



**ISClass**

INTERNATIONAL SHIP CLASSIFICATION

**GUIDELINES FOR STATUTORY  
SURVEYS OF INLAND WATERWAY  
SHIPS**

2015

Effective from July 1 2015

## **TABLE OF CONTENTS**

PART ONE	GENERAL .....	1-1
PART TWO	SURVEYS AND CETIFICATION .....	2-1
PART THREE	TONNAGE MEASUREMENT .....	3-1
PART FOUR	LOAD LINES.....	4-1
PART FIVE	SAFETY OF THE SHIP.....	5-1
PART SIX	CARRIAGE OF DANGEROUS GOODS.....	6-1
PART SEVEN	CONSTRUTION AND EQUIPMENT FOR THE PREVENTION OF POLLUTION FROM SHIPS.....	7-1
PART EIGHT	ACCOMMODATIONS FOR CREW.....	8-1
PART NINE	PASSENGER QUOTAS AND ACCOMMODATION OUTFITS.....	9-1

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**PART ONE GENERAL**

## CONTENTS

<b>CHAPTER 1</b>	<b>GENERAL PRINCIPLES.....</b>	<b>1-3</b>
Section 1	GENERAL PROVISIONS.....	1-3
Section 2	SURVEYS AND CERTIFICATES.....	1-6
<b>CHAPTER 2</b>	<b>CLASSIFICATION OF SERVICE AREAS ON INLAND WATERWAYS.....</b>	<b>1-7</b>
Section 1	GENERAL PROVISIONS.....	1-7
Section 2	ASSESSMENT METHODS FOR SERVICE AREA CLASSIFICATION.....	1-8
Section 3	ESTIMATION METHODS OF SIGNIFICANT WAVE HEIGHT.....	1-8

## CHAPTER 1 GENERAL PRINCIPLES

### Section 1 GENERAL PROVISIONS

#### 1.1.1 General requirements

1.1.1.1 The Guidelines for Statutory Surveys of Inland Waterway Ships (hereinafter referred to as the Guidelines) is formulated by International Ship Classification (hereinafter referred to as ISC), in order to carry out statutory services for surveys of inland waterway ships outside China and guarant the integrity of technical specifications and standards for inspection.

1.1.1.2 The Guidelines apply to the following cases:

(1) The Administration approves the Guidelines and authorizes ISC to issue the relevant statutory certificates in accordance with the Guidelines; or

(2) The shipowner, ship designer or shipyard (hereinafter referred to as the Client) accepts the Guidelines and entrusts ISC with the issuance of the relevant certificates in accordance with the Guidelines.

1.1.1.3 In the application of the Guidelines, the integrity of the technical standards is to be maintained in principle, but all parties concerned, based on the environmental conditions of the waters as well as the relevant requirements for safety and environment protection of the ship by the Administration, may decide the applicability of acceptance and adoption for the relevant provisions (such as fire safety, life-saving applicances, radiocommunications, navigational equipment, signals, accommodations for crew, passenger quotas and accommodation outfits, environment protection) of the Guidelines.

1.1.1.4 The ship, as regards the strength, construction, arrangement, structural scantlings, materials, welding, main and auxiliary machinery, boilers and other pressure vessels and their appurtenances and electrical installation are to be so designed and installed that it is fit for the service for which it is intended.

1.1.1.5 The tonnage of the ship is to be calculated in accordance with the International Convention on Tonnage Measurement of Ships, 1969, except for the gross tonnage and net tonnage mentioned in PART FIVE to PART NINE of the Guidelines that are to be determined according to the gross tonnage and net tonnage obtained from CHAPTER 2 and CHAPTER 3 of PART THREE of the Guidelines.

1.1.1.6 For the aspectes of a ship specified in PART FIVE to PART NINE of the Guidelines, the ship may be considered to meet the requirements of the Guidelines where one of the following provisions is complied with. Nevertheless, the ships navigating in torrent currents are to comply with the relevant requirements for ships navigating in torrent currents of the Guidelines:

(1) the relevant provisions for Service Area 3 of ISC Guidelines for Statutory Survey of Ships Engaged on Non-international Voyages; or

(2) the relevant provisions of international conventions and codes.

1.1.1.7 The signs and markings on board a ship mentioned in the Guidelines are to be in the language accepted by the Administration.

