

**PROTOKOLLE**  
**VEB Uhrenwerk Ruhla**  
**Ruhla, Thueringen, DDR**  
**August 31, 1990**

Discussion with Personnel director and head of Aus- und Weiterbildung. Tour of Watch assembly

interview and protokolle by Gary Herrigel, Department of Political Science, University of Chicago.

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I went to a watch/clock factory in Thuringen, the VEB Uhrenwerke Ruhla (UWR). The firm employs approximately 7,700 people, nearly a third of whom are counted as management (verwaltung). This is the largest concern within the Leitbereich Zeitmessgeraete, which itself is part of the Kombinate for Microelectronics. Other firms within the LZB are VEB Uhrenwerke Glashuette (2,400 workers); VEB Uhrenwerk Weimar (2000 workers); VEB Plastikverarbeitung Eisenach (280 employed); VEB Elektronische Bauelemente Ruhla (340 employed); and VEB Plast- und Metallverarbeitung Berlin (280 employed).

The UWR produces wristwatches (standard watches, quartz watches and electronic watches), pocket watches, stop watches, alarm clocks, chess timers, special machinery for areas of microelectronics production, rationalization materials and Schaltkreise.

Watch making in Ruhla goes way back. The original firm that got turned into the watch kombinate was established over 125 years ago. Before this year, the company was one of the most successful in the DDR. They exported over 60% of sales, mostly in the form of chincy watches to West German department store chains (eg.: Quelle).

UWR is extremely proud of the fact that it has the worlds only fully automated line for the assembly of the basic gear work of mechanical wrist watches. They invented it in 1974 and it has not been changed, at all, ever since. The line is composed of pneumatic switches and handling devices, many of which are magnetized. The system basically uses magnetism and gravity in an extremely ingenious way to ensure that the casings for the watches and the tiny gears that are to be placed on them fall, without human intervention, exactly into the right place. The line is totally rigid, and can accommodate no variety or change in product. They invented the machine in the early seventies because they began to experience competitive pressure from lower wage producers and were not able to shift production off shore, as was possible in the capitalist countries.

Despite this automated line, there is still a lot of hand assembly. Over half of the employees are skilled woman watchmakers. They do a normal apprenticeship and are certified skilled watchmakers by the time they begin working. These women sit all day at their own stations in large, clean, rooms and build watches out of incredibly tiny little parts. They work with small magnetized tweezers and screwdrivers. They magnetize their tools themselves because it makes it

easier to handle the tiny parts that go into the watches. Some workstations are also outfitted with mechanical handling equipment and automatic oiling devices that the woman operate and which are designed to complement her particular set of operations.

Each woman performs a specific set of operations on a given type of watch. When she has completed her operations, the watch is then passed down to the next station, where another woman performs a further set of assembly operations. Usually the woman receive a magazine full of watches that they slowly empty ; they fill another magazine with the watches they have worked on. When this magazine is filled they pass it on to the next station. The woman we observed generally had a puffer of three magazines. The woman are able to work on an infinite variety of watches, but always the work is performed on large standardized series of particular watch types. The expected daily output is set at 380 watches.

Three further interesting aspects of the work that these woman workers do, or, actually about the woman themselves. One is that the woman do not like to change workstations. They prefer to do the same set of operations day in and day out rather than change. Staying on the same station makes it easier to make the daily quota. Secondly, all of the woman had small round mirrors positioned slightly to the side of their immediate work area right next to the finished magazines. When asked what the mirrors were for, we were told that the woman liked to look at themselves while they worked. One woman became embarrassed when she heard us talking about the mirror and quickly tucked the mirror away underneath her workstation. Technically, such mirrors can be used to make small pieces appear larger and hence facilitate manipulation. But it was clear that the fact that the women could peer into the mirrors as they worked and observe their own images was in fact a very significant feature of the mirrors. The monotony of the work could be broken by their own reflections.

Finally, until a few years ago alot of this work was also distributed to homeworkers throughout the valley -- the traditional putting out system didn't get eliminated, it got nationalized by the socialists.

There was no boundary between the UWR and the town Ruhla in which it was located. The firm collected all of the garbage in the town, operated a half dozen bars, a large centralized grocery store, provided day care, had a staff of optometrists, as well as a central medical and dental clinic (this explains the high percentage of the workforce in management. They only have two categories: production worker and management.)

The company began to have problems a couple of years ago when their buyers in the west began asking for greater variety and more rapid product changes. They just couldn't do it. They needed new machines and any investment that they made, despite the fact that they earned alot of foreign exchange, had to be cleared through the ministry of microelectronics in Berlin. When everything ran smoothly, this usually took about two years. They tried to compensate by rationalizing the production process -- they got rid of the home workers (brought them inside and rationalized the flow of the lines -- e.g., they invented the mechanical handling and oiling devices at the women's workstations.) This helped improve their cost structure, but it didn't solve the variety problem. In the good old days they produced one line of watch for about fifteen years,

now they had to produce a couple of different kinds in two or three years. Plus the western buyers were asking for shorter contracts.

Pretty familiar story. Problem is, to restructure in a competitive way, as we've been seeing, you basically have to break up the whole political structure in the country. At the moment things look pretty grim for the company. Their exports to west Germany have stayed strong, even improved, but their domestic market has fallen away (yes, they think that the improvement in the West comes from East Germans going over and buying their chincy watches in West German department stores). But now with a hard currency, they don't think that they will do so well getting contracts for next year. Most of the workforce was put on short time work on September first (for most this meant that they got paid, but there was no work).

The company sold their division that manufactures special machines for the microelectronics industry to the West German machine tool producer MAHO. They were negotiating with Mannesmann Kienzle and Junghans about selling, licensing, entering into a joint venture or otherwise finding capital for the still saleable parts of their product palette in clocks and watches. They planned to transfer responsibility for garbage collection and day care to the town -- which, of course, has no money to be able to actually carry these services.

There was also a program to reduce the level of vertical integration in the company which offered to help employees establish their own independent production companies. UWR would supply the machinery and the initial business. The person I talked to was disappointed that so few people had shown an interest in this idea. He claimed that the entrepreneurial spirit was not very well developed in the area. I suggested to him that it seemed possible to understand the attitude of the workers as quite rational: why wouldn't they want to avoid entering into a relationship with their old employer in which all of the risk and none of the control over production lay in their hands?

Finally, Neckarmann offered to pay two thousand people more than twice their current normal wages to get on a bus, travel three hours to Frankfurt, work a ten hour shift in the company's warehouse, and then get in a bus and travel three hours back -- worktime was between 1 and 11pm. So far there were not very many takers. Most people preferred to wait out the short time work at home to see what would happen. The recent collective bargaining agreement in the industry guarantees East German workers one year of work before they can be, actually, laid off. So even though they weren't really working, they could receive their regular wages. I read recently that if you count short time workers as unemployed (which they basically are) the rate of unemployment in East Germany at the beginning of September was at 15% -- and this from zero on July 2.