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**SECTOR 7 — CHART INFORMATION**

# SECTOR 7

## CHINA—SAN-MEN WAN TO MIN JIANG

**Plan.**—This sector describes the SE coast of China between Banzhao Liedao (T'ung-t'ou Shan), an islet NE of San-men Wan, and Shafeng Jiao, a point about 193 miles to the S. The description is N to S.

### General Remarks

**7.1 Winds—Weather.**—Winds are seasonal and blow largely NE and SW in consequence of the influences which create the characteristic monsoons of the SE coast of China. From September through May winds from the NE predominate and commonly exceed 22 knots. During October, November and January, winds will likely exceed 34 knots. In August winds are transitional and blow with equal frequency from the SW and NE.

Typhoons, created well to the SE by forces other than those giving rise to monsoon winds, may occur at anytime of the year. From November to April, they seldom if ever occur. In May, the frequency of occurrence increases until during June and July at least one typhoon occurs each year while in August at least two typhoons annually occur. During September and October, though frequent well to sea, they seldom reach the mainland coast.

**Tides—Currents.**—Offshore ocean currents are seasonal in set and velocity. From October to March the set is SW and parallels the coast. In April the set becomes confused or counterclockwise. From May to August the set is NE and parallels the coast. In September, current flow once more becomes irregular and sets SW as far as Ou Chiang where it becomes confused or counterclockwise. The SW current reaches a maximum of 1.7 knots in January. The NE current reaches a maximum of 2 knots in August.

Tidal currents in general flood S on a rising tide and ebb N on a falling tide. Tidal rise is everywhere considerable and reaches extremes in excess of 6.1m near the entrances to the rivers Ou Jiang and Min Jiang.

**Aspect.**—The coastline of China, between Banzhao Liedao (T'ung-t'ou Shan) and Shafeng Jiao, is extremely irregular and indented by numerous bights, large bays, and lengthy inlets. The inshore area is generally shoal and flat, and provides large portions of the coastline with extensive areas of drying mud flats which, in places, extend well to sea. The offshore area contains many large islands and a multitude of smaller islands, clustered islets, and scattered dangers, most of which rise abruptly from surrounding shoal water and afford good landmarks for coastal navigation. The 40m curve, in general, parallels the coast at a distance of 10 to 22 miles. Inland, the coastline is backed throughout by mountainous terrain which, characteristically for the SE coast of China, reaches the sea in isolated, rock-fringed promontories with intervening coastal plains extending 20 miles inland.

**Caution.**—Fish stakes and fishing nets encumber the approaches and entrances to many of the bays indenting this portion of the Chinese coast.

### Off-lying Islands

**7.2** The many offshore islands lie within the 40m line. Several islands and isolated islets lie outside the curve and rise abruptly from the sea floor at a distance as far as about 30 miles offshore where they present a danger to vessels standing off the coast for destinations N or S. The outermost of these dangers are described below.

**Yu-shan Lieh-tao** (Yushan Liedao) (28°52'N., 122°15'E.) consists of a group of several islets and three steep-sided, inhabited islands offering little shelter. Yu-san Chiao, the N islet, is mushroom-shaped. Pei-yu Shan, a large island in the middle of the group, is precipitous on its SE side, which is marked by a light. Wuhu Jiao, 0.5 mile E of Pei-yu Shan, consists of a group of rocks like saw teeth that are easy to identify. Nan-yu Shan, the southernmost island of the group, is saddle-shaped and reported radar conspicuous at 25 miles.

**Caution.**—A rock, awash, lies 0.25 mile N of Yu-san Chiao; another rock, with a depth of 2.1m, lies 2 miles NE of the same islet. Other dangers may best be seen on the chart.

Numerous dangerous wrecks lie SW of these islands.

**7.3 Ta-ch'en Tao** (Taizhou Liedao) (28°30'N., 121°53'E.) is a group of islands consisting of two large, inhabited, and mountainous islands and several islets and adjacent above and below-water dangers. Shang Hsu (Xia Yu), the 113m high S islet with a prominent yellow streak on its SW side, is reported radar conspicuous at 23 miles. Finger Rock, a remarkable stack 52m high, stands close off the S point of Shang Hsu.

**Xiadanchen Shan** (28°26'N., 121°53'E.), about 2.3 miles NNW of Shang Hsu, is 225m high and inhabited.

Zhu Yu (Chu Hsu), a 53m high islet, lies 0.4 mile W of the SW end of Xiadanchen Shan; the passage between is dangerous. Other islets lie close S and SW of Zhu Yu; foul ground extends 0.15 mile E and 0.25 mile N of the E end of the islet. A light is shown on the N side of the islet.

**Anchorage.**—Dachen Western Anchorage, located about 0.8 mile N of the light on Zhu Yu, affords anchorage, in depths of 7 to 13m, mud, sheltered from winds between NE and SE. A bank, on which there are depths of less than 9.1m, extends from the N side of Xiadanchen Shan to within 0.5 mile NE of the anchorage. Near the extremity of this bank is a dangerous wreck, the position of which is doubtful.

Fishing stakes may be encountered when approaching from the W. Tidal currents flow NW at 2 knots on the flood and SE at 1.5 knots on the ebb.

**7.4 Xiaojiatou** (28°28'N., 121°55'E.) is the N islet of a group of three islets that extend nearly 1 mile N from the E end of Xiadanchen Shan; a light is shown from the islet.

Dachen Middle Anchorage, 0.75 mile W of the light, affords anchorage, in depths of 10 to 26m, mud, sheltered from winds between NW and NE, and between SW and SE. Tidal currents

flow SW at 1.75 knots on the flood and NE at 1.5 knots on the ebb.

**Shangdachen Shan** (28°30'N., 121°53'E.), 203m high, is separated to the N from Xiadachen Shan by a 0.75 mile wide channel; foul ground extends 0.2 mile from the NW, N, and E sides of the island.

A light is shown from a small islet 0.15 mile SW of the SW end of Shangdachen Shan.

**Sheshan Dao** (Ch'ing Hsu) (28°33'N., 121°55'E.), the N island of Ta-ch'en Tao, is 62m high with two rocky islets close S of it, and lies 2 miles NE of the NE end of Shangdachen Shan. The channel between the two islands is reported to be deep.

**Caution.**—Several islets lie within 0.5 mile S and SW of the Shangdachen Shan; a reef, with a depth of 3.8m, lies 1.25 miles SW of the SW extremity of the islet.

**7.5 Tung-yin Tao** (26°23'N., 120°30'E.), a high precipitous, inhabited island reported radar conspicuous at 27 miles, is a weather station with two white buildings standing on the slope rising behind the lighthouse on the E extremity of the island. Small vessels, seeking shelter during the Northeast Monsoon, can obtain anchorage, in 7.3 to 11m, in Bertha Cove, a small body of water formed SW by Tung-yin Tao and an islet lying close NW. Vessels best approach the anchorage from the S and clear of off-lying fish stakes during daylight hours only.



**Tung-yin Tao from E**

**Tung-sha Tao** (26°10'N., 120°24'E.), about 13 miles SSW of Tung-yin Tao, is a barren rock which, rising abruptly from the sea floor, is reported radar conspicuous at 15 miles.

