

Rules for the Certification of the Production Quality Control System of Manufacturers of Yachts or other Products Built in Composite Material

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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 ship builder, 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 ship owner, 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, as for example rule variations or interpretations.

"Services" means the activities described in Article 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, as for example offshore structures, floating units and underwater craft.

"Society" or "TASNEEF" means Tasneef and/or all the companies in the Tasneef Group which provide the Services.

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

Article 1

- 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 are regulated by these general conditions, unless expressly excluded in the particular contract.

Article 2

- 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 committed also 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 on the basis of 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. The 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 of 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.

Article 3

- 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 authorised bodies and for no other purpose. Therefore, the Society cannot be held liable for any act made or document issued by other parties on the basis of 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 certificate on 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 in relation to 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, ship builders, 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 in relation to 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 with respect to the services rendered by the Society are described in the Rules applicable to the specific Service rendered.

Article 4

- 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. In the event of late payment, interest at the legal current rate increased by 1.5% may be demanded.

- 4.3. The contract for the classification of a Ship or for other Services may be terminated and any certificates revoked at the request of one of the parties, subject to at least 30 days' notice to be given in writing. Failure to pay, even in part, the fees due for Services carried out by the Society will entitle the Society to immediately terminate the contract and suspend the Services.

For every termination of the contract, the fees for the activities performed until the time of the termination shall be owed 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 the Society will be withdrawn in those cases where provided for by agreements between the Society and the flag State.

Article 5

- 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 art. 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.

Therefore, except as provided for in paragraph 5.2 below, and also in the case of activities carried out by delegation of Governments, neither the Society nor any of its Surveyors will be liable for any loss, damage or expense of whatever nature sustained by any person, in tort or in contract, derived from carrying out the Services.

- 5.2. Notwithstanding the provisions in paragraph 5.1 above, should any user of the Society's Services prove that he has suffered a loss or damage due to any negligent act or omission of the Society, its Surveyors, servants or agents, then the Society will pay compensation to such person for his proved loss, up to, but not exceeding, five times the amount of the fees charged for the specific services, information or opinions from which the loss or damage derives or, if no fee has been charged, a maximum of AED5,000 (Arab Emirates Dirhams Five Thousand only). Where the fees charged are related to a number of Services, the amount of the fees will be apportioned for the purpose of the calculation of the maximum compensation, by reference to the estimated time involved in the performance of the Service from which the damage or loss derives. Any liability for indirect or consequential loss, damage or expense is specifically excluded. In any case, irrespective of the amount of the fees charged, the maximum damages payable by the Society will not be more than AED5,000,000 (Arab Emirates Dirhams Five Millions only). Payment of compensation under this paragraph will not entail any admission of responsibility and/or liability by the Society and will be made without prejudice to the disclaimer clause contained in paragraph 5.1 above.

- 5.3. Any claim for loss or damage of whatever nature by virtue of the provisions set forth herein shall be made to the Society in writing, within the shorter of the following periods: (i) THREE (3) MONTHS from the date on which the Services were performed, or (ii) THREE (3) MONTHS from the date on which the damage was discovered. Failure to comply with the above deadline will constitute an absolute bar to the pursuit of such a claim against the Society.

Article 6

- 6.1. These General Conditions shall be governed by and construed in accordance with United Arab Emirates (UAE) law, and any dispute arising from or in connection with the Rules or with the Services of the Society, including any issues concerning responsibility, liability or limitations of liability of the Society, shall be determined in accordance with UAE law. The courts of the Dubai International Financial Centre (DIFC) shall have exclusive jurisdiction in relation to any claim or dispute which may arise out of or in connection with the Rules or with the Services of the Society.

- 6.2. However,

- (i) In cases where neither the claim nor any counterclaim exceeds the sum of AED300,000 (Arab Emirates Dirhams Three Hundred Thousand) the dispute shall be referred to the jurisdiction of the DIFC Small Claims Tribunal; and
- (ii) for disputes concerning non-payment of the fees and/or expenses due to the Society for services, the Society shall have the

right to submit any claim to the jurisdiction of the Courts of the place where the registered or operating office of the Interested Party or of the applicant who requested the Service is located.

In the case of actions taken against the Society by a third party before a public Court, the Society shall also have the right to summon the Interested Party or the subject who requested the Service before that Court, in order to be relieved and held harmless according to art. 3.5 above.

Article 7

- 7.1.** 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.
- 7.2.** Notwithstanding the general duty of confidentiality owed by the Society to its clients in clause 7.1 above, 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.
- 7.3.** 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 the purpose of 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 with regard to the provision of plans and drawings to the new Society, either by way of 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.

Article 8

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

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Chapter 1 - General

1 GENERAL

1.1

These Rules illustrate the general criteria and the procedures adopted by Tasneef for the issue and maintenance of the certification of the Production Quality Control System developed by Manufacturers of Yachts or other products built in composite material.

1.2

Manufacturers who implement a Production Quality Control System certified by Tasneef in compliance with these Rules may affix a plate in the workshop and/or on board the yachts delivered under the certified scheme.

1.3

Manufacturers who implement a Production Quality Control System certified by Tasneef in compliance with these Rules may be admitted to an alternative classification surveillance scheme during construction to be agreed on case-by-case and approved by Tasneef.

1.4

Manufacturers who have implemented a Production Quality Control System relevant to hull, machinery, systems and fittings certified by Tasneef in accordance with these Rules may be admitted to Module D in accordance with Annex IX of Directive 94/25/EC as amended by Directive 2003/44/EC.

1.5

Manufacturers who apply Module F in accordance with Annex X of Directive 94/25/EC as amended by Directive 2003/44/EC and have implemented a Production Quality Control System relevant to the hull and to machinery, systems and fittings certified by Tasneef in accordance with these Rules may be subjected to final product verification upon delivery.

1.6

In any case conformity with these Rules requires compliance with ISO 12215-4 standards as concerns the Manufacturer's obligation to apply a Quality Assurance program relevant to the Hull lamination process.

1.7

When a yacht is built by a Manufacturer who applies a Production Quality Control System (including hull construction, machinery, systems and fittings) certified as being in compliance with these Rules and a Planned Maintenance Scheme (PMS) developed in

accordance with the applicable Tasneef Rules is implemented on board, the notation "High Quality Boat" may be assigned to that yacht.

1.8

These Rules also apply to subcontractors involved in some parts of the production process (e.g. hull lamination). Such subcontractors are to be clearly identified by the Manufacturer and Tasneef may carry out the relevant verification at the subcontractor's premises.

2 FIELD OF APPLICATION

2.1

These Rules apply to:

- a) the construction of the hull; and/or
- b) the installation of machinery, systems and fittings.

3 DEFINITIONS AND ABBREVIATIONS

3.1 Production Quality Control System (PQCS)

System aimed at ensuring that the production complies with a given quality standard.

