height of mast above waterline
   - mast collar height from mast base
   - luff length (P)
   - rake
   - prebend
   - sections (width, depth and inertia)
   - crane length
b) Boom
   - spar length
   - mainsail foot length
   - height from mast step
   - vang offset from gooseneck to attachment point
   - vang height from mast step to attachment point on mast
   - sheet offset distance from gooseneck to attachment point on boom
   - sheet offset
c) Foretriangle
   - base of the foretriangle (J)
   - foretriangle height (I)
   - forestay length
   - maximum luff length

- height of forestay pin above waterline

d) Spinnaker
- spinnaker hoist height above datum
- spinnaker pole length (or bowsprit length)
- spinnaker pole height above datum
- spinnaker sheeting blocks distance from forestay
- spinnaker sheeting blocks height above datum
- spinnaker sheeting blocks offset from centreline

e) Spreaders
- height above mast datum
- length
- sweepback (m or degrees) angle of spreader
- incline (m or degrees) angle of spreader end above horizon
- cross sectional shape
- height and width dimension at inner and outer ends
- spreader shape (curve or straight)

e) Shrouds
- chainplates half width from boat centreline
- chainplates pin height above waterline
- offset distance back from the aft face of the mast at the deck datum point
- attachment height of shrouds above mast step

f) Headsail tracks
- forward end distance from forestay pin
- aft end distance from forestay pin
- forward end height above datum
- aft end height above datum
- forward end offset from centreline
- aft end offset from centreline

g) Runners and checkstays
- attachment heights of runners and checkstays on the mast above mast step
- distance of chainplates from aft face of mast

h) Sail plan
- mainsail shape e, including roach and reefing details
- foresails shape
- storm canvas details (storm trysail, storm jib) when applicable

4.2.3 Standing & Running rigging properties

a) Geometry of Rig according to the Mast layout (dimensions and geometrical properties)
b) Spar material mechanical properties (Density, Young's modulus, Poisson's ratio, breaking tension)
c) Running rigging cable properties.

4.2.4 Additional aspects to be considered – extra to the info in the Sail Plan above-mentioned

What below is to be taken to consideration:

a) Chainplates and connection points to the hull
b) When, in accordance with the Flag administrations, any part of the rigging is used as a lifesaving appliances launching device its material, construction and arrangement must meet the requirements of the LSA Code
c) Canting keel of water ballast tanks (if any) are to be accounted in the stability documentation
d) Lightship data preliminarily assumed in the calculations. If they are inconsistent with the as built data, the verifications are to be performed again.

5 RIG BOOKLET

5.1 General

5.1.1 Data included in the rig booklet are to be consistent with the certification scheme adopted and with the yacht type under examination.
The rig booklet is to supply master and crew with the instructions to correctly utilize and maintain the rig.
The rig booklet has to have a dedicated space to log the history of the RIG (service maintenance, inspections, damages…).

5.1.2 The Rig Booklet

The Rig booklet is to contain: Rig user manual and the operating manual.
The booklet has to include, at least:

a) Clear operating instructions for master and crew:
   - sailing table
   - emergency system
b) Certificates of components subject to periodical test
c) Main yacht data
d) Rig geometry
   - Key parameters, e.g.:
   - Reference design righting moments
   - Reference load case
   - Reference lightship data
   - Sail Plan
   - Mast GA
   - Boom GA
e) Bill of materials with the indication of suppliers and manufacturers, including at least:
   - mast tube
   - boom
   - foils for Foresails
   - babystay and Runners/Checkstay information
   - running rigging sheet
   - furler & swivel manuals
   - mainsail track
   - sheaves and blocks
   - locks and special components
f) Mast & Boom
   - Spreaders attachment
   - Vang attachment and information
   - Electrical and/or Hydraulic information
g) Rigging sheet
h) Stepping sequence
i) Dock tune with tuning sequence

5.2 Maintenance details

5.2.1 General

In general, rig maintenance is to follow the manufacturer’s instructions in accordance with the info approved in the Rig Booklet.
Any surveys are to be carried out by Tasneef Surveyor or a Certified Rigger.

5.2.2 Maintenance schedule

A maintenance manual issued by the Spare and Rig manufacturer should be submitted to Tasneef for approval.
Rigs are to be subject to a planned overhauling scheme in accordance with the approved Rig Booklet with all the works carried out is to be checked by the surveyor in order to verify compliance with the Manufacturer's Instructions.
The criticality of the components is to be ascertained through a risk assessment method and included in the maintenance manual.

