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1. The Steaua Rosie metallurgical works in Bucharest following their nationalization come under the control of the Ministry of Metallurgy and Chemical Industry. Previously they were the property of a Swiss, E. Wolff. The works are located in Strada Dr. Istrati 1, and employ 19 engineers, 28 foremen, 2,200 technical and 140 clerical workers. During the last war the works produced steel shells and there are indications that production of this type is about to be resumed.
2. The works are guarded by fourteen men of the Securitate.
3. Production is carried on in three separate departments, known as Technical Sections I, II and III, working respectively on turning, foundry and forging work.
4. Technical Section I has three principal workshops. Turning Shop No. 1 is housed in a hall 75 meters long and 12 meters wide, built of reinforced concrete, with a ridged metal roof. A second similar building, 15 meters by 10 meters, is connected with the first and is known as the Assembly Shed. The main building is used for the manufacture of large parts for the finished products made by the whole works, while Turning Shop No. 2 makes the smaller pieces. The Assembly Shed is used for putting together the sections made in the main hall including, for instance, gear boxes.
5. The equipment of Turning Shop No. 1 consists of:
 - (a) Thirty-two turning and milling machines which have been there since 1942. Most of these are of German origin, manufactured by Magdeburg, Schut & Suchard and Loewe, and only a few are of either French or Italian make; their span varies between 1.2 and 2.5 m. and each has its own electric motor of 4 to 7½ h.p.
 - (b) Six old German lathes with a span of 5 m. They are all operated by a single 20 h.p. three-phase 500 volt motor.

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- (c) Seven old German and French milling machines, each with its own 4 or 5 h.p. motor.
 - (d) A new Buzzi (Italian) automatic milling machine used for making cogwheels, with a device to move the disc being cut in such a way that the incisions are made the desired distance apart. This machine is constructed on a different principle than the corresponding American model but produces work of a similar quality though production is slower. It is used to make the most important cogwheels needed for the concrete mixers made by Steaua Rosie, namely the wheel which engages all the others. The steel used for this purpose still comes from a stock of 350 tons of "armament steel" which was on the premises when the works were nationalized in 1948. This steel had been used for the production of shells during the war and represents what was left over at the time of the armistice.
 - (e) Three old German Jack planes, each with a 3 to 5 h.p. motor.
 - (f) A new Polish-made Jack plane, modeled on the well-known Loewe planing machine, with two knives and 5 h.p. motor.
 - (g) Two old horizontal Jack planing machines of German origin, each with a 4 h.p. motor.
 - (h) A Rabona radial drilling machine, made in Hungary by Scepel in 1948. The four phases of its operation, (the raising of the machine, the lateral motion of the machine itself, the fixing of the piece of steel being worked, and the making of the hole), are carried out with the help of four separate electric motors, of 2½, 1, 4 and ½ h.p. respectively.
 - (i) Eight vertical drilling machines, all old and of German make. Each is operated by a motor of 1 to 2½ h.p.
 - (j) An old German lathe with a span of 4 m. connected to two chuck lathes for the stripping of crankshafts. The whole installation is operated by a single 15 h.p. motor with a transmission system.
 - (k) As auxiliary equipment there are also two cranes, each with a 5 h.p. motor and a capacity of 3 and 5 tons respectively. They are operated from two gantry bridges, one on the right and one on the left.
6. Turning Shop No. 2 forms a unit with the Heat Treatment Section and a large 240 h.p. forging press that develops up to 200 atmospheres of pressure. This is the press that was used for the manufacture of shells. It was out of use from 1944 to February 1951 when it was made ready for use again though it was not in operation by July 1951. The Turning Section itself makes small and accurate pieces, including screws, screw spindles, small cogwheels and pieces used for certain apparatus especially ordered by the USSR. The Heat Treatment section consists of two electric furnaces, a methane gas furnace and two ventilators and is used for the processing of the metals used by turning workshop.
7. The equipment in Turning Shop No. 2 consists of:
- (a) Sixteen old Magdeburg and Hille lathes, fourteen of them with a span of 1.5 m. and the remaining two with a span of 2 m. and each operated by a separate 5 h.p., 500 volt, three-phase motor.
 - (b) Two old German milling machines, each with a 4 h.p. motor.
 - (c) An old German grinding machine (without a magnetic plate), with a 6 h.p. motor giving 9,000 revolutions per minute.
 - (d) A small polishing machine with 1 h.p. motor.

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- (e) Three 1943 Oerlikon (Swiss) machines for testing the resistance of the materials used, each with a 3 h.p. motor.
- (f) Two 1944 Hauser (German) microscopes for metallography..
- (g) It has the same auxiliary equipment as Turning Workshop No. 1. (See paragraph 5k.)
8. The maintenance Workshop has sections for turning, electric work and the winding of electric coils, tools and a special shed for compressors. It is responsible for the needs of the works themselves and supplies tools and spare parts and repairs machinery.
9. The equipment in the Maintenance Workshop includes:
- (a) A 1943 Hille lathe and milling machine with a span of 1.5 m. and a 7½ h.p. motor.
- (b) Four old Hille lathes, with a span of 1.5 m. and a 5 h.p. motor each.
- (c) An old Magdeburg lathe with a span of 1.5 m. and a 5 h.p. motor.
- (d) A cugir (Rumanian) polishing machine with a magnetic plate, which is a copy of a British Ruston machine. It was installed in October 1950 and has a 3 h.p. motor.
- (e) A new Leningrad (Soviet) grinding machine, without a magnetic plate, and two motors, one of 4 h.p. and one of 2 h.p. The machine itself bore the date 1950 but close inspection showed that the "50" had been superimposed on a "49". The machine is inaccurate and badly balanced. When set at 1 mm. it produces 4 mm. work.
- (f) Two old German machines for cutting circular saws, each with a 3 h.p. motor.
- (g) Two old German machines for grinding the cutting edges of machinery, each with a 2 h.p. motor.
- (h) Five bench vices.
10. The electrical equipment and problems of the Maintenance Workshop are described as follows:
- (a) Steaua Rosie had originally its own 350 h.p. generator, but this was dismantled by the Soviets in 1948 and transferred to Kharkov. After this, the works had to obtain current from the town to transform it according to requirements. Most of its machinery works with a.c. motors of 5,000/550 volts, while some use 550/380 volts; the cranes use d.c. at 110 volts. The electric section therefore has transformers of the following types: 5,000/550 volts, two of 5,000/380 volts, and two Siemens transformers which transform a.c. of 380 volts, into d.c. of 110. The total power capacity of the works is 3,350 kw which is used to operate 475 motors. Monthly consumption of electric power is 1,450,000 kw. This is only 60% of the total required.
- (b) The Grozavesti Bucharest electric works, which burn coal and methane gas, were short of fuel and unable to supply the full industrial needs of the

