

Rules for the Qualification and Certification of Coating Inspectors in the Marine Sector

Effective from 1 January 2016

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

Article 8

related to a period prior to transfer of ownership.

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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1 GENERAL AND FIELD OF APPLICATION

These Rules illustrate the procedures applied by Tasneef to certify personnel acting as inspectors of painted steel structures, both when the latter are new and during maintenance, in marine applications.

1.2

Certification is granted upon satisfactory verification that the candidate meets the educational, experience and training requirements described in paragraph 4 and after the candidate has passed the examination described in paragraph 6 of these Rules.

1.3

These Rules apply, in particular, to coating inspectors engaged in the activities described in the Rules for the Classification of Ships, Pt D, Ch 10, Sec 12, and in the standards mentioned in paragraph 2.1 a) and b) of these Rules

2 REFERENCE STANDARDS

2.1

The applicable standards for the above-mentioned qualification are:

- a) IMO Resolution MSC.215(82) Performance standard for protective coatings for dedicated seawater ballast tanks in all types of ships and double-side skin spaces of bulk carriers (hereafter referred to as PSPC).
- b) IACS Procedural Requirement (PR) No. 34: application of IMO performance standard for protective coatings (PSPC), resolution MSC.215(82), under IACS common structural rules for bulk carriers and oil tankers (hereafter referred to as IACS PR 34).
- c) European Pre-standard ENV 12837:2000, Paints and varnishes – Qualification of inspectors for corrosion protection of steel structures by protective paint systems (hereafter referred to as ENV).

3 SKILL LEVEL

3.1

According to reference standard ENV, a candidate may be certified to one of the two skill levels A or B as indicated in paragraph 3 of the standard.

3.2

With regard to the two skill levels, only inspectors certified to level B meet the requirements of paragraph 2.2 of IACS PR 34, and therefore this level is the only one considered by these Rules.

4 ADMISSION REQUIREMENTS

4.1

To be admitted to the exam, the candidate must possess the minimum training and experience requirements stated by ENV, as defined below.

4.2

Education: candidates must hold a technical or scientific secondary school diploma or a higher qualification such as a technical/scientific university degree/diploma (engineering, architecture, chemistry, industrial chemistry, etc) or equivalent.

4.3

Experience: candidates must prove they have spent two years working uninterruptedly in the field of inspections of corrosion protection systems of steel structures and components by means of painting within the shipbuilding industry.

4.4

Training: candidates must demonstrate they possess the knowledge required to perform the tasks of a paint inspector, as described in chapter 6 of PSPC and in paragraphs 4.1, 4.2 and 4.3 of ENV.

The certificate of participation in a specific course, issued by Tasneef, is proof that the candidate meets the above knowledge requirements. The Tasneef course program is in compliance with the prescriptions of paragraph 2.3.1.2 of IACS PR 34 and, in particular, includes:

- basic theories related to the notions of corrosion chemistry, electro-chemistry and physics, behaviour of materials, corrosion protection methods, preparation of surfaces, coating products and their application, environmental protection and safety;
- procedures related to inspection methods, coating quality control, field activities, measuring instruments, laboratory tests, etc;
- specifications of inspection activities on new buildings and ships in service.

The Tasneef training course syllabus is contained in Annex 1.

The minimum number of training hours for each of the above three groups of subjects is stated in Tab 1.

Table 1: Minimum training requirements

Group	Subject	Hours
Basic	Elements of electrochemistry, corrosion, cathode protection, metal-coating and galvanisation	4
	Coating products	4
	Protective cycles (*)	4
	Preparation of surfaces and application of protective cycles (*)	12
	Environmental protection and safety	4
Practical	Laboratory tests and instruments	4
	Instruments, measurements and field tests (*)	20
	Inspection methods and Quality Control	12
	Field experience	8
Marine	New buildings and coating	4
	Operating lifetime of ship and coating	4
	TOTAL HOURS	80
(4.)	1	·

^(*) as regards these subjects, training must be based as much as possible on the EN ISO 12944 family of technical standards and on those given in PSPC.

5 TUTORS

5.1

Course tutors must possess the qualification and experience requirements defined below.

5.2

Qualification: tutors are to be qualified coating inspectors certified according to these Rules or to the requirements stated in paragraph 6.1.1 of PSPC.

5.3

Experience: tutors must prove they have spent two years working uninterruptedly in the field of inspections of corrosion protection systems of steel structures and components by means of painting within the shipbuilding industry. Experience gained for admission to the qualification level stated in paragraph 5.2 is considered valid.

