

# *Inserve*

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## Yangtze River Three-Gorge tour



From Chongqing to Yichang

23<sup>rd</sup>, 24<sup>th</sup>, 25<sup>th</sup> July 2014

## Introduction

Based on the childhood admiration of Yangtze River described by a Chinese Essayist Liu-Bei-Yu, titled Three Gorges of Yangtze River, I planned a tour of Yangtze River through Three Gorges to share the beautiful scenery of Yangtze River, including Three Gorges Dam.

My family (wife and son) left Shanghai for Chongqing by express train on 20<sup>th</sup> July 2014 and returned home on 27<sup>th</sup> July 2014.

During Chongqing stay, I visited the attractive sightseeing of Wulong (170km away) sinkhole, of which is formed by natural karst geology, meanwhile, I have attended the Hong-Yan martyrs' memory museum.

We embarked the vessel *Victoria Katarina* on the 23<sup>rd</sup> July 2014 around 18:00, disembarked the vessel on 26<sup>th</sup> July 2014 at eight o'clock.

Due to the Three Gorges Lock is being repaired, the cruise vessel has to terminate her voyage in front of Three Gorges Dam, as a result, I have no chance to pass through the five-stage ship lock, in addition, missing out the third Gorge: Xiling Gorge (50.3 km from the giant Dam to wharf nine of Yichang City).

## Victoria cruise line background

Since 1993, Victoria Cruises has stepped in luxury river cruising, the first ship was edged out of port in 1994 for Yangtze River, nowadays, the fleet has seven vessels shuttling between Chongqing City and Yichang City, the fleet vessels are reportedly built locally with CCS class and China flag, they were rebuilt or renovated in recent years for interior advancement and luxury pursuance, the brief of fleet as below.

Victoria ship	GT/LOA/Breadth/draft	Built	Specification	Modification
<i>V-Katarina</i>	5888/98.6m/15.2m/2.5m	2004	132 cabins, 264 passenger and 118 crew with 4 passenger deck and 1 lift	Renovated in December 2010, refurbished in 2014
<i>V-Jenna</i>	10000/133.8M/18.8m/2.6m	2009	189 cabins, 378 passengers and 180 crew with 5 passenger decks and 4 lifts	Nil
<i>V-Sophia</i>	4587/89.4m/16.4/2.7m	1994	104 cabins, 208 passengers and 121 crew with 4 passenger decks and no lift	Renovated in 2011
<i>V-Selina</i>	4587/89.4m/16.4/2.7m	1994	108 cabins, 218 passengers and 121 crew with 4 passenger decks and 1 lift	Rebuilt in 2011
<i>V-Grace</i>	3868/85.5m/14.4m/2.65m	1996	99 cabins, 198 passengers and 117 crew with 4 passenger decks and no lift	2002 in rebuilt, refurbished in 2012
<i>V-Lianna</i>	4587/89.4m/16.4m/2.7m	1995	108 cabins, 218 passengers and 121 crew with 4 passenger decks and 1 lift	2011 in rebuilt
<i>V-Anna</i>	6200/106m/16,6m/2.6m	2006	133 cabins, 266 passengers and 138 crew with 5 passenger decks and 2 lifts	Renovated in 2010, Refurbished in 2013

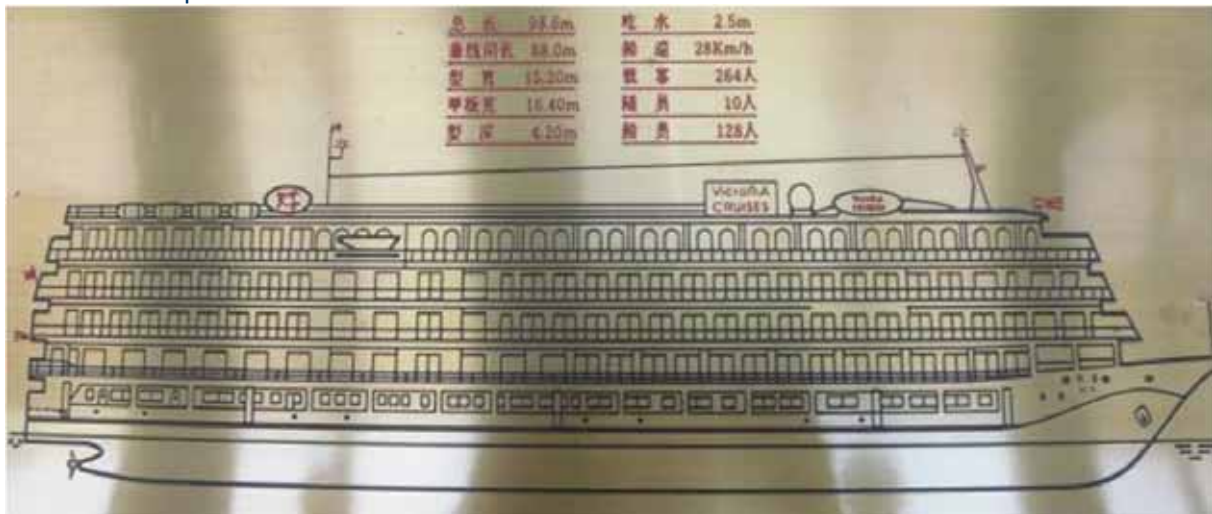
*Victoria Cruises line plying Yangtze River*

