

# IFDS Functional Classification 2000 & Procedures System Manual

November 2000



International Foundation for Disabled Sailing



## General

Throughout this document, where the words "sailor" or "sailors" are used, they shall mean "sailor with a disability" or "sailors with disabilities".

## INTRODUCTION

### History

The previous IFDS classification system was based upon a sailor's disability and we believe was an excellent basis for the early days of international racing. However, recent trends within the sport/disability world have indicated that functional disability classification provides a more equitable means of quantifying a disabled person's ability to participate in a particular sport. This falls in line with the general trend within the Paralympic Movement and is also a response to the dramatic improvement in the standard of racing by sailors.

### Purpose

An efficient classification system must:

- Enable fair and equitable competition, at all levels, for mildly, moderately and severely disabled sailors.
- Encourage crews of mixed disability, from mild to severe, to compete and complement each other.
- Not be affected by the sailing skills, training or talent of the participant
- Only measure functional limitations caused by physical disability
- Be as simple as possible so that it can be used in a consistent way in every participating country
- Allow sailors and those people without medical expertise to make a reasonably accurate estimate of a sailor's classification.

### Sailing functions

In this context, the main functions of sailing have been identified as:

- Compensation for the movement of the boat. (Stability)
- Operating the control lines and the tiller (Hand function)
- Ability to move about in the boat (Mobility)
- Ability to see whilst racing (Vision)

These functions have been further refined to test A. Tiller, B. Sheeting, C. Cleating, D. Transferring, E. Hiking.

## Functional classes

The following functional classes have been identified as the framework for this Classification System:

- Stability
- Hand function
- Mobility
- Vision

## Ranking of functional limitations

From the observation of top sailors, it has been possible to identify the degree to which different functional limitations affect the ability to undertake the functions of sailing. For example, the partial loss of the use of a foot is regarded as less functionally disabling in sailing than it might be in other sports.

In the previous system, if a sailor had several functional limitations, it was the one that scored the least points which counted.

In the Functional Classification 2000 consideration of several measurable abilities and disabilities will be taken into account

## Maximum and Minimum Total Points per Crew ( "Crew" is the three sailors racing the boat).

A maximum total points per crew is set so that a crew cannot have too many sailors with a mild disability. If a crew chooses to compete with three severely disabled sailors (which would not be desirable for safety reasons), they are not given any sporting advantage over a less disabled crew whose total points is within the limit. The limit is set to encourage a mix of disabilities. See 1.3 for details

## Minimum level of disability for an individual

When a sailor has minimal disability they may be considered to have normal ability for sailing and will not rate under the Functional Classification 2000. They are not allowed to compete in ISAF/IFDS Disabled Sailing Events. See 1.2

## 1. GENERAL PRINCIPLES

### DEFINITIONS

A. Primary Definition. (Phrases underlined are secondary definitions):

A sailor is eligible to compete in an ISAF/IFDS sanctioned event if he/she has a physical disability which causes, or ought to cause, a noticeable impairment of function while sailing. The Event Classification Committee makes the final decision.

B. Secondary definitions

- 1) Physical disability is any birth defect, injury, surgery, or disease process, which causes a medically evident permanent impairment of physical function.
- 2) Disability solely due to mental or psychological causes, or to disorders which could be corrected by the sailor, such as obesity, is not considered eligible for competition, even if it causes noticeable impairment of function while sailing.

- 3) If disability of type B. 2) is added to a physical disability, the Event Classification Committee will not consider any further noticeable impairment of function while sailing caused by these additional causes.
- 4) Noticeable impairment of function while sailing is a Functional Dock (FD) and (SAIL) score of 24 or less supported by an appropriate Functional Anatomic (FA) score or by objective evidence of impairment of vision. If the FD or SAIL score is 25, the Event Classification Committee may consider evidence, if submitted, of noticeable impairment of function while sailing, given by others.

This means that if a sailor has a minor disability which causes no noticeable functional impairment while sailing, he/she is not allowed to compete. Alternatively, if he/she has a minor disability and can prove to the Classification Committee's satisfaction that it does cause a Primary Definition. (Phrases underlined are secondary definitions): functional disability while sailing, then he/she will be classified as a 7.

### **1.1 Functional Classification in relation to sailing**

This Classification System is based entirely on the functions required to compete in sailing and as such may differ from those functions required for other sports, or for daily living.

### **1.2 Minimum disability**

If a sailor has more than 300 points in the Functional Anatomic test and more than 24 points in the Functional Dock or Sailing test, or if they are not classifiable, he/she cannot be allowed to compete in ISAF/IFDS sanctioned Disabled Sailing Events, i.e. if their classification exceeds 7.

Sailors may sail 2.4m(R) if they have minimal disability or greater (i.e a classification of 7 or less points).

Blindness is an exception. Sailors with a visual impairment will be classified with the Vision test (see 2.5). If a sailor can not be classified as a B1, B2 or B3 or if they are not classifiable, he/she cannot be allowed to compete in ISAF/IFDS sanctioned Disabled Sailing Events.

### **1.3 Maximum points per crew**

Each crew is allowed a maximum of fourteen (14) rating points. No sailing advantage is given to a crew with a total of less than thirteen points.

### **1.4 IFDS Classification**

After classification by a classification committee the sailor will be notified of his/her rating and may receive a card. (see also 4.3)

Four types of classification may be awarded.

