

Main page Contents Featured content Current events Random article Donate to Wikipedia Wikimedia Shop

Interaction Help About Wikipedia Community portal Recent changes Contact page

▶ Tools

Print/export



Article Talk





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Aurora Australis (icebreaker)

From Wikipedia, the free encyclopedia

Aurora Australis is an Australian icebreaker. Built by Carrington Slipways and launched in 1989, the vessel is owned by P&O Maritime Services, but is regularly chartered by the Australian Antarctic Division (AAD) for research cruises in Antarctic waters and to support Australian bases in Antarctica.

Contents [hide]

- 1 Design and construction
- 2 Operations
- 3 References
- 4 External links

Design and construction [edit]

Designed as a multi-purpose research and resupply ship, Aurora Australis was built by Carrington Slipways in Newcastle, New South Wales.[1] The vessel was launched in September 1989.[1]



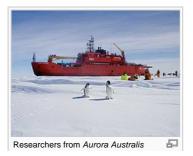
Aurora Australis berthed in Hobart under a rainbow, with the French research vessel L'Astrolabe to the right.

Australis is 94.91 metres (311.4 ft) long, and has a beam of 20.3 metres (67 ft), draught of 7.862 metres (25.79 ft) and moulded depth of 10.43 metres (34.2 ft). Her displacement is 8,158 tons, gross tonnage 6,574 and deadweight tonnage 3,911 tons.^[1] Her propulsion machinery consists of two Wärtsilä medium-speed diesel engines in father-son arrangement, one 16-cylinder 16V32D producing 5,500 kW and one 12-cylinder 12V32D producing 4,500 kW. Both engines are coupled to a single shaft through a reduction gear, driving a single, left-handturning controllable pitch propeller in a nozzle. [2] Slow speed manoeuvring is achieved with three manoeuvering thrusters, one forward and two aft. [2] Aurora Australis has a maximum speed of 16.8 knots (31.1 km/h; 19.3 mph), $^{\text{[citation needed]}}$ and a cruising speed of 13 knots (24 km/h; 15 mph). $^{\text{[1]}}$

The vessel can break level ice up to 1.23 metres (4 ft 0 in) thick at 2.5 knots (4.6 km/h; 2.9 mph).[1][3] Aurora Australis is served by a crew of 24[3] and carry up to 116 passengers

accommodated in three or four-bunk cabins with attached bathrooms. [1][4] The ship has a cargo capacity of 1,700 cubic metres (60,000 cu ft) for break bulk or 29 twenty-foot equivalent containers, and a supply tank that can hold 1,000 cubic metres (35,000 cu ft) of fuel. [citation needed] The ship is fitted with laboratories for biological, meteorological, and oceanographic research, and was designed with a trawl deck for the deployment and recovery of research instruments while at sea.^[1] The ship's hangar and helideck allow for the operation of up to three helicopters,^[1] usually Eurocopter Squirrels or Sikorsky S-76s. [citation needed]

Operations [edit]



Aurora Australis is chartered by the AAD over the southern summer for research purposes, and to support the Antarctic bases operated by the AAD.^[4] The vessel spends most winters in port in Hobart, Tasmania, as the AAD headquarters is in the nearby town of Kingston. [citation needed] P&O sometimes charter the ship for other work during winter.[citation needed]



Aurora Australis docked at Hobart in 2010

(rtaotrana)		100
Name:	Aurora Australis	
Namesake:	The Aurora Australis	
Owner:	P&O Maritime Services	

Operator: P&O Polar

Career

Aurora

Builder: Carrington Slipways, Newcastle, New

South Wales, Australia

18 September 1989 [citation needed] Launched: 30 March 1990 [citation needed] In service:

Hobart Homeport:

IMO number: 8717283 Identification:

Status: In service

General characteristics

Type: Icebreaker 6,574 GT Tonnage: 3,911 DWT Displacement: 8,158 tons

94.91 m (311.4 ft) Length: Beam: 20.3 m (67 ft) Draught: 7.862 m (25.79 ft) Depth: 10.43 m (34.2 ft) Ice class: LR 1A Super Icebreaker