3.2 Production Control Manual (PCM)

Collection of documents which describe the internal control of the production carried out by the Manufacturer.

3.3 Score

A number ranging from 0 to 4 assigned by the Tasneef Surveyor to PQCS items during verification.

3.4 Essential item

Item for which the maximum score (4) is required for the issuance and maintenance of the certification.

3.5 Hull Rating (HR)

Global weighted average, in per cent, calculated on the basis of the score assigned to the items assessed during the verification as regards hull construction.

3.6 Machinery, Systems and Fittings Rating (MR)

Global weighted average, in per cent, calculated on the basis of the score assigned to the items assessed during the verification as regards machinery, systems and fittings.

3.7 Production Quality Control Level (PQCL)

Defines the different stage of implementation of the PQCS, i.e. Medium, High and Very High, as follows:

Medium: HR or MR is between 50% and 70%;

Chapter 1 - General

High: HR or MR is more than 70% but not greater than 80%;

Very High: HR or MR is greater than 80%.

3.8 Personnel certification

Scheme developed by Tasneef to confirm through the issue of a certificate that the qualification requirements for a given task have been fulfilled.

3.9 Non-conformity

- a) Non-fulfilment of a requirement of the system which does not impair its capacity to guarantee the control of the process;
- b) HR or MR value greater than the minimum permissible limit (50%) but lower than the lower limit of the PQCL assigned at the previous verification.

3.10 Major non-conformity

- a) A non-conformity that causes a serious non-fulfilment in the system and which impairs its capacity to guarantee the control of the process;
- b) The highest score is not achieved for an essential item;
- c) HR or MR value lower than the minimum permissible limit (50%).

3.11 Finding

A statement of fact that if not corrected may lead to a non-conformity in the future.

3.12 Lamination Process Manager

Personnel trained and qualified to manage the lamination and assembling process.

3.13 Laminator

Personnel trained and qualified to carry out the lamination and assembling process.

3.14 Adhesive bonder

Personnel trained and qualified to carry out the bonding process.

4 DUTIES OF INTERESTED PARTIES

Interested Parties (Manufacturers, testing laboratories, etc.) involved in the certification in accordance with these Rules are to take the necessary measures so that Tasneef Surveyors, employees and subcontractors can carry out verification in complete safety.

Interested Parties assume with respect to Tasneef Surveyors, employees and subcontractors all the responsibility of employers for their workforce such as to meet the provisions of applicable legislation. As a rule, during verification the Tasneef Surveyor, employees and subcontractors are to be accompanied by personnel representing the Interested Parties and have free access to all areas and information as necessary to carry out the checks required to verify compliance with these Rules.

Chapter 2 – Quality system

1 PRODUCTION QUALITY CONTROL SYSTEM (PQCS)

The Manufacturer is to establish and implement a Production Quality Control System (PQCS) aimed at ensuring that the production complies with a given quality standard.

All the elements, requirements and provisions adopted by the Manufacturer are to be documented in a systematic and orderly manner in the form of written procedures and instructions which describe the specific processes directly affecting production quality and conformity.

2 PQCS DOCUMENTATION

PQCS documentation is to consist of:

- the Production Control Manual (PCM);
- pertinent procedures and instructions for the control of the production process.

3 PRODUCTION CONTROL MANUAL (PCM)

The PCM is to include:

- quality objectives, organisational charts, personnel duties and responsibilities;
- a list of products and associated technical characteristics;

- a list of raw materials and associated technical characteristics;
- the general arrangement of the Manufacturer's premises with the subdivision of the various spaces and the equipment installed;
- fabrication methods, quality control techniques, processes and systematic actions intended to be applied;
- checks and tests to be carried out during and after fabrication, with indications of their frequency and acceptability criteria;
- quality documentation, including inspection reports, calibration data, personnel qualifications, etc.;
- criteria adopted to continuously verify product compliance with the requested quality level and the operation of the process control system;
- a description of parts of the process, if any, that are assigned to subcontractors.

Guidelines for the preparation of a standard PCM relevant to the hull construction together with indications on essential items are given in Annex 1.

Chapter 3 - Initial assessment

1 REQUEST FOR CERTIFICATION

Manufacturers wishing to obtain Tasneef certification according to these Rules are to send a request containing the information given in the form provided in Annex 2.

Having reviewed the information submitted, Tasneef will formulate an economic offer.

Upon receipt from the Manufacturer of the acceptance of the economic offer using the relevant Form given in Annex 3, Tasneef will confirm in writing to the Manufacturer its agreement to provide the service requested.

At its discretion and as deemed necessary, Tasneef may also require the submission of other documents to complete the information already submitted.

2 DOCUMENTATION TO BE SUBMITTED

The Manufacturer is to provide Tasneef with three copies of the Production Control Manual (PCM) and the associated procedures and instructions.

3 REVIEW OF THE TECHNICAL DOCUMENTATION

Tasneef will examine the documentation and inform the Manufacturer whether it is in compliance with the requirements of these Rules or whether modifications and/or additions are to be made.

The certification process will be suspended until the required modifications and/or additions are made to the satisfaction of Tasneef.

4 VOLUNTARY PRELIMINARY VERIFICATION

At the Manufacturer's request, Tasneef may carry out preliminary verification at the Manufacturer's premises in order to evaluate the general stage of implementation of the system.

5 INITIAL VERIFICATION

Upon satisfactory outcome of the review of the technical documentation, verification at the Manufacturer's premises is carried out by Tasneef to check PQCS compliance with the requirements of these Rules.

In general, as far as possible, the verification is to be scheduled so that it takes place during the actual manufacture of the products.

Particular attention is to be paid to the following documentation relevant to the product(s) to be certified:

- PQCS documentation;
- inspection reports;
- reports of tests performed on manufactured products;

- testing equipment calibration data;
- personnel qualifications:

In the course of the verification, as far as possible, the Surveyor is to witness the tests carried out by the Manufacturer during the various stages of manufacturing and for the final acceptance of the products in order to verify compliance with the applicable requirements.

Upon completion of the verification, the Tasneef Surveyor draws up the relevant report and provides the Manufacturer with a copy.

The verification is considered satisfactory when: major non-conformities are not found, the maximum score is achieved for all essential items, personnel involved in special processes, such as lamination process managers, laminators and adhesive bonders, are certified by Tasneef in accordance with the relevant Tasneef Rules, and HR and/or MR calculated in accordance with the methodology given in Annex 4 is not less than 50%. Where non-conformities are found, corrective actions are to be identified and their implementation will be checked by Tasneef during the next periodical verification.

Where a major non-conformity is found, the certificate cannot be issued.

The correction of a major non-conformity requires the identification of a corrective action, to be implemented within an agreed time schedule.

