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Fortunate Feeders – MaK M 43 C Marine Engine leads in ships up to 1,000 TEUs

Hamburg, Germany – At the end of June, prestigious Hamburg-based shipyard J.J. Sietas delivered its Type 168 feeder ship “Wilhelm” to owners Jens & Waller, in Stade near Hamburg, bringing the total number of units delivered to 52. However, this 868 TEU, 11,400 tdw newbuilding is not only the latest in what has been one of the world’s biggest feeder series, but also sets an impressive track record for the MaK M 43 marine engine. All 52 ships of the Sietas 168/168a/168b series are equipped with one 9 M 43 or 9 M 43 C main propulsion engine (8400 kW at 500 rpm), two Cat® 3508B or 3512B auxiliary engines each and one Cat 3406C or 3408C emergency engine.

Ten years of unremitting service

The MaK M 43 engine went onto the market in 1998 and added a fourth, even more powerful model to the new generation of long-stroke medium-speed marine engines of series M 20, M 25, and M 32. During the first ten years of production, more than 800 M 43 units were sold in 6-, 7-, 8-, 9-, 12- and 16-cylinder configurations and with a total output of some 6,000 MW. In 2004 the redesigned M 43 C was introduced, which is also available with 1,000 kW power output per cylinder. Today, the M 43 is the clear market leader for feeders of up to 1,000 TEUs size and also has a strong foothold in other market segments, like cruise ships and ferries.

Heading for the 60,000 hours mark

It was a sign of confidence in MaK in 2000 when the owner Heinz Ehler of Otterndorf near Hamburg had his container feeder “Anke Ehler” (the first ship in the Sietas 160A series) equipped with what was at the time the brand-new M 43 engine. After five years and 30,000 hours of unremitting operation on the North Sea and the Baltic Sea for Unifeeder,

a first comprehensive inspection of the engine was carried out in April 2005. The results were excellent: perfect seals, valves in good order, piston rings okay, bearings with no signs of cavitation and stable running patterns on rollers and cams. Only the usual wear parts had to be replaced according to MaK maintenance instructions. Meanwhile, many other M 43 engines have also completed their 30,000 hours overhaul and showed similarly good results, among them the first ten ships in the Sietas 168 series equipped with a 9 M 43 engine. Recently, the 8 M 43 engine on “Anke Ehler” completed its 45,000 hours overhaul without any problems and is now headed for the 60,000 hours mark.

Engine orders spanning into 2011

Current M 43 C projects in the feeder segment include several bigger ship series on order at shipyards in China, the Netherlands and Germany. The Zhejiang Yangfan Ship Group in Zhoushan, China, is working on a series of 29 feeders of the 700 TEU size category, each powered by one MaK 7 M 43 C engine. Fujian Mawei Shipbuilding is also relying on the M 43: it will supply 32 ships of 700 TEUs with 8 M 43 C engines and a capacity of 700 TEU as well as 13 ships of 880 TEUs with 9 M 43 C engines. The Dutch Damen Shipyards Group is equipping further 14,000 tdw multi-purpose cargo ships and 800 TEU feeder series with M 43 C engines. IHDA Europe Feeder will have 8 feeders of 800 TEUs each built with 8 M 43 C and 9 M 43 C engines at different yard locations. In addition, Volharding shipyards are working on 8 ships of 900 TEUs with 8 M 43 C propulsion engines. As well as Sietas, other German shipyards such as Detlef Hegemann Rolandwerft, SSW Schichau Seebeck, Cassens and Peters Schiffbau are also installing a significant number of M 43 C engines in their feeder ships.

Big splash in cruise business

During its first ten years the MaK M 43 series has delivered excellent performance and is enjoying widespread market acceptance. The delivery of “AIDAdiva” in 2005 also marked the entry of Caterpillar Marine Power Systems (CMPS) into the large cruise ship sector. AIDAdiva and her five future sister ships feature a diesel-electric propulsion system grouping four MaK 9 M 43 C engines developing a total 36,000 kW. Their low exhaust emission, very smooth running, and low fuel consumption are valued by both passengers and shipowners alike. In the meantime the CMPS reference list for cruise ships already comprises 66 M 43 C series engines

of some 700 MW total output both in-line and Vee-configurations. So, nowadays, when owners and yards need to decide, what engine to fit in a new ship, regardless of whether it is a container feeder or a luxury liner, the MaK M 43 C is definitely on the short list.

Characters: 4,524

Pictures available on request:

- 1.) MaK 9 M 43 C Marine Engine**
- 2.) Sietas Type 168 Container Feeder Ruth powered by MaK 9 M 43 C**
- 3.) Sietas Type 168 Container Feeder Hanna at Caterpillar Motoren Rostock**

About Caterpillar Marine Power Systems

Caterpillar Marine Power Systems, with headquarters in Hamburg, Germany, brings together all the sales and service activities for Cat and MaK branded marine products within Caterpillar Inc. This organization provides premier marine power solutions (high and medium speed with outputs from 11 kW to 16,000 kW) and customer service from a single source for the global ocean-going, commercial and pleasure craft markets. The Caterpillar Marine Power Systems sales and service network includes more than 2,100 dealer locations world-wide and is well positioned to support customers wherever they are.

More information is available at www.cat-marine.com or www.mak-global.com.

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For more than 80 years, Caterpillar Inc. has been making progress possible and driving positive and sustainable change on every continent. With 2007 sales and revenues of \$44.958 billion, Caterpillar is a technology leader and the world's leading manufacturer of construction and mining equipment, clean diesel and natural gas engines and industrial gas turbines.

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Editorial information:

Ronald Brüggmann

Manager Media Relations

Caterpillar Marine Power Systems

Phone: +49 40 2380-3104

E-mail: Brueggmann_Ronald@Cat.com