5.4

Tutors who meet the requirements stated in paragraphs 5.2 and 5.3 are to be approved by Tasneef.

6 STAFF AUDITING AND CERTIFICATION PROCESS

6.1

Candidates wishing to obtain the above certification must send Tasneef a special application containing at least the following:

name and surname of the candidate;

- a detailed curriculum vitae together with a minimum work experience declaration (2 years) issued by the employer;
- a copy of the training course attendance certificate issued by Tasneef.

6.2

Alternatively to the above training certificate, Tasneef may consider other recognised qualifications held by the candidate demonstrating his/her knowledge and specific skills in the field of painting. Recognised qualifications are:

- declarations and certificates issued by NACE (National Association of Corrosion Protection) or by FROSIO within their respective programs.
- attendance certificates for a course in compliance with paragraph 2.3.1.2 of IACS PR 34 and approved by an IACS Member Society.
- a minimum of 5 years' practical work experience as coating inspector of ballast tanks during new construction according to the requirements stated in paragraph 2.3.2 of IACS PR 34.

6.3

Tasneef reserves the right to require other documents in order to supplement and support the information previously received from the applicant.

6.4

Tasneef may hold the qualification examination at its examination centres or at the applicant's facilities. For each examination session, the commission will comprise a suitable number of tutors with reference to the number of candidates involved.

6.5

The tutors of the examination commission must meet the requirements stated in 5.

6.6 Examination

- **6.6.1** The qualification exam comprises:
- an initial written test comprising a set of questions divided by subject group, as shown in Tab 2:
- a second written test in which candidates are asked to write about a technical subject assigned by the commission:
- an oral test with discussion and analysis of the results of the written tests.
- **6.6.2** The first written test includes multiplechoice questions chosen from the Tasneef collection.
- **6.6.3** During the written test, candidates are allowed an average of two minutes per question.
- **6.6.4** To pass the written test, candidates must:
- answer correctly at least 80% of the questions i.e. 101;
- answer correctly at least 70% of the questions relative to each of the groups indicated in Annex 5, Tab 2.

Only candidates who have passed the first written test will be admitted to the second written test and the oral test.

Table 2: Minimum number of questions

Group	Number of questions
Basic	44
Practical	74
Marine	8
Total	126

6.6.5 The second written test requires candidates to write about a technical subject, such as preparing a control plan, drawing up a technical specification, solving a problem in the field, etc.

Candidates have 30 minutes to complete the second written test; this test will not be corrected by the commission but presented and explained to the commission by the candidates during the subsequent oral test.

6.6.6 The oral test will then be held by the commission at the end of the candidate's second written test.

During the oral test, the commission may show candidates painted samples and ask them to inspect them, answer specific questions or perform measurements.

- **6.6.7** The commission considers the oral test as passed if the candidate demonstrates:
- he/she has completed the second written text correctly, explaining its contents and replying to the questions on the subject asked by the commission;
- he/she has sufficient knowledge of all the subjects involved without revealing any systematic shortcomings in his/her training or work experience.

For assessment purposes, the commission also assesses the candidate's capacity for critical analysis and correction of any errors in the written test, together with the results of any inspections of painted samples.

6.6.8 At the end of the tests, the commission writes a report for each candidate comprising a description of the exam, the evaluations and the final result.

Candidates who do not pass the exam must wait for at least thirty days before applying again. If they have been disqualified for dishonesty, they must wait for at least one year.

Candidates who have passed the first written test but do not pass the second test and/or the oral test may be allowed to take the second written test and the oral test again – without repeating the first written test – within six months from the date of the first exam. After six months, candidates must take all the tests again.

- **6.6.9** Upon completion of the examinations, the examination commission meets to draw up the final examination report, which must be signed by all the commission members.
- **6.6.10** The final report, all the examination reports and all the documents produced by the candidates are to be sent to Tasneef for approval and issue of the proposed certificates.

7 ISSUE OF THE CERTIFICATES

7.1

Upon satisfactory review of the final report, the examination reports and the documents produced by the candidates, Tasneef decides upon the issuance of certificates.

7.2

For the foregoing activity, Tasneef may make use of coating inspectors meeting the requirements stated in paragraph 5.1 above.

7.3

On the basis of the decisions taken, Tasneef issues the certificates and corresponding badges to the qualified staff.

8 VALIDITY OF CERTIFICATES

8.1

The certificates issued by Tasneef are valid for five years, unless they are withdrawn. Only Tasneef may withdraw a certificate.