1. The classification awarded with the passport will usually be a PPS or Permanent Paralympic Status classification. With a PPS classification sailors need not be reclassified unless:
  - Their medical condition or aids and adaptations have changed
  - It is more than four years since they were last classified
  - There have been changes in the classification system since they were last classified

2. A PRS or Paralympic Review Status classification may be issued if the sailor's condition is likely to change, (either to improve or deteriorate), e.g. multiple sclerosis. These sailors must be reclassified at any ISAF/IFDS sanctioned event in which they compete. It is advisable that they are also reclassified before competing in non-sanctioned events, if possible.
3. A PNS or Paralympic New Status classification is issued by a national classifier and is valid for national events. These sailors must be classified by a recognised international classification committee prior to and during an ISAF/IFDS sanctioned event.
4. A *T* or "temporary" classification can be given at the beginning of an event and may be changed to a PPS, PRS, or PNS, at the end of the event. It may also be used where classification has been given as the result of a letter, e-mail or video submission. It may be valid for that event, or, if an ISAF/IFDS sanctioned or paralympic event, may only be a guide for team selection. Classification by a recognised IFDS classification committee would have to be carried out before an ISAF/IFDS sanctioned event, with the risk of the T classification being changed.
5. 2.4m(R). This classification may be given to a sailor who has agreed that he/she is only going to compete in the 2.4m(R) class and is not valid in the three person boat. It only requires that the sailor's disability is at least that of the minimum disability standards, i.e a class of 7 or less points, and may not require an FA or FD.

## **1.5 Personal Aids**

When sailors present themselves for classification, they must bring all their personal aids, adaptations, prostheses, orthotics, etc. that they intend to use during racing. This would include seating support, harnesses and any other device essential to enable a person to sail.

Sailors will be classified according to the agreed use of personal aids and any deviation from this, during racing, could lead to a protest from other competitors, teams or the Event Classification Committee.

A sailor with a single below the knee amputation and who has no additional disability which might cause a noticeable impairment of function while sailing, may not use his/her prostheses while racing.

## **1.6 Evidence**

Where appropriate, competitors should present to the Event Classification Committee medical reports, visual handicap assessments, X-rays, supporting passports from other sports, videos and any other relevant material that would assist the classifiers. Classifiers have the right to request such evidence, if necessary, and may decide not to issue a classification without such evidence.

## **1.7 Substitution of crew**

In the event of one crew member being unable to sail, one substitution is allowed but only after the written and published approval of the Race Committee. Such a substitution must not cause the total number of points per crew to exceed the

permitted fourteen (14) points. Such a substitution would apply for the remainder of the event.

## **1.8 Agreement**

An Agreement, (Appendix A), must be signed by the sailor prior to classification. The coach should also sign if present. If it is not signed, the sailor will not be classified, will receive no rating and will be not eligible for sailing in an ISAF/IFDS sanctioned Disabled Sailing Event.

## **1.9 Appendices.**

Details of an Appendix may be changed at any time during the term of this classification system, if approved by the IFDS General Board. RNAs will be notified of these changes as soon as possible after they are approved.

## **2. METHOD OF ASSESSMENT**

### **2.1 Benchmark**

Most sailors have clear cut or benchmark disabilities.

Establishing the bench marks will also ensure that sailors are not penalised for training.

A list of bench marks will be published each year in an appendix and will be reassessed each year. (See appendix B)

In order to obtain meaningful data, initially, all three person boat sailors being classified should have the Functional Dock tests done.

### **2.2 Functional Dock Test**

This test will be performed by a Classifier on a Sonar at the dockside. For more detail see appendix C. It maybe necessary to use another similar sailing vessel if a Sonar is not available. The sailor's coach may be present.

The functions: "tiller", "sheeting", "cleating", "transferring" and "hiking" are measured on a 0-5 scale and recorded on the "*Functional Classification 2000, examination form, functional dock and sailing tests*" (Appendix D)

### **2.3 Functional Anatomical Test**

This test will be performed by a Classifier in a room with an examination table available. The sailor's coach may be present.

The impairment of strength, movement and co-ordination is measured on a 0-5 scale (Appendix E), and recorded on the "*Functional Classification 2000, examination form, functional anatomical test*" (Appendix F)

It is necessary to measure and record impairment of either strength, range of movement, or co-ordination. Score only the most significant impairment for each movement, whether strength, range of movement, or co-ordination, although any or all may be recorded.

For example, impairment of strength is measured for complete spinal lesions, polio and other neurological weakness. Impairment of range of movement is measured for those with congenital deformities or arthritis. Impairment of co-ordination is measured for those with neuromuscular disorders causing inco-ordination, spasticity, rigidity, tremor or involuntary movement such as cerebral

palsy, MS, Parkinson's disease\_or head injuries.

In cases of limb deficiencies of the upper extremities due to birth defect, injury or amputation, the functional length of the stump will count for the rating. That means if the stump of the forearm is long enough to hold a rope in the cubitum, or the above elbow stump is long enough to hold a rope in the armpit, they will count as fully functioning. If those stumps are not long enough to do so this part of the stump will not count at all. This short forearm stump (SBEA = single below elbow amputation) will be rated as an above elbow amputation (SAEA = single above elbow amputation) and a short upper arm stump will be rated as a through shoulder amputation (STSA).

In cases of bilateral amputations of the upper limbs, as a bonus, each amputation will be rated one level higher than it is in reality, that means a double below elbow amputation (DBEA) will count as a double above elbow amputation (DAEA). A double above elbow amp will count as double through shoulder amputation (DTSA) or a single below elbow amp (SBEA) on one side and a single above elbow amp.(SAEA) on the other side will count as a SAEA and STSA (single through shoulder amp.).

In cases of limb deficiencies of the lower limb no bonus will be given for a single short stump. Only when there is a double amputation (below or above knee) the rotation of the hips will not count (-20 points) regardless of the length of the stumps.

If a disability involves an upper limb and a lower limb on the same or opposite side, the rotation would again not be recorded (-20 points).

For ease of reading for people without medical expertise, a Glossary of Medical Terms and their meanings is provided in Appendix J.