#### 1.1.2 Application

1.1.2.1 The Guidelines apply to inland waterway ships outside China with a length of 20 m or over except for:

- (1) military vessels;
- (2) fishing vessels;
- (3) sailing boats;
- (4) racing boats.

1.1.2.2 The lifting applicances onboard are to comply with the relevant requirements of ISC Rules for Lifting Appliances of Ships and Offshore Installations.

1.1.2.3 In addition, chemeical tankers are to comply with the provisions of ISC Rules and Regulations for Construction and Equipment of Inland Waterway Ships Carrying Dangerous Chemicals in Bulk or Rules

for Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code).

1.1.2.4 In addition, liquefied gas carriers are to comply with the provisions of ISC Rules and Regulations for Construction and Equipment of Inland Waterway Ships Carrying Liquefied Gas in Bulk or Rules for Construction and Equipment of Ships Carrying Liquefied Gas in Bulk (IGC Code).

1.1.2.5 The ships not specified in the Guidelines, such as high speed crafts and ships of less than 20m in length are otherwise specified by ISC.

1.1.2.6 Classification of service area grade of inland waterways is to comply with the provisions of CHAPTER 2 of this PART. In case the environmental conditions of inland waterways exceed the scope specified in 2.1.2 of CHAPTER 2 of this PART, other provisions or special consideration may be given by ISC.

### 1.1.3 Equivalent and exemptions

1.1.3.1 Any fitting, material, appliance or apparatus, other than that required in the Guidelines, may be allowed by ISC to be fitted in a ship, if it is satisfied by trial thereof or otherwise that such fitting, material, appliance or apparatus is at least as effective and safe as that required in the Guidelines.

1.1.3.2 Equivalence or substitution to those methods of calculation, criteria of evaluation, manufacturing procedures, materials, survey and test requirements specified in the Guidelines may be accepted subject to agreement of ISC, when relevant tests, theoretical basis or experience in application is provided, or recognized effective standards are available.

1.1.3.3 Any ship which embodies structure and features of a novel kind may be exempted from any requirement of the Guidelines if the application of which might seriously impede the application of such features or their incorporation in ships navigated in inland waterways. However, any such ship is to, in the opinion of ISC, be adequate for the service for which it is intended and be such as to ensure the overall safety of the ship by taking equivalent measures.

1.1.3.4 Ships with a special requirement, e.g. religion, may be specially considered upon approval by ISC.

1.1.3.5 In addition, equivalence or substitution is to be agreed by the Administration, provided that the Administration accepts the Guidelines (or the partial of the Guidelines) as the the basis for statutory surveys.

### 1.1.4 Entry into force of rules and application

1.1.4.1 Unless stated otherwise, the effective date will be indicated on the first page of the Guidelines.

1.1.4.2 Unless stated otherwise, the Guidelines apply to ships the keels of which are laid or which are at a similar stage of construction on or after the effective date, and the ships constructed before the effective date may refer to the Guidelines.

### 1.1.5 Interpretations

1.1.5.1 Interpretations of the Guidelines are to be left solely to ISC.

1.1.5.2 In case of any different understanding to the English version of the Guidelines, the original version in Chinese language are to prevail.

### 1.1.6 Definitions

1.1.6.1 The relevant definitions involved in each part and chapter of the Guidelines are specified in each part and chapter.

1.1.6.2 For the purpose of the Guidelines, the relevant definitions are as follows:

- (1) An *inland waterway* means any inland waters, including the rivers and lakes, natural and man-made.
- (2) An *administration* means the Government of the State administering inland waterways.
- (3) *Approval* means the approval taking place in executing specific surveys in accordance with the Guidelines carried out by ISC.
- (4) A *passenger ship* is a ship which carries more than twelve passengers.
- (5) A *ro-ro passenger ship type 1* is a passenger ship with ro-ro cargo spaces or vehicle spaces and with a time for sailing against the current more than two hours from the port of departure to the port of destination (excluding a ro-ro passenger ship type 2).
- (6) A *ro-ro passenger ship type 2* is a ro-ro ship which is constructed only to carry goods vehicles (excluding vehicles carrying dangerous goods) with fuel in their tanks for their own propulsion having a

flashpoint exceeding 60°C (closed cup test), of which the truck-drivers and personnel accompanying vehicles are more than twelve, and the time for sailing against the current is more than two hours from the port of departure to the port of destination.

(7) A *vehicle-passenger ferry (barge)* is a ship which is constructed with vehicle spaces and intended for carriage of vehicles and passengers, and the time for sailing against the current is not more than two hours from the port of departure to the port of destination (including ships for carriage of only vehicles but excluding ships for carriage of only commercial vehicles).