The closure of a major non-conformity generally requires supplementary verification of the actual implementation and efficiency of the corrective action proposed by the Manufacturer.

Where a major non-conformity cannot be closed within the agreed time, the verification is closed and a new verification of the whole system needs to be carried out.

Manufacturers may apply for one of the three certification levels, Medium – High – Very High Level, as defined in Ch.1, [3.7], depending on the level of implementation.

6 ISSUE OF THE CERTIFICATE

Subject to the satisfactory outcome of the verification and the closure of any major non-conformities, Tasneef issues a certificate according to the form in Annex 5.

The period of validity is two years.

Chapter 4 - Maintenance of the certification

1 GENERAL

During the period of validity of the certificate, the Manufacturer is to maintain its PQCS in compliance with the requirements of these Rules.

The Manufacturer is to inform Tasneef of any relevant modification to the PQCS made during the period of validity of the certificate.

The Manufacturer is to keep a record of complaints and the relevant corrective actions taken and make such records available to Tasneef.

Tasneef reserves the right to carry out supplementary verification at the Manufacturer's premises and request for supplementary verification is refused by the Manufacturer without a valid reason, Tasneef may decide to suspend the certificate.

Chapter 5 - Periodical verification

1 PERIODICAL VERIFICATION

The purpose of the periodical verification is to confirm that the PQCS is maintained in compliance with these Rules.

At each periodical verification 50% of items verified during the initial verification are checked.

When, as a result of the verification, the PQCL decreases (e.g. from Very High to High) but remains above the minimum limit (50%), the verification is extended to all items.

If, as a result of the extended verification, the decrease of the PQCL is confirmed, a non-conformity is issued.

In this case, the Manufacturer is to take corrective actions to restore the original PQCL within 3 months.

The certificate is endorsed and the actual (reduced) PQCL is indicated in the endorsement.

At the end of the 3-month period, supplementary verification is carried out. If the PQCL is restored to the original value, the certificate is endorsed and the original PQCL indicated.

If the PQCL is not restored, a new certificate is issued with the new (reduced) PQCL.

If other non-conformities are found during periodical verification, the certificate is endorsed and the Manufacturer is to identify the relevant corrective actions; implementation will be checked by Tasneef during the next periodical verification, unless a shorter period of time is deemed necessary by Tasneef.

A major non conformity may be issued during periodical verification when:

- i) at completion of the extended verification, the PQCL is below the minimum limit (50%);
- ii) the highest score is not achieved for an essential item,

When a major non-conformity is found, the certificate is suspended.

The Manufacturer is to take corrective actions to restore the PQCL within 3 months.

The correction of a major non-conformity requires the identification of a corrective action, to be implemented within an agreed time schedule.

The closure of a major non-conformity generally requires supplementary verification of the actual implementation and efficiency of the corrective action proposed by the Manufacturer. If the outcome is satisfactory, the certificate is reinstated.

If a major non-conformity cannot be closed by the set deadline, the periodical verification is considered failed and the certificate remains suspended.

The validity of the certificate may be restored upon satisfactory outcome of new verification of the whole system to be carried out with the same procedure as for the initial verification described in Ch 3 [5.].

2 UPGRADE OF THE CERTIFICATE

When, at the periodical verification, the PQCL increases (e.g. from High to Very High), the Manufacturer may request the certification to be updated, subject to the extension of the verification to all items.

3 OCCASIONAL VERIFICATION

Tasneef may carry out occasional verification in the following cases:

- when production has been interrupted for more than three months,
- at the Manufacturer's request (i.e. when the production conditions are modified),
- when, in Tasneef opinion, the number, frequency and nature of the non-conformities found may compromise the efficiency of the system. If such non-conformities are not corrected within the agreed time, Tasneef may suspend the certification until these non-conformities are closed.

4 RENEWAL VERIFICATION

At the end of the period of validity a renewal survey is to be carried out, with the same extension as the initial verification.

5 SUPPLEMENTARY VERIFICATION

Supplementary verification is additional verification carried out for the closure of a non-conformity or major non-conformity.

Chapter 6 - Suspension, reinstatement and withdrawal certification

1 SUSPENSION

The PQCS Certificate may be suspended in the following cases:

- major non-conformities have not been corrected and closed within the agreed time;
 - HR and/or MR is/are found lower than 50%;
 - the Manufacturer has not informed Tasneef of important modifications made to the PQCS or such modifications are deemed unacceptable by Tasneef;
 - the Manufacturer does not provide the necessary assistance during verification;
 - the Manufacturer does not pay the relevant fees to Tasneef;
 - justified and serious complaints received by Tasneef are confirmed;
 - the Manufacturer has made improper use of the Tasneef Certificate and has not taken the measures required by Tasneef;
 - evidence is found that the PQCS does not guarantee compliance with the laws and regulations applicable to the characteristics of the product supplied by the Manufacturer;
 - any other circumstance that Tasneef considers has a negative influence on the PQCS.
- when there are circumstances, such as those indicated in [1] for suspension, which are held to be particularly serious;
 - at the request of the Manufacturer;
 - when production has been interrupted for more than six months;
 - for persistent arrears in payments to Tasneef for its services;
 - if the Manufacturer does not accept the new economic conditions stipulated by Tasneef following a modification to the contract;
 - for any other reason that Tasneef deems to be serious.

The Manufacturer may also make a reasoned request to Tasneef to suspend certification, normally for not more than six months.

The Manufacturer will be notified of the suspension by registered letter, stating the conditions for re-establishing certification and the date by which the new conditions are to be complied with.

The suspension of validity of the Certificate of Conformity may be made public by Tasneef.

The certified Manufacturer may not use the Tasneef Certificate (Certificate number, etc) in any document if the certification has been suspended.

The Manufacturer will be notified of withdrawal of the certificate by registered letter, unless the Manufacturer asks for revocation; the withdrawal will be made public by Tasneef.

A Manufacturer whose certificate has been withdrawn must return it to Tasneef, and may not use the Tasneef Certificate (certificate number, Tasneef identification of the certificate, etc) in any document following withdrawal of the certificate, any Manufacturer that wishes to be re-certified is to submit a new application and follow the procedure described in Chapter 3.

2 REINSTATEMENT

Reinstatement of the certificate is subject to verification that the shortcoming which led to the suspension has been eliminated.

The Manufacturer will be notified in writing by registered letter of reinstatement of the certificate, which will be publicly announced by Tasneef if the suspension of the certificate has also been made public.

3 WITHDRAWAL

Failure to fulfil the condition as per [2] above by the agreed date will lead to withdrawal of the certificate.

The certificate may also be withdrawn in the following cases:

Chapter 7 - Voluntary withdrawal from certification

1 VOLUNTARY WITHDRAWAL FROM CERTIFICATION

The Manufacturer may send a request to Tasneef in writing, for voluntary withdrawal from certification. In such case the Manufacturer is to return the certificate to Tasneef. When Tasneef receives notice of the Manufacturer's intention to withdraw from certification, the list of certification as per Chapter 8 is updated.

