

LEV PODVOISKY

*Notes
of an Engineer*



FOREIGN LANGUAGES PUBLISHING HOUSE

Moscow 1950



SKETCHES
of
SOVIET LIFE

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I find it somewhat difficult to answer so common a question as what my main profession is, since I worked ten years as a metallurgical engineer and five I fought as an artillery officer.

We Soviet people speak of our childhood days as the time when we were Young Pioneers; our youth is linked up with the Komsomol organization and our adult life with the Communist Party.

I became acquainted with the past largely through tales told by the old folks—living witnesses of history. About contemporary life abroad I learnt by personal observation and from the impressions gained through friends and companions. All important happenings in Soviet times I can bear witness to myself. These notes are the result of a comparison of such facts as anyone is apt to come across in the ordinary course of life. They are the fruit of my reflections upon these facts—facts that become exceedingly indicative when you try to interpret them historically.

I. A GREAT CHANGE CAME OVER THE MILL

We are accustomed to have everything change rapidly in our country. Topographical maps snapped in 1939 are out of date by 1941. During the war we noticed, however, that abroad, and only abroad, old war maps depicted the localities in question with the greatest accuracy.

Who would today recognize the factory district I work in as the forsaken nook of old Moscow it was? The modern Serp i Molot iron and steel mill resembles the former Goujon wire and rolled metal works as little as the present Zastava Ilyicha Square does the former Rogozhskaya Zastava.

Not so long ago the Rogozhskaya Zastava was reckoned to be two versts away from Moscow. Today the Zastava Ilyicha is eight kilometres within the city line. A great change has come over our mill. Magnet cranes, charging machines, roller beds and

automatic machinery have taken the place of the crowbar and the shovel, the principal tools in the Goujon days.

The old hands tell you: "During the last twenty years the mill has changed so, you can't recognize it any more; under Goujon it stayed almost the same for thirty-five years." In actual fact one factory chimney is all that has not been changed, but even that was shifted a distance of twenty metres.

To my mind, some of the shops are hard to work in even now, especially in summer time. But I hear old man Brylkin, ever alert, remarking with satisfaction as he takes in the shop with a businesslike look:

"It gladdens my heart to see what a fine place this has become!"

And Brylkin is a foreman in the steel-melting department who has a good memory for the convict labour his work was like under the capitalist bosses.

Not a crane was to be seen in the yard where they used to keep the charge. It was loaded into the trucks by hand and hauled to the melting platform. Forty-ton open-hearth furnaces were loaded with shovels. The charging took four and a half hours. During the melting helpers would climb every ten or fifteen minutes to the red-hot furnace roof to

turn on the sprayer valves. In the rolling shop, ingots weighing four hundred kilograms were pulled out of the heating furnace with tongs and were conveyed to the mill by means of a hand winch. The furnaces were situated in direct proximity to the mills. Rollers overcome by the heat were brought to by pouring buckets of water over them, whereupon they would resume their work.

In 1920 the mill came to a dead stop. Tufts of grass made their appearance all over the yard, to the delight of the neighbourhood goats.

Five years later, in the fall, I paid a visit, my first, to the Serp i Molot Plant. Our school had arranged an excursion there. At that time everything in and about the plant was still just as it had been under Goujon and fully bore out the old saying current among the workers: "At the factory it is hell, and round about it a foul smell."

The antiquated machinery and methods made work a drudgery. Peasants at that time came on frequent excursions to the various shops of the plant. The kulaks used to spread rumours in the villages that under Soviet rule the workers were treated like pet-children and the tillers of the soil like step-children. The cities are full of loafers, they said, who get

fed for doing nothing. "It's a cinch, you know, to feed at somebody else's crib; not at all like chewing chaff and choking on it, as we have to," the kulaks would tell their fellow villagers insinuatingly.

After tarrying a bit near the furnaces and mills the rustic excursionists, steaming as if they had been in a Turkish bath, would go out into the yard, wipe off their copious perspiration, and ask, puzzled:

"How can you work in such a bake-oven? I couldn't stand it an hour."

But a time of great upheavals had already arrived....

At an all-Union rally of Young Pioneers held in 1929 people of my generation listened keenly to the story of the projected great undertakings—the First Stalin Five-Year Plan—as if they were read from a book of wonders. In ten to fifteen years we were to overtake the foremost capitalist countries, for otherwise our native land would be unable to offer effective resistance to the hostile countries that encircled it. The backward country that tsarism had left us as our heritage was to be converted into a mighty socialist power, on the basis of industrialization. And that meant primarily metal.

