

# Shredder and pressing machine for waste paper on ships

**STORAGE** | The German ice shelf research vessel *Maria S. Merian* meets the highest environmental standards. The ship, managed by the Briese Schifffahrts GmbH & Co. KG company, based in Leer, Germany, was recently equipped with a cardboard and paper shredder and briquetting press from mütek Systemtechnik, headquartered in Filderstadt, Germany. The mütek machines are said to considerably reduce storage space needed for the waste paper that accumulates on board the vessel until it can be properly disposed of at the next port.

The 44-person maritime and scientific crew of the *Maria S. Merian* produces 50kg of packaging waste daily, such as fruit crates, egg cartons, paper and cardboard, as well as packaging material from the instruments used by the 23

researchers. All of the trash has to be collected and separated on board and cannot be disposed of until the ship reaches its next port. However, the limited space on the vessel makes storing the waste virtually impossible. For environmental reasons, the packaging waste should not be incinerated at sea.

The installation of the mütek MGZ 62 SP shredder and MGP 1-50 briquetting press will substantially reduce the volume of paper waste that piles up on the vessel. The system is used to shred and compact packaging materials, cardboard and paper. The trash is shredded into pieces 10 x 10mm in size, and then a conveyor screw built into the shredder transports it directly to the storage container of the briquetting press, where it is pressed into briquettes. This process reduces the vol-



The cardboard and paper shredder and briquetting press considerably reduce the volume of waste paper

ume of packaging waste and paper to approximately one-tenth of its original size.

The shredder, which weighs 1380kg and is 1900 x 1120 x 1640mm in size, has a 620 x 800mm cutting unit opening. The hopper volume is approximately 1m<sup>3</sup>, and the throughput rate is two to four hopper fillings per hour. The shredder is equipped with an inspection window in the rotor box lid, a conveyor screw for transporting the material into the press, a feed hopper with a lid and hatch, and an electrical locking mechanism on the hatch. Depending on the material, the press can process up to 60kg of paper waste into briquettes hourly; each briquette is 50mm in diameter. The storage container has a volume of about 1m<sup>3</sup>. Special features include an inspection window for the material feeding hopper as well as a filling level indicator.

By installing the new paper-compacting system, the research vessel meets the stringent standards of the German "Blue Angel" ("Blauer Engel") eco-label as well as other relevant standards.



A mütek waste crushing machine is used on the research vessel *Maria S. Merian*