From the date on which the request for voluntary withdrawal has been submitted to Tasneef the Manufacturer may not use the Tasneef Certificate (certificate number, Tasneef identification of the certificate, etc) in any document.

Chapter 8 - Publicity

1 PUBLICITY BY TASNEEF

Tasneef issues and updates on its website a list of Manufacturers whose PQCS has been certified, together with the product typology.

Information on the validity of the Certificate is shown in the above list.

The list contains:

- the name and address of the Manufacturer;
- the product description;
- the reference certification scheme/stage/level;
- the number and the validity status of the Certificate;
- the date of issue of the first certificate.

2 PUBLICITY BY MANUFACTURER

A Manufacturer who has obtained PQCS certification from Tasneef may publicise it.

The Manufacturer is to clearly indicate any limitations and conditions imposed by Tasneef at the time of issue of the certificate.

The certified Manufacturer may reproduce the certificate in full, and enlarge or reduce it, provided that it remains legible and is not modified in any way.

When using the Tasneef Certificate, the Manufacturer is to ensure that PQCS certification may not be intended as covering product types or lines or production sites other than those for which Tasneef certification has been issued.

3 Tasneef PRODUCTION QUALITY CONTROL PLATE

A plate certifying compliance with these Rules may be affixed in the workshop and/or on board the delivered yacht by the Manufacturer.

Annex 1 - Guidelines for the preparation of the QCM

GUIDELINES FOR THE PREPARATION OF A STANDARD QUALITY CONTROL MANUAL (QCM)

These Guidelines have been developed for Manufacturers of yachts built in composite materials having thermosetting matrices. The same principles may be applied by Manufacturers of other products, taking into account the relevant characteristics.

The production quality control manual (QCM) is to be prepared taking into account the general requirements of PART 1 and is to contain at least the specific requirements indicated in Sections 1 to 10 of PART 2.

According to the production process adopted by the organisation, the above Sections may be supplemented by further sections as necessary to cover the control of the process.

PART 1: GENERAL REQUIREMENTS

SECTION 1: GENERAL

The requirements given in this Article apply to hull construction, machinery, systems and fittings.

The Manufacturer is to establish and maintain a management system to identify the producer's organisational structure relating to conformity and quality and detail the specific processes which directly affect product quality and conformity.

This system includes:

- documentation control and record-keeping;
- control procedures for raw materials and suppliers;
- planning of the production process;
- process control;
- requirements for handling and storage of the product;
- plant calibration and maintenance;
- requirements for inspection and testing of processes and products;
- procedures for handling non-conformities;
- analysis of data;
- personnel training;
- personnel duties and responsibility.

SECTION 2: DOCUMENTATION CONTROL

2.1

The Manufacturer will establish and maintain documented procedures to assure that:

- all the documents used by organisation are approved before their issue;
- in the event of changes or updating, the revision of the document is clearly identified;
- the organisation only makes use only of the most recent version of a document and avoids accidental use of obsolete versions;
- outgoing documents are identified, their distribution is controlled and their updating is verified before use.

Annex 1 - Guidelines for the preparation of the QCM

2.2 Record-keeping

The Manufacturer is to implement a record-keeping system for the maintenance of records, documentation and drawings.

A documented procedure is to be established to define the actions needed for the identification, storage, protection, retrieval, retention time and disposition of records.

A documented procedure is also to be established to define the actions needed to prevent troubles and misunderstanding due to the unintended use of obsolete documents, and to apply suitable identification to them if they are retained for any purpose.

SECTION 3: CONTROL PROCEDURES FOR RAW MATERIALS AND SUPPLIERS

3.1

The Manufacturer is to establish and maintain documented procedures to ensure that: all raw materials and semi-manufactured products are qualified and controlled before use; every supplier is qualified, controlled and periodically requalified on the basis of the quality of its supplies.

3.2 Purchasing information

The Manufacturer is to make available purchasing information describing the product to be purchased, including requirements for approval of the product.

3.3 Suppliers

The Manufacturer is to develop a quality control system so that suppliers can meet the requirements of this document for production quality control.

The Manufacturer is to evaluate and select suppliers considering their capacity to meet the Manufacturer's requirements.

Criteria for selection, evaluation and re-evaluation are to be developed by the Manufacturer, and the results of evaluations and any necessary information are to be maintained.

3.4 Verification of the purchased product

The Manufacturer is to establish and develop controls to ensure that the incoming product conforms to specified purchase requirements.

Said controls are to be based on:

- quality of the incoming product; the Manufacturer is to have a process to ensure the quality of the purchased product based on one or more of the following methods:
 - examination of statistical data
 - inspections and/or tests according to a sampling plan based on the supplier's performance
 - evaluation carried out by another organisation or inspections at the supplier's site, when the quality records of the supplied products show an acceptable level of quality
 - product evaluation carried out by a laboratory appointed for the purpose
 - other methods

Annex 1 - Guidelines for the preparation of the QCM

- monitoring of the supplier; the performance of the supplier is to be monitored using the following indicators:
 - quality of the product supplied
 - interruption to supply to the customer
 - performance in product delivery
 - customer feedback concerning product quality and delivery.

SECTION 4: PLANNING OF THE PRODUCTION PROCESS

4.1

The Manufacturer is to plan and develop the processes, the result of which is the realisation of the final product.

The planning activity is to include the following:

- quality and requirements for the product, taking into account the customer's technical specifications, design documentation and approved documentation
- working process, documents and resources necessary for product realisation
- verification, validation, monitoring, inspection and test activities to be performed during the production processes, including final tests and the criteria for product acceptance in order to obtain a final product in compliance with the stated requirements; the acceptance criteria, when required, are to be approved by the customer
- records needed to provide evidence that the production processes and resulting product meet the requirements.

SECTION 5: PROCESS CONTROL

5.1

The Manufacturer is to establish and maintain documented procedures to ensure that:

- every single production step is performed with qualified raw materials, proper tools and following detailed and approved instructions;
- every single production step has its own control points and a person is appointed to check and record results;
- stated process controls are performed by means of proper instruments;
- all production parameters, related tolerances and methods of registration are defined and controlled.

5.2 Production Process

The stored products are to be supplied to the installation sites according to the production plan, when required by the person responsible for the production line.

The production activity is to proceed according to the production plan: the Manufacturer is to make available worksheets for each production process describing the working operations and their sequence.

Any variation of the activity scheduled in the production plan which may be necessary or deemed necessary by the person in charge of the production line is to be authorised by the product manager.

Annex 1 - Guidelines for the preparation of the QCM

Records of the variation of the production plan, stating the cause, are to be signed by the product manager and kept in the documentation.

