



BRØDRENE AA DELIVERS HIGH PERFORMANCE CATAMARAN

TEXT: ALAN BLUNDEN

PHOTOS: BRØDRENE AA

Brødrene Aa launched its first carbon fibre sandwich vessel in 2002. Since then the company has delivered fifty-five, forty-four of which are fast ferries. The first fast ferry was a 21m catamaran that carries 70 passengers at 25 knots, the latest is a 44m catamaran that carries 300 passengers at 40 knots.

The fastest catamaran yet built by Brødrene Aa, 42m ZHONG SHAN 6, was shipped from Norway to China at the end of September. The carbon fibre sandwich ferry has a total installed power of only 4,320kW but during trials achieved a speed of 40 knots at 100% maximum cruise rating when carrying 35 deadweight tonnes. A speed of 41.5 knots was recorded with 25 deadweight tonnes

on board and 44.3 knots with “a low deadweight”.

DESIGN

Designed and constructed to the International Maritime Organization’s HSC 2000 International Code of Safety for High-Speed Craft and Classed by China Classification Society, ZHONG SHAN 6 has a length overall of 44.2m,

the 42m designation refers to the waterline length of the hull.

The twin-deck design has 226 seats and one wheelchair space in an Economy Class saloon on the main deck. Located aft are a refreshment kiosk, five toilets and a crew day room.

The upper deck is fitted out with 64 seats in a First Class saloon, a six-seat VIP room, a four-seat VIP room and one toilet. Between the wheelhouse and the ►

“With vessels operating long hours at speeds of 40 knots you really capitalize on the benefits of carbon fibre construction. Lighter vessels result in lower fuel consumption and reduced emissions.”

Tor Øyvind Aa, Managing Director, Brødrene Aa

▶ passenger accommodation are a kiosk and another two crew rooms, the largest of which has a toilet and shower installed. Baggage is carried in up to nine panniers loaded on the deck behind the upper superstructure.

Brødrene Aa says that internal noise levels are very low, only 63-65 dBA in the main deck saloon, less than 60 dBA in the upper deck saloon and 55 dBA in the wheelhouse.

Four MTU 12V 2000 M72 diesels, rated at 1,080kW at 2250 rpm, each power a Kamewa 56 S4 waterjet via a ZF 3050 gearbox. One advantage of having four separate power trains is flexibility, Brødrene Aa reports that ZHONG SHAN 6 is able to operate at 37 knots on three engines.

SERVICE

Two 42m twin-deck catamarans have been ordered by Zhongshan-Hong Kong Passenger Shipping, the second was due to be launched in the middle of October and should now be on a ship heading for China.

The company operates two Pearl River Delta routes, Zhongshan-Hong Kong and Zhongshan-Hong Kong International Airport. Scheduled journey times are 90 minutes and 70 minutes respectively.

The Brødrene Aa catamarans will replace two of Zhongshan-Hong Kong Passenger Shipping’s fleet of four Austal 40m catamarans introduced during 1993-1994. One of these has already reached the government’s 25-year age limit for fast ferries registered in Mainland Chinese ports and is laid up, a second will be withdrawn before the end of 2018.