## T'ung-t'ou Shan to Zhaitou Jiao

**7.6 T'ung-t'ou Shan** (29°14'N., 122°00'E.) is a 171m high, steep-sided islet lying off the coast and on the N side of a tortuous channel leading inland. The coastline between the islet and Zhaitou Jiao, about 74 miles SSW, continues extremely irregular and much indented by shoal bays and several lengthy inlets which throughout are fronted by extensive areas of drying mud flats. Inland, the coastline is backed by mountains which reach the shore in a multitude of long, narrow, rugged peninsulas or promontories, except in the middle part where the land is low and in places swampy. Off-shore, the coastline is fronted by numerous clustered islands and many scattered islets, rocks, and isolated underwater dangers.

**Tantou Shan** (29°10'N., 122°02'E.), lying about 3.3 miles SE of T'ung-t'ou Shan, is an irregular shaped island that is wooded and almost divided into two parts by a low isthmus.

Wu Jiao (Niao Chiao), about 0.8 mile NE of the E point of the island and marked by a light, and Jilong Jiao (Chilong Chiao), 38m high and lying 1 mile NE of the N point of the island, are the outermost islets marking the dangers extending from the NE side of Tantou Shan.

A shallow bank, on which there are a number of fishing stakes and other dangers, extends 3 miles W from Tantou Shan to two islands lying in the entrance to the channel between the N side of Niutou Shan and the mainland. Deep, but narrow and intricate, passages lead N and S of these latter two islands to **Shih-p'u** (29°13'N., 121°57'E.) ([World Port Index No. 59935](#)), a coastal trading center; there are least depths of 4.9m in the approach to the N channel and 7m in the approach to the S channel.

**Niluo Yu** (Ni-lo Chiao) (29°08'N., 122°03'E.), about 3.3 miles S of Tantou Shan, appears as two islets, of which the N part is 48m high. There are fishing stakes in the area between 5 miles E and 5 miles S of the islet. A depth of 6.4m lies 6 miles ESE of Niluo Yu.

**Niutou Shan** (Niu-T-ou) (29°07'N., 121°56'E.), a large island 387m high, is separated from Tantou Shan by a 1.75 mile wide passage. Nanshan, 154m high and wooded, lies close off the S point of Niutou Shan.

Nuying (Chiao) Jiao, 3 miles SE of Nanshan, dries 1m. Youcaihuazhi (Tsai-hua-chi), 46m high, lies 1.75 miles NE of Nuying Jiao; foul ground extends 0.5 mile W from it to another islet. Mituo Dao, 42m high, lies 1.2 miles NNW of Youcaihuazhi.

**Anchorage.**—Indifferent anchorage can be obtained, in depths of 6.4 to 10.1m, mud, between the SW side of Tantou Shan and the E side of Niutou Shan, but the tidal currents may attain a rate of 2.5 knots and there is usually a heavy swell. Anchorage can also be obtained in the sheltered waters N of Niutou Shan, in depths of 5.5 to 40.2m, mud.

**7.7 Sanmen Wan** (29°00'N., 121°45'E.) is a large inlet entered between Nanshan and **Niushan Zui** (29°01'N., 121°43'E.), a point lying about 12 miles further SW. The coastline is extremely irregular and recedes about 20 miles inland to form several arms which throughout are almost completely filled by extensive areas of drying mud flats. It is generally backed by low-lying land within the inlet and by rugged mountains without. Several large, mountainous islands lie on the N side of the entrance while elsewhere numerous islets and dangers largely encumber clear access through the approaches from sea.

The principal fairway into Sanmen Wan passes between **Ts'ao-hsieh-pa Yu** (29°00'N., 121°54'E.), a steep-sided islet divided into three parts, and Sanmen Tao, a 53m high island about 5.5 miles further SW; rocks, islands, and other dangers extend 3.5 miles NW from Sanmen Tao. The fairway, in general, trends NW. It enters the inner part of the inlet by passing through the channel **Man-t'ou Kang-tou** (29°05'N., 121°40'E.) and rounding the steep-to point **Mao-t'ou-shan Tsui** (29°06'N., 121°39'E.).

The coast between Niushan Zui and **Ketangshan** (28°54'N., 121°41'E.), an islet rising to a height of 212m, and lying 6.5 miles S, is very broken and is composed of a number of bays filled with drying flats. A number of islets and dangers, which

are best seen on the chart, lie within 2 miles NE and 3.5 miles ESE of Ketangshan.

The coast between Ketangshan and Baishashan, the N entrance point of T'ai-chou Wan, about 10 miles S, is fringed by a drying flat extending up to 4 miles offshore, with a shallow coastal bank extending seaward to the off-lying islands.

**7.8 T'ai-chou Wan** (28°40'N., 121°37'E.) is a shoal bay entered between Baishashan, 76m high and **Langjishan** (28°32'N., 121°37'E.), a 243m high island lying 10 miles further S. The shoreline is low, regular, and fronted throughout by an extensive margin of drying mud flats except for the area in the entrance to the river Jiao Jiang. Numerous rugged islands, clustered islets, and isolated above and below-water rocks lie in the offshore approaches.

**Toumen Shan** (28°41'N., 121°47'E.), inhabited and rising to a sharp cone 202m high, rises from surrounding shoal water about 15 miles E of the entrance to Jiao Jiang (Chiao Chiang). Good anchorage can be obtained between the S point of Toumen Shan and a 19m high islet lying 0.5 mile S of the point. Islands and other dangers, which may best be seen on the chart, extend from 7.5 miles NE to 6 miles ESE of Toumen Shan.

Navigation within the area N of the island is not recommended.

**Baijiashan** (28°37'N., 121°52'E.), 6 miles SE of Touman Shan, is 75m high and cliffy, with a reef at its E end. Yijiangshan, 2 miles W of Baijiashan, consists of two islands, very close together, of which the N island is 127m high.

**Caution.**—Fishing stakes exist in the area around Yijiangshan, Baijiashan, Touman Shan, and the islands E of Touman Shan.

**7.9 Hai-men** (28°41'N., 121°27'E.) ([World Port Index No. 59930](#)), a coastal trading center of some importance, is a community with about forty berths. It is capable of handling vessels of 3,000 to 5,000 dwt, located on the S bank of the area close within the entrance to the river.

A berth for 10,000 dwt ships is now in operation. Vessels with a draft not exceeding 6.8m can be led through the channel to the berths.

**Pilotage.**—Pilotage is compulsory and available at all times. The pilot boards in position 28°39.8'N, 121°46.2'E for the No. 1 Pilot and Quarantine Anchorage and in position 28°27.4'N, 121°52.5'E for the No. 2 Pilot and Quarantine Anchorage.

**Anchorage.**—The Quarantine Anchorage has a depth of 9m, mud and good holding ground. It lies within the following bounded area:

- 28°40.2'N, 121°45.3'E.
- 28°40.2'N, 121°47.3'E.
- 28°39.2'N, 121°47.3'E.
- 28°39.2'N, 121°45.3'E.

Anchorage can also be obtained in the narrows at the entrance to Jiao Jiang, where there is an area 1 mile long and 0.5 mile wide, with depths of 4 to 8.2m, soft mud.

The coast between Langjishan and **Heshang Tou** (28°21'N., 121°40'E.), about 14 miles SSE, is fringed by a shallow and partly drying bank extending up to 6 miles offshore and on which there are a considerable number of islets and rocks, with

heights up to 243m, of which only the outer dangers are described.