Installed Wärtsilä 16V32D (5,500 kW) and

12V32D (4,500 kW) power:

Propulsion: One controllable pitch propeller with nozzle

One bow thruster Two stern thrusters

Speed: 16.8 knots (31.1 km/h; 19.3 mph) (max) 13 knots (24 km/h; 15 mph) (cruising) 2.5 knots (4.6 km/h; 2.9 mph) (1.23 m

(4.0 ft) ice)

1,700 m³ (60,000 cu ft) of break bulk Capacity:

cargo

1,000 m³ (35,000 cu ft) of supply fuel in

tanks 29 TFU

116 passengers

Crew: 24

Aircraft Up to four helicopters

carried:

Aviation Hangar and helideck

facilities:

observing a pair of penguins

In 1998, the *Aurora Australis* became stranded in ice and was towed into clear water by the Japanese icebreaker Shirase.^[5]

On 8 May 2011, *Aurora Australis* was chartered by the Department of Defence for a two-month deployment (ending 30 June) as an amphibious transport ship supporting the Royal Australian Navy.^[4] The charter, costing A\$3.375 million, was to assist in the Australian government response to humanitarian crises and natural disasters that occurred while the naval heavy lift ship HMAS *Tobruk* undergoes maintenance.^[4]

In December 2013, *Aurora Australis*, Chinese research vessel *Xuĕ Lóng* and French icebreaker *L'Astrolabe* attempted to rescue *Akademik Shokalskiy*, trapped in an outbreak of old glacial ice in the Antarctic Ocean. *Xuĕ Lóng* reached within 6NM of the ship before being forced to turn back. *L'Astrolabe* failed to reach that far before turning back to open water. *Aurora Australis* reached within 10 nautical miles (19 km; 12 mi) before also being forced to turn back. ^[6] After failure of all three icebreakers to reach the beset vessel, the personnel aboard *Akademik Shokalskiy* flattened a helipad on the ice to prepare for helicopter evacuation when the weather cleared. On January 2, 2014, the helirescue was performed by *Xuĕ Lóng*'s helicopters, directly transferring people from *Akademik Shokalskiy* to a makeshift helipad prepared on the sea-ice near the *Aurora Australis*, the boat transfer having been cancelled due to excess ice around *Xuĕ Lóng*; left aboard were 22 crew members to attempt to free the ship when winds clear the ice, or when a Russian heavy icebreaker arrives to clear a path. The rescued people are expected back in Hobart, Australia, in mid-January, after *Aurora Australis* completes her scheduled resupply of Casey Station which was interrupted for the rescue mission. ^[7]

On 5 January 2014, the 399-foot (122 m) USCGC *Polar Star* departed Sydney to assist in freeing the Chinese icebreaker and the Russian ship. [8][9] On 7 January 2014, a change of wind direction which loosened the icepack around the ships enabled *Xuĕ Lóng* and *Akademik Shokalskiy* to work their own way free before the American ship arrived. [10]

References [edit]

- 1. A a b c d e f g h "Aurora Australis" 🗗 Australian Antarctic Division. 18 April 2011. Retrieved 13 May 2011.
- 2. ^a b Barlow, Karen (25 January 2011). "Revhead heaven in icebreaker's engine room" 🗗 ABC News Online. Retrieved 13 May 2011.
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- 10. A "Antarctic ships escape from ice trap as weather changes" 🗗 www.bbc.co.uk. The BBC. 7 January 2014. Retrieved 7 January 2014.

External links [edit]

- 🛦 Media related to Aurora Australis (ship, 1990) at Wikimedia Commons
- Webcam aboard Aurora Australis 🗗
- Breaking the Ice
 — blog from Aurora Australis by Australian Broadcasting Corporation reporter Karen Barlow, during the January
 — February 2011 scientific trip to Mertz Glacier
- P&O Maritime Services

Categories: Icebreakers of Australia | 1989 ships | Australia and the Antarctic | Ships of the Peninsular and Oriental Steam Navigation Company | Research vessels of Australia

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