(8) A *cargo ship* is any ship which is not a passenger ship.

(9) A *dry cargo ship* means a cargo ship primarily carrying dry cargo (including barrelled liquid cargo) in holds or on deck, where, a dry cargo ship primarily carrying dry cargo in holds or on deck is considered as a bulk carrier.

(10) A *self-unloading sand ship* is a ship constructed for loading/unloading granular cargo in bulk, such as sand, by a hopper and provided with a dumping device on board.

(11) A *container ship* is a ship constructed for the carriage of containers in holds and on deck.

(12) A *ro-ro cargo ship* is a cargo ship constructed for loading and unloading vehicles and containers/or cargo in pallet form by rolling in and rolling out.

(13) A *tanker* is a cargo ship which is constructed primarily to carry liquid cargoes in bulk.

(14) An *oil tanker* is a ship which is constructed to carry oil in bulk.

(15) A *chemical tanker* is a cargo ship constructed for the carriage in bulk of any liquid products.

(16) A *liquefied gas carrier* is a cargo ship constructed for the carriage in bulk of any liquefied gas.

(17) A *ship carrying dangerous goods* means a ship carrying substances and articles that are explosive, inflammable, poisonous, or radioactive, etc., likely to cause personal injury, property damage or loss, or environmental pollution in the course of transport, loading and unloading, and need special protection. Such ships exclude oil tankers, chemical tankers and liquefied gas carriers.

(18) A *high speed craft* means a craft with a length of 15 m or over and a speed  $V \geq 3.7 \nabla^{0.1667}$  m/s or a craft with a length of 5 m or over but less than 15 m and a speed  $V \geq 3.7 \nabla^{0.1667}$  m/s or  $V \geq 18$  km/h (whichever is the greater).

Where,  $V$  is the the speed achieved at the maximum continuous propulsion power for which the craft is certified at maximum operational weight and in smooth water, and  $\nabla$  is the displacement corresponding to the loaded waterline, in  $m^3$ .

(19) A *working ship* means a ship dedicated to water or waterway construction tasks, including dredgers, floating cranes, pile driving barges, hopper barges (dredgers) and split hopper barges (dredgers).

(20) A *tug (pusher)* means the ship which does not carry cargoes, but is engaged in pushing (towing) cargo (oil) barge.

(21) A *barge* is a non-self-propelled cargo ship.

(22) A *pontoon* is a ship or an installation on water secured by anchors and anchor cables or by other facilities in shore or specific waters and not navigation operating.

(23) A *restaurant pontoon* is a pontoon used for restaurant, entertainment and accommodation, secured in shore and provided with a fixed access way to the shore.

(24) A *self-propelled vessel* is a ship fitted with mechanical means of propulsion for navigational purposes.

(25) A *non-propulsion vessel* is a ship which is not a self-propelled ship and includes ships fitted with mechanical means of propulsion only for minor adjustments of ship's positioning during handling operation (not for navigating purpose).

(26) A *passenger* is every person other than:

① the master and the members of the crew or other persons employed or engaged in any capacity on board a ship on the business of that ship; and

② a child under one year of age.

(27) *Oil* means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products.

(28) *Length of ship  $L$  (m)* is the distance on the full load waterline from the forward side of the stem to the after side of the rudder post, or from the point of intersection of the forward side (the inner skin for metal shell plating and the outer skin for non-metal shell plating) of the side projected plane of the hull and the full load waterline if there is no stem, or to the centre of the rudder stock if there is no rudder post or to the point of intersection of the backward side (the inner skin for metal shell plating and the outer skin for non-metal shell plating) of the side projected plane of the hull and the full load waterline provided that the rudder stock is located outside the side projected plane of the hull, but  $L$  is not to be less than 96% and need not to be greater than 100% of the extreme length on the full load waterline. For ships without rudder, the extreme length of the

full load waterline is to be taken as length  $L$ .

The length of the full load waterline  $L_S$  (m) is the horizontal distance between the fore and aft ends (the inner skin for metal shell plating and the outer skin for non-metal shell plating) of the full load water plane.

(29) The *extreme length of the hull*  $L_E$  (m) is the horizontal distance between the very front at fore end and the rearmost at aft end, including shell plating and structural projecting parts at fore and aft ends (such as sponson decks, fenders, bulkheads, pseudobow, pseudostern, pushing arrangement), and movable projecting parts (such as ramps, lifting arms and transport systems) are to be considered according to the state of navigation conditions.