## **2.4 Functional Sailing Test**

This examination may be performed by a Classifier during competition. The functions: "tiller", "sheeting", "cleating", "transferring" and "hiking" are measured on a 0-5 scale and recorded on the "*Functional Classification 2000, examination form, functional dock and sailing tests*" (Appendix D)

## **2.5 Impairment of sight**

The testing techniques described here are very technical. They are meant to guide the ophthalmologist carrying out the sight testing. There is no need for the sailor to attempt to understand them; the only need is for the sailor to ensure that he/she has proper testing by an ophthalmologist who has been shown these requirements beforehand (Appendix G)

## **3. DECIDING THE RATING**

The classification will depend on the presence of a benchmark disability, or the Functional Dock test (FD). In cases of difficulty or disagreement, it will depend on a combination of the Functional Dock and Sailing tests (FD & SAIL) and the Functional Anatomical test (FA). In such cases, or where a temporary (T) classification has been given, the SAIL test should be during races to count, rather than practice races. The Functional Dock and Sail tests may be subject to the effects of training and motivation, consequently, if there is disagreement between the FA, SAIL and FD numbers, the classifiers shall give weight to the one which they think is most reliable . The reason for the weighting should be recorded on the examination forms. Only the final classification will be published to



#### **4.1.2 Chief National Classifiers**

These will be appointed by the RNAs of each country and are trained and approved by the IFDS Medical Committee.

Role – They classify sailors in their own country. They supervise, train, and are responsible for, the national classifiers.

Requirements: A Chief National Classifier should classify at an ISAF/IFDS sanctioned international event under the supervision of a member of the IFDS Medical Committee at least once in order to be nominated as a Chief National Classifier. All Chief National Classifiers should attend a classification workshop (preferably an international workshop) once in 4 years. Recredentialing should occur every 4 years and is at the discretion of the Chief International Classifier and the IFDS Medical Committee.

#### **4.1.3 IFDS International Classifier**

These will be selected from classifiers who have classified at least twice at an IFDS sanctioned event under the supervision of a member of the IFDS Medical Committee., and will be nominated by the IFDS Medical Committee and confirmed by the IFDS Executive Committee. All International Classifiers have to classify at a major IFDS event at least twice in four years, and to be an instructor at a classification workshop (at least one of which is an international workshop) twice in four years. Recredentialing should occur every four years by the IFDS Executive Committee of the IFDS after a nomination by the Chief International Classifier and the IFDS Medical Committee.

#### **4.1.4 IFDS Chief International Classifier**

He/she will be selected from International Classifiers. Role - Be chairman of the international classifiers and take care that each international classifier has the opportunity to classify at a major event at least twice in four years. An International Chief Classifier has to be also an instructor at a classification workshop (at least one of which is an international workshop) twice in four years.

### **4.2 Classifying committees at ISAF/IFDS "Sanctioned" Disabled Sailing events**

#### **4.2.1 ISAF/IFDS "Sanctioned" Disabled Sailing events - Event Classification Committee (ECC)**

An ECC will be nominated by the IFDS Medical Committee and appointed by the event Organizing Committee. It will consist of four National or IFDS International Classifiers, from at least two different countries. Paralympics and World Championships should have four International classifiers. For other ISAF/IFDS sanctioned events, it is recommended that an ECC would include at least two IFDS International Classifiers.

Role – Such a committee would be appointed to cover an event such as an International, World or Paralympic Sailing Event. They would be responsible for classifying any new or classified sailors with a PRS, PNS or T Classification and for undertaking random checks on sailors who had been classified in their own countries or at previous International, World or Paralympic events.

The ECC must produce a list of all competitors and their classification by 1200 hours on the day before the Race 1. Any classifications made by the ECC would

be valid for the current event only and would not be PPS. However, if the ECC included at least two IFDS International Classifiers then the classification could be PPS.

#### **4.2.2 ISAF/IFDS "Sanctioned" Disabled Sailing events - Classification Protest Committee (CPC)**

For Major events, such as a World championship or Paralympics, a CPC would consist of two IFDS International Classifiers from different countries and one responsible nominated person. (eg. Technical Delegate, Chairman of the Medical Committee.).

Role – To adjudicate on all matters relating to classification for the event. All decisions made by the CPC regarding the classification of an individual with a PPS classification (Rule 1.4.1) will be final and not subject to appeal.

#### **4.2.3 Non ISAF/IFDS sanctioned Disabled Sailing events. (Guidelines).**

4.2.3.1 Use of the FCS 2000 classification rules is encouraged, but in the event of protests relating to classification, the IFDS is under no obligation to be involved. If a MNA(s) wants a non-sanctioned event to be a qualifier for a sanctioned event, that MNA(s) will assume financial responsibility for classifiers, protest committees, etc. An additional entry fee could be charged to the sailors of that MNA(s) to cover these costs.

4.2.3.2 Event Classification Committee (ECC). One National or International Classifier would be the Chair of the ECC and the two other members would be medical or paramedical professionals with sailing experience. Classifications they award are subject to protest.

4.2.3.3

(a) Ideally the CPC would consist of a different classifier and two new members that were not on the ECC.

(b) If this is not practical, the CPC will consist of the ECC Chair and at least one new member that was not on the ECC. The CPC's decision is final and not subject to appeal. However, the classification awarded may be altered if the sailor subsequently attends a sanctioned event.

### **4.3 IFDS Classification Card and Passport**

There are two kinds of IFDS Classification Certificate.

#### **4.3.1 A National IFDS Classification Card**

This can be issued by a National Classifier, gives a PNS, PRS or T classification and permits competition in national events and qualifying events for the World Championships or Paralympics. It does not permit competition in an ISAF/IFDS sanctioned event, without reclassification by the Event Classification Committee .

#### **4.3.2 An International IFDS Classification Passport**

This can be issued by the IFDS Medical Committee. To obtain an International IFDS Classification Passport the Chief National Classifier has to submit a classification report (appendix H), an dock and sailing tests form (appendix D), and a examination form "functional anatomical test" (appendix F ) to the IFDS

Medical Committee for authorisation. Alternatively, the sailor has to be classified by a Classification Committee including at least two IFDS International Classifiers.