**Jigushan** (Chiku Shan) (28°23'N., 121°43'E.), the southeasternmost of these dangers, lies 3 miles NE of Heshang Tou. It is cone-shaped and 228m high, with a broad yellow stripe on its SE side, which is an excellent landmark.



**Jigushan from SE, distant 2 miles**

**Luo Yu** (Lo Hsu) (28°16'N., 121°44'E.) is an islet lying about 5.5 miles SE of Heshang Tou; a light is shown from a 4m high white square brick structure located at an elevation of 76m. Niu Shan, 162m high, lies 2 miles WNW of Luo Yu.

The coast between Heshang Tou and **Liudou Zui** (Litou Zui) (28°16'N., 121°25'E.), the E entrance point of Aiwan Wan, about 7.5 miles further SW, is composed of many shallow bays. Islets and other dangers extending off this coast may best be seen on the chart.

**Yisuan Shan** (28°13'N., 121°40'E.), marked by a light, lies 4.5 miles SE of Liudou Zui; a reef lies 0.2 mile NE of the islet. Daqi Jiao and Xiaoqi Jiao, also known as The Stragglers, are two groups of above and below water rocks lying between 2.5 and 3 miles NE of Yisuan Shan. Sansuanshan, 111m high, lies 1.25 miles NW of Yisuan Shan; a 100m high islet lies between these two islands.

An unmarked dangerous wreck lies at approximately 1 mile SW of Sansuanshan.

**7.10 Aiwan Wan** (28°16'N., 121°30'E.) is entered between Liudou Zui and Maocaoshan, 9 miles WSW; the bay is generally shallow with a drying flat extending about 2.5 miles offshore.

Tidal currents in Aiwan Wan set NW on the flood current and SE on the ebb current, at a rate of 1.5 knots.

**Wailongyan** (28°13'N., 121°33'E.), a flat rock about 5m high that is marked by a light, situated in the approach to Aiwan Wan, about 3 miles SW of Liudou Zui. Neilongyan, 10m high, lies about 1 mile NNW of Wailongyan.

**Anchorage.**—Anchorage sheltered from NW to NE winds, can be obtained in Aiwan Wan, in depths of 4 to 5m, mud, NW of Neilongyan.

**Maocaoshan** (28°12'N., 121°25'E.), 81m high, is the W entrance point of Aiwan Wan, and is the outermost of a group of islets lying close offshore. The coast continues SW for 5 miles to Zhaitou Jiao (Hebe Head).

**Caution.**—Fishing nets and stakes may be encountered in the area extending 5.5 miles NE of Wailongyan. A dangerous wreck lies about 3.5 miles ENE of Wailongyan.

## Zhaitou Jiao to Shi Jiao

**7.11 Zhaitou Jiao** (Hebe Head) (28°08'N., 121°21'E.) is the S extremity of a rugged mountainous headland. The coast

line between the headland and Shi Jiao, about 112 miles SW, continues rather irregular and is indented by many inlets and the estuaries of several large rivers. It is backed throughout by mountainous terrain which reaches the sea everywhere in bold promontories and headlands, except in the N central part where the land is low and well-cultivated. The inshore area as far S as P'ing-yang Tsui fronts the coastline with an extensive margin of drying mud flats, while the offshore area contains numerous islands and islets well-scattered throughout.

**Xialangtan** (28°04'N., 121°31'E.), a small islet marked by a light, with another islet close NW, lies 9.5 miles SE of Zhaitou Jiao. Pi Shan, 1.25 miles NW of Xialangtan, is 174m high and has several rocks and islets within 0.5 mile of its shores. Two other small islets lie 1 mile WNW and 2.5 miles NW, respectively, of Pi Shan.

**Qian Shan** (28°03'N., 121°24'E.), 86m high and marked by a light on its W end, is the N of a group of three islets, close together, lying 4.5 miles WSW of Pi Shan. Other islands, rocks, and dangers, best be seen on the chart, lie between Qian Shan and Zhaitou Jiao.

The coast between Zhaitou Jiao and Wenzhou Jiao, about 23 miles WSW, recedes N to form a large bay whose very irregular shoreline is fronted by extensive margins of drying mud flats and whose offshore area is considerably blocked by the large mountainous island **Yuhuan Dao** (28°08'N., 121°12'E.) and numerous smaller islands and lesser islets. The river **Ou Chiang** (28°01'N., 120°44'E.), with the port of Wenzhou, has its entrance about 23 miles SW of Zhentou Jiao.

Vessels, seeking shelter from typhoon winds, anchor in 9.1 to 14.6m about 1.25 miles off the salient point on the SW side of Yuhuan Dao. This anchorage, in the deeper part of the bay Leqing Wan (Lo-ch'ing Wan), is at times obstructed by fishing stakes.

**Wenzhou Wan** (27°55'N., 121°15'E.) is an extensive open roadstead lying SE of Yuhuan Dao and E of the numerous large, mountainous islands which, rising abruptly from surrounding areas of shoal water and westward trending margins of drying mud flats, lie in the E and SE approaches to Ou Chiang.

**Dongtou Shan** (27°50'N., 121°08'E.) is a large irregularly-shaped island about 223m high; there are a number of dangers within 0.75 mile of the E end of the island. Dazhu Shan, about 2 miles E of the SE point of Dongtou Shan, is 75m high; islets and rocks extend 0.5 mile S from this islet. Another small group of islets and rocks lies 0.4 mile NW of Dazhu Shan.

**Hutou Yu** (Hu-tou Hsu) (27°50'N., 121°15'E.) is 99m high, with several islets extending almost 0.8 mile NW from it; a light is exhibited from the summit of Hutou Yu.

**Caution.**—This group of islets resembles Dazhu Shan and its surrounding islets, about 1.5 miles SW; these two groups of islets may be confused in thick weather.

A dangerous wreck reported in the approach to Wenzhou Wan in approximately position 28°01.7'N, 121°21.4'E.

**7.12 Chongshan Shuidao** (27°54'N., 121°04'E.) is the channel between the N side of Zhuangyuanao and Niyu Shan, and the S side of Qingshan Dao and Chongshan Shazui, a drying bank extending 3 miles W from Qingshan Dao. There are depths of as little as 2.2m in the W part of this channel.

**Shatou Shuidao** (28°01'N., 121°02'E.) leads SW between two groups of islets lying close NW of Xiaomen Dao and the

drying mud flats fronting the mainland. There is a least charted depth of 2.6m in the channel.

**Huangdao Shuidao** (27°56'N., 121°07'E.) is the only channel available to shipping entering Ou Jiang. The channel leads W between Qingshan Dao and Chongshan Shazui to the S and the coast of Damen Island to the N; the channel then continues N of Zhong Sha, an extensive bank which dries in places and lies between 0.6 mile and 2 miles S of the SW end of Damen Island. The channel then continues NW, passing between the extensive drying bank of **Wenzhou Qiantan** (27°56'N., 120°57'E.) to the SW and Sanjiao Sha to the NE.

**Aspect.**—The S coast of Damen Island between Dong Tou, its E extremity, and **Rock Point** (27°56'N., 121°05'E.), about 3 miles WSW, is bold and cliffy. From Rock Point to Huangdu Zui, the SW point of Damen Island, about 1.5 mile E, the coast consists of a bay which dries completely.