(30) *Breadth of ship*  $B$  (m) is the horizontal distance between the inner skins (or the outer skins for non-metal shell plating) of both side shell plating at the widest part of the ship, excluding projecting parts, such as sponson decks and fenders.

(31) *Moulded depth of ship*  $D$  (m) is the vertical distance measured at the middle of the length  $L$  from top of keel (or lower edge of keel for non-metal shell plating) to lower edge of freeboard deck at side. When a rounded gunwale is arranged, the moulded depth is to be measured to the point of intersection of the continued moulded line of lower edge of freeboard deck and the continued moulded line of inner edge (or outer edge of keel for non-metal shell plating) of side shell plating.

(32) *Draught*  $d$  (m) is the vertical distance measured at the middle of the length  $L$  from top of keel (or lower edge of keel for non-metal shell plating) to the full load waterline.

(33) A *full load waterline* is the waterline corresponding to the load line of the highest-grade service area assigned, and the full load waterline is parallel to the baseline.

(34) *Deadweight DWT* (t) is the combined weight of approved cargoes, persons and their effects, fuel, lubricating oil, fresh water, consumable stores, spares and supplies, corresponding to the difference between the full load displacement of a ship and the lightweight of the ship.

## Section 2 SURVEYS AND CERTIFICATES

### 1.2.1 General requirements

1.2.1.1 The surveys covered in the Regulation are to comply with the requirements of the Section.

1.2.1.2 In addition to those specified in the Section, the surveys mentioned above are to comply with the provisions of ISC Regulations for Classification of Inland Waterway Ships.

1.2.1.3 Any provision related to the surveys covered in the Guidelines is made by the administration, the provisions of the Administration are to be complied with.

1.2.1.4 The Guidelines are the basis for the surveys covered in it.

### 1.2.2 Surveys

1.2.2.1 The surveys covered in the Guidelines are to be carried out at the same time as classification surveys. If necessary, the surveys covered in the Guidelines may be carried out independently with the consent of the party applying for the surveys and ISC.

1.2.2.2 The types, periods and contents of the surveys covered in the Guidelines are to comply with the requirements of ISC Regulations for Classification of Inland Waterway Ships.

### 1.2.3 Certificates

1.2.3.1 Upon completion of the surveys covered in the Guidelines, the relevant certificates of compliance are to be issued or endorsed in accordance with the requirements of ISC Regulations for Classification of Inland Waterway Ships.

### 1.2.4 Inspections of products

1.2.4.1 The products intended for classed ships are to be inspected in accordance with the provisions of ISC Regulations for Classification of Inland Waterway Ships.

## CHAPTER 2 CLASSIFICATION OF SERVICE AREAS ON INLAND WATERWAYS

### Section 1 GENERAL PROVISIONS

#### 2.1.1 General requirements

2.1.1.1 On the basis of the meteorological and hydrological conditions, service area for inland waterways ships is classified into grades A, B and C, where, according to the current velocity, some water areas are further classified as torrent section, i.e. Grade J<sub>1</sub> Section and Grade J<sub>2</sub> Section.

2.1.1.2 Grade A is the highest grade of service area and Grade C is the lowest. Grade J<sub>1</sub> is the highest grade of service section and Grade J<sub>2</sub> is the lowest. Different grade J section is under the service grade area where it is located.

2.1.1.3 The ships navigating in lower service grade area can not navigate in higher service grade area; the ships navigating in various service grade areas, if not meeting the special requirements for torrent section of the service area, can not navigate in the torrent section.

2.1.1.4 When the average gradient of mountain rivers exceed 0.10.1‰, the assessment of torrent section is to be carried out according to the provisions of this Chapter.

2.1.1.5 Letters (numbers) of service areas (sections) may be determined by the Administration itself. However, the division criteria, loadline marks and the corresponding technical requirements of service area (section) grades are to be kept consistent.

#### 2.1.2 Division of Service Areas

2.1.2.1 The service areas are classified into Service Area A, B and C by the significant wave height with 5 percent probability of exceeding, and the significant wave height corresponding to each service area is shown in Table 2.1.2.1.