SECTION 6: REQUIREMENTS FOR HANDLING AND STORAGE OF THE PRODUCT

6.1

The Manufacturer is to establish and maintain documented procedures to ensure that:

- raw materials, semi-manufactured products and finished goods are correctly handled to prevent accidental damage to products and injuries to operators;
- raw materials and semi-manufactured products are adequately identified and stored to prevent wrong selection and accidental injuries and deterioration.

Incoming products are to be subdivided by production line.

For machinery, systems and fittings, production lines are to be established by the Manufacturer, and, by way of example, may be:

- propulsion machinery and components
- other machinery
- electrical plant
- electronic components intended for communication, vessel position determination, etc
- fixed fittings
- mobile fittings

Purchased products are to be stored in suitable spaces, subdivided into storages areas.

Products intended for different production lines and those for which a non-conformity has been found are to be stored in different clearly identifiable areas.

6.2 Preservation of the product

The Manufacturer is to guarantee the conformity of the product during the production process until the delivery to final destination.

The preservation also applies to the constituent parts of the product and includes identification, handling, packaging, storage and protection.

The condition of the stored product is to be monitored at planned intervals in order to detect any deterioration.

A management system is to be used by the Manufacturer to optimise the use of the stored products; e.g. by utilizing first the ones that have been stored the longest.

Expired products are to be considered as non-conforming products.

Annex 1 - Guidelines for the preparation of the QCM

6.3 Identification of the product

The product is to be made identifiable by the Manufacturer by suitable means throughout the whole production process.

Product status is to be identified during the production process by means of monitoring and measurement.

The Manufacturer is to ensure that records are kept based on the identification of the product, in order to guarantee traceability.

SECTION 7: PLANT CALIBRATION AND MAINTENANCE

7.1

The Manufacturer is to establish and maintain documented procedures to ensure that:

- all control instruments are periodically verified and calibrated;
- production plants and associated systems (such as heating and cooling systems, dust extractors etc) are periodically verified and maintained.

SECTION 8: REQUIREMENTS FOR INSPECTION AND TESTING OF PROCESSES AND PRODUCTS

8.1

The Manufacturer is to establish and maintain documented procedures to ensure that all processes are periodically checked by means of proper parameters and inspections performed by qualified persons, in order to determine the effectiveness of the Production Quality Control System. The results of the audits are to be documented and brought to the attention of the personnel with responsibility in the area audited;

All finished goods are to be tested by means of proper parameters and the results are to be presented in a signed report.

8.2 Monitoring, measurements and tests during production

The Manufacturer is to carry out monitoring, measurement and tests, including final tests to verify that product requirements are met.

Monitoring, measurement and tests are to be performed in accordance with the production plan at appropriate stages of the production processes.

Evidence of conformity with the acceptance criteria is to be recorded and maintained. Records are to indicate the person authorising the satisfactory completion of every process and the release of the final product.

Process completion and product release are not to proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by the customer and/or a relevant authority.

For inspection and monitoring of the parts built by the Manufacturer, and defined by the customer as "elements having aesthetic requirements" (i.e. fixed and mobile fittings, etc), the Manufacturer is to provide:

- suitable resources including the illumination of the space where inspection is to be carried out
- samples and reference models for the colour, surface state, shine, metallic appearance, wrinkling, (Distinctiveness of Image) DOI, as applicable

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- maintenance and monitoring of the appearance of the original models and of the instruments for control and measurements
- Control of competence and qualification of the operators performing the evaluations.

SECTION 9: ANALYSIS OF DATA

9.1

The Manufacturer is to provide resources in order to determine, collect and analyse, with continuity, appropriate data to assess the suitability and effectiveness of the production process and to evaluate where improvement of the effectiveness of the production process can be made.

To this end the data generated as a result of monitoring, measurements and tests and from other relevant sources are to be considered.

In addition, the following information is to be provided to analyse the suitability and effectiveness of the production processes:

- customer satisfaction
- conformity with product requirements
- operative performance of working processes and quality of products compared with the stated objectives
- suppliers

The above data are to be used in order to evaluate:

- opportunities for preventive actions
- any need to modify the process planning
- the opportunity to develop software in order to have timely information about the behaviour of finished products.

SECTION 10: PROCEDURES FOR HANDLING NON-CONFORMITY

10.1

The Manufacturer is to establish and maintain documented procedures to ensure that:

- any product which does not conform to specified requirements is prevented from use, as far as is reasonably practicable;
- non-conforming products are identified, evaluated, separated (when practical) and removed;
- in the event that a non-conforming material, product or process is identified, investigations are initiated to determine the reasons for non-conformity and effective corrective action is implemented to prevent recurrence.

SECTION 11: PERSONNEL QUALIFICATION

11.1

The personnel for whom professional qualification is required are as follows:

- Hull Construction
 - Laminators
 - Bonders

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- Technician responsible for the quality process department
 - Process Manager
- Machinery, Systems and Fittings
- Operators
 - Welders
 - Technician responsible for the production line
 - Product Manager

The Process Manager and Product Manager are responsible for the application of the Production Control Certification Scheme for Hull Construction and for Machinery, Systems and Fittings, respectively.

The Process Manager and the Product Manager may be the same person.

11.2 Personnel training

Qualification for the above positions is to be provided by means of adequate training and skills.

Welders are to be qualified according to Tasneef Rules together with Laminators, Bonders and Process Managers.

To this end, the Manufacturer is to arrange a specific training program by means of internal or external training courses.

In particular, suitable training is to be carried out when new equipment or different installation systems are introduced into the production line.

The Manufacturer is to establish and maintain documented procedures to ensure that:

- all personnel involved in activities affecting quality and performing specific assigned tasks are suitably qualified and competent on the basis of appropriate education, training or experience, as required.
- training records are maintained.

SECTION 12: PERSONNEL DUTIES AND RESPONSIBILITY

12.1

The Manufacturer is to identify the responsibility, authority and interrelation of all personnel who manage, perform and verify work affecting the conformity and quality of the products. In particular, the Manufacturer must identify a person with appropriate authority, knowledge and experience to supervise the Production Quality Control and to ensure that the requirements of the quality plan are implemented and maintained.

Annex 1 - Guidelines for the preparation of the QCM

PART 2: TECHNICAL REQUIREMENTS FOR HULL PRODUCTION

Including indications on essential items

This part provides a typical list of elements, organised in sections, which may be included in a Quality Control Manual (QCM).

For each section, the main topics and essential items are indicated.

The list is given for guidance only and does not intend to be exhaustive.

The Manufacturer is free to include alternative/additional content in the manual to describe the production control system.

SECTION 1: WORKSHOP ARRANGEMENT

If not adequately defined, workshop arrangement could influence short- and long-term mechanical properties, and weather and water resistance of the F.R.P. laminates and structures.