*Victoria Katarina* was built in 2004 by Chongqing Dongfeng Shipyard, she was designed according to CCS class rules for inland passenger vessel mixing with American cruise ship's features, she was

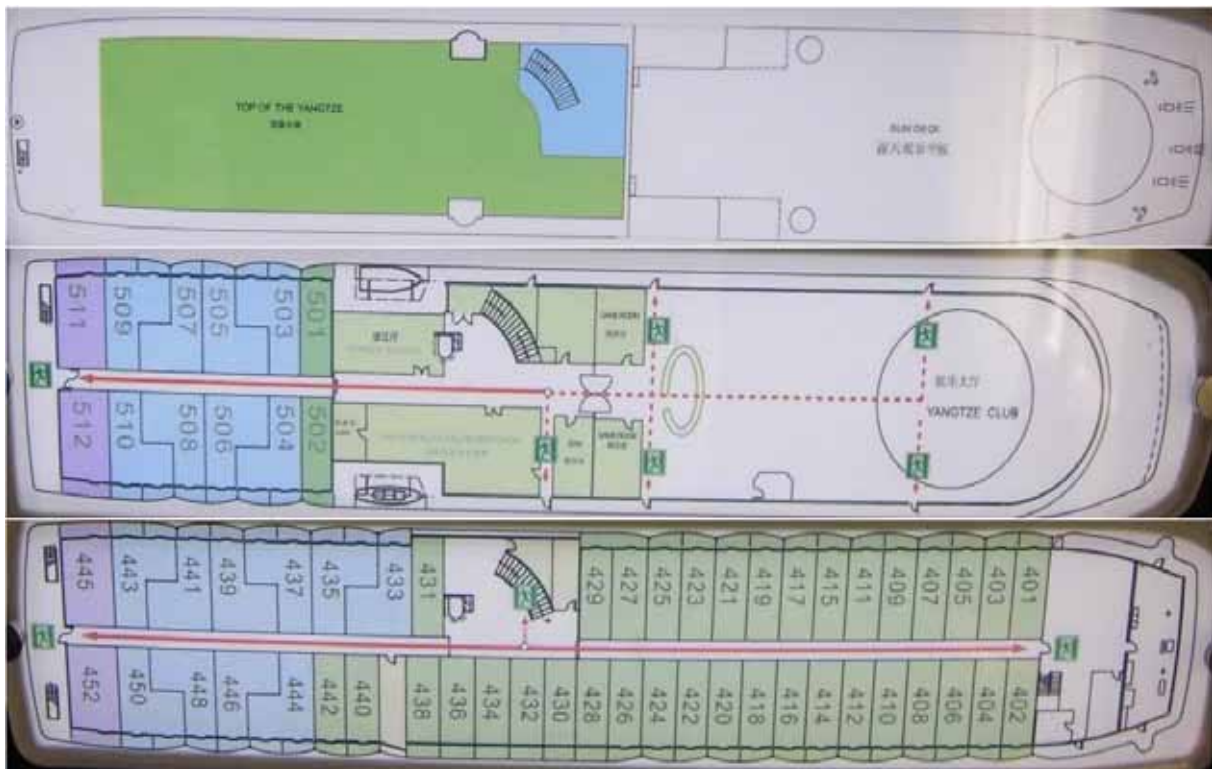
renovated in December 2010 for thorough upgrade and refurbished in 2014 for a further improvement.