Qingling Yu, a small islet about 0.6 mile W of Rock Point, has a 43m high summit and is marked by a light. Lights are also exhibited on Huangdu Zui and Dong Tou.

**7.13 Qingshan Dao** (27°55'N., 121°07'E.) is 224m high and remarkable in appearance. From its E, N, and W sides it rises gradually in long spurs until nearly halfway to the summit, where its rocky sides then rise abruptly.

**Tides—Currents.**—The flood current near Qingling Yu has a maximum rate of 2 knots; the ebb current has a rate of 2.5 knots.

Off the S end of Damen Island, the tidal current is rotary and changes from flood to ebb gradually through N, and from ebb to flood gradually through S.

**Anchorage.**—Wenzhou pilotage and quarantine anchorage is designated within the area enclosed by:

- a. 27°56'04"N, 121°06'06"E.
- b. 27°55'50"N, 121°06'06"E.
- c. 27°55'50"N, 121°07'05"E.
- d. 27°56'41"N, 121°07'15"E.

The anchorage has depths of 7 to 10m, mud and sand bottom. It is protected from winds and heavy swell except from E and S winds and swell.

Vessels anchor with little shelter, in 7.4 to 21.9m, hard mud, anywhere in Wenzhou Wan according to draft. Vessels seeking refuge from typhoon winds anchor, in 5.5 to 12.8m in **Heiniu Wan** (27°48'N., 121°07'E.), sheltered by Dongtou Shan to the N, but open to S and SW winds which send heavy swells into the anchorage.

Vessels seeking shelter from the predominating winds of the Southwest Monsoon season anchor, in 7.4 to 9.2m, in a position N of Dasanpan Shan, an island close N of Dongtou Shan. The anchorage is approached from the E. The approach from the W through Dongtou Xia (Tung-t'ou Hsia) (Tungtow Strait) is obstructed by a bar and is not recommended without local knowledge. Vessels also anchor, in 11 to 36.5m, clear of fish stakes, in a position close S of Qingshan Dao, a lofty islet lying S of Damen Island. The anchorage lies in a deep pool in Chongshan Shuidao, a secondary access channel to Ou Chiang used only by junks.

Above Qingling Yu, the water changes from clear and salty to muddy and brackish.

**Caution.**—Dangerous wrecks lie in the approaches to Wenzhou Wan. These may best be seen on the chart.

**Wenzhou (28°01'N., 120°39'E.)**

World Port Index No. 59910

**7.14** Wenzhou, a large metropolis and important coastal trade center, lies on the S bank of Ou Chiang at about 17 miles upstream from Wenzhou Jiao, the hilly N entrance point of the river.

**Tides—Currents.**—At the river entrance, flood duration is 5 hours 30 minutes and the ebb is 7 hours 30 minutes. Currents reach 5 knots and continue to run about 25 minutes after the time of H and LW.

At Wenzhou, flood duration is 4 hours 45 minutes; ebb, 7 hours 30 minutes. Currents continue to run about 38 minutes after the time of HW and LW. From April to June, freshets occur which may cause ebb currents to persist throughout the day at a maximum velocity of 6 knots, but may reach 7 knots for short periods.

**Depths—Limitations.**—The harbor is divided into two sections, Shuo Men and An Lan. There is 540m of wharf space, with an alongside depth of 6m, capable of taking vessels of 500 to 1,500 dwt. A new floating wharf is now in operation. Two berths for 10,000 dwt ships have been completed in the Longhai area. Five new coal-handling berths are to be constructed.

Vessels can ordinarily reach Wenzhou with a draft of 4.6m during neap tides and with 5.5m during springs. It was reported that an ocean-going vessel, with a draft of 5.1m, entered Ou Chiang and proceeded to the port of Wenzhou.

At **Panshi** (27°59.3'N., 120°49.6'E.), there are mooring buoys for vessels of 10,000 and 20,000 dwt for berthing ; at **Longwan** (27°58.3'N., 120°48.2'E.), there are general cargo berths for vessels of 10,000 dwt. The main channel leading to these berths has depths of between 2 to 10m; vessels enter the port area with a favorable tide.

**Aspect.**—The river banks are generally low and maintained for considerable lengths by dikes. The N bank is backed by rugged hills while the S bank, within the river entrance, is largely flat and well-cultivated. Several low, diked, and cultivated islands, as well as extensive areas of drying mud flats and shifting sand banks encumber the river between the entrance and alongside berthing facilities at Wenzhou. River depths and the navigable channel change constantly and require local knowledge to ensure safe navigation.

**Pilotage.**—Vessels board pilots in the quarantine anchorage at Huangdao in position 27°56'N, 121°07'E. Pilotage is compulsory and available during daylight hours only.

**Caution.**—The navigable channel from the Quarantine Anchorage is marked by buoys and beacons; these are altered as necessary to conform with the constant changes which take place in the river bed.

A rock, with a depth, of 2.1m lies close NW of the fairway from Panshi to Long-wan-Tou. Laohu Yan Diike projects 0.6 mile S from the shore 0.5 mile NW of Qidu Zui. Two lights are shown from near the dike.

**7.15 Ku-ao-t'ou** (27°36'N., 120°33'E.) (World Port Index No. 59890), about 32 miles SW of the N entrance point of Ou Chiang, is a community on the N bank of the river Ao Chiang

which, lying about 2 miles within the river entrance, is reached by small vessels with a draft of 3m.

**Beijshan Liedao** (27°38'N., 121°12'E.), consisting of several rugged islands and islets, lies about 34 miles E of the entrance to Ao Chiang and constitutes the farthest seaward danger in the approaches to Ku-ao-t'ou. Bei Ji Shan, 120m high and the largest of these islands, has several islets lying close together about 1 mile SE. Numerous other mountainous islands and lofty islets lie scattered to the W and reach the coast off the entrance to **Feiyun Jiang** (27°42'N., 120°40'E.), a river which small vessels with a draft of 3.7m are able to ascend at HW for a distance of about 5 miles to the community of Ruian.

**Nanjishan Liedao** (27°27'N., 121°04'E.), about 12 miles SW of Beijshan Liedao, consists of the large mountainous island Nanji Shan and the several islets and the many underwater dangers which surround it. Small vessels anchor, in 14.6 to 16.4m, in Nan-chi Chiang, a small inlet on the S side of Nanji Shan. A swell sets into the anchorage with winds occurring during the Northeast Monsoon season and with winds from the SE.

**Shacheng Gang Approaches**

**7.16 Pingyang Zui** (27°28'N., 120°40'E.), about 9 miles SE of the entrance to Ao Chiang, is a point at the NE extremity of a bold headland. The coastline between the point and Shi Jiao, about 57 miles SSW, is very irregular and indented by numerous bays and a multitude of small coves. It is everywhere backed by high hills and mountains which, in general, rise abruptly from a foreshore largely clear of the characteristic margins of drying mud flats.

**Qixing Dao** (27°03'N., 120°51'E.), about 26 miles SSE of Pingyang Zui, is a group of small, high-rising rocks lying at the seaward extremity of a string of islands and islets stretching WSW to the mainland. The SW and largest islet is 61m high and split in two. The above-water rocks at the N end of the group are low and have a number of rocks awash within 0.5 mile E and 1 mile W of them; it is recommended that this group be given a wide berth. **Lie Yan** (Cleft Rock) (27°06'N., 120°49'E.), 15m high, lies 3 miles NW of Qixing Dao.