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city. As a result, restrictions on the use of electricity were introduced in the whole of Rumania in 1950 according to which factories are permitted to use only 20% of the requirements from 6 to 8:30 a.m. and from 4:30 to 9 p.m. These restrictions also apply to plants making their own current and using either oil or methane gas as fuel, while plants with generators burning coal are exempt.

- (c) No copper wire can be used except for exterior installations. All underground wiring has to be of the iron-aluminum type produced by Industria Sarmei at Tirda and by the Resita Works.
 - (d) All Rumanian factories producing electric motors have adjusted their production to the European standard types of either 380 or 220 volts a.c.
11. The Tools Section of the Maintenance Workshop is located on the first floor above the Turning Workshop No. 2 and the Compressor Shed. It has the following equipment which is operated by motors totaling 8 h.p.:
 - (a) Two old Siemens grinding machines.
 - (b) A number of small electric grinding machines.
 12. The Compressor Shed supplies compressed air to all sections of the Steaua Rosie works. Their equipment consists of the following:
 - (a) One 110 h.p. Deutzlocomotiven diesel compressor.
 - (b) Three electric compressors, one Zwickkauer (German), one Ingersol (American) and one British (make unknown). Each has a 50 kw engine, two of them being Siemens and one an AEG. The three motors, linked in series with three containers, produce a total pressure of 6 atmospheres.
 13. Technical Section II also has three principal workshops, viz. an iron and a bronze foundry and a forging press.
 14. The iron foundry is housed in a building 70 m. long by 18 m. wide. A mixture of steel billets and scrap is used as raw material. Such pieces as large wheels are cast in sand moulds and small wheels in matrices.
 15. Equipment in the Iron Foundry consists of:
 - (a) Two 5-ton furnaces, each of which produces two batches per day.
 - (b) Auxiliary equipment as follows: An electric crane which was built on the spot before the plant was nationalized, with a 6 h.p. motor and lifting capacity of 5 tons; two hand-operated cranes, each of which has a lifting capacity of 3 tons.
 16. The Bronze Foundry casts only aluminum and bronze in prepared matrices. Its equipment consists of:
 - (a) Two methane gas furnaces, each with a capacity of two tons of metal.
 - (b) An electric calender roller for the cleaning of cast metal, with a 4 h.p. motor.
 - (c) Two hand polishing machines.
 - (d) A pneumatic hammer.

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- (e) A mechanical sieve for the sand used in the foundry moulds.
- (f) As auxiliary equipment it has an electric furnace that can be heated to 700°C for keeping matrices hot in which metal has been cast.
17. The Forging Presses are housed in a large and wide building that is 12 m. high. It is built of concrete with a ridged metal roof. Its equipment consists of:
- (a) Three furnaces which are heated with gas oil, each having a capacity of one ton of metal a day.
- (b) Three electric pneumatic hammers, each with a 40 h.p. motor and a striking power of 75 tons.
- (c) A new Soviet electric pneumatic hammer with a 90 h.p. motor and a striking power of 100 tons. This is a copy of the model produced by the Maschinenfabrik-Essen, but it is not successful as its consumption of electric power is twice as great as that of the German machine and its striking power relatively lower. According to the number plate it was made at Odessa in 1950 but close inspection shows the figure "42" under the "50". The hammer was obtained in November 1950 at a cost of 2,800,000 lei, or two and a half times the cost of a Swiss hammer of the same or higher power.
- (d) A compressor for the furnaces, made by the works while they were still owned by Wolff, with a 40 h.p. motor and developing six atmospheres of pressure. The compressor has a spare container.
- (e) Auxiliary equipment consists of two cranes mounted on gantry bridges, which were made in the works themselves. Each has a capacity of 15 tons.
18. Technical Section III has two principal workshops, one of which makes boilers while the second is a Locksmith's Shop. Mixing drums for concrete mixers and steam boilers were made by Steaua Rosie until roughly the beginning of July 1951. Then the production of boilers was transferred to the Vulcan works and only drums are now made at Steaua Rosie. The boilermaking shop has a special shed for assembly work. The equipment of the boilermaking shop consists of:
- (a) Four oil Wagner rollers, three for working hot metal and one for cold. These use heated billets to produce steel plates of 7, 10 and 12 mm.
- (b) Three furnaces burning gas oil in which the billets are heated.
- (c) Five Raboma lathes of which two are old and of German manufacture. One was made in Poland and one by Csepel, Hungary. (The latter is of the same type as the lathe employed in Turning Section No. 1).
- (d) Two Hydraulic presses which develop 300 atmospheres.
- (e) Eight old grinding machines which are connected by transmission belts to two 12 h.p. motors.