## **5. PROTEST AND APPEALS**

### **5.1 Types of classification protests**

Three general types of classification protests have been established, based on the types of situation. These are:

- (a) Protest over the sailor's own classification (Protest type A)  
When it is the sailor concerned who disagrees with the classification given.
- (b) Protest over another sailor's classification before competition (Protest type B)  
When there is disagreement over the classification of another competitor before the start of the competition.
- (c) Protest over another sailor's classification during competition (Protest type C)  
When there is disagreement over the classification of another competitor after the start of the competition.

### **5.2 Time limits for lodging a protest**

Time limits for lodging a protest of the three different types are as follows:

- (a) Protest type A  
Protests shall be lodged by 1800 hours on the day before Race 1.
- (b) Protest type B  
Protests shall be lodged by 1800 hours on the day before Race 1.
- (c) Protest type C  
Time limit as within the ISAF Racing Rules of Sailing or as amended by the Sailing Instructions.

### **5.3 General procedure for lodging protests**

This section defines the process to be followed in lodging each type of protest, as well as defining those authorised to lodge protests.

- (a) All protests shall be typed or written in a clear hand, in any of the official Languages of the Event. The IFDS classification protest form has to be used (Appendix I).
- (b) In all cases, except in a protest by a member of the Event Classification Committee (ECC), the protest shall be accompanied by the Classification Protest Fee.
- (c) Protests shall be delivered by hand to the Race Office where the time and Date at which the protest is lodged will be recorded
- (d) A protest of type C shall be lodged according to the ISAF Racing Rules of Sailing or as amended by the Sailing Instructions

### **5.4 Personnel authorised to lodge protests**

The following are authorised to lodge protests over classification:

#### **5.4.1 Protest type A and B:**

- Sailors or their nominated representative
- Team Manager or his/her nominated representative
- Event Classification Committee

#### **5.4.2 Protest type C**

- Sailors or their nominated representative
- Team Manager or his/her nominated representative
- Event Classification Committee
- Race Committee
- Racing Protest Committee or International Jury

## **5.5 Classification protest fee**

### **5.5.1 Fee**

The fee which shall accompany a classification protest will be announced in the Rules of the Event or the Sailing Instructions.

If not specified, the protest fee will be \$100 US payable to the IFDS through the Regatta Organizers. If the protest is upheld, the fee will be returned.

### **5.5.2 Payment**

Payment of the fee shall be made at the time the protest is lodged.

### **5.5.3 Refunds**

If the protest is upheld, the Chairman of the Classification Protest Committee (CPC) or the Chairman of the Racing Protest Committee (or the International Jury) shall authorise the sum deposited to be returned by the Race Committee.

## **5.6 Classification protest process**

### **5.6.1 General classification process**

The Race Committee shall publish time, date and place of classification review.

### **5.6.2 Classification review system according to type of protest**

#### **(a) Protest type A**

The following will be present at the time and place announced:

- The sailor involved
- The sailor's team manager or his/her nominated representative
- Interpreters, if necessary
- The Chair of the Event Classification Committee

The above people will report to the CPC. The CPC shall review the allegations in the protest, allow questions and answers from each party and review the results of the tests and examinations carried out, and may repeat them.

If there is no general agreement, a vote shall take place, in which the Chairman of the CPC will have a casting vote.

The decision shall be written, state the specific rule(s) involved, be signed by the Chairman of the CPC and subsequently published. This decision shall be final and not subject to appeal

#### **(b) Protest type B**

The wording of this section is exactly as in 5.6.2 (a) except that the following extra persons will be present at the time and place announced

- The sailor being protested.
- That sailor's team manager or his/her nominated representative

**(c) Protest type C**

The CPC shall hear classification protests initiated by people defined in rule 5.4.2 (Lodging Protest Type C)

The wording of this section is exactly as in 5.6.2 (a) above except that the following extra people will be present at the time and place announced

- The Chair of the Event Classification committee, if this committee is lodging the protest OR
- A representative of the Race Committee, if this committee is lodging the protest, OR
- A representative of the Racing Protest Committee or International Jury, if this committee is lodging the protest.
- The sailor being protested.
- That sailor's team manager or his/her nominated representative

**5.6.3 Time limits for publishing the results of the classification review by the Classification Protest Committee**

This section deals with the time limits, according to type of protest, within which the CPC must publish the results of the classification review.

**(a) For protest types A and B**

Ideally, the results of a CPC hearing will be published by 2400 hours on the day before Race 1. If this is not practical, they shall be published within 1 hour after their decision. If using the latter, the race results shall be amended to reflect the CPC's final decision.

**(b) For protest type C**

In accordance with the ISAF Racing Rules of Sailing and or as modified by the Sailing Instructions.

**APPENDIX A**

ISAF - IFDS CLASSIFICATION AGREEMENT

I (name of sailor) \_\_\_\_\_, agree to accurately declare and describe my condition, and demonstrate and perform all tests to the best of my ability for the purpose of classification. My medical condition is stable and to my knowledge, I am fit for classification. I will not hold the classifier(s) responsible for any injury, pain, or suffering which may occur as a result of the conduct of their examination or other duties of classification. I consent to the disclosure of information relating to my function and performance by my designated coach(s) and/or medical advisor(s). I consent to being videotaped at any time should the classifiers deem it necessary.