**Caution.**—Discolored water has been reported to the SE of Qixing Dao.

**7.17 Taishan Liedao** (27°00'N., 120°42'E.), marked by a light and a racon, consists of two islets and a number of rocks. Dongtai Shan, the SE islet, has a table top summit 165m high. Above and below-water rocks extend 2.5 miles W of Xitai Shan, the NW island. A reef, awash, lies about 4.5 miles NW of the same island.

**Nan Yu** (Strawstack Island) (26°56'N., 120°21'E.), about 3.3 miles SSW of Xitai Shan, is 86m high. A rock, awash, whose position is doubtful, lies 4.5 miles W of the islet; a depth of 11.6m lies about 2.5 SW of Nan Yu.

**Xingdao Dao** (26°59'N., 120°28'E.) and Dongxing Dao, together with their off-lying rocks, form a small group of islands sometimes known as Ying-ko-ku Lieh-tao, lying about 20 miles WSW of Qixing Dao. Small vessels, seeking shelter from the Northeast Monsoon, can obtain anchorage, in a depth of 11m, mud, 0.2 mile off the SW side of Xixing Dao, with two white masts in line, bearing 058°. Vessels also anchor, in

12.8m, off the NW side of the islet in a position at the juncture of two ranges indicated by beacons standing E and W of the disused lighthouse at the W end of the islet. Vessels transiting the passage between Yin-ko-ku Lieh-tao and Taishan Leidao, a group of high, steep-sided islands about 11 miles to the E, are recommended to favor the W side of the passage.

**Riyue Yu** (Solitary Rock) (27°02'N., 120°25'E.), 81m high with a reef extending 0.2 mile E of it, lies 3.5 miles NW of Xixing Dao.

Three dangerous wrecks lie within 2.5 miles NE and NW of the rock.

**7.18 Shacheng Gang** (27°10'N., 120°24'E.), about 22 miles SSW of Pingyang Zui, is a narrow, deep, fjord-like inlet which, winding through sheltering mountainous terrain, recedes irregularly inland for a distance of about 17 miles. The inlet has not been thoroughly examined above Kin-sho, an islet lying about 5 miles inland from Fu-chien T'ou, the hilly steep-to S entrance point of the inlet. Depths in the fairway through the entrance are generally deep but irregular; shoal depths of 9.1 to 12.8m have been reported.

Vessels seeking shelter during the Northeast Monsoon season and having a draft no greater than 4.6m can obtain anchorage between **Beiguan Dao** (27°10'N., 120°31'E.) and Nankuan Shan, 1.25 miles W, but local knowledge is required. They also anchor, in 12.8 to 18.2m, clear of fishing nets, off the W side of Nankuan Shan.

Vessels of all classes seeking refuge from typhoon winds enter Shacheng Gang between Fu-chien T'ou and Nankuan Shan and anchor, in 11 to 25.6m in a position in the fairway, clear of bamboo moorings, NW of Lung-mu Yen (Bate Island), a small islet on the N side of the channel about 1.5 miles W of Fu-chien T'ou. A drying reef extends about 0.3 mile NW from the islet. Small vessels anchor, in 5.9 to 9.2m, mud, in a position on the shore bank SE of Tree Islet, an islet lying in the middle of the fairway about 1.8 miles NW of Lung-mu Yen. The channel on the E side of the islet is foul. The tidal range in Shacheng Gang is extreme.

**Caution.**—A dangerous wreck lies approximately 2 miles SW of the entrance to Shacheng Gang, in 11m of water.

**7.19 Dayu Shan** (Fu-yao Shan) (26°57'N., 120°21'E.), about 6 miles WSW of Ying-ko-ku Lieh-tao, is a large mountainous island lying at the seaward end of a number of lesser islands and scattered islets extending E from the N entrance point of the partially examined bay Funing Wan. Transit of the several narrow rocky passages between Dayu Shan and the mainland is not recommended without local knowledge.

**Anchorage.**—Good anchorage, in a depth of 11m, sand, is reported about 1 mile W of Dayu Shan. Good anchorage is also reported, in 11m, 1 mile N of the E point of Dayu Shan.

**Caution.**—Less water than charted has been reported in an area 2 miles N of Dayu Shan.

**Funing Wan** (26°51'N., 120°07'E.) is shoal and has a number of islets and rocks in it. **Beiao Dao** (26°53'N., 120°13'E.), 136m high, is the largest of a group of islands lying within 2.25 miles S of the N entrance point of the bay. The village of

**Sansha** (26°55'N., 120°13'E.) situated close W of the N entrance point.

Good anchorage has been obtained off Sansha, in a depth of 8.2m, with the N entrance point of the bay bearing 043° at 0.35 mile. The anchorage is approached, after passing 0.5 mile N of Beiao Dao on a W course, on a course of 003° with a ruined castle, standing on one of the islets fronting the village, a little on the port bow.

Many of the inshore areas along this portion of coast have been partially surveyed. Vessels must use caution.

**Dajin Jiao** (26°43'N., 120°09'E.) lies about 4.5 miles S of the E end of Changbiao Dao, the S entrance point of Funing Wan; the bay between these two points contains a number of islets and dangers.

Several islets, one of which is marked by a light, lie up to 1 mile SSE of Dajin Jiao.

**Caution.**—Fishing stakes may be encountered up to 2.5 miles SE of Dajin Jiao.

## Shi Jiao to Beijiao Zui

**7.20 Shi Jiao** (26°39'N., 120°07'E.), lying about 4.5 miles SSW of Dajin Jiao, is a steep-sided headland which, backed by high-rising hills and mountains, rises abruptly from a sea floor lying in depths in excess of 18.2m. The coastline between the headland and Beijiao Zui, about 19 miles SSW, is irregular and considerably indented by Sansha Wan and Loyuan Wan, two extensive inlets whose several arms are largely filled with wide areas of drying mud flats. It is backed by mountainous terrain which reaches the shore in bold headlands with a multitude of intervening coves. The offshore area is relatively deep and encumbered by several large islands and many lesser islands and scattered underwater dangers.

**Sishuang Liedao** (26°40'N., 120°21'E.) is a group of islets and rocks lying 9 to 14 miles E of Shi Jiao; the S danger of the group is **Nanquan** (Bare Rock) (26°37.5'N., 120°19.5'E.). Nanshuang Dao, 1.75 miles NE of Nanquan is 182m high; Dongshuang Dao, 2 miles farther NE, is 101m high and has a reef marked by breakers extending 0.5 mile E from it. Beishuang Dao, 139m high and the largest in the group, lies 4 miles NNE of Nanquan. Other islets and dangers may best be seen on the chart.

**Caution.**—Fishing stakes may be encountered between Nanshuang Dao and Dongshuang Dao, and on the N side of Beishuang Dao.

**Hsi-yin Tao** (Lang Tao) (26°20'N., 120°12'E.), about 19 miles SSE of Shi Jiao, is a lofty islet which, with underwater rocks lying close NE and SW, constitutes the farthest seaward danger in the immediate approaches to the considerable inlets indenting this area of the coast. **Tung-yin Tao** (26°23'N., 120°30'E.) and **Tung-sha Tao** (26°10'N., 120°24'E.) are both described in [paragraph 7.5](#).