5.3 Operating instructions

5.3.1 Load cases

At least the following are to be taken into account:

- Upwind/downwind
- through wind speed (TWS)

- apparent wind speed (AWS)
- Mainsail – full / reef
- Headsail
- Heel angle
- Sail reduction plan
- Safe heeling angle – operating limits
- the Sailing Table must be present in the approved Rig Booklet.

6 DESIGN PRINCIPLES

6.1 General

6.1.1 The rig design analysis is to enable the designer to assess the rig structural behaviour under the weight, tuning, sailing loads and inertia loads.
For this purpose, in general the methodology adopted by the designer has to include:

- a representation of the geometrical definition of sail shapes and rig components,
- a fluid-dynamic model and a finite element model of the sail plan,
- the aero-elastic solution for the sail plan,
- the rig finite element structural analysis.

The criteria for the structural model, load model and result analyses are reported in [6.2], [6.3] and [6.4], respectively. Analyses based on different approaches may be considered by Tasneef, on a case by case basis, on the basis of a documented procedure that illustrates the load, and structural model adopted and the results obtained.

6.2 Structural models

6.2.1 The rig is generally modelled with cables, beam-column elements and rigid constraints at the connection with the yacht structures.
The structural model is to be such to as to take into account geometric non linearities and the no-compression behaviour of the cables. In some cases.
In some case, when deemed necessary by Tasneef on the basis of the results obtained and the mast characteristics, a non-linear buckling analysis may be required to be carried out.

6.3 Load cases

6.3.1 In general, the basic value for the evaluations is the static righting moment (RM) of the yacht at full displacement with a heel angle corresponding to the safe working angle (SWA).
The safe working angle (SWA), which will be referred to in the following, generally represents a heeling angle of 25°. However, other angles may be defined as SWA in agreement with Tasneef.
Class reserves the right to assess the SWA according to the relevant characteristics of the yacht under sail according to the characteristics of the yacht.
The strength assessment of the RIG design is to be based on the most severe sailing configurations and the vessel in full load conditions.
Tasneef considers a minimum of 6 Load cases (in case of single Mats):
Case 1

- Full Main Sail + Foresail
- Upwind at 100% of maximum heeling angle.

Case 2

- Full Main Sail + Reacher
- Reaching/Downwind at 70% of maximum heeling angle

Case 3

- 1 Reef Main Sail + Foresail
- Upwind at 80% of maximum heeling angle

Case 4

- Main Sail Only
- Upwind at 60% of maximum heeling angle

Case 5

- Fore Sail Only (Jib or Genoa)
- Upwind at 50% of maximum heeling angle

Case 6

- Staysail Only
- Upwind at 50% of maximum heeling angle

6.3.2 Loads to be considered

The loads to be considered in the rig analysis are:

- the weight loads,
- the tuning loads,
- the rig sailing loads,
- the inertia loads.

These loads are to be combined in their most severe realistic combinations.

6.3.3 Rig sailing loads

In general, rig sailing loads are to be calculated by means of Computational Fluid (CFD) techniques, integrated with Finite Element structural models.

6.3.4 Inertia loads

The inertia loads to be considered are those originated on the various masses by the vertical accelerations of the yacht due to impact on waves.
The longitudinal components of the accelerations due to pitch are also to be considered. The centre of rotation of the pitch motion is considered to be at the yacht mid length at the waterline height.
The mass of each structural element may be considered evenly distributed along its length.
In general, the inertia loads are to be calculated on the basis of the above assumptions, for a vertical acceleration at the cockpit not less than 9,81 m/s^2.
As an alternative, the inertia loads may be calculated on the basis of a seakeeping analysis, which accounts for the specific characteristics of the yacht and the intended operational conditions. In this case, the details of the analysis are to be submitted for approval.

6.4 Checking criteria

6.4.1 It is to be checked that, for each rig element, the ratio between its ultimate stress and the stresses acting in this element is not less than 2,5 (note Tab 2 for details).

- the design analysis is fully in accordance with the criteria in [6.2] and [6.3],
- ad-hoc strength checks are carried out by the Designer, and deemed acceptable by Tasneef, for all the rig system components.

Table 2

Rig Element		Limit Criteria		
		ROD	*Man-made Aramidic / carbon fibers*	*Man-made Aramidi*
Riigging	*Vertical Shrouds*	2.5	3.7	-
	Diagonal shrouds	2.7	4	-
	Forestay	2.7	4	-
	Backstay	3	4.5	-
	Running rigging	3	4.5	-
Ropes	*Halyards*	-	-	3
	Boom sheets	-	-	3.25
	Sheets	-	-	3.5