Division of Service Areas

Table 2.1.2.1

Service areas	Significant wave height $H_s$ (m)
A	$1.25 < H_s \leq 2.0$
B	$0.5 < H_s \leq 1.25$
C	$H_s \leq 0.5$

2.1.2.2 Where the random current velocity of a section is greater than 3.5m/s, the section is determined as a torrent section. The random current velocity of Grade J<sub>1</sub> Section and Grade J<sub>2</sub> Section are shown in Table 2.1.2.2.

Division of Torrent Sections

Table 2.1.2.2

Torrent sections	Random current velocity $V$ (m/s)
J <sub>1</sub>	$5 < V \leq 6.5$
J <sub>2</sub>	$3.5 < V \leq 5$

#### 2.1.3 Definitions

2.1.3.1 *Wind scale* is Beaufort scale.

2.1.3.2 *A wind speed  $U$  (m/s)* means the horizontal distance of air traveling in unit time. Wind speed usually refers to the average wind speed of 10min and the standard height is 10m from water surface.

2.1.3.3 *Wind direction  $F$  (°)* means the direction from which it originates. For manual observation, 16 cardinal directions is adopted; for automatic observation, the wind direction is represented by degrees (°).

2.1.3.4 *Fetch  $D$  (km)* means the distance over which the wind blows without significant change in direction.

2.1.3.5 *Wave height  $H$  (m)* means the vertical distance between the crest and the neighbouring trough parts of a wave.

2.1.3.6 *Significant wave height  $H_s$  (m)* means the average of the highest one-third of waves (measured from trough to crest) that occur in a given period.

2.1.3.7 *5% probability* means 5% probability of a certain amount of wave height higher than or equal to a certain wave height in a given period.

2.1.3.8 *Current velocity (m/s)* means the distance water travels in unit time. For mountain rivers, current velocity means the maximum surface current velocity on the main channel (including main channel at

shoals and rapids).

2.1.3.9 *Slope J* (‰) means the fall head of water surface of channel segment in unit length, expressed by permillage. Fall head of water surface/length of head segment x 1000‰.

2.1.3.10 A *mountain river* means a river passing through mountainous area and hilly area with water level rising up and down sharply and river channel of high gradient slope and large flow velocity.

## **Section 2 ASSESSMENT METHODS FOR SERVICE AREA CLASSIFICATION**

### **2.2.1 General requirements**

2.2.1.1 Service area (section) grades of water areas are to be determined on the basis of the hydrological conditions, navigating experience and meteorological data according to the provisions of 2.1.2 of this Chapter.

2.2.1.2 In the course of assessing service area (section) grade, the hydrological conditions, navigating experience and meteorological data are to meet the requirements of 2.2.2 of this Section.

2.2.1.3 When the aforementioned data mentioned in 2.2.2.2 of this Section of this Section are insufficient, the estimation of significant wave height may substitute the data mentioned in 2.2.2.2 of this Section. The estimation of significant wave height is stipulated in Section 3 of this Chapter.

### **2.2.2 Data for assessment of service area grade**

2.2.2.1 Hydrological conditions and navigating experience are to at least cover the following contents:

- (1) geographical location and geomorphic feature of water areas;
- (2) plan and channel chart of water areas;
- (3) main characteristic parameters of water areas, such as length, width, depth, river slope (water area of lakes/capacity of reservoirs), altitude and so on;
- (4) basic meteorological conditions (such as average strong wind days, prevailing wind direction over several years) and hydrological conditions (such as water flow conditions and wave height conditions);
- (5) navigating conditions, navigating experience and maritime accident conditions, such as type, number and dimension of ships, transport characteristics, navigating experience, type of major accident and typical cases.

2.2.2.2 In the course of assessing service area grade of water areas, the hydrological conditions and meteorological data are to meet the following requirements:

- (1) statistical data of wind scale (or wind speed) and wind direction no less than five consecutive years;
- (2) statistical data of wave height no less than three consecutive years.

2.2.2.3 In the course of assessing torrent section grade of water areas, the channel and hydrological data are to meet the following requirements:

- (1) position and curvature radius of typical curved channel;
- (2) name, location, segment length, slope, flow regime and shoal forming conditions (water level and flow) of rapids and shoals;
- (3) current velocity and slope measuring data of rapids and shoals under typical water level and flow.

## **Section 3 ESTIMATION METHODS OF SIGNIFICANT WAVE HEIGHT**

### **2.3.1 General requirements**

2.3.1.1 When the significant wave height is estimated according to the method mentioned in this section, the corresponding hydrological conditions and navigating experience are to be collected according to the provisions stipulated in 2.2.2.1.