**7.21 Sansha Wan** (26°25'N., 120°00'E.) is an extensive island-filled bay located between Shi Jiao and Beijiao Zui, about 19 miles SW. **Sandu Ao** (26°35'N., 119°50'E.) is described in [paragraph 7.22](#).

**Fuying Dao** (26°35'N., 120°08'E.) is a large, mountainous steep-sided island lying close S of Shi Jiao; the island has two

remarkable peaks near its NE end, the higher being 363m high. Maci Dao is an island, 255m high, lying 0.75 mile S of the SW end of Fuying Dao.

Another island lies close off the SE side of Fuying Dao, to which it is joined by a shallow ridge. An isolated rock, 18m high, lies 0.75 mile NW of the W end of Fuying Dao.

In the Northeast Monsoon, good anchorage can be obtained, in a depth of 12.8m, mud, SW of Fuying Dao, sheltered from the E swell by Maci Dao and the island N of it.

**Kuishan Dao** (26°30'N., 120°08'E.), rising to a cone 233m high, is the outer island of a group of islands lying on the N side of the approach to Sandu Ao. A rock, with a depth of less than 1.8m, lies 1 mile SE of Kuishan Dao; a reef, awash, lies about 3.8 miles further SE.

**Xiyang Dao** (26°30'N., 120°03'E.), lies 3.5 miles WNW of Kuishan Dao; fishing stakes may be encountered S of the island. Other islets, rocks, and dangers extending W and NW from Xiyang Dao may best be seen on the chart.

**7.22 Sandu Ao** (San-tu Ao) (26°35'N., 119°50'E.) is an extensive inlet entered between **Mouth Point** (26°27'N., 119°50'E.) and the extremity of a rugged and steep-to peninsula about 4.5 miles NE. The inlet provides anchorage in a typhoon with good holding ground. Within its entrance the inlet divides into several arms and is encumbered with a number of islands and islets; the land around the inlet is well cultivated and the hills are terraced.

Tidal currents in Sandu Ao turn at the times of HW and LW; the currents follow the directions of the channels, dividing where there are islands and running at a greater rate past their salient points. In the entrance channel rates of 4 to 7 knots may be obtained, and heavy tide rips occur during the ebb current. The mean spring tidal range in Sandu Ao is 6.6m.

The W sides of the entrance channel, between the entrance to Luoyuan Wan and **Town Point** (26°33'N., 119°48'E.), the extremity of a steep-to peninsula about 7 miles NNW, is rugged and indented with several bays mostly filled with drying mud flats. The peninsula rises NW to become part of the rugged mountain range which backs this coast.

The E side of the entrance channel is also rugged and indented with bays filled with drying mud flats. **Castle Point** (26°32'N., 119°50'E.), jutting out close within the entrance of the channel, is steep-to and marked by a light. Channel Rock, lying near mid-channel about 0.6 mile WSW of Castle Point, dries 4.3m.

**Chi-chiao Shan** (26°34'N., 119°48'E.) lies near mid-channel at the N end of the entrance. Rocks, some awash and some as much as 18m high, extend 0.4 mile SSE of the island. The passage W of the island is reported deep and clear, but during spring tides, the tidal currents may attain a rate of 6 to 7 knots; tide rips and swirls may form off Hail Point, the W extremity of the island.

**Qingshan Dao** (Yen Tao) (26°37'N., 119°47'E.), the second largest island in Sandu Ao, lies 2 miles NNW of the inner end of the entrance channel. The island has several peaks of similar elevation, the highest rising to 390m high in its W part.

**Waterwitch Channel** (26°36'N., 119°46'E.) leads NW between the SW side of Qingshan Dao and the mainland; the latter is much indented with small bays filled by mud flats. The E part of the channel is free of dangers except for a rock, with a

depth of 0.2m, lying 0.25 mile SE of the S point of Qingshan Dao; at the W end of the channel foul ground extends 0.3 mile from the SW side of Qingshan Dao.

**Caution.**—Tidal currents in the fairway between the dangers are strong; there are tide rips and swirls. The ebb current sets towards the S side of the channel.

**7.23 Sandu Dao** (26°39'N., 119°41'E.) is the largest island in Sandu Ao. It has several summits, with Mount MacAllum, 457m high and situated in its W part, being the highest. Mount Stevens, 1.5 miles SE, is 367m high.

**Customs Point** (26°38'N., 119°40'E.), at the SW end of Sandu Dao, has a Customhouse, stone jetty, and pier; storm signals are displayed from a flagstaff nearby. The town of **Sandu** (26°38'N., 119°40'E.) ([World Port Index No. 59880](#)) stands on the W side of a mud filled bay, 0.5 mile NE of Customs Point; it is a port of call for coastal shipping.

Vessels anchor, in 14.6 to 18.2m, 0.5 mile SE of Customs Point with King Point, lying 0.5 mile W of Customs Point, bearing 293° and open N of Lay Rocks (Pai Chiao) and with Mount Stevens, about 1.3 miles ENE of Customs Point, bearing 043°.

**Kaiser Rock** (26°37'N., 119°44'E.), awash and steep-to, lies about 1 mile W of the W end of Qingshan Dao. The tidal currents swirl around this rock at a great rate.

Between **Ridge Point** (26°35'N., 119°51'E.) and Pu-lo-wu Chiao, 4 miles NE, the SE shore of the inlet is slightly indented and has a number of wooded spurs descending steeply to the shore from the mountain range close inland. The best position to anchor to ride out a typhoon is in **Algerine Roads** (26°37'N., 119°53'E.), about 0.8 mile W of Pu-lo-wu Chiao, in a depth of about 22m.

**7.24 Loyuan Wan** (26°25'N., 119°43'E.), entered close S of the entrance to Sandu Ao, is an irregularly shaped bay which, reached through a narrow, deep, islet-obstructed entrance channel about 4 miles long, has extensive margins of drying mud flats and areas of deep water in which large vessels find an excellent refuge from typhoon winds. Tidal rise in the bay is extreme, while tidal currents in the entrance channel reach a velocity of 1.75 knots and form rips.

Anchorage can be obtained about 1 mile SW of the inner end of the entrance channel, in depths of 11 to 12.8m. Anchorage can also be obtained about 1.8 miles N within the N arm of the channel, in depths of 7.3 to 9.1m.

**Dongluo Dao** (26°25'N., 119°55'E.), the larger islets of a group of three, lie 4 miles and 2.75 miles E of the S entrance point to Loyuan Wan; other islets and below-water rocks lie in the bay to the S and W of them. A drying rock lies 0.75 mile N of Dongluo Dao. Tidal currents in the vicinity of these islets sometimes attain a rate of 3 knots.

**Caution.**—Fishing stakes extend up to 2.75 miles NE of Dongluo Don.

## Beijiao Zui to Shafeng Jiao

**7.25 Beijiao Zui** (26°23'N., 119°57'E.) is the seaward extremity of a mountainous finger of land extending about 15 miles NE from the mainland. Pei Hsu is a small islet about 0.3

mile ESE of Beijiao Zui; heavy tide rips and seas form off the islet during the Northeast Monsoon.

