

## »Hamburg« is ship of the year 2020

28 m and 4,000 hp: This year, the HANSA award »Ship of the Year« goes to the German Maritime Search and Rescue Service's sea rescue cruiser »Hamburg« and the shipyard Fr. Fassmer in Berne

The SAR newbuild is the fourth unit of the 28 meter class, the youngest and most modern type of sea rescue cruisers of the German Maritime Search and Rescue Service (DGzRS). At a length of 28 m, a beam of 6.20 m, a draught of 2m the vessel has a displacement of 120 t. With almost 4,000 hp the new »Hamburg« reaches a top speed of 24 kn. The 15,0001 diesel tanks ensure an operating range of 600–800 nautical miles. The ships of this class are new constructions with a completely enclosed deckhouse and a multi-purpose room with on-board hospital separated from the mess.

The type ship of the 28 m class, the »Ernst Meier-Hedde«, built by Fassmer and now stationed on the island of Amrum, was christened at the end of May 2015 to mark the 150 th anniversary of the DGzRS. Since then, »Berlin« (2016), »Anneliese Kramer« (2017), »Hamburg« (2020) and »SK 41« (2021) followed. Meanwhile, the sixth ship of the class with the internal designation »SK 42« is under construction; Fassmer laid the keel in March 2020. The newbuilding is to replace the »Theo Fischer« at the Darß station on the Baltic coast. The 28 m sea rescue cruisers will gradually replace the 27.5 m



units of the Berlin class. Their operational area is the coastal areas as well as the high seas.

In early April 2019, Fassmer had laid the keel of the new SAR cruiser – however, not at the shipyard in Berne on the Weser, but in Hamburg on the Binnenalster. The first section of the hull had been brought to the Alsterschifffahrt pier on Jungfernstieg for this purpose. In the case of »Hamburg«, the DGzRS had made an exception to its traditional rule of not announcing the name of a new ship until the moment of its christening. With the campaign »Donation manoeuver: >Hamburg« becomes sea rescuer!«, the sea rescuers had called on all residents and friends of Hamburg to contribute to the financing of the new building.

The special ship was built entirely of aluminum using the proven net rib system with a self-righting hull. Depending on the size of the ship, the longitudinal and transverse ribs are no further apart than a maximum of 50 cm, thus forming a narrow, tight net onto which the planking is mounted. Since 1967, all DGzRS rescue units have been built exclusively from the seawater-resistant light metal, which saves considerable weight and thus requires lower engine power.

Special features include comprehensive onboard medical first aid equipment, a fire pump with remotely controlled monitor for fighting fires at sea, and the ability to right itself within a few seconds in the event of capsizing. In the stern – typical of sea rescue cruisers – the 28 m units each carry a 8.2 m long daughter craft that can operate independently of the mother ship at sea.

## MTU power for »Hamburg«

The main propulsion is provided by two MTU 16V 2000 M72 engines, each rated at 1,440 kW. Via a Geislinger clutch, a ZF 5000 gearbox with trolling gear, they provide power to the Schaffran shafts and Schaffran propellers.

The e-plant/auxilliary engines section consists of a Deutz BF 6M 1013 M with an output of 122 kW at 1,800 rpm in conjunction with a Leroy Somer LSAM 44.2 generator with 88 kVA and a Sauer-Sundstrand 90 hydraulic pump from Hansa-Aggregate. Furthermore, a Whisperpower SQ 27 diesel generator with 27 kVA is installed with a Victron Quattro 5000 charger/inverter system acting as backup. The Deutz engine also supplies the power for the hydraulically driven 75 kW Jastram bow thruster and the Jöhstadt NP 4000 fire pump, the Kabola KB30 heating system from Scheer and the air conditioning system from Drews-Marine. Böning supplied the en-

gine monitoring and ship alarm system on board the »Hamburg« with two AHD 515F panel PCs and three AHD 880 TC displays.

The hydraulic system with two pumps each for the steering gear and central hydraulics, including steering cylinders, drive for the daughter boat recovery system, hinged stern cylinders and lashing system for the daughter craft, is supplied by Parker-Lingk & Sturzebecher. The control system via Siemens Simatic comes from R+S







The ship was built entirely of aluminum using the proven net rib system

The engines are being installed

Stolze. Steen supplied the MVS200Hyo-7 mooring capstan and 15.10.SO anchor combination capstan.

Onboard nautical electronics and communications include three Sailor 62xx VHFs, a Furuno FS1575 SSB transceiver, an ATIS voice recorder, a Schnoor SAR-COM, ICOM M73 handheld VHFs and a Rhoteta RT 500-M radio direction finder/direction finder, all grinded by Alphatron. Furuno Germany also has delivered two FAR-22x8 BB radar systems, each with a TimeZero plotter and Furuno chart backup. In adition, the company has supplied a TimeZero Chart for OSC, an FE800 echosounder/graph, GP 170 DGPS, FA 170 AIS, NX 700 Navtex, a system-integrated WS 200 weather station with RD33 display and a system-integrated FLIR M-618 C S thermal imaging camera for the new maritime rescue cruiser. From Raytheon Anschütz the STD30MF gyro, a Compass 360/10 repeater, Rudder-In-

dicator and Pilotstar NX autosteering, three FU Tillers and a Zöllner Zetfon 400/310 Typhon and signal generator were provided. Dose supplied two Virgo S450 remote-controlled searchlights, two SS190 searchlights and a special bow searchlight.

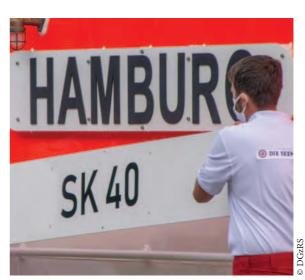
Fassmer also built the 8.20 m long daughter boat of the »Hamburg». The »St. Pauli« is powered by a Steyr SE 236 E40 with 170 kW and ZF-220V transmission. The boat is also equipped with two Sailor 6210 VHFs, a Raymarine Quantum radar, depth sounder and two Axiom Pro16 MFDs as well as a Dose Searchlight.

»Hamburg« operates in the Ems estuary and large parts of the German Bight. The cruiser operated by a crew of four is stationed at the westernmost station of the sea rescuers in Borkum, where it replaced the »Alfried Krupp«, which was decommissioned after 32 years of service and sold. After »very satisfying« sea trials in









SK 40 officially becoming <code>"Hamburg"</code>

the North Sea, the new vessel went into service in mid-April and carried out its first mission barely 24 hours later, when the British flagged 26 m crew transfer vessel »Njord Forseti« had collided with a wind turbine at the »Borkum Riffgrund 1« offshore wind farm in the North Sea. Three crew members were injured. The accident caused a leak and water entered the ship. After a helicopter had taken the injured crewmen to a hospitalm, the remaining crew of the damaged ship managed to keep the water ingress under controt. SK 40 – the new SAR vessel had not beed officially christened yet – accompanied the Njord Forseti»« on its voyage to Lauwersoog/Netherlands for safety reasons.

The new "Hamburg" is the fourth rescue unit of this name in the history of sea rescue. The vessel follows last year's winner, the new LNG-powered German research vessel "Atair", built by Fr. Fassmer as well.

## Main particulars of »Hamburg«

Length	27.9 m
Width	
Draft	1.95 m
Displacement	120 t
Top speed	24 knots
Range	600-800 nm

Main engines and propulsion ...... 2x MTU 16V 2000 M72, 1.958 hp each, 2x ZF DF gear, 102 hp bow thruster

Auxiliary .... Deutz BF 6M 1013 M (122 kW) and Whisperpower SQ 27 diesel generator (27 kVA)

