

Business Briefs

Technology

Argonne starts MHD ship propulsion project

Argonne National Laboratory will begin a large-scale magnetohydrodynamics (MHD) ship propulsion project. The effort will leapfrog the Japanese MHD effort by using a more powerful superconducting magnet, according to *Argonne Research Highlights*, the lab's publication.

The MHD propulsion system provides a quiet technique with no moving parts. In military applications, submarines would be harder to detect with sonar. The article proposes that such technology could be used for cargo submarines, which would have less drag than surface vessels and would not be affected by storms.

A test facility will be created for the two-year project to test the MHD thruster. It will be on the scale of what would be required in one unit of a multiple-thruster system envisioned for a full-size cargo or naval vessel.

Infrastructure

One in three bridges in U.S. is unsound

Only 5% of the 20,841 worst bridges in the United States were approved for federal funding for repair or replacement, according to statistics kept by the Federal Highway Administration (FHA) which were leaked to Cox News Service, the Norfolk *Virginia Pilot* reported on Dec. 15. One of every three bridges has been judged to be either structurally deficient or functionally obsolete, or both.

The FHA surveys the 585,000 bridges in the United States that are longer than 20 feet, and assigns each a grading of 1 to 100, the latter being the best condition. Some 20,841 bridges were assigned ratings of 20 or below, but only 996 were given federal funding, even though the threshold for receiving federal funding is a rating of 50. Some 4,535 bridges have ratings of 1 to 10.

The FHA estimates that \$78 billion is re-

quired to "eliminate all backlog bridge deficiencies," but some engineers argue a more likely figure is \$100 billion. Federal, state, and local governments now spend \$3.7 billion annually to repair and replace bridges—\$1.5 billion less than the FHA estimates is required just to stay even and prevent any bridges from falling into an even worse condition.

Robert Campbell, a bridge inspector in Alabama, said, "We go out and look at a bridge and we're often horrified by what we see. Many of them are too far gone to fix, and we can't afford to replace them."

Sam Schwartz, head of the Infrastructure Institute in New York, said, "In New York City, the day of reckoning is just around the corner, and I suspect it is for much of the rest of the country."

Banking

Russia heading toward financial catastrophe

The French daily *Libération* reported on Dec. 9 on the first declared bankruptcy in Russia of one of the 1,974 private commercial banks that have been launched during the past five years. The bankruptcy of Rusinvestmentbank, which had been created by an insurance company and a research center, was the first declared failure of a commercial bank in Russia in 76 years. "This is a first bankruptcy, but certainly not the last," said Russian Central Bank official Olga Prokofieva.

The entire edifice of the private commercial banking structure in Russia "risks exploding at any moment," said the paper. The only banks which can be considered to be serious ventures are those linked to the petroleum sector, or those which were created by the old Soviet Communist Party structure, such as the Bank Menatep, created with funds from the old Komsomols. Most other banks are based on insane financing schemes. For example, a banker lends money to himself, which in turn allows him to have credit available to lend even more money to himself. This is only feeding into the inflationary surge; 96% of all credits disbursed are for less than three months. Interest rates are minimally 25% a month, and there

is a reserve ratio of 1:31. While banks have 513 billion rubles of their own capital available, 16,000 billion rubles have been loaned out.

"Thereby, no doubt, financial catastrophe is signaled," the paper wrote. It linked the recent murder of two bankers to the "failure to fulfill obligations," and claimed that the rates of unpaid loans had increased 559% from January to September of 1993, representing 21% of all credit loaned out.

The "speculative fever of an economy of indebtedness absolutely disconnected from the productive sphere" is "a pre-crash situation," the paper wrote.

Water Management

King of Thailand urges dam construction

The king of Thailand on Dec. 4 openly advocated the construction of dams across the Pa Sak and Nakhon Nayok rivers to ensure an adequate water supply for Bangkok in the long term, the *Sunday Post* reported on Dec. 5. Addressing an audience of government and private sector representatives and people from all walks of life who were in the Royal Palace to mark his 66th birthday, the king said that it kept bothering him for several years that he could not speak out openly for building the two dams, because of opposition to the projects from experts and conservationists.

The king said that the projects are feasible, especially the one in Nakhon Nayok. He also assured listeners that there should not be any fear that the project would encroach on the national park at Khao Yai, because the dam is to be built near Ban Tha Dan. He said that a study on the two dam projects had been conducted several years ago, but that they could not be implemented, for fear of protests.

"Now we feel sorry, sorry that they were not implemented. And we now face drought," the king said, adding that the dams should have been built six years ago. He insisted that the dams be completed by the time he reaches the age of 72, at the latest. He warned that if the two dams were not built, people in Bangkok in the near future would not have the convenience of using 200 liters of water per capita

per day, "but probably an average of 20 liters of water per person per day."

