

Maglev travels at 312 mph

Japanese build flying train

United Press International
MIYAZAKI, Japan — The Japanese have this crazy idea that trains should fly like airplanes, and their space-age engineers have built one that does so at 312 miles per hour.

But now there's much head-bashing at the Japan National Railways over what to do with their brainchild.

The two maglevs — magnetically levitated linear motor propelled trains — have successfully completed two stages of development at this southern Japan test facility on the island of Kyushu. Plans now call for the building and testing of three vehicles later this year.

The maglevs sail through the air at a fixed height of about four inches above the magnetized roadbed, and would make the 311-mile run between Tokyo and Osaka in about an hour.

"Our aim is to take people out of airplanes and put them back on trains," a JNR representative said.

JNR did a pretty good transplant job a few years ago when they introduced the 130 mph

When the 10-ton vehicle accelerates to a speed of 100 mph, the wheels retract and the train skims through the air, levitated by the repulsion force of the two magnets — those on the road bed and those aboard the train.

shinkansen (bullet trains) that now hustle thousands of passen-

gers between Tokyo and Japan's major southern cities often faster than planes.

"But the shinkansen are becoming too congested and too slow," the representative complained. "That's why we are developing the maglevs."

To the pampered Japanese train riders, the other attractive features of the maglevs are that they are more quiet, more comfortable and consume less energy than the present rail system — 80 percent of which is electrified.

"The maglevs would only use about half the electricity needed to run the shinkansen at speeds of about 156 mph," the representative said. "But at speeds of about 312 mph, twice the amount of energy would be needed."

The far-sighted engineers at this Kyushu testing facility estimate it will take another eight to

10 years to put the maglevs into service on the major trunk routes. Eventually, they predict unmanned maglev freight trains will run during the night, giving Japan the world's fastest freight service. Manned passenger trains will use the facilities during the day.

"Only two people are needed to operate maglevs," the representative said, "one at either end of the line. But people prefer humans at the controls of their trains and planes, so we would man the passenger-carrying maglevs."

The revolutionary concept of propelling vehicles through the air with magnets uses the same basic principles as the electric motor, except the magnetic energy in motors rotates a shaft in a circular motion. With maglevs the magnetic energy pulls and pushes the vehicles in a

straight line forward or backward.

The maglevs begin their flight on wheels. When the 10-ton vehicle accelerates to a speed of 100 mph, the wheels retract and the train skims through the air, levitated by the repulsion force of the two magnets — those on the road bed and those aboard the train. Similar magnetized coils along the sides of the guideway always keep the vehicle on dead center.

The fate of the maglevs now passes from the physicists to the politicians. The physicists and engineers have proved the efficiency and practicality of the maglevs. But the construction costs are enormous.

"Although the costs of building a guideway are much higher than a shinkansen, the maintenance costs are much less," the JNR representative argued.

Kidney windfall results in three rush transplants

United Press International
DALLAS — The head of a team of surgeons who performed kidney transplants on three patients within a 24-hour period says the rush job was necessitated by the sudden availability of the kidneys.

The three patients, Charles Sides, Rickey Phillips and William Butler, were in fair condition over the weekend, a Methodist Hospital representative said.

The men were being kept alive on dialysis machines when the organs became available, lead surgeon Dr. Richard Dickerman said.

"It's really unusual that something like this happened," he said. "Patients who

need a transplant will wait months or years for an organ to become available."

Dickerman and his team performed the three operations in succession. One kidney was flown in from Atlanta and the other two were donated by the family of a Texas man.

"To have three kidneys become available on the same day for three of my patients is something I'll remember a long time," Dickerman said.

Kidneys usually are donated by living relatives with a matching tissue type willing to give up one of two healthy organs. Sometimes they come from deceased persons.

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