The coastline between Beijiao Zui and Shafeng Jiao, about 25 miles SSW, recedes irregularly inland and forms a large bay in the S portion of which lies the estuary to the river Min Jiang. The coastline is everywhere backed by mountainous terrain, except in the area of Shafeng Jiao, where the land is low, sandy, and light in color. The area close offshore in shoal and has extensive margins of drying mud flats. A number of rugged islands, surrounded by drying mud flats, lie in the estuary and create several tortuous channels leading to the river entrance. Farther offshore, several groups of high and generally conspicuous islands with numerous lesser islands and scattered above and below-water dangers extend S from Beijiao Zui as far as Shafeng Jiao.

### Mazu Liedao (Ma-tsu Liehtao)

**7.26 Gaodeng Dao** (Kao-teng Tao) (26°17'N., 119°59'E.), the N island of Ma-tsu Liehtao, is 173m high. There are rocks within 0.75 mile E and W of Kao-teng Tao; another rock, about 11m high, lies 1.5 miles NE of the island.

**Hsiao-ch'iu** (26°15'N., 120°01'E.), 79m high and Ta-ch'iu, close SW and 93m high, lie about 1.3 miles SE of Kao-teng Tao; the channel between is encumbered with above and below water rocks.

**Beigantang Dao** (Pei-kan-t'ang Tao) (26°13'N., 119°59'E.) rises in the NE to two prominent peaks; Bi Shan, the NE and higher peak, is 293m high. Islets and rocks extend 0.75 mile SE from the S point of the island to Yan Shi, which has a depth of 0.9m. Anchorage, providing good shelter from NE winds, can be taken in the NE part of Ma-pi Wan, in a depth of 8.2m, mud, with the summit of **Pang Shan** (26°13'N., 120°01'E.) bearing 126°, distant 1 mile.

**San-lien Yu** (26°14'N., 120°03'E.), widely spaced and up to 31m high, lie between 1.75 and 2.5 miles E of Pei-kan-t'ang Tao.

**Mazu Haixia** (Matsu Strait) (26°11'N., 119°57'E.), separating Pei-kan-t'ang Tao from Ma-tsu Tao, has a navigable width of nearly one mile. Tung Shih (Dong Shi), a pinnacle rock with a depth of 6.4m, lies in the central part of the strait.

**Matsu Dao** (26°09'N., 119°56'E.), a large hilly and cultivated island, rises in its SW part to the prominent summit of Yuantai Shan, 246m high. Hou Ao, a bay on the N side of Ma-tsu Tao, affords shelter with winds from E through S to WNW, in a depth of 9m, but is a bad anchorage due to its rocky bottom.

**Caution.**—Fishing stakes may be encountered off the S and SW side of the island.

**7.27 Tai Shih** (Dai Shi) (26°08'N., 119°58'E.), about 1 mile SE of Ma-tsu Tao, is a group of rocky heads with depths of 1.5 to 5.4m; a 3m high rock lies about 0.5 mile N of Tai Shih.

**Pei-chuan Chiao** (Bei-quan Jiao) (26°07'N., 119°58'E.), 1.5 miles SSE of Hsieh Chiao, is a prominent black rock 6m high; other dangers surrounding this rock may best be seen on the chart.

**Yin-shui Chiao** (Pilot Rock) (26°07'N., 120°02'E.), 3 miles E of Pei-chuan Chiao, is a pinnacle rock with a depth of 0.3m. The sea breaks over this rock, except at LW. A prohibited area

and an explosives dumping ground lie 2 and 7 miles E, respectively, of Yin-shui Chiao. Other prohibited areas lie up to 7 miles ENE of Yin-shui Chiao.

**Liu-ch'uan Chiao** (Liu-quan Jiao) (26°05'N., 119°58'E.), 2 miles SSW of Pei-chuan Chiao, is a precipitous black rock about 50m high; dangers extend 0.4 mile N from it to Kau-chiu Chiao, a 7m high rock.

**Hsi-pi Shih** (Xipi Shi) (26°04'N., 119°57'E.), about 1.5 miles SSW of Liu-ch'uan Chiao, is a group of pinnacle rocks with a least depth of 3m. The sea rarely breaks on them, even with strong NE winds, nor is there any surface disturbance to indicate their presence.

### Chu-Kuang Lieh-Tao

**7.28 Baiquan Liedao** (Pai-ch'uan Lieh-tao) (25°58'N., 119°55'E.), lying about 11 miles S of Matsu Liehtao, consists of two islands and several islets and rocks.

**Dongquan Dao** (Tung-chu Tao) (25°58'N., 119°58'E.), the E island of the group, is 114m high and precipitous; islets and dangers lie within 0.75 mile NW and 1 mile NE of the island.

A light is shown from a round tower on the NE end of the island and a signal operates from the tower.

**Xiquan Dao** (Hsi-chu Tao) (25°59'N., 119°56'E.), the W island of the group, is 191m high. Its summit consists of three rounded hummocks, on the center and highest of which is a boulder; the SW slopes of the ridge are strewn with sand and show white in misty weather when little else of the island is visible. P'o-lang Shih, 16m high, lies at the outer end of a rocky ridge which extends 0.5 mile SW from the W point of the island; this rock and a 13m high rock on the ridge are prominent. Sand banks, with charted depths of 5.4 to 10m, extend up to 4 miles SW of Hsi-chu Tao.

**Caution.**—A prohibited area, which may be fouled by fishing stakes, lies about 4 miles SE of Tung-chu Tao.

### Min Jiang

**7.29** The estuary to Min Jiang, lying between Shafeng Jiao and a point of land about 11 miles NNW, is obstructed by a number of mountainous islands, extensive areas of drying mud flats, and many shifting bars of mud and sand. The several channels leading through these obstructions are tortuous and, at times, subject to displacement in consequence of the shifting banks which border them. Muddy water, discharged from Min Jiang, flows well seaward and tends to obscure sunken dangers unless these are marked by breakers when the seas are high.

The buoyage system conforms to IALA Maritime Buoyage System (Region A).

**Wu-chu Chiang** (26°10'N., 119°36'E.), the northernmost entrance channel to Min Jiang, is an impassable, stone-blocked channel leading N of Culu Dao, a large mountainous island, 229m high, lying in the N part of the estuary.

**Wei-tou Shui-tao** (25°31'N., 119°38'E.), a passage used by small craft, leads between the E side of Culu Dao and Chuan-shi Dao, a small rugged island rising to a prominent 183m high peak, lying close E of Culu Dao.

**Mei-hua Chiang** (26°03'N., 119°37'E.), the southernmost entrance channel, is the partially examined and little used passage S of Langqi Dao, the largest island in the estuary.

The main entrance channel passes about 2.5 miles NW of **Qixing Jiao** (26°05'N., 119°50'E.), a group of pinnacle rocks which, covered at HW, lie about 8 miles ENE of Shafeng Jiao. A light is exhibited on Qixing Jiao. The channel then continues WSW about 6 miles, passing over **Wai Langjiangsha** (26°07'N., 119°46'E.), the outer bar, and between the drying mud flats Yaozi Sha and Tieban Sha on the N and the drying mud flats of Foshua Sha on the S. Range lights, situated on the E side of Langqi Dao, in line bearing 265.5°, lead over the outer bar and into the estuary. It continues WNW over the inner bar **Nei Langjiangsha** (26°07'N., 119°41'E.) and, passing between Culu Dao and the low islets close off the N side of Langqi Dao, enters Jinpai Men, the deep, narrow channel between the N extremity of this latter island and the mainland.