2.3.1.2 For river-type and river-course type reservoirs, at least three wide channel segments are to be used for the estimation of the wave height and the significant wave height is to be the average.

2.3.1.3 The significant wave height estimated according to the method in this Section is the significant wave height corresponding to 5% probability.

### 2.3.2 Selection of calculated wind speed

2.3.2.1 The calculated wind speed may be determined based on local available weather information according to the provisions in 2.3.2.2 or determined based on the number of strong wind days according to the provisions of 2.3.2.3 of this Section

2.3.2.2 In case there are available information on local wind speed, daily maximum wind speeds (average maximum wind speed for 10min at 10m away from water surface or ground) measured at a given period are sorted in descending order, the calculated wind speed is the maximum wind speed corresponding to 5% probability.

2.3.2.3 In case there are no available information on local wind speed, the calculated wind speed may be determined based on the annual average strong wind days over several years N according to the following method:

(1) when  $N/365 \geq 0.05$  or there is no information on strong wind days, the calculated wind speed is 20.00m/s;

(2) when  $0.025 \leq N/365 < 0.05$ , the calculated wind speed is 17.10m/s;

(3) when  $N/365 < 0.025$ , the calculated wind speed is 16.00m/s.

2.3.2.4 For water areas freezeup period, when the calculated wind speed is determined according to the provisions in 2.3.2.2 of this Section, the days of freezeup period and wind speed data are to not be taken into account; when the calculated wind speed is determined according to the provisions in 2.3.2.3 of this Section, the days of freezeup period and strong wind days are to not be taken into account.

### 2.3.3 Selection of calculated fetch

2.3.3.1 For rivers, the calculated fetch is to be determined according to the river surface size corresponding to the average water level over several years; for lakes, the calculated fetch is to be determined according to the lake surface size corresponding to the average highest water level over several years; for reservoirs, the calculated fetch is to be determined according to the water surface corresponding to the normal storage level.

2.3.3.2 The calculated fetch of river-type and river-course type reservoirs is to be the maximum river surface width or 3 times of average river surface width, whichever the greater.

2.3.3.3 The calculated fetch of lakes and large reservoirs is to be determined according to the following method:

(1) The prevailing wind direction for the estimation of wave height parameters is to be determined according to the wind direction of local strong winds. In case there are available information on local wind direction, the prevailing wind direction is the wind direction mentioned in 2.3.2.2; in case there are no available information on local wind direction, the prevailing wind direction is the wind direction of usual strong winds;

(2) when the water surface of the water areas is in regular shape, the maximum distance to the other side of the river corresponding to the prevailing wind direction is taken;

(3) when the water surface of the water areas is in irregular shape (or has island or other obstacles), the calculation point is on the shoreline of windage side. Make a principal ray from the calculation point of the prevailing wind direction. Then, make rays at two sides of the principal ray at interval  $7.5^\circ$  of till the angle of deviation with the principal ray is  $\pm 22.5^\circ$ , shown as Figure 2.3.3.3. The fetch is calculated according to the following formulae:

$$D = \frac{\sum D_i \cos^2 \alpha_i}{\sum \cos \alpha_i}, i = 0, \pm 1, \pm 2, \pm 3 \quad \text{km}$$

where:  $D_i$ —distance from the rays at two sides along the prevailing wind direction at the calculation point to the intersection point of boundary of water areas, in km;

$\alpha_i$ —included angle between  $i^{\text{th}}$  ray and the principal ray, in  $^\circ$ ,  $\alpha_i = i \times 7.5^\circ$ ;

$i$ —sequence number of rays, expressed by 0,  $\pm 1$ ,  $\pm 2$  and  $\pm 3$ , of which, the positive sign and negative sign are respectively one side and the other side of the principal ray as the center line.

A series of fetches are obtained when the calculation point is at different locations and the maximum value is taken as the calculated fetch.

