Aug. 4, 1974

Soviet Technology Mired in Red Tape

By John Dornberg
Special to the Star-News

MUNICH — Russia used to be called "a giant with feet of clay."

That was a century ago.

Today it is in an even bigger giant but seems just as immobile and faces a widening technological gap with the industrialized nations.

To be sure, the Soviet Union's list of scientific and technological "firsts" is impressive.

IT BUILT THE FIRST successful intercontinental rocket, put the first artificial satellite in orbit and launched the first man into space. It had the world's first nuclear power plant and was the first country to place a jet airliner into service.

But it lost the space race. It is negotiating to buy nuclear power plants from West Germany. And it hopes to purchase Boeing 747 and DC-10 airliners from the United States to modernize its sadly outdated passenger fleet.

The obvious questions: What's wrong?

Though the giant's feet are no longer mired in peasant backwardness, they are bogged down in a morass of bureaucracy and inefficiency which prevents modern technology from being applied.

Buying the necessary know-how and equipment from abroad is one solution.

But periodically the USSR attempts various bootstrap operations to pull itself up. Such a drive has again been launched by some leaders in the Kremlin in recent weeks.

Its aim is to remove the obstacles that prevent new technology from being put into use; that is, to speed up the process of transferring new ideas from the drawing boards to the economy.

AS THE DISCUSSION has been unfolding, it has given Western observers some valuable insights into the USSR's troubles.

Countless inventions and new processes emerge from Soviet think-tanks, research institutes and scientific laboratories. But few are applied, as Soviet economists admit, because it is safer and more profitable for bureaucratic management to churn out the same old products or use outdated techniques rather than expose itself to the risks of change.

The centralized economic system with its emphasis on fulfilling a predetermined plan has too many built-in disincentives against innovation.

The 1965 "economic reform" was supposed to remedy this. But the reform, consistently undermined in practice, is as good as dead today and given little more than lip service.

In 1973 a system of "production associations" was introduced. Scheduled to be fully operable by the end of 1975, it will merge related groups of factories into "firms" or "trusts" with their own supply sources, manufacturing and distribution network, and, most important, their own research and development capabilities.

BUT AFTER ONLY a year there are already clear signs that the program will go the way of economic reform because the powerful bureaucracies of the State Planning Committee and the central industrial ministries are sabotaging it.

Even when a new process overcomes bureaucratic and managerial inertia, years may pass before it can be fitted into the planning mechanism, clear the hurdles of paperwork or overcome the bureaucratic obstacles in all the many agencies that run the Soviet economy.

The annual Soviet loss of 10 million tons of newly mined coal is an example of this.