**7.30 Dieshidui Lighted Buoy** (26°08.0'N., 119°37.2'E.), close W of the pilotage-quarantine anchorage, marks the extremity of a stone barrier extending from the S shore of the channel. Mazuyin Lighted Buoy marks a similar area of foul ground extending from the N shore. The channel between these two lighted buoys is only 0.15 mile wide.

Shoal depths of 1.3m and 3.9m exist close NE and 0.15 mile WNW from Dieshidui Lighted Buoy.

**Tides—Currents.**—The tide is mainly semi-diurnal, with a spring rise of 6.2m and a neap rise of 5m. These levels are affected by the wind; the water level is relatively high during the Northeast Monsoon and low during the Southwest Monsoon. Tidal currents seaward of the outer bar are quite weak. Tidal currents at the entrance to Min Jiang set W from 1 hour 30 minutes after LW to 1 hour 30 minutes after HW. They set E from 1 hour 30 minutes after HW to 1 hour 30 minutes after LW.

During the rainy season (April to June), freshets cause the W current to run for a shorter period of time, while the E current begins earlier and runs longer. Rates are from 1 to 4 knots. During heavy freshets vessels do not swing to the W current.

In **Jinpai Men** (26°08'N., 119°35.5'E.), 0.2 mile wide, the tidal currents are strong and set W through the channel on the flood current, with a branch setting SW at the W end of the narrows; the ebb current sets in the reverse direction. During spring tides, or during a freshet period, the ebb current usually exceeds a rate of 7 knots; a similar rate is experienced in **Min'an Men** (29°03'N., 119°30.5'E.), a 3 mile long and 0.2 mile wide narrow channel beginning about 6 miles SSW of Jinpai Men.

**Depths—Limitations.**—Depths over the bars in the main entrance channel to Min Jiang, while subject to change, are generally greatest during the Northeast Monsoon season and least during the Southwest Monsoon season. During gale winds, a heavy swell, which quickly subsides, may set across the bars. The least depth over the outer bar was 3.7m while the least depth over the inner bar was about 3m. The deepest reported draft of vessels transiting the bars and entering Min Jiang during the same year was 7.6m.

Vessels with a draft of more than 3m should enter on the flood tide. Tide rips and cross sets should be guarded against.

An overhead power cable, with a vertical clearance of 55m, spans the W end of Jinpai Men. Anchoring is prohibited in this area.

**Pilotage.**—Pilotage is compulsory above the pilotage-quarantine anchorage. The vessel's ETA and request for a pilot

should be signaled 48 hours in advance, through radio station Fuzhou. Vessels, awaiting quarantine inspection, display the flag "Q" from the International Code of Signals by day and three red lights, disposed vertically, at night.

**Anchorage.**—Vessels anchor, in 6.4 to 9.2m, in a position within the deep water pool lying between the outer and inner bars of the main entrance channel. The anchorage reportedly offers no shelter during HW.

The pilotage-quarantine anchorage is located 0.75 mile E and 1 mile NW of the light on **Hujiang Dao** (26°07.4'N., 119°38.5'E.), and has depths from 2 to 17m.

**Caution.**—Underwater obstructions extending from either bank restrict the channel width to less than 183m close W of the pilotage-quarantine anchorage. A shoal depth of 1.1m exists in the SE corner of the anchorage close to the entrance channel. Vessels transiting Jinpai Men are further cautioned that, because of strong currents and eddies, the most favorable time for transit is slack water. At other times, they should avoid meeting in the passage. Vessels proceeding with the current have precedence over those proceeding against it.

The continuation of the main entrance channel inland from Jinpai Men to Lo-hsing-t'a Mao-ti, about 12 miles SSW, consists of a 1 mile-wide body of water extending about 6 miles along the W side of Langqi Dao and the 6 mile long seaward reach of Min Jiang proper. The channel favors the mainland coast as far as Min Jiang, when it lies fair between each shore for about 3 miles before tending to favor the E mainland shore.

**7.31 Lo-hsing-t'a Mao-ti** (25°59'N., 119°27'E.) (**World Port Index No. 59870**) is a general anchorage in Min Jiang close downstream from a position where the large island Nan-t'ai Tao causes the river to branch N and continue as Pei Chiang and S as Wu-lung Chiang. It lies in deep water on the E side of the river and under high hills which extend NE from Hai-kuan Chiao (Customs Point), a point about 0.8 mile SE of the village Lo-hsing-t'a which marks the N entrance point of Pei Chiang. The W side of the anchorage is shoal and encumbered by large areas of drying mud flats extending from the W shore of the river. Hsiao-ma Chiao, a rock that covers at HW, lies about midway between Customs Point and Lo-hsing-t'a. Vessels that cross the outer bar can reach the anchorage.

Vessels board licensed pilots from a motor sampan, painted yellow, which is on station either in the vicinity of Qixing Jiao or in the deep water pool between the outer and inner bars across the main entrance channel. Vessels should arrive at the outer bar at HW so as to have slack water all the way to Lo-hsing-t'a Mao-ti.

Vessels anchor off the N bank of the river between Hsiao-ma Chiao and Ta-ma Chiao, in depths of 3 to 10m, mud. There is insufficient room for large vessels, which should seek shelter E of Hsiao-ma Chiao. Ma-wei Mao-ti, situated SE of Lo-hsing-t'a, close off the SE bank of the river between Kiang-hsi Chiao and Hai-kuan Chiao, has depths of 8 to 15m, mud and sand.

Both anchorages provide shelter from all strong winds, but holding ground is poor and dragging can occur during freshets. Tidal rise in the anchorage is 4.8m at MHWS and 4m at MHWN. Tidal currents reach a velocity of 3 to 4 knots, but during freshets the ebb current can reach 5 knots and sometimes overcomes the flood current altogether.

**Fuzhou (26°05'N., 119°18'E.)**[World Port Index No. 59860](#)

**7.32** Fuzhou is a large metropolis lying on the Pei Chiang branch of Min Jiang at a distance of about 11 miles upstream from Lo-hsing-t'a Mao-ti.

Fuzhou harbor consists of two districts, Fuzhou and Ma-wei, separated by about 8 miles. The Ma-wei work area affords good space and provides a deep-water basin. All large vessels can berth and work cargo here.

Ma-wei has a total wharfage length of 592m, and can accommodate two 10,000 dwt vessels and two 5,000 dwt

vessels. Recent dredging now is reported to allow a depth of 9m in the harbor.

**Pilotage.**—Pilotage is compulsory and available during daylight hours only. Pilots board, as follows:

1. Vessels less than 20,000 dwt—in the quarantine anchorage.

2. Vessels greater than 20,000 dwt—near Lighted Buoy No. 1.

The ETA and request for a pilot should be sent 48 hours in advance through Fuzhou. The ETA should be confirmed 24 hours and 12 hours in advance.

**Directions.**—Vessels proceeding to Fuzhou must contact Fuzhou Port Radio on VHF channel 16 to confirm the pilotage request.