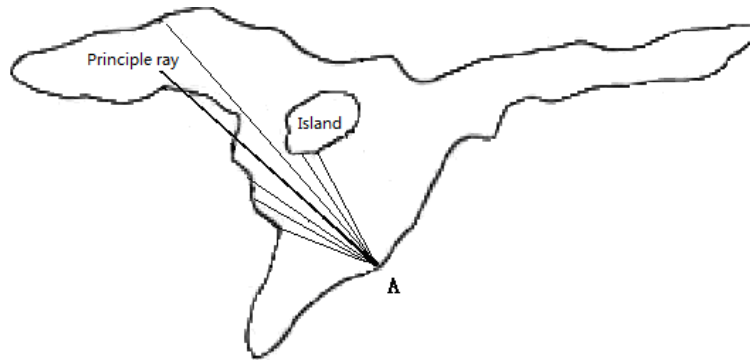


Figure 2.3.3.3 Calculation of fetch

#### **2.3.4 Selection of calculated depth**

2.3.4.1 For rivers, the calculated depth is the average depth corresponding to the average water level over several years; for lakes, the calculated depth is the average depth corresponding to the average maximum water level over several years; for reservoirs, the calculated depth is the average depth corresponding to the normal storage level.

2.3.4.2 For river-type and river-course type reservoirs, when several river segments are selected for the estimation of wave height parameters, the calculated depth is to be the average depth of each river segment.

#### **2.3.5 Estimation of significant wave height**

2.3.5.1 The calculated wind speed, the calculated fetch and calculated depth for the estimation of significant wave height are to be determined according to the provisions in 2.3.2, 2.3.3 and 2.3.4.

2.3.5.2 The significant wave height is to be selected according to 2.3.5.2 on the basis of wind speed, fetch and depth.

**Estimation table of significant wave height of inland waterways  $H_s(m)$**  Table 2.3.5.2

No.	Wind speed $U$ (m/s)	Depth of water (m)	Fetch $D(km)$							
			0.50	1.00	2.00	3.00	4.00	5.00	10.00	20.00
1	16.0	2	0.3065	0.3984	0.5106	0.5863	0.6449	0.6933	0.8634	1.0724
2		5	0.3147	0.4175	0.5504	0.6438	0.7175	0.7790	0.9950	1.2506
3		10	0.3171	0.4226	0.5625	0.6639	0.7457	0.8151	1.0665	1.3740
4		20	0.3188	0.4254	0.5679	0.6722	0.7574	0.8306	1.1023	1.4501
5		50	0.3207	0.4283	0.5723	0.6783	0.7650	0.8398	1.1206	1.4901
6		80	0.3217	0.4296	0.5743	0.6807	0.7680	0.8432	1.1261	1.4997
7		130	0.3227	0.4311	0.5763	0.6832	0.7708	0.8464	1.1309	1.5072
8		Average value	0.3175	0.4218	0.5592	0.6583	0.7385	0.8068	1.0578	1.3777
9	17.1	2	0.3305	0.4281	0.5485	0.6293	0.6918	0.7437	0.9258	1.1506
10		5	0.3399	0.4505	0.5931	0.6931	0.7719	0.8376	1.0680	1.3408
11		10	0.3426	0.4563	0.6071	0.7162	0.8041	0.8787	1.1480	1.4767
12		20	0.3444	0.4594	0.6132	0.7257	0.8176	0.8965	1.1892	1.5632
13		50	0.3465	0.4625	0.6180	0.7323	0.8260	0.9067	1.2100	1.6094
14		80	0.3475	0.4640	0.6202	0.7350	0.8292	0.9104	1.2161	1.6202
15		130	0.3494	0.4655	0.6223	0.7377	0.8323	0.9139	1.2233	1.6285
16		Average value	0.3430	0.4552	0.6032	0.7099	0.7961	0.8696	1.1401	1.4842
17	20.0	2	0.3946	0.5007	0.6494	0.7435	0.8165	0.8771	1.0915	1.3591
18		5	0.4079	0.5390	0.7072	0.8246	0.9165	0.9931	1.2614	1.5797
19		10	0.4112	0.5470	0.7266	0.8560	0.9600	1.0481	1.3634	1.7481
20		20	0.4134	0.5510	0.7347	0.8692	0.9788	1.0729	1.4211	1.8637
21		50	0.4159	0.5547	0.7407	0.8776	0.9896	1.0864	1.4496	1.9284
22		80	0.4171	0.5565	0.7433	0.8807	0.9935	1.0908	1.4572	1.9427
23		130	0.4171	0.5583	0.7458	0.8839	0.9971	1.0950	1.4637	1.9534
24		Average value	0.4110	0.5439	0.7211	0.8479	0.9503	1.0376	1.3583	1.7679

Note: Where the wind speed, fetch and depth are mediant given in Table, the significant wave height is to be obtained by linear interpolation.