In order for a workshop to be qualified as suitable for the production of high quality F.R.P. laminates and structures on a consistent basis, it is necessary that manufacturing facilities and room conditioning meet certain minimum requirements.

Main topics

- Workshop area layout
- Material and semi-finished product storage and handling
- Workshop facilities
- Workshop conditioning
- Material storage and handling
- Records

Essential items

- Identification of the areas for material storage, manufacturing and services
- Means for preventing the spread of dust
- Physical separation between joinery department and lamination/mould department
- Instruments to control temperature and humidity in the workshop
- Positioning and level of lighting adequate to reveal product defects and surface quality
- Adequate storage of material to prevent accidental contamination or wrong selection
- Sufficient records of room temperature and humidity to ensure the proper control level of these parameters.

SECTION 2: PROCESS QUALITY CONTROL DEPARTMENT

A Manufacturer's organisation function intended for the following activities:

- a) evaluation and approval of new materials;
- b) monitoring of incoming batches of materials;
- c) control of the manufacturing process;
- d) quality assurance of the final parts.

Main topics

- Process Quality Control Department duties and responsibilities
- Process Quality Control Department testing
- Process Quality Control Department equipment
- Process Quality Control Department documentation

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Essential items

- Adequacy of the testing equipment
- Availability of updated lists of:
 - raw materials under evaluation
 - technical and safety data sheets of all raw materials and chemical reagents used in the laboratory
 - certifications and approvals
 - test methods and acceptance limits
- Availability of the calibration instrument procedure and register
- Availability of a procedure for the identification and traceability of incoming batches of raw materials.

SECTION 3: RAW MATERIAL SELECTION

Materials for construction of laminates are to be limited to those for which characteristics are stated in detail and for which chemical and physical characteristics and performances have been determined and certified.

From a general point of view, all materials are to be approved by Tasneef for the specific use and referring to the procedures indicated in the "Rules for the Type Approval of Component Materials Intended for Hull Construction", "Rules for the Classification of Yachts" Part B Chapter 4 and Part D Chapter 6

The Production Quality Control Department is responsible for the approval of materials from the point of view of compatibility and application: approval will be granted in accordance with the material Manufacturer's instructions and recommendations.

Main topics

- Raw materials
- Compatibility between raw materials
- Suppliers' qualification
- Polymeric materials' performance

Essential items

- Qualification of raw materials
- Availability of working instructions
- Investigation of compatibility between raw materials
- Suppliers' qualification
- Definition and registration of the Highest Lamination Temperature (HLT)
- Definition and registration of the Highest Service Temperature (HST).

SECTION 4: MOULDS

Composite moulds require a proper design in order to be able to perform and to resist or prevent transportation, movement, splitting, lifting, handling, lamination and demoulding. Consequently, their construction is to be carried out referring to the design specifications and requirements.

In principle, standard quality F.R.P. parts are to be extracted from an F.R.P. mould when they are completely cured and finished. Therefore, the moulds considered in this manual are intended to be composite female moulds, used in those processes in which gel coat application is the first step in F.R.P. product manufacturing.

Main topics

- Mould properties
 - Mould surface aspect
 - Mould chemical resistance

Annex 1 - Guidelines for the preparation of the QCM

- Mould abrasion and impact resistance
- Thermal resistance
- Geometrical characteristics
- Structural resistance and rigidity
- Mould approval and inspection
- Mould preparation and maintenance
- Mould release agents
- Closed moulds

Essential items

- Availability of instructions for mould production and for new mould construction
- Availability of instructions for mould cleaning and preparation
- Evidence of testing and approval of mould release agents
- Evidence of verification and approval of all the necessary parts for closed moulds.

SECTION 5: EQUIPMENT FOR LAMINATION

Where commercially available, machines and equipment for handling, agitation, mixing, and application of materials are recommended in order to reduce variability in the process. Pressure, vacuum and flow metering are to be present on the equipment.

Equipment is to be selected according to the raw material specifications and the material flows needed in the process. Also, geometrical complexity and size of the mould are to be carefully considered in the selection phase.

Materials for parts of equipment and gaskets in direct contact with liquids are to be compatible and resistant to them.

All equipment with parts in movement are to be statically grounded. Electrical equipment may be assumed to be explosion-proof.

Operators are to be correctly trained in the use of the equipment and precise procedures and operating instructions are to be available.

Main topics

- Heaters
- Pumps
- Mixers
- Gel coaters
- Resin applicators
- Impregnated reinforcement applicators
- Bonder applicators
- Vacuum pumps and systems

Essential items

- Availability of equipment list
- Equipment calibration procedure
- Availability of equipment instructions
- Operator training.

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SECTION 6: PROCESS DEFINITION AND CONTROL

The standardisation of F.R.P. boat fabrication depends on the correct definition of the manufacturing process in use.

The lamination and assembling techniques, the laminate type (monolithic or sandwich) and the hull dimensions are the parameters to be considered in the definition of the manufacturing process.

Main topics

- Process operations and procedures
- Process variables
- Production checks
- Production sample panels
- Lamination records
- Process indicators

Essential items

- Availability of process indicator list
- Availability of lamination reports
- Availability of sample panels
- Operator training
- Availability of process control reports (e.g. checklists)
- Definition of lamination parameter tolerance limits
- Definition of the working phases.

SECTION 7: LAMINATION DEFECTS

Knowledge of laminate defects is fundamental in training personnel. A better understanding of the origin of such defects will prevent problems arising on the laminates while they are still under construction.

Main topics

- Types of defects
- Defects detectable during construction
- Short-term defects
- Long-term defects
- Origin of defects
- Defect inspection
- Defect recording

Essential items

- Recording of process non-conformities and lamination defects
- Operator training
- Availability of process control reports (e.g. checklists).

SECTION 8: INTERNAL STANDARD LAMINATES

Standard laminates are to be made from standard materials [Section 3: RAW MATERIAL SELECTION] approved by the Internal Production Quality Control Department.

Product design is to refer only to standard laminates for the construction of new units.

Personnel are to be specifically trained and qualified in order to be able to reproduce the internal standard laminate.

Main topics

- Standard laminate fabrication
- Availability of internal standard laminates

Annex 1 - Guidelines for the preparation of the QCM

- Typical laminated joints
- Inspection
- Base laminate and joint characterisation
- Durability of standard laminates
- Testing
- Recording

Essential items

- Evidence of laboratory adequacy (i.e. accreditation, evidence of instrument calibration related to international standards etc), when external laboratories are involved in laminate characterisation
- Evidence of internal standard laminate durability evaluation
- Definition of internal standard laminate samples
- Qualification and approval of internal standard laminates.

SECTION 9: PERSONNEL QUALIFICATION

The operators involved in lamination and assembling are to demonstrate their ability to produce standard laminates and secondary bonding. They are to have specific skill, depending on the lamination and assembling techniques in use in the shop.

