A high-tech train that floats on powerful magnetic fields smashed into a maintenance car on an elevated test track Friday, killing 23 people and injuring 10 — the first fatalities on a maglev train.

Initial indications were that human error, not sophisticated maglev technology, was to blame for putting the maintenance vehicle on the track at the same time as the Transrapid train. The train was moving at 125 mph but can reach speeds of up to 270 mph.

The speeding train's low nose scooped up the maintenance car, hurling it against the front and along the roof of the sleek, advanced train. Rescuers had to climb fire ladders and use cranes to reach the 13-foot-high track to clear debris and retrieve the dead and injured. At least one American was killed. Seats and other wreckage were left strewn beneath the track.

Maglev trains — short for magnetic levitation — use powerful magnets that allow the train to skim along its guideway without touching it, reducing friction and increasing speeds. The Transrapid, which floats about half an inch on a cushion of magnetism, was made by Transrapid International, a joint venture between Siemens AG and ThyssenKrupp AG.

The closed 20-mile track, built in 1985 near the northwestern towns of Doerpen and Kathen, consists of two loops connected by a long straightaway. It is operated by Munich-based IABG mostly as an exhibition aimed at showing off Germany's maglev technology. Aboard the train that crashed were Transrapid employees, workers from a nursing care company and people from local utility RWE.

American martial arts expert Ernest Lieb, 66, of Muskegon, Mich., was among the dead, his wife Jennifer told The Associated Press. She said he was in his native Germany to conduct a seminar on karate.

The Chinese city of Shanghai has the world's only commercially operating maglev train. Officials in Germany are studying the possibility of a line between Munich and its airport. Japan has been experimenting for years with a maglev line that has clocked a record top speed of 361 mph.

German prosecutors seized records of the radio communications on the train line and were examining Friday's crash.

The maintenance car, which had two workers aboard, was used to check the tracks and clear them of branches and other debris. IABG employees told The Associated Press the track's control center must get an all-clear that the maintenance vehicle is out of the way before starting the train. They spoke anonymously because they were not permitted to talk publicly about the information.

Rudolf Schwarz, a spokesman for IABG, said the accident was the result of human error. "At this time, the accident was not caused by a technical failure. It is the result of human error," he said.
Chancellor Angela Merkel abandoned a public policy conference in Berlin and arrived at the scene by helicopter. Wearing black, she said thoughts were with the victims. "I want to show that I am with them," she said.

Merkel declined to talk about what effect the accident would have on Germany’s maglev technology industry, which she worked to promote during a trip to China in May. While there, she rode the maglev train that links Shanghai’s Pudong International Airport with the city’s financial district.

But she added that "at this point I don't see any connection with the technology. The technology is a very, very safe technology."

Ekkehard Schulz, the chief executive of ThyssenKrupp, agreed.

"I remain convinced that this is a safe travel technology," he told broadcaster ZDF.

Maglev supporters contend that the trains are nearly impossible to derail because they wrap around the guideway and have no wheels. A broken wheel was blamed for Germany’s worst train accident, involving a conventional high-speed train, at Eschede in 1998 in which 101 people died.

Despite the accident, the Transrapid didn't actually derail. Instead it came to rest on the track itself.

The idea of magnetic levitation dates to the 1890s, when a French-born American, Emile Bachelet, conceived the idea and worked for 20 years on its application to a train. A model of a maglev train received much public attention in 1914 when it was demonstrated in London, where photographs show Winston Churchill and other government officials viewing it.

But nearly a century later, the technology has still not caught on even as high-speed service with conventional trains has expanded. Concerns include the cost of the new tracks and the amount of electricity the trains use at high speed.

The technology's image was not helped by a fire that broke out in an electrical storage compartment aboard Shanghai's magnetic levitation train as it was headed toward the city's international airport Aug. 11, generating large amounts of smoke but causing no injuries.

In a statement, Transrapid expressed "shock and sadness" over the crash, which Osnabrueck police spokeswoman Andrea Menke said killed 23 people and injured 10. Because there was no passenger list, authorities were unsure how many people were aboard the train. It was not immediately clear how many workers were in the maintenance car.

Kevin Coates, a former spokesman for Transrapid, said it was the first time that he was aware of a crash of a magnetic levitation train.

"I have to believe that this is not a malfunction of the technology but a communications breakdown" between the operators and the maintenance personnel, he told the AP by telephone from Maryland.

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