8.2

The validity of the certificates during the above period is subject to intermediate validation by Tasneef (during the third year of validity), which will audit the following conditions:

- the correct professional behaviour of qualified personnel;
- the continuity of professional paint inspection activities during the two-year period;
- the professional training and updating activities attended by the inspector during the two-year period;
- the continued physical fitness of the inspector to perform the specific inspection activities.

9 RENEWAL OF CERTIFICATES

9.1

At the end of the five-year period, the certificate expires and the inspector must sit a special renewal exam for the issue of a new certificate.

9.2

Applications to renew certification must be presented to Tasneef, as indicated in point 6 above.

10 WITHDRAWAL OF THE CERTIFICATION

10.1

Tasneef may monitor or control the work of qualified staff within the sphere of its institutional activities, such as:

- · surveillance of sites and production units;
- certification or periodical audits of company quality systems according to UNI EN ISO 9001:2000 standards;

- certification or periodical audits of products subject to statutory constraints (e.g. EC Directives);
- third party industrial certification activities.

10.2

Within the scope of these activities, Tasneef may cancel the certificates of qualified operators if:

- it finds that the conditions indicated in chapter 8 are not satisfied;
- objective documented evidence shows that qualified staff are unable to guarantee the professional skills demonstrated during their qualifying exam.

10.3

The inspector will be notified by registered letter of the cancellation of the certificate and the person in question will be deleted from the list indicated in chapter 11.

10.4

Personnel whose certificate has been cancelled must return the certificate to Tasneef. Personnel who, following cancellation, intend to apply for certification again must present a new application and repeat the entire procedure.

10.5

Certified personnel may not use the certificate or copies thereof if certification has been cancelled.

11 LIST OF INSPECTORS CERTIFIED BY Tasneef

11.1

Tasneef publishes and regularly updates a list of the personnel who have obtained certification and who have explicitly agreed to have their personal data processed. The list contains the inspector's name, surname and address and the expiry date of the certificate and can be found on the Tasneef web site www.Tasneef.org.

Annex 1 - Course Syllabus

1. RUST AND PAINT PRODUCTS

- 1.1 Rust
- 1.2 The rust triangle
- 1.3 Protection by painting
- 1.4 Paint Products
- 1.5 Classification of paints
- 1.6 Solvents and Diluents
- 1.7 Manufacturing Paint
- 1.8 Compatibility of paint products
- 1.9 Chemical resistance and mechanical strength tests
- 1.10 The rheological properties of paint products
- 1.11 Technical data sheets

2. APPLYING PAINT PRODUCTS

- 2.1 Application methods
- 2.2 Paint application standards
- 2.3 Importance of thicknesses
- 2.4 Paint defects
- 2.5 Application safety standards

3. SURFACE PREPARATION

- 3.1 Objectives of the protective procedure
- 3.2 Types of surface
- 3.1 Methods for preparing surfaces
- 3.4 Degrees of surface preparation
- 3.5 Old iron surface blasting
- 3.6 Preparing concrete surfaces
- 3.7 Bonding profile
- 3.8 Abrasives

4. INSPECTION PROCEDURES AND STANDARDS

- 4.1 Inspector's responsibilities and duties
- 4.2 Checks to be carried out before beginning the activity
- 4.3 Checks to be carried out during the activity
- 4.4 Final checks and tests
- 4.5 Technical specifications
- 4.6 Classification of inspections

- 4.7 Practical performance of inspections
- 4.8 Legal and commercial aspects of the work and technical implications
- 4.9 Reports
- 4.10 Standards for correct inspection
- 4.11 How to inspect surface preparation
- 4.12 Overall evaluation of surface preparation
- 4.13 Inspecting a surface: cleaning and dusting
- 4.14 Inspecting the process used to apply a coating
- 4.15 Inspecting a tank coating after washing

5. METEOROLOGICAL FACTORS

- 5.1 Air temperature thermometers
- 5.2 Air humidity psychrometers and hygrometers
- 5.3 Rustproofing and dew point

6. MEASURING AND CHECKING INSTRUMENTS

- 6.1 Use of instruments general
- 6.2 Inspection plan
- 6.3 Measuring instruments and methods
- 6.3.1 Checking paint products
- 6.3.2 Checking surfaces before sandblasting
- 6.3.3 Checking surfaces after sandblasting
- 6.3.4 Checking ambient conditions
- 6.3.5 Checks during application
- 6.3.6 Final checks
- 6.3.7 Other tests and checks