All this came back to my mind when the

Soviet steel engines of war clattered through the streets of jubilant Prague on V-G Day.

Merkulov, an officer standing at my side who had worked with me in the plant, said on that occasion:

"Here you have it, the handiwork of Stalin. What would we have come here with, and would we have gotten here at all, if he had not safeguarded Lenin's idea of industrialization from the attacks of the trotskyite and bukharinite riff-raff?"...

I shall not enumerate all that I have seen done at the plant. The rolling mill shop has been excellently mechanized. Temperature conditions in the open-hearth furnace shops have been automatically regulated during the last few years, and the factory's spectral laboratory is on a par with the best in the world. Five new departments have been added and in the old ones almost nothing is as it was before.

As early as 1948 the plant attained the planned 1950 level and surpassed by far the prewar output indices. In October 1949—less than four years—it fulfilled the entire five-year plan in volume of production.

Up to 1926, as was the case under Goujon, the plant manufactured only merchant steel, iron roofing, bolts and nails. Wire and band



Rolling department of the Serp i Molot steel mill

steel of every description, high-grade merchant steel and sheet metal, alloy steel and calibrated steel were imported. Even ordinary steel balls for mills, the simplest thing for a plant to produce, had to be bought abroad.

The former Goujon works became the pioneer producer of high-grade steel in our new country. In 1926 frog switches were cast from superior Hatfeld steel for the Moscow streetcar tracks. This was the first alloy steel of domestic production. But at the beginning of the Second World War the Serp i Molot

output was nine times that of the Goujon works, and quality and high-quality steels made up 99% of it.

In 1929-30 many engineers from our mill were sent abroad. Some of them had attended the Eighth Congress of the Komsomol where they heard Comrade Stalin say: "To be able to build you must have knowledge, and to acquire knowledge you must learn.... Learn from everybody, both from your enemies and your friends, particularly your enemies. Learn, clenching your teeth, not afraid that our enemies may laugh at us...."

A friend of mine, Vladimir Tunkov by name, who in wartime was an officer in the Engineer Corps and in peacetime works as a foundry engineer, told me about a conversation between two General Electric engineers, Americans, he had overheard by chance. On account of the crisis their plant worked only two days a week—orders were scarce. The assembly department, however, was kept busy by an order from the U.S.S.R. for a huge turbogenerator.

"Why do we make such machinery for them? The Russians will start making them themselves and then we're cooked, for they won't buy any more from us," said one of them.

"It'll take them fifty years to catch on. By that time, Jimmie, we'll be pushing up daisies; so why worry?" the other remarked reassuringly.

This dialogue took place just at the time when the reconstruction of our mill began. That year I entered a metallurgical institute on the recommendation of the Komsomol.

Bolsheviks must master technique, we were taught by Comrade Stalin. What we needed was not specialists "in general" but specialists in some particular branch of production, such as metal in the case of our plant.

It did not take fifty but only ten years for us to learn how to make all sorts of steel products. In 1936 quality steel completely disappeared from our list of imported items. Our mill alone manufactured upward of sixty brands of alloy steel. Its new makes included the finest wire filament of special alloys, ribbon steel as thin as cigarette paper, complex shapes of high-quality rolled and calibrated metal, sheets of high-speed and magnet steel, intricate profile alloy steel castings and extra-durable aviation cable. More than five hundred domestic mills receive S i M brand steel, and it is also an item of export.

Take, for instance, stainless steel. It was our mill that in 1932 produced the first stain-

less sheets ever rolled in the U.S.S.R. The output steadily increased but always trailed behind demand. The Mayakovsky Square subway station in Moscow is faced with SiM stainless steel; and so were the main sculptures in the Soviet pavilions at the Paris and New York world fairs. Chkalov and Gromov flew over the pole in an airplane made of SiM steel. Steel melter Kirill Chirkov, the factory poet, wrote with legitimate pride:

*Our metal has been ev'rywhere,
New York and Paris, at their fair;
Even the North Pole saw our brand—
The famous steel from Soviet Land.*

In learning to manufacture new products we did not simply copy foreign models but used our own creative talent.

A host of engineers from diverse plants pilgrimed to our laboratory and declared:

"Hitherto we got the metal we needed from abroad. But we have been advised that beginning this year all metal imports are off."

Our young engineers returned from America with little to the good. The foreign concerns they had dealt with evinced no great desire to disclose their "business secrets." We practically had to start from scratch. After much strenuous work the production of high-