Designated Coach(s): \_\_\_\_\_

Designated Medical Advisor(s): \_\_\_\_\_

Signature of Sailor: \_\_\_\_\_

Signature of Witness: \_\_\_\_\_

Date: \_\_\_\_\_

## APPENDIX B

### Bench marks:

- 1  
Quadriplegic, complete or virtually complete
- 2  
Paraplegic high, complete (no trunk control)  
Double Above Elbow Amputation  
Single Above Elbow Amputation & Single Below Elbow Amputation
- 3  
Paraplegic low, complete  
Single Above Knee Amputation & Single Above Elbow Amputation  
Double below Elbow Amputation
- 4  
Single Through Shoulder Amputation  
Double Above Knee Amputation
- 5  
Single Above Elbow Amputation  
Single Above Knee Amputation & Single Below Knee Amputation
- 6  
Double below Knee Amputation  
Single below Elbow Amputation
- 7  
Single Above Knee Amputation  
Single Below Knee Amputation

**1 EQUIPMENT REQUIRED**1.1.1 *By Classifier:*

A Sonar moored to a dock. It is best if this is the Sonar to be used by the sailor with the sailor's adaptations. Since the sailor will be asked to do both the jib test and the tiller test, if other adaptations are present at either of these positions not used by the sailor, and which are not easily removable, another Sonar should be available which does not have adaptations fitted.

Two classifiers, one volunteer helper.

A video camera, video tape, batteries (and, if no helper is available, a tripod may be useful).

Stopwatch.

3300 mm (11 feet) of 8mm (5/16 inch) shock cord,

10,000 mm of 10 mm (3/8 inch) braided line for mock jib sheet.

4 short (about 500 - 1000mm) pieces of line about 6mm diameter for tying.

Clipboard, pencil, test check lists (Appendix D).

Electrical tape, Felt pen, black, Tape measure in cm.

1.1.2 *Preparation of the equipment*

The ends of the shock cord are tied in a square (reef) knot. The ends left over beyond the knot should be about 100mm (4 in.) long so that they can be tightly taped to the shock cord loop to prevent it from coming undone. These could be whipped if desired. The loop of shock cord is now looped again into three equal smaller loops lying over each other. A tie is tied around the three cords of the loop to keep them together.

The mock jib sheet is doubled and a simple overhand knot tied in the doubled sheet 1400mm from the end formed by the middle of the sheet after it is doubled. A black, or contrasting, mark is made on each of the two loose ends 300mm from the overhand knot.

1.2 *By Sailors:*

Their normal sailing equipment which should include:

Life jacket.

Any prosthesis, adaptation, sitting / sliding board or aid used in racing.

Sailing gloves (if worn during racing), Sailing shoes or boots

Padding, hiking pants, any special clothing (if worn during racing).

**2. CHOICE OF TESTS**

The sailors should be asked to perform the jib test and tiller test, if possible. The mainsheet test is not performed if upper limb function is normal. However, if there appears to be any difficulty with sheeting during the jib test, the mainsheet test should be done. If, for example, a high paraplegic has to brace him/herself to sheet in the jib sheet, the mainsheet test should also be done. If a sailor says he/she is unable to get up onto the side deck and the classifiers think he/she should be able to do so, the sailor should be asked to try to get up onto the side. If the sailor refuses, or does not seem to be able to, this should be recorded on the checklist in the comments section. The same remarks apply to hiking out.

**2.1 THE TESTS****2.1.1 PREPARATION**

Prior to starting the tests, the boom has to be raised to the horizontal position. This is done by attaching the main halyard to the aft end of the boom. The mainsheet is tightened with the traveler central, or the boom is secured to the backstay with a piece of line so that it does not move about much from side to side. It is best for the mainsail to be removed, but if this is impractical it should be tied so that it does not fall below the boom and get in the way of the sailor or the view of the classifiers. If the sailor is using a seat or bench, and, when sitting on it, the top of the sailor's head touches the boom, this is unsafe and the seat or bench should be disallowed, or altered until there is clearance for the head.

Certain instructions are given to the sailors as detailed in the classifiers' instruction sheet. It must be explained to the sailor that the tests should be carried out as QUICKLY as possible

and the jib test with AS MUCH EFFORT AS POSSIBLE. A trial run of two sequences of each test is advisable (only one is necessary for the mainsheet test).

## 2.2 *JIB TEST*

This is a complex composite test and closely simulates the actions used in sailing. It involves mobility, stability, speed, strength and co-ordination of the upper limbs and, to a lesser extent, the lower limbs. Because of its complexity it tends to show difficulties more clearly than the other tests.

The jib fairleads are equally placed such that they lead as straight as possible to the jib cleat which would be used with that jib sheet. The shock cord loop is tied to the mooring cleat in the centre of the foredeck, or, if no cleat is available, to the forestay base. The mock jib sheet is placed IN FRONT OF THE MAST, the loose ends are threaded through the jib fairleads and stopper knots are tied in the ends.

The doubled end is tied securely round the triple shock cord loop, after being adjusted such that the marks made on the loose ends of the sheet just enter the fairleads when the shock cord is just tight.

(If the boat has winches, the winches may be used, if desired, WITHOUT a full turn round them, in order to direct the line to the jib cleat, but not to aid in pulling the sheet).

The sailor is seated on the side deck, if possible, or if not possible, on the cockpit seat. He/she should use the sliding board or adaptation (which must be legal), which he/she needs to cross from side to side. If the sailor cannot cross from side to side, the sailor sits on his/her usual board or seat, in the centre of the boat. In this case the sailor only carries out the sheeting, cleating and uncleating actions of the test. The jib sheet from the opposite fairlead is then pulled tight and cleated in the appropriate cleat.

If at all possible, an assistant videotapes the entire test so that the actions of the sailor can be clearly seen and recorded for verification.. The classifiers should stand in different places so that they can see the test from different angles.