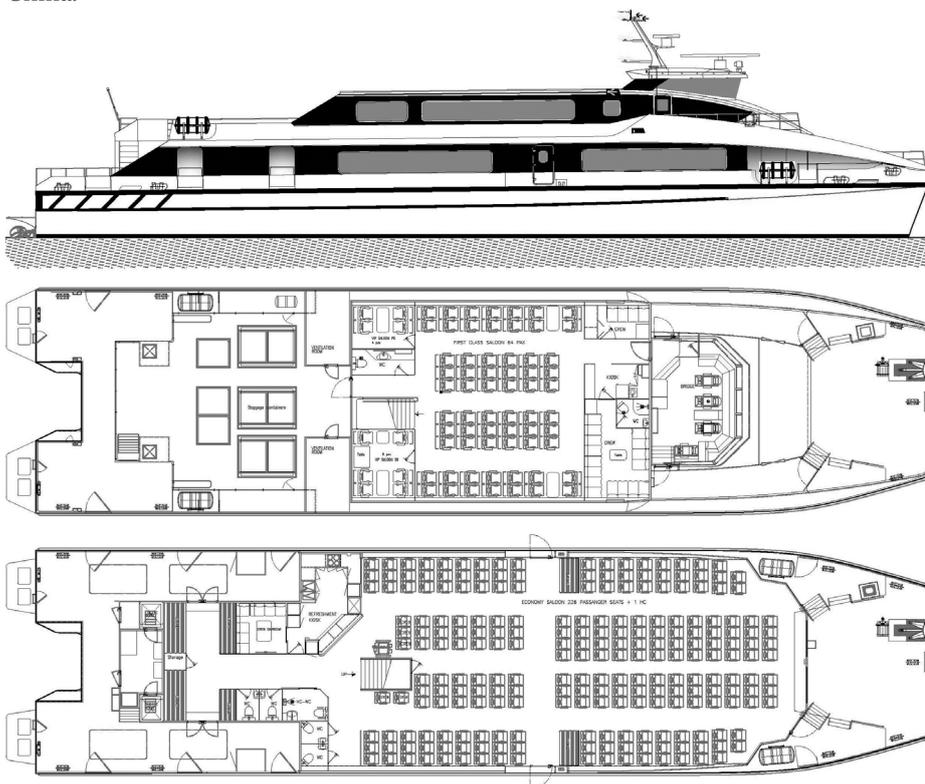
Zhongshan-Hong Kong Passenger Shipping has also ordered a third Brødrene Aa 42m catamaran featuring single-deck accommodation for 230 passengers. This will have two MTU 16V 2000 M72 diesels rated at 1,440kW and Kamewa 63 S4 waterjets installed to give the vessel a service speed of 35 knots. Delivery is scheduled for June 2019.

FUTURE PROSPECTS

Zhongshan-Hong Kong Passenger Shipping is 40% owned by Chu Kong Shipping Enterprises, which acquired 40% of the equity of Brødrene Aa at the end of 2015. When the Zhongshan order was announced in October last year, Brødrene Aa said, “One objective of the partnership was to establish a joint composite manufacturing facility in China, as well as providing market opportunities for completed vessels from Brødrene Aa’s yard in Hyen.”

By the end of this year, six Brødrene Aa catamarans will have entered service with two Chinese operators. The Norwegian company has so far built four ferries and two hulls, both of which have both been fitted out by Sinoway in Nansha, Guangzhou. At least one more completed vessel and two hulls will be leaving Hyen in 2019. All nine catamarans will be operating between Mainland Chinese ports and Hong Kong.

Following the successful trials of ZHONG SHAN 6, Brødrene Aa is now eyeing another Pearl River Delta route, Hong Kong-Macau. When the order for the three 42m catamarans was confirmed, Managing Director Tor Øyvind Aa said, “With vessels operating long hours at speeds of 40 knots you really capitalize on the benefits of carbon fibre construction. Lighter vessels result in lower fuel consumption and reduced emissions. This contract will allow us



General arrangement of ZHONG SHAN 6.

Main particulars

IMO	9840556
Class	China Classification Society
Loa	44.2m
Beam	10.84m
DWT	35
GT	532
Passengers	300
Main engines	4 x MTU 12V 2000 M72
MCR	4,320 kW
Waterjets	4 x Kamewa 56 S4
Gensets	2 x Volvo Penta 108 KW
Service speed	40 knots



Economy Class saloon on the main deck.



There are 64 seats in a First Class saloon on the upper deck.

to demonstrate the benefits our vessels bring to markets in China and elsewhere in Asia.” He describes the 42m twin-deck design as “a fantastic alternative” to the gas turbine and diesel-powered catamarans in service between Hong Kong and Macau. These have maximum service speeds of 45 or 43 knots, carry 330 or 410-425 passengers and have total installed powers of 8,400kW or 9,280kW. Fifteen were built during 1994-2004 and sixteen during 2007-2009. ■

Four MTU 12V 2000 M72 diesels power Kamewa 56 S4 water-jets.



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