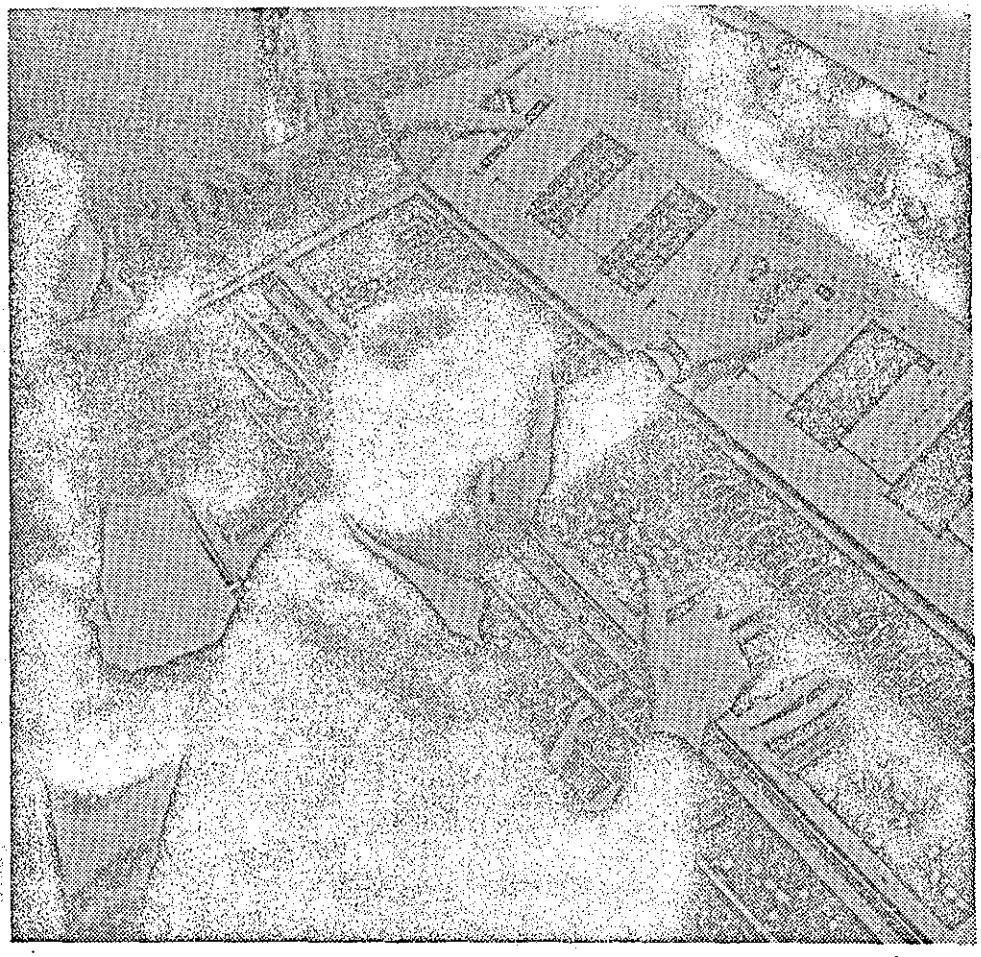
New mining techniques produce smaller fragments which tend to get blown off railway freight cars as the trains travel at high speed. Besides the loss in coal, last year it cost 50 million rubles ($65 million) to clean up the roadbeds.

THE TECHNOLOGICAL remedy for this — compacting the coal and covering it with a protective film — was offered by scientists at the Railroad Engineering Institute in Novosibirsk almost 20 years ago.

They spent the next two decades trying to convince bureaucrats in the Soviet Coal Mining Ministry that their method was sound, arguing all the time that 208 roller-compactors would solve the problem.

When the ministry finally agreed in principle, it contended that only 150 compacting machines were needed. Of these, only one-third had gone into service by the beginning of this year. The remainder are still "in the planning stage."

The director of an electrical equipment plant complained some time ago that agreements of 16 different bureaus



Although automation is being applied, industry hasn't benefitted from many advances in Soviet technology.

and agencies had to be obtained to approve the technical specifications for a new hydroelectric generator. The approval time was longer than that which had gone into designing and making the generator itself.

THE CHIEF DESIGNER and engineer of a plant in Mogilev reported earlier this year that approval had to be obtained from 11 different agencies before his factory was allowed to produce and market a do-it-yourself-type electric power tool.

And who can forget that Soviet scientists came up with a technique of freeze-drying food products in the 1920s that is now in use all over the world — except in the USSR itself, where documentation to approve industrial use of the process has been tied up with red tape for almost half a century.

G. A. Kulagin, a prominent Soviet machine-tool designer, summed up the problem succinctly in an Izvestia article a few weeks ago.

"We have been producing the same heavy drill presses for 15 years, though they are obsolete and do not meet current standards," he explained. "For three years running the State Standards Committee and the State Committee for Science and Technology have been trying to halt their production and in the meantime we have come up with newer models that are 30 to 40 percent more efficient than the old ones.

"But the customers stubbornly insist on the older presses and the State Planning Committee (Gosplan), the State Committee for Material and Technical Supply and the Machine Tool Ministry had ordered their production to continue.

"ALTHOUGH OUR DESIGNERS have come up with new and better equipment, management is reluctant to disrupt established production processes and opposes adoption and assimilation of the new designs."

"Industrial executives," said another prominent design engineer, Zakhar Sirotkin of the Belorussian Motor Vehicle Plant, "do not have sufficient economic incentives to change to the latest type of equipment. . . . The economic reform has proven ineffective in providing those incentives.

Until managerial inertia and bureaucratic obstacles can be overcome, it seems that no matter how much know-how the USSR buys abroad or how many more "firsts" Soviet scientists and engineers score, the technological gap will remain.