On the start command, "ready, set, go!" (timing starts), the sailor uncleats the jib sheet, crosses to the opposite side deck, pulls in the other sheet as hard as he/she can, cleats it, calls out "one" and claps both hands. If he/she only has one hand, he/she claps on their chest. In either case the object is for the sailors to put down the sheet so that they then have to pick it up again before the next sequence. It is important to tell the sailor that he/she may do the movements of the sequence in any order and way the sailor wants, e.g. uncleat, get down from the deck, cross, get up on deck, sheet in, cleat, as closely to the way he/she would normally do it while sailing, but the entire sequence must be completed. As soon as the sequence is completed, it is repeated in the opposite direction, without resting, until a total of six sequences have been done. The count that the sailor calls out changes as each sequence is completed e.g. "one", "two", "three" etc. The timing stops on "six". The time is recorded to the nearest second, and the checklist for that test is completed. If the sailor did not pull in the jib sheet completely, it is noted in the comments section..

At the completion of the jib test, the sailor, seated on the side deck away from the dock, holding the jib sheet, and whatever else he/she needs for stability, is asked to hike out as far as he/she safely can. If there is a risk of sailors falling overboard, they should be wearing their lifejackets.

## 2.3 *TILLER TEST*

This tests primarily mobility, stability and ability to control the tiller smoothly during a tack. It does not really test strength (other than grip) or fatiguability unless the sailor is very weak indeed.

The sailor sits on one side deck. If he/she is unable to get on deck the test is carried out from cockpit seat to cockpit seat. If the sailor says he/she cannot move from side to side at all and this is compatible with the medical condition, the sailor sits in his/her normal position and the range of tiller movement that the sailor can achieve is noted. There is no need to time or do the test six times if the sailor cannot change sides.

The sailor starts with the tiller in the mid position. If possible, an assistant videotapes the entire test so that the actions of the sailor can be clearly seen. The classifiers should stand in different places so that they can see the test from different angles.

On the start command, "ready, set, go!" (timing starts), the sailor pushes the tiller to the opposite side until the tiller end is just over the opposite cockpit seat back; then pulls it back until the end of the tiller is just over the cockpit seat back on the side on which he/she is sitting; then returns it to the centreline. At this point the sailor crosses over to the opposite side and gets up on deck, maintaining control of the tiller throughout, if possible. When properly seated on the deck with the tiller in the centreline the sailor calls out "one" and immediately starts the sequence again until a total of six sequences has been completed (timing stops). The count that the sailor calls out progresses as the sailor completes each sequence, e.g. "one", "two", "three" etc. Clapping is not required as we are trying to see if the sailor can keep control of the tiller throughout the tack. Timing is recorded to the nearest second.

#### 2.4 *MAINSHEET TEST*

The only features being looked for in this test are the ability to carry out rapid, smooth, full range arm movements while sheeting the mainsheet right in from right out.

The boom is pushed right out until it touches the lower shroud. The traveler is centered, the sailor sits on one or other cockpit bench and holds the mainsheet. A classifier, or the helper holds the boom out with mild resistance and maintains that mild resistance throughout the range of boom movement.

On the start command, timing starts, and the sailor sheets the mainsheet right in as quickly as he/she can and cleats it. Timing stops. The test is repeated once more and the shortest time, to the nearest second, is recorded.

#### 2.5 *COMPLETING CHECKSHEET*

The Functional 2000, examination form, dock and sail tests (Appendix D) is completed independently by each classifier at this time. The two check sheets are compared together, and if they do not correspond, either are the tests repeated or the video is viewed and agreement reached.

## Functional dock and sailing tests

**A. TILLER**

1. Unable to use or control tiller. Or only able to control tiller with assistive device (ie. ropes, blocks, mechanical or electrical devices, or stabilising devices)
2. Can only sit in one position or has to use a mechanical device to change sides. Or can not move the tiller through the full range of movement. Or can change sides but can only control the tiller with teeth or feet.
3. Must let go of the tiller for >2 seconds while changing sides.
4. Can only control the tiller with one upper limb. Or must use one hand for support while tacking. Or can only control the tiller with moderate difficulty.
5. Able to control tiller throughout tack normally

Comment:

**B. SHEETING**

1. Unable to pull sheet in any way, or only with teeth or feet.
2. Able to pull sheet, but with severe difficulty, very slow, or needs assistance from nother crew member to get proper jib tension
3. Able to pull sheet, but with moderate difficulty, or slow
4. Able to pull sheet with slight difficulty
5. Able to pull sheet normally

Comment:

**C. CLEATING**

1. Unable to cleat or uncleat sheet, or only with teeth or feet
2. Able to cleat/uncleat but with severe difficulty, very slow, or misses frequently
3. Able to cleat/uncleat with moderate difficulty, or slow, or misses sometimes
4. Able to cleat/uncleat with mild difficulty
5. Able to cleat/uncleat sheet normally

Comment:

**D. TRANSFERRING**

1. Unable to transfer from side to side – remains in a fixed position
2. Only able to transfers from side to side with severe difficulty, on a board. Cannot get up on the side deck. Or very slow
3. Transfers from side to side with moderate difficulty. Or slow
4. Transfers from side to side with slight difficulty.
5. Able to transfer normally

Comment:

**E. HIKING**

1. Unable to get on the side deck
2. Able to get on the side deck but with severe difficulty. Cannot hike past vertical
3. Able to get on the side deck with moderate difficulty. Or needs two hands to hold on or hike past vertical
4. Able to get up on the side deck and can hike past vertical, with slight difficulty.
5. Able to get up on the side deck and hike past vertical normally

Comment:

**F. TIME:**

Tiller Test Time:

Jib Test Time:

Mainsheet Test Time:

Sailor (name):

Birthday (dd-mm-yy):

Country

Date of examination:

Classifiers:

## APPENDIX E

### MUSCLE GRADING CHART

Muscle Gradations	Description
0 – Zero	No evidence of contractility
1 – Trace	Evidence of slight contractility. No joint motion
2 – Poor	Complete range of motion with gravity eliminated
3 – Fair	Complete range of motion against gravity
4 – Good	Complete range of motion against gravity with some resistance
5 – Normal	Complete range of motion against gravity with full resistance

