



# HB215LC Goes to Antarctica





HB215LC clearing snow in the area between the station and the rocky stretch

## Komatsu Supports Polar Science

On January 19, 2014, a new HB215LC excavator equipped with Komatsu's exclusive hybrid technology was unloaded onto the ice shelf in Antarctica. This was "mission accomplished" for the crew of the *Mary Arctica*, and the ship, which had transported the machine all the way from Belgium to the South Pole, could now start the long journey back to its homeport in Denmark. The Komatsu HB215LC, however,

would continue its own extraordinary journey, which had begun several weeks earlier thousands of miles away.

### Komatsu Europe International Donates HB215LC Hybrid Excavator to the International Polar Foundation

In November 2013, Komatsu Europe International N.V. (KEISA) announced the donation of a new HB215LC hybrid excavator to the International Polar Foundation (IPF). BIA n.v. (BIA), the official Komatsu distributor for Belgium, provided free attachments for the machine to be used in work at the Princess Elisabeth Station.

On December 2, the hybrid excavator was loaded on the *Mary Arctica* at the port of

Zeebrugge in Belgium, and the ship departed for the White Continent the day after. After a short stopover at Cape Town, South Africa, it headed out for Crown Bay on Antarctica's coast, where cargo for the Princess Elisabeth Station is usually unloaded.

### HB215LC Arrives in Antarctica

On January 19, the HB215LC was unloaded onto the icy continent of Antarctica. The ship could not arrive at the usual site at Crown Bay due to the worst sea ice conditions in the last 30 years, and

operations were delayed until an alternative site could be located using satellite imagery. The Danish sea captain was finally able to identify a suitable zone at Dog's Head Terminus, 120 km (75 mi) away from Crown Bay, where the shelf was low enough for unloading. The *Mary Arctica* was soon moored alongside. The unloading began immediately, with the ship's two cranes working simultaneously to speed things up, and to allow the *Mary Arctica* to leave quickly before it got trapped by the moving ice.

The HB215LC was then transported using a giant sled to the Princess Elisabeth Station, approximately 400 km (249 mi) away from the point of



Handover ceremony (left to right: Mr. Andreas Wagner, CEO of International Polar Foundation; Ms. Keiko Fujiwara, managing director and CEO of Komatsu Europe International N.V.; and Mr. Raf Cools, general manager of BIA Benelux



Briefing on the HB215LC during a press conference



"Waving" goodbye to the *Mary Arctica*



The Komatsu D31A bulldozer delivered to Japan's Asuka Station in 1985 is back in operation at the Princess Elisabeth Station.



HB215LC exerting its full potential at the Princess Elisabeth Station

arrival. Soon after it arrived at the station on January 22, the HB215LC was already hard at work, removing snow and preparing the site for the reconstruction of the technical storerooms.

“It is fantastic to see how much work the excavator can do in one day,” says Mr. Alain Hubert, IPF founder and Belgian polar explorer. “The power and the precision of this new HB215LC are amazing!”

## Komatsu’s First Step to Antarctica Taken in 1956

Japan’s Antarctic exploration began in 1956. Since that time, Komatsu has a long history of involvement with the exploration by producing and sending snow vehicles, which are indispensable in Antarctica. The Komatsu D31A bulldozer delivered in 1985 to the Asuka Station, a Japanese Antarctic unmanned observation base, is back in operation at the Princess Elisabeth Station after nearly three decades.

Under a temperature of minus 15°C (5°F), the HB215LC accomplishes snow clearance work in a single day that used to typically take more than a month for seven men to do by hand, proving its superior performance. It was a great honor for Komatsu to have the opportunity to once again contribute to Antarctic exploration through IPF.

## Commitment to the Environment

Komatsu has been developing eco-conscious construction equipment as part of its environmental efforts. Today, more than 2,500 Komatsu hybrid excavators are in use worldwide. In Komatsu’s unique hybrid system, the electric swing motor/generator captures and regenerates energy as the

upper structure slows down and converts it into electric energy. The regenerated energy is stored in the capacitor and used to swing, as well as by the generator/motor to assist the engine when it needs to accelerate. Thus, the hybrid system reduces fuel consumption significantly.

The donated HB215LC is a second generation hybrid machine fitted with cutting-edge Komatsu technology. It boasts an average of 25% less fuel consumption and CO<sub>2</sub> emissions than a traditional excavator.

The Princess Elisabeth Station, established as IPF’s first zero emission polar research station, utilizes solar and wind power generation to achieve zero emissions within the building. The environment-friendly HB215LC is also compatible with the zero emission policy of the station. It is expected the HB215LC will play a valuable role at the station.

To learn more about IPF, refer to their website: <http://www.polarfoundation.org/>



KC20, a Komatsu snow vehicle manufactured in the 1950s and delivered to work in Antarctica (Komatsu no longer manufactures snow vehicles.)

# KOMATSU

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