The principle dimensions: LOA 98.6M, Beam 15.2m, draft 2.5m, GT5780, four of six decks are for passenger cabins.

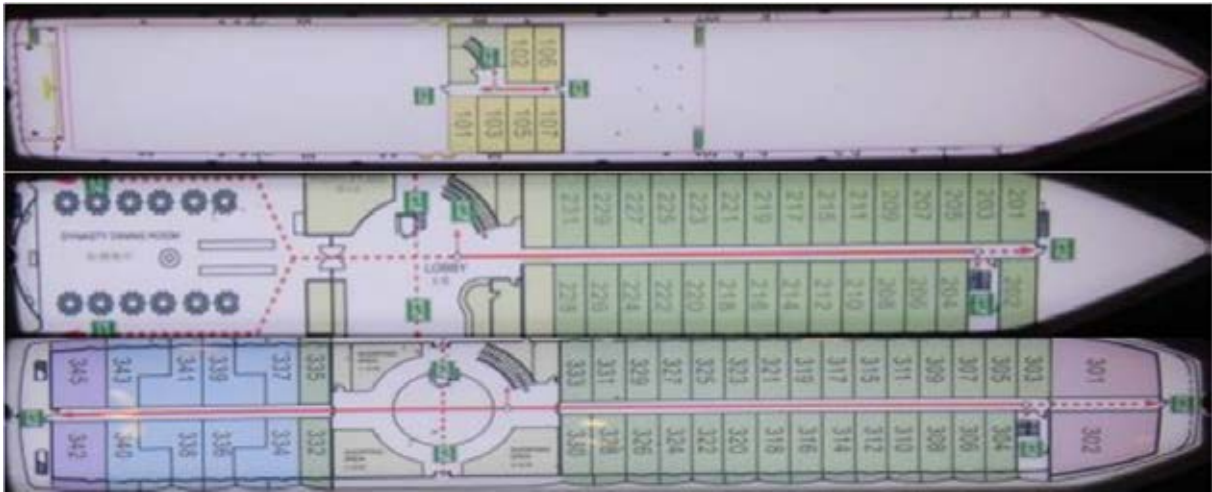
- Deck6: Pinnacle deck (sun deck)
- Deck5: Observation deck (recreation deck)
- Deck4: Bridge deck
- Deck3: Promenade deck
- Deck2: Upper deck
- Deck1: Main deck
- Deck0: Tank top



Profile of the vessel in December 2003



4/5/6 deck



Deck1/2/3 plan



Deck6: Sun deck

The vessel has 133 cabins for 264 passengers totally; the cabins are categorized into four grades:

Two sets of Shangri-La suites 60.03m<sup>2</sup>

Six sets of deluxe suites 37.80m<sup>2</sup>

Six sets of junior suites 30.42m<sup>2</sup>

119 sets of standard cabins 19.11m<sup>2</sup>

## Manning

The vessel was manned by 118 crewmembers serving for 264 passengers this voyage.

The engine room seemingly has fewer hands due to the bridge control; the plumber has taken partial electrician job, such as passenger cabin air conditioner repairing.

The bridge house is fully manned during sailing; I saw the master, two third mates and two helmsmen on duty, while the chief mate is taking break for relieving the master, hereby two helmsman change hands each hour within four hour on and eight hours off regime.

A residing representative is on board for the management assistance.

The master has 30 years seafarer's experiences, hereby 15 years as a master for the Yangtze River passenger ships, he is very polite and courtesy to all passengers aboard, he looks knowledgably and well trained, he explained the bridge equipment functioning and Yangtze River water characteristics.

He said the giant dam has raised the upstream river water line 90m, leading to great advantages for navigation, meanwhile, the adverse impact is emerging, such as the riverside mountain sliding.

The master is familiar with the vessel and the Yangtze River, he confessed the past river water rushing and exciting scenery has gone, however, the elevated great lake appeared on the narrow and stiff gorge gives a distinctive feeling of the majesty of Yangtze River.

The master is totally in charge of the ship's safety, besides, he attends welcome banquet and farewell dinner.

## Our travelling line



Yangtze River geographic location across Three Gorges



Three Gorges tour (192km) from Chongqing City to Yichang City

Three gorges tour program from Chongqing to Yichang contains three nights and four days, encompassing views of centuries-old temples, pagodas and stone carvings nestled along the river

Three gorges are Qutang Gorge, Wu Gorge and Xiling Gorge.