### RANGE OF MOTION

Scale	Description
0	No movement possible
1	Less than 25% movement possible
2	25 - 49% range of movement possible
3	50 – 69% range of movement possible
4	70 –89% range of movement possible
5	90 – 100% range of movement possible

### COORDINATION

Scale	Description
0	Activity impossible
1	Severe impairment; only able to initiate activity without completion
2	Severe impairment; able to accomplish the activity but in a very unorthodox way. Unable to move through the full range
3	Moderate impairment; able to accomplish the activity, movements are slow, awkward and unsteady through the full range
4	Minimal impairment; able to accomplish the activity with slightly less than normal speed and skill through the full range
5	Normal performance

## Functional Classification 2000

*Examination form,  
functional anatomical test*

### HAND FUNCTION

		Range of Movement		Muscle Strength		Co-ordination		Comment
		Right	Left	Right	Left	Right	Left	
Shoulder	Flexion							
	Extension							
	Abduction							
	Adduction							
	Ext. Rot.							
	Int. Rot.							
Elbow	Flexion							
	Extension							
	Pronation							
	Supination							
Wrist	Flexion							
	Extension							
Hand	Flex. Finger							
	Ext. Finger							
	Flex. Thumb							
	Ext. Thumb							
	Total points							

### STABILITY

		Range of Movement		Muscle Strength		Co-ordination		Comment
		Right	Left	Right	Left	Right	Left	
Trunk	Flx. Upper							
	Flx. Lower							
	Ext. Upper							
	Ext. Lower							
	Rotation							
	Total points							

### MOBILITY

		Range of Movement		Muscle Strength		Co-ordination		Comment
		Right	Left	Right	Left	Right	Left	
Hip	Flexion							
	Extension							
	Abduction							
	Adduction							
	Ext. Rot.							
	Int. Rot.							
Knee	Flexion							
	Extension							
Ankle	Dorsiflex.							
	Plantaflex							
	Total points							

		Right	Left
Functional Profile	Handfunction		
	Stability		
	Mobility		

<b>TOTAL</b>



## **The Vision Test**

**The vision has to be tested as follows:**

### **1 Visual acuity test conditions**

both eyes open (unless one eye is to be covered whilst sailing)  
all lights on in the room (ideally test in the open in daylight)  
best practical distance optical correction to be worn (that which can be used whilst sailing)  
Snellen or equivalent chart to be used

Where the visual acuity is better than 6/12, as tested above, then the competitor is ineligible for blind sailing irrespective of the visual field. Where the visual acuity is 2/60 or worse, then measuring the visual field becomes too inaccurate to be useful. Routine automated perimetry may not be sufficient in certain cases, particularly where the visual field is very small.

### **2 Visual field test conditions**

both eyes open (where both are to be used for sailing)  
correcting lenses for the test distance (i.e. "reading" glasses worn where appropriate)  
white test target subtending a visual angle of 0.5 – 0.7 degrees having a contrast of 10 – 20 dB over the background (background luminance to be approximately 31.5 apostilbs)  
manual dynamic perimetry may be necessary in certain cases, especially where the field is borderline

# ISAF – IFDS CLASSIFICATION REPORT

Surname:  
Given name(s):  
Date of birth:  
Nationality:

Diagnosis/condition:  
Date of injury or disease:  
Adaptations used during sailing:

## ***Examination dock test***

Tiller:  
Sheeting:  
Cleating:  
Transferring:  
Hiking:  
Time:

## ***Examination functional anatomical test***

	Right	Left
Profile		
Handfunction:		
Stability:		
Mobility:		

## ***Examination sailing test***

Tiller:  
Sheeting:  
Cleating:  
Transferring:  
Hiking:

Comments:

Classification points: **PPS/PRS/PNS/T** Based on: FA/FD/SAIL

Date of examination:  
Classifiers:



## APPENDIX J

### Glossary of Medical Terminology.

#### 1. Explanation of appendix F

Joint Movement Definition

#### HAND FUNCTION

Shoulder

Flexion - Moving the upper arm forwards from by the side

Extension - Moving the upper arm backwards from by the side

Abduction - Moving the upper arm sideways away from the side

Adduction - Moving the upper arm sideways towards the side

Ext. Rot. - Twisting the upper arm, with the elbow bent at 90 degrees, so that the hand moves away from the body

Int. Rot - Twisting the upper arm, with the elbow bent at 90 degrees, so that the hand moves towards the body

Elbow Flexion - Bending the elbow

Extension - Straightening the elbow

Pronation twisting forearm/wrist from palm up to palm down

Supination twisting forearm/wrist from palm down to palm up

Wrist Flexion - From the neutral position, moving the hand in the direction of the palm

Extension - From the neutral position, moving the hand in the direction away from the palm

Hand Flex. Finger – Bending or closing the fingers

Ext. Finger - Straightening the fingers

Flex. Thumb - Bending the thumb towards the fingers

Ext. Thumb - Straightening the thumb away from the fingers

#### STABILITY

Trunk Flx. Upper - Bending the upper part of the trunk forwards

Flx. Lower - Bending the lower part of the trunk forwards

Ext. Upper - Bending the upper part of the trunk backwards

Ext. Lower - Bending the lower part of the trunk forwards

Rotation - Twisting the shoulders around the axis of the spine

#### MOBILITY

Hip Flexion - Bending the thigh forwards towards the abdomen(belly)

Extension - Straightening the thigh back towards the buttocks

Abduction – Moving the thigh sideways away from the other leg

Adduction - Moving the thigh sideways towards the other leg

Ext. Rot. - With the knee bent at 90 degrees, twisting the thigh so that the foot moves towards the other leg

Int. Rot. - With the knee bent at 90 degrees, twisting the hip so that the foot moves away from the other leg