The technicians involved in process control are to demonstrate their ability to monitor and control the process variables and parameters.

Main topics

- Qualification of laminators
- Qualification of adhesive bonders
- Qualification of process managers

Essential items

- Availability of Manufacturer's shipyard organization chart
- Personnel training and qualification records
- Availability of production process instructions.

SECTION 10: RECORD-KEEPING

In order to ensure traceability of the composite fabrication, the F.R.P. Manufacturer is to keep records concerning the material applications and lamination procedures available.

All records are to be dated and signed.

For each product, a file is to be kept with a copy of the relevant records.

Main topics

- Lamination plans
- Highest boat service temperatures
- Layout of production departments
- Raw material technical data sheets
- Raw material safety data sheets
- Raw material certifications and approvals
- Raw material internal evaluation and approvals
- List of equipment
- Planned equipment maintenance

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- Instrument calibration reports
- Tests on internal standard F.R.P. laminates and approvals
- Standards and methods for testing
- Contact list of external laboratories
- Process definition and flowcharts
- Highest lamination temperatures
- Acceptance of new moulds
- Planned maintenance for the moulds
- Fabrication procedures
- Working instructions
- Process parameters and indicators
- Registration of sample panels
- Room temperature records
- Room humidity records
- Acceptance reports for incoming materials
- F.R.P. parts: bill of materials
- F.R.P. parts: lamination reports
- F.R.P. parts: final part inspections
- Process indicator variability
- Personnel training records

Essential items

- Availability of records of all parameters relevant to the production quality control.

Annex 2 - Informative Module

APPLICATION FOR CERTIFICATION

PRODUCTION QUALITY CONTROL CERTIFICATION SCHEME - APPLICATION FORM -

1. SHIPYARD/MANUFACTURER	
Business name:	
Address:	
Contact person	

VAT number	Phone	Fax	E-mail

2. PRODUCTION SITE(S)	
Name of the site:	
Address:	
Contact person :	
Phone:	
Fax:	
E-mail:	

3. REQUIRED CERTIFICATION		
	HULL CONSTRUCTION	MACHINERY, SYSTEMS AND FITTINGS
PARTS TO BE CERTIFIED		

Annex 2 - Informative Module

4. PRODUCT IDENTIFICATION DATA (for the reference product : other information to be supplied in [6])				
Yacht type /Product description				
Number of yachts built for year having a length (L _H) not more than 24 metres	Yachts/year ≤30 2,5 m ≤ (L _H) ≤15m	Yachts/year >30 but ≤50 2,5 m ≤ (L _H) ≤15m	Yachts/year >50 2,5 m ≤ (L _H) ≤15m	
	----- -	----- -	----- -	
	Yachts/year ≤30 2,5 m ≤ (L _H) ≤18m	Yachts/year >30 but ≤50 2,5 m ≤ (L _H) ≤18m	Yachts/year >50 2,5 m ≤ (L _H) ≤18m	
	----- -	----- -	----- -	
	Yachts/year ≤30 18 m < (L _H) ≤24m	Yachts/year >30 but ≤50 18 m < (L _H) ≤24m	Yachts/year >50 18 m < (L _H) ≤24m	
	----- -	----- -	----- -	
Number of yachts built for year having a length (L _H) more than 24 metres	Yachts/year ≤20 24 m < (L _H) ≤35m	Yachts/year >20 but ≤30 24 m < (L _H) ≤35m	Yachts/year >30 24 m < (L _H) ≤35m	
	----- -	----- -	----- -	
	Yachts/year ≤10 35 m < (L _H) ≤45m	Yachts/year >10 but ≤20 35 m < (L _H) ≤45m	Yachts/year >20 35 m < (L _H) ≤45m	
	----- -	----- -	----- -	
	Yachts/year ≤10 (L _H) > 45m	Yachts/year >10 (L _H) > 45m		
	----- -	----- -		
Yacht main dimensions (*)	Length L	Breadth B	Construction Head D	Depth T
Yacht Displacement (tonnes) and Tonnage (GT) (*)	Displacement		Tonnage	

(*) to be filled in only in the case of yachts: a range is to be indicated for the numerical data (L, B, D, Displ. Tonnage), containing approx. the min. and max. values of the boats built by the shipyard.

Annex 2 - Informative Module

5. Makers' Manufacturer information:			
Number of persons involved in the activity to be certified			
Are personnel, (Bonders, Laminators, Process Manager) qualified according to the applicable Rules?	Yes	No	In part
If the above answer is no, indicate if personnel are qualified based on an internal training course or by an external Manufacturer			
If personnel are qualified by an external Manufacturer, state the relevant Manufacturer and the reference standards adopted			
Is an internal laboratory available for the Shipyard/Maker?	Yes	No	
Are tests and analysis carried out by an external laboratory?	Yes	No	In part
Business name of the external laboratory:			
Has a certified quality management system been adopted by the Shipyard/Maker?	Yes	No	
Quality management system certified according to: (to be indicated if the above answer is yes)	ISO 9001	ISO 14001	Other standards
Indicate Certification Body			
Is a preliminary assessment of the Production Quality Control System required?	Yes	No	

6. Additional information for Yacht Hull/Product:	
Gel coats normally used (Maker and type – neopentyl isophthalic polyester, neopentyl isophthalic, vinylester, polyester and/or vinylester blend)	
Resins normally used (Maker and type – epoxies, vinylesters, isophthalics, blends of styrenated resins, pure orthophthalics and pure dicyclopentadiene)	
Catalyst normally used with the above gel coats and resins (Maker and type-MEKP, CUHP or CHP, AAP)	
Hardeners normally used with the above gel coats and resins (Maker and type)	
Structural bonders and core bonders used (Maker and type)	
Reinforcements normally used with the above resins [Maker and type – fibres (glass, carbon, aramid) and form (roving, MATs, woven roving, unidirectional, multiaxial)]	
Core materials normally used (Maker and type – rigid expanded foam plastic, low density wood, syntactic foam, polymeric/metallic honeycomb, low density reinforcement)	
Composite production technique normally used (open moulding manual, open moulding spray-up, closed moulding vacuum bagging, closed moulding infusion bagging)	

Annex 2 - Informative Module

7. Attachments for Yacht Hull/Product:			To be sent later
General layout of the production site showing the subdivision of the various spaces, and relevant installed equipment			
List of products (with associated technical characteristics) manufactured in the factory where the Manufacturer intends to apply the relevant Production Quality Control			
Other drawings/documents if deemed necessary			

8. Information to be supplied for each model (**)	
Number, power and type of propulsion engines	
Number of shaft lines and type of propellers	
Number and power of electric generators and total power of electrical plant	
Type of current (a.c., d.c.) and rated voltage of the electrical plant	
Other plants fitted on board, short description	
Fixed and mobile fittings, description	

Annex 2 - Informative Module

9. Attachments for Yacht Machinery, Systems and Fittings for a representative yacht (**):		
To be sent later		
General arrangement of machinery space of a representative craft if deemed necessary	<input type="checkbox"/>	
General arrangement of machinery and plants outside machinery space of a representative craft if deemed necessary	<input type="checkbox"/>	
General arrangement of fittings of a representative craft if deemed necessary	<input type="checkbox"/>	
Other drawings/documents if deemed necessary	<input type="checkbox"/>	

(**) to be filled in only in the case of yachts when the Production Quality Control relevant to the arrangement of machinery, system and fittings is required.