Qutang Gorge is about five miles with narrowest gap 500 feet, it is most dramatic.

Wu Gorge is 25 miles known for its quiet beauty, forest-covered mountains, and cliffs so sheer that the sun barely penetrates the precipices.

Standard shore excursion package is covered by the cruise ticket on free basis:

A visit to a modern village built in Fengdu (Fengdu Ghost Town).

Three gorges dam visit

Traditional sampan journey to Shennong Stream or Goddess stream (one of Yangtze's tranquil tributaries)

In addition, the cruise guide strongly recommends some payable scene for attraction.



Wulong karst geology formed a huge sinkhole (Chinese Tiankeng)



Sinkhole bottom single building: official relay lodge (since BC619 Tang dynasty)



Chongqing City cloverleaf and elevated road traffic

-Yangtze River attractive views



500 Car Carrier is overtaking our ship





Yangtze River sunset (2014.07.21)



*Victoria Katarina* alongside a pontoon barge for a shore excursion: Fengdu Ghost City



Goddess peak standing on the Yangtze River bank



Yangtze River mountain slide repaired with highest water level marks

-Three gorges highlights



Qutang Gorge from shipboard deck6



Qutang Gorge from the White Emperor City (ashore)



[Wu Gorge Side Bridge](#)



[Wu Gorge water channel](#)

-Three Gorges Dam scenery

--Brief of Three Gorges Dam

The Three Gorges Dam consists of a main dam wall and a set of five-stage 2-way ship lock for raising transit ships, in addition, a ship lift is almost ready for use.

The giant dam is 2,335m long and 101m tall, 115m thick at the bottom and 40m thick at the top, the top of the dam is 185 meters above sea level, and the concrete dam wall is 181 meters high above the rock basis.

The Three Gorges Dam reservoir is 175m above sea level; the reserving water has 660km long and 1.12km wide surface having 91m depth, the reservoir contains 39.3 km<sup>3</sup> of water and has a total surface area of 1,045 km<sup>2</sup>.

During construction, the dam has consumed approximately 27.2 million cubic metres concrete, and 463,000 tonnes steel plus 102.6 million soils.

The Three Gorges Dam power plant is furnished 34 sets electrical generators, 14 sets at the north side and 12 sets at the south side, six sets at the underground room and two sets for Dam itself consumption.

the main generators are driven by the water turbines powered by the dropping water from 80m high reservoir to the generator, the drive water varies from 600 m<sup>3</sup> to 950 m<sup>3</sup> per second, the turbines is turned at a speed of 75 RPM.



Francis turbine 10m wide and 9.8m tall

Each of 32 generators makes about 700 megawatts of electricity, the remaining two generators make 50 megawatts power for the dam itself.

The Three Gorges Dam generates 22,250 megawatts power, which makes it the biggest single hydroelectric power source in the world; the expected annual electricity generation will be over ten billion KWH.

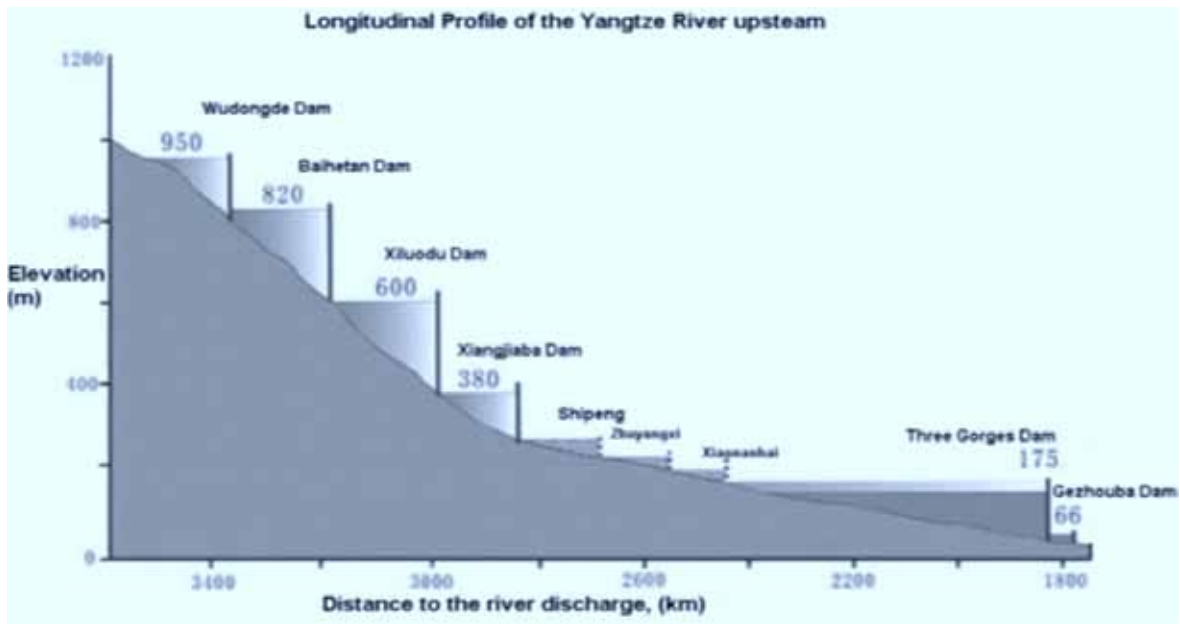
There are two series of ship locks installed near the dam; each of them is made up of five stages, with transit time at around four hours. Maximum vessel size is 10,000 tons; the locks are 280m long, 35m wide and 5m deep.