Knee Flexion - Bending the knee

Extension - Straightening the knee

Ankle Dorsiflex. - Moving the ankle so that the foot moves up away from the floor  
Plantaflex - Moving the ankle so that the foot moves down towards the floor

## 2. OTHER MEDICAL TERMS YOU MAY ENCOUNTER

\* indicates the word is elsewhere in the list

Abdomen – Belly, Stomach

Achondroplasia – a defect of cartilage formation leading to a type of dwarfism

Amelia – Congenital\* absence of a limb or limbs

Amputation – Surgical or accidental removal of a limb or part of a limb

Amputee – A person who has had an amputation\*

Amyotrophic Lateral Sclerosis (ALS). A disease in which the nerve cells slowly die, resulting in progressive weakness and loss of muscle

Ankylosing Spondylitis – A form of arthritis\* in which the spine becomes completely stiff

Arteries – Blood vessels carrying oxygenated blood from the heart to the tissues

Arthritis – Pain and stiffness of the joints. This takes many forms – Rheumatoid Arth. –

Inflammation which can destroy the joints. Osteoarthritis – Degeneration of the joints, “wear and tear” usually associated with aging. Gout. Ankylosing Spondylitis\*

Arthrogryposis Multiplex – Contraction of many joints

Athetosis – A form of involuntary movement, writhing in type, usually associated with cerebral palsy\*

Bechterew’s disease – Ankylosing spondylitis\*

Bilateral – On both sides

Brachial plexus – A complex junction of nerves leading into the arm from the neck

Cerebral Palsy – Damage to part of the brain, present at birth, usually affecting the legs more than the arms, and resulting in spasticity\*, athetosis\*, chorea\* and often severe speech difficulties. It is important to realise that many such people who may have very severe disabilities and with whom it is extremely difficult to communicate because of their speech problems, have normal intellect.

Chorea – Involuntary movements which are twitchy and jerky.

Congenital – Present at birth.

Contractility – The ability of muscle to shorten

Cubitum (cubital fossa) – The groove at the front of the elbow

Dystonia – Abnormality of the resting tone or tension of muscles. A disease where this is very abnormal resulting in involuntary movement and deformity.

Forearm – The part of the arm between the elbow and wrist

Fragilitas Osseum – Osteogenesis imperfecta. A hereditary disease where the bones are very fragile and break very easily and frequently, resulting in deformities.

Hemilateral – Down one side

Hemiplegia – Paralysed or weak down one side. Usually the result of a stroke\*

Hemiplegic – A person with hemiplegia\*

Inflammation – A tissue reaction resulting in swelling, stiffness, pain and sometimes redness.

Leg – Technically, the part of the lower limb between the knee and ankle. In common use for the whole lower limb

Lesion – Any abnormality or injury to tissue or loss of function of a part.

Lumbar plexus – A complex junction of nerves between the spine and the lower limb

Monoplegia – Weakness or paralysis of one limb

Multiple Sclerosis – (MS or in some countries DS – Disseminated Sclerosis) - A disease affecting young and middle aged adults, with patchy, variable, and sometimes fluctuating damage to many different parts of the nervous system. This can result in many different symptoms, affecting vision speech, strength, co-ordination balance etc.

Muscular Dystrophy – A hereditary disorder of muscle fibres resulting in slowly progressive

weakness. There are several different varieties of it.

Myasthenia Gravis – A disease of the junction between nerve and muscle resulting in fluctuating weakness of various muscles.

Myopathy – Any disease process of the muscle fibres.

Myositis – An inflammatory myopathy\*

Neuromuscular disorders – The large group of disorders of the nerves and the muscles which they supply

Osteogenesis Imperfecta\* - See fragilitas osseum\*

Paraplegia – Weakness or paralysis of both legs. Most often caused by injury to the spine

Paraplegic – a person with paraplegia\*

Parkinson's Disease – A disease of the nervous system resulting in rigidity\*, tremor\* and slowness or lack of movement

Phocomelia – Congenital\* absence of the part of a limb nearest to the trunk

Poliomyelitis (Polio) – A viral disease which affects the nerve cells, within the spinal cord, which move the muscles. This results in weakness and loss of muscle in a patchy form. The post polio syndrome is a situation seen in a few polio sufferers 30 –50 years after the disease, in which further weakness and loss of muscle occurs.

Prosthesis – an artificial limb

Quadri(a,u)plegia – Weakness or paralysis of all four limbs. Usually the result of injury to the neck

Quadriplegic – a person with quadriplegia\*

Rigidity. A type of stiffness of the muscles, different from spasticity\*.

Sciatic nerve – the largest nerve going into the lower limb.

Snellen chart – A chart with letters of diminishing size, used to test visual acuity\*.

Spasticity – A type of stiffness of the muscles, different from rigidity, which can be very variable and sometimes painful. Most commonly seen in spinal injury, MS\* and cerebral palsy\*

Spina bifida – Failure of the lower part of the spinal canal to close off properly during development and often associated with paraplegia\* without spasticity\*

Stroke – Blockage of an artery to the brain often resulting in hemiplegia\*

Thigh – The part of the lower limb between the hip and the knee.

Thorax - Chest

Tremor – Rhythmic shaking of a limb

Unilateral – one sided

Upper arm – The part of the upper limb between the shoulder and the elbow.

Visual acuity – Sharpness of vision.

*(This list is not comprehensive. Any items missing that you think should be there, notify the Medical committee and they will try and include them in the next reprint.)*

Produced by Medical Committee IFDS

Chairman:	Peter van Aanholt	(NED)
Members:	Anne Allen	(USA)
	Vicki Fumado	(ESP)
	Eric Herlenius	(SWE)
	Mikko Kannisto	(FIN)
	Jurgen Schwittai	(GER)
	Charles Simpson	(CAN)
	Stephen Wilson	(AUS)

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