Labor

Classical education urged in Germany

A return to a classical-type system of higher education in Germany was recommended in a resolution passed by the German Association of Philologists on Dec. 7. The resolution was specifically addressed to federal and state government ministers for education who met in Bonn on Dec. 16.

The resolution said that the 1972 reform of the *gymnasium* (the so-called Brandt reforms of the high school curriculum), which brought "freedom of choice" for the pupils under the slogan of "more democracy," is no longer appropriate for a nation that is preparing to enter the next century. A reform of the 1972 reforms is required because Germany cannot move into the 21st century with a "hostile view of technology."

The philologists call for an emphasis on mastering of the German language and the natural sciences, and a return to a classical curriculum, including five central courses: 1) German language, 2) one foreign language, 3) mathematics, 4) physics, and 5) ethics and religion. The *abitur* examination to qualify for the university shall be made on the basis of three written tests and two verbal ones, among these five.

Germany

Cabinet approves maglev for Hamburg-Berlin route

The German cabinet decided in favor of the "Transrapid" magnetically levitated train to link Hamburg and Berlin, at its weekly session in Bonn on Dec. 8, but postponed a decision on when the construction should begin and on other details until March 1994.

The 285-kilometer route would employ

10,000 workers, of whom 4,000 alone would be in steel production, and the cost of the project would be 8.9 billion deutschmarks (\$5.6 billion). Of that, DM 5.6 billion will be paid by the state for the construction, and industry will pay DM 3.3 billion for the 16 trains, technical and administrative equipment, and other necessary operational investments of the private company that is to service the route. Siemens, Thyssen, Daimler-Benz/AEG, Lufthansa AG, Deutsche Bahn AG, Holtzmann, and Dyckerhoff will spend DM 1.5 billion to form a management company for the Transrapid. Completion of the project is envisioned for the year 2003. The average travel time will be less than one hour.

In Berlin, a group of politicians, including Mayor Eberhard Diepgen, and industrial and business managers in the city's chamber of industry and commerce, is lobbying to extend the route toward both Warsaw and Dresden, and from Dresden to Prague.

Subcontinent

Regional development key to solution for Kashmir

F.J. Khergamvala, the *Daily Hindu* correspondent in Bahrain, wrote in early December that regional economic development is the key to finding a solution to the Kashmir crisis. Citing the Israel-Palestine Liberation Organization settlement as a model for India and Pakistan, Khergamvala wrote that "similarly, peace in the formerly princely states of Jammu and Kashmir ultimately will arrive only if the solution is economically viable to the people of Kashmir and beneficial to the countries surrounding it."

Khergamvala continued, "Assuming both India and Pakistan are serious about peace . . . at some early stage the negotiating parties will have to look at various models and have to draw from them. It will be most interesting to see how the West Asian Benelux idea moves ahead. . . . The message is very simple: not emotion for blind *azadi* [freedom] slogans will drive a solution, only a workable model will."

Briefly

● **AIDS** transmission occurred between two young children in a New Jersey home; two doctors announced in late November. One AIDS-infected child who had a nosebleed gave it to another, non-infected child. Dr. Anthony Fauci of the National Institutes of Health insists the case is not one of "casual contact."

● **EXXON** has announced that it will sell its credit card operations to GE Capital and GE's wholly owned Monogram Credit Card Bank of Georgia. It said that the sale will lead to the layoff of 400 employees in Houston by mid-1994.

● **CHINA** will extend credit to Pakistan for defense purchases under an agreement signed on Dec. 4, a Pakistani government statement said, Reuters reported. The agreement was signed during a visit by Chief of General Staff of the People's Liberation Army, Gen. Zhang Wannian.

● **THE DUTCH** Parliament approved an 80-mile rail project exclusively for freight on Dec. 8. The route will connect the port of Rotterdam (continental Europe's biggest) with Emmerich on the German border, and is to replace part of the huge volume transported by road.

● **TUBERCULOSIS** patients who are uncooperative are to be quarantined, the Atlanta Centers for Disease Control said in new guidelines, according to the *Washington Post*. The CDC attributes the rapid rise in TB to AIDS, immigration, drug use, homelessness, and the deterioration of public health infrastructure.

● **THE ECONOMIC CRISIS** is structural, not cyclical, says Albert E. Sindinger of Philadelphia's Sindinger and Co., according to the Dec. 12 *New York Times*. "We ceased to produce major things that we consume, and we buy on borrowed money. . . . You can't run a decent economy when 40% of the people get up in the morning" wondering if they'll get their next paycheck, he said.