

automated production lines, the director agreed that the productivity of the cutting procedure could be increased exponentially with the use of lasers. But such equipment is too expensive for the moment.

Outside the hall, huge cranes—the two largest ones, produced in the U.S.S.R., can lift 900 tons together; smaller ones, built in Romania, lift 50 or 150 tons—pick up the prefabricated block sections and carry them to the floating docks, of which there are three with two chambers each.

Are all the capacities being utilized, we asked, with the situation of the Western shipyards in mind. “Yes, until 1985 we are fully booked with orders,” he replied. This means full employment for the yard’s approximately 6,500 workers. In 1955, there were only 600.

The Danube-Black Sea Canal: a modern epic

by Webster G. Tarpley

In an office in the outskirts of Constanza we are introduced to Engineer Sergiu Ivanov, in charge of mechanization for the Danube-Black Sea Hydropower and Transport System. Ivanov is a hearty man in his late fifties, tanned by the sun of the Pontus. He has been working on the canal since its inception back in 1975. He relates with pride that his son and daughter are studying electromechanical engineering in Craiova, a center of heavy industry west of Bucharest.

Ivanov told us the first projects for a canal from the Black Sea to Constanza date back one and a half centuries. Today Romania is building the canal to facilitate the transfer of growing imports and exports, more than half of which go through the port of Constanza, built up in the last century by the Italian-Romanian engineer, Saligny. By building a canal of some 65 kilometers from Cernavoda on the Danube, which is also the site of the country’s first nuclear reactor, to a point south of Constanza, it will be possible to save a 400-kilometer trip north through the Danube Delta, which is also near the frontier with the Soviet Union. Ivanov cites figures to show that with freight tonnage rising to 150,000,000 within a decade or two, the canal will pay for itself within “only 75 years.”

To procure those savings and related benefits, the Romanian government has decided to implement what Ivanov calls “the largest single investment in the history of the country.” The canal, now in its ninth year of construction, employs a small army of workers, 30,000 in number, who are operating some 5,000 trucks and 50 separate types of earth-moving equipment to move 300 million cubic meters of earth and pour 3.5 million cubic meters of concrete. Ivanov reels off the details: his workers have completed the construction of eight bridges and 150 kilometers of roads. Most impressive, they are in the final phases of cutting their way through

the bluffs of the Dobruja plateau, where at various points the canal has had to be cut some 70 meters deep into chalk hills, with constant threat of inundations. Almost 90 percent of this work was mechanized,” says Ivanov. Ivanov goes on to say that the canal is part of a comprehensive strategy of regional development. This includes whole new towns, and new neighborhoods in older towns, for the canal workers. At Medgidia there is a large new cement factory to meet the needs of the construction. Along the canal there will be three ports, plus a seaport at Constanza.

Most important will be the benefits for agriculture. The canal will provide some 180 cubic meters per second of water, which is already being used to irrigate a land area that will shortly reach 400,000 hectares. Topsoil taken off hill-sides has been redeposited to form new arable land.

Ivanov then points to the other side of the project, which is the improvement of labor power. The Romanian economy had no skilled labor reserves to shift into canal building, so it was imperative to train canal builders and civil engineers on the job. All along the canal, schools have been built for 27 trades, and many of their graduates are young recruits from the Romanian army assigned to the project. Instruction goes up to a junior degree in civil engineering granted by a higher education institute in Constanza, created to serve the canal. The new skilled labor will be moving on to another canal to be built from kilometer 37 on the Danube-Black Sea Canal over to Cape Midia. There will also be a canal from Bucharest to the Danube which Ivanov says will make the Romanian capital a port for the North Sea and the Black Sea. Further projects will complete a national canal system.

We pile into a battered mini-bus for a ride under a broiling sun to some of the key remaining construction sites. At Agigea Ivanov shows us the massive locks under construction, designed to keep the salt water of the Black Sea out of the fresh-water irrigation system. There is another set of locks at Cernavoda at the Danube end. The dusty roads are filled with heavy dump trucks; the make is Român Diesel. Ivanov points out that the role of Romanian equipment in the building has been maximized. He shows us a striking suspension bridge, noting with satisfaction that this too is an original Romanian solution to an engineering problem.

Parallel to the canal there is a belt winding through the countryside—a 17-kilometer-long conveyer belt that is taking clay and subsoil to the Black Sea coast, where it is being used for landfill to reclaim new land. “That is our project for the peaceful expansion of Romanian territory,” he jokes.

Ivanov says that he had been in Dortmund, West Germany some years earlier to see the biggest earth mover in the world, slated for use in building the Rhine-Main-Danube Canal in West Germany, since delayed by greenies and cost-cutters.

“It is a great honor for everyone who is working on this canal,” Ivanov says. “We think that this project is a kind of epic. What we are doing here can stand comparison with the canals at Suez, at Panama, at Kiel, the Volga-Don.”