Date

Stamp and signature of the Manufacturer

Annex 3 - Application Form

APPLICATION FORM

**PRODUCTION QUALITY CERTIFICATION SCHEME
- APPLICATION FORM -**

SHIPYARD/MANUFACTURER	
Business name:	
Address:	
Contact person	

VAT number	Phone	Fax	E-mail

PRODUCTION SITE(S) (if different from shipyard/Manufacturer address)	
Name of the site:	
Address:	
Contact person:	
Phone:	
Fax:	
E Mail:	

YACHT TYPE NAME/PRODUCT DESCRIPTION

RULES/STANDARDS TO BE APPLIED FOR THE YACHT/PRODUCT CONSTRUCTION

INFORMATION RELEVANT TO THE PRODUCTION QUALITY CERTIFICATE REQUIRED			
Required PQCL		Hull Construction	Machinery, Systems and Fittings
Level	Medium		
	High		
	Very high		

Date

Stamp and signature of the Manufacturer

Annex 4 - Hull & Machinery Rating calculation method

HULL & MACHINERY RATING CALCULATION METHOD

1 GENERAL

The verification will be carried out by the Tasneef Survey Team using checklists containing references for all the PQCS items.

All items will be assessed and a score will be assigned to each item.

The score is assigned based on the following criteria:

- 0 no knowledge of the item, no action identified to fulfil the item requirement;
- 1 knowledge of the item, actions identified but not implemented;
- 2 action implementation in progress;
- 3 action implementation nearly completed;
- 4 item requirement fulfilled in appropriate manner.

2 RATING CALCULATION

HR and MR are calculated as shown below.

2.1 Checklist Rating Score

The rating score of each checklist is the sum of the score assigned to each item in the checklist divided by the maximum score for the checklist (i.e. the total number of items x 4) and given as a percentage (%).

$$\text{N.B. ChecklistRatingScore} \quad (\text{ChecklistRaingScore}_j) = \frac{\sum_i \text{score}_i}{\sum_i \text{score}_i^{\max}} \times 100$$

Where: *i* is extended to all the applicable items of a checklist

score_i^{\max} is the max score assignable to each applicable item of a checklist

2.2 Hull Rating (HR)

HR is the sum of each checklist rating score multiplied by the percentage weight of each checklist given in the following list and divided by 100.

$$\text{N.B. checklistscore} \quad \text{HR} = \frac{\sum_j \text{checkltsscore}\%_j \times \text{weight}_j}{100}$$

Where:

j is extended to all sections

weight_j is the "percentage weight" shown for each section of the hull in the following table

Checklist	Percentage Weight
Workshop Arrangement	16%
Process Quality Control Department	9%
Guidelines for Raw Material Selection	12%
Moulds for a Quality Lamination	9%
Equipment for Lamination	12%
Process Definition and Control	12%
Lamination Defects	9%
Internal Standard Laminates	9%
Personnel Qualification	12%
Total	100%

Annex 4 - Hull & Machinery Rating calculation method

2.3 Machinery Rating (MR)

MR is the sum of each checklist rating score multiplied by the percentage weight of each checklist given in the following list and divided by 100.

$$MR = \frac{\sum_j \text{checkltscore}\%_j \times \text{weight}_j}{100}$$

Where:

J is extended to all sections

weight_j is the "percentage weight" shown for each section of the machinery, systems and fittings in the following table

Checklist	Percentage Weight
Workshop Arrangement	5%
Control of conformity of incoming machinery and materials	12%
Storage spaces and their subdivision into areas	11%
Identification and traceability of materials	6%
Equipment for installation, construction and control	12%
Planning and process control	18%
Monitoring, control and test system	12%
Personnel Qualification	18%
Record-keeping system	6%
Total	100%

3 RATING CALCULATION DURING PERIODICAL VERIFICATION

When, during periodical verification, half of the total elements of the system are checked (i.e. half of the checklists are used), HR and MR are calculated as described in the above paragraphs 2.2 and 2.3, considering the checklist rating scores for the current periodical verification and the rating score of the checklists not used during the current verification but used for the previous verification.

Annex 5 - Form of the Certificate

FORM OF THE CERTIFICATE



CERTIFICATE N°

THIS IS TO CERTIFY THAT
THE PRODUCTION CONTROL SYSTEM
ADOPTED BY

- SHIPYARD/MAKER -
(Business name, VAT number)
Address

For the production of
Description *Commercial model/name*
Identification
Use
Production site *Address*

- is in compliance with the Rules:
- PRODUCTION QUALITY CONTROL CERTIFICATION SCHEME FOR MANUFACTURERS OF YACHTS AND OTHER PRODUCTS MADE IN COMPOSITE MATERIAL HAVING THERMOSETTING MATRICES
- according to the above Rules, the following score/level can be assigned:

HULL CONSTRUCTION

Score rating (HR): _____
Production Quality Control level: _____

MACHINERY, SYSTEMS AND FITTINGS

Not applicable

Score rating (MR): _____
Production Quality Control Level: _____

First issue _____/_____/_____
Current issue _____/_____/_____
Validity _____/_____/_____

Information on the certificate validity can be found at www.Tasneef.org
Use and validity of this certificate are subject to compliance with the requirements of Tasneef Rules: "PRODUCTION QUALITY CONTROL CERTIFICATION SCHEME FOR MANUFACTURERS OF YACHTS AND OTHER PRODUCTS MADE IN COMPOSITE MATERIAL HAVING THERMOSETTING MATRICES"

Date ___/___/___ Tasneef

Annex 5 - Form of the Certificate

PERIODICAL SURVEY ENDORSEMENTS

FIRST PERIODICAL SURVEY Place Date	Signature and seal
SECOND PERIODICAL SURVEY Place Date	Signature and seal
THIRD PERIODICAL SURVEY Place Date	Signature and seal

SUPPLEMENTARY SURVEY ENDORSEMENTS

Place Date	Signature and seal
Place Date	Signature and seal
Place Date	Signature and seal
Place Date	Signature and seal

This certificate is made up of 2 pages and ___ attachments containing product information.