In addition to the canal locks, a ship lift is almost completed, after commissioning finished, the 3000 gross tonnage downwards vessels will be able to climb the Dam in 40 minutes reportedly. The lift cage is 120m\*18m\*3.5m, deadweight 11,800 tons, maximum lift 113m, water level variation 30m for upstream and 12m for downstream.



Yangtze River band alteration before and after Three Gorges Dam building

In order to maximize the utility of the Three Gorges Dam and cut down on sedimentation from the Jinsha River, upstream of the Yangtze River before reaching Yibin in Sichuan, authorities plan to build a series of dams downstream of Jinsha, including Wudongde Dam, Baihetan Dam, Xiluodu Dam, and Xiangjiaba Dam.



Longitudinal profile of upstream three Gorges Dam across Yangtze River

-- Three Gorges Dam highlights

It is attractive the dam area entry is required a serious security check, to view Three Gorges Dam, three locations are provided for visitors, the dam proximity is not available.

Tanziling bird view platform for remote seeing of Dam and reservoir area

Five-stage ship's lock viewing platform

185m platform for Dam close-up



Three Gorges Dam model (14 north /12 south/ 6 underground/ 2 self-turbine generators)



Three gorges dam with highest 175m water marks and four 195m towers for the ship lift





Tetrahedron rock for the river close-off and Tanziling (262.48m above sea level)



Three gorges dam two-way ship's lock (upper two)



Three gorges dam two-way ship's lock (lower three)

### **Machinery**

Two sets propulsion engines are type of MAN 8L23/30, each can develop 1080kw at 825rpm through a reduction gear to drive propeller, the main engine was built in May 2003 by Zhengjiang Marine Diesel Engine Manufacturer.

The propeller shaft diameter is 180mm and the intermediate shaft is 150mm made from 35# steel, the right-handed and left-handed propellers are made of Magnesium-brass 1975 diameter

Three sets Cummins generator engines are type of KT38-G, the rated power is 560kw at 1500rpm

The electrical power system comprises battery sets and generators:

18 sets of emergency battery sets are 195 A.H and 220V each

One of three sets generators has a 500kw capacity at 1500rpm, 400V AC909A

The waste oil collection tank is situated at the engine room starboard side with 3.0m<sup>3</sup> capacity.

Oily water separator has 1.5 tons per day dealing with ability.

Touring lift wincher is 5.5kw with 630kg capacity under 0.63m/s, bridge cage 1100\*1550

One diesel oil boiler WHG1-0.7 has 18.5m<sup>2</sup> heating area, the working pressure 0.70bar, two diesel oil and exhaust gas boilers ZYW1.0/36-0.7 have 19m<sup>2</sup> heating area each, the working 0.6, three

boilers are built in June 2003 by Qingdao Mariner boiler Co., Ltd, their evaporation is 1000kg/h respectively.

Due to engine room not accessible, there is no detail and further information attainable.

**Navigation safety**

The bridge visibility is good and internal communication is fully functional, the navigation equipment is doubled for redundancy.

- Two radars
- Two GPS sets
- B grade AIS
- Magnetic compass
- AWENA-1 ECS (Electronic chart system)
- Echo sounder
- Two searching lights
- Navigation lights and signalling lamps fully furnished
- Pilot is hand steer only

Lights	Bow	International Signal Flags	Whistle	Bell	Navigation	Anchor	Flickering	Mast	Stern	Fog	Side
Quantity	1	1 set	2	2	12	1	3	4	1	1	2

Signalling lights



Bridge house situated at the deck4 foremost



Captain briefing me the bridge equipment



Electronic chart system



B-Class AIS

Radio devices are furnished according to the inland river standard:

Two sets of VHF, IC-M59 from ICOM Japan

Two sets of MF/HF IC-M700PRO from ICOM Japan

Three sets of walkier-talkier IC-M2A from ICOM Japan

One set of public addresser system from China, the system is used for the shipboard announcement and notice, the indoors TV set and phone are helpful.

### **Fire safety and life saving**

The fire safety plan was captioned in March 2013, there is a fire detection panel at the bridge for the passenger areas and engine room, the engine room was furnished the fixed CO2 fire fighting system.

263 smoke fire detectors

46 heat fire detectors

61 fire calling buttons

38 cylinders of CO2 40l (988kg) engine room and boiler spaces

Two fire alarm controller with a repeater at the engine room

Numerous portable fire extinguishers deployed up and down according to the fire plan, they are readily accessible for immediate use, such as, each deck (deck1 to deck 6) is fitted A-60 class fire doors at the central atrium fore and aft forming MVZ, whereas, the passenger cabins looks B-class fire doors.

It is noticeable the passenger cabins and public have no water sprinklers or mist similar, however, the fire hydrant encompassing the lengthwise of whole ship.

The fire detection is seemingly not extending to the major balconies.

The fire control plan summarizes the following fixed fire fighting supplement:

Tw sets of Fire pumps (IS80-50-200B) at engine room  
 48 sets of Fire hydrants (DN65) across decks  
 46 Fire hoses storage boxes across decks and two boxes at engine room  
 Diesel oil tanks and lube oil tanks fitted quick-closing valves mechanism

Besides above, the fire dampers and isolating gates associating with the ventilations are indexed and marked for their service.

Item	Location	Number	Distribution
1	Machinery spaces fire dampers	11	Main deck
2	Accommodation/service spaces fire dampers	2	Main deck
3	Machinery spaces fire isolating gate	1	Main deck
4	Accommodation/service space fire isolating gate	93	Sanitary 82, main deck/sun deck 11
5	Accommodation and other spaces ventilation remote shut down switches	4	Main/bridge deck
6	Machinery spaces ventilation remote shut down switches	4	Main/bridge deck
7	FO & LO remote shut down switches	4	Main/bridge deck
8	Fire pump	1	Main deck

Ventilation system remote control

Although a document checking is unavailable, the master confirmed all fire fighting systems are functioning well with valid certificates, they arrange a night fire round across shipboard. The lifesaving appliances are good judged from exterior appearance, the safety guides for donning life jackets and other precautions are repeated through a designated channel of the passenger cabins television set.



Deck6 aftermost ventilation dampers

Life jackets 15 children and 425 adult, life buoy 36 sets  
Drop-type Inflatable life rafts eight sets for 15 persons each

Port and starboard life boats for ten peoples each with electric davit launching devise and diesel engine drive waterborne.



Evacuation equipment box



Portside life rafts on deck6





Starboard life rafts on deck6



Portside lifeboat



Starboard side life boat

### **Entertainment and recreation**

Besides gift and souvenir shops on deck3 both sides, there are gyms and beauty shop and body spa, the VIP messroom for blue chips and advanced clients.

The public dining hall is on the reception deck with image making centre, the Yangtze club is on deck5, the major unforgettable events are entertained here, such as, the night show performance from the ship's staffs, the show is quite amazing.



VIP messroom



Yangtze club on the deck5



Captain's welcome banquet at Yangtze club



Captain and me at the banquet



Farewell dinner



Peacock dance by the ship staffs



Ancient Chinese fashion show by the ship staffs

### General appearance

General appearance is good whatever interior or exterior from my points, it could be benefitted from the latest refurbishment in 2014 and former renovated decoration.



Midway alongside for shore excursion



Deck2 reception desk



Deck3 interior

Name: Marinos Wang

Date of report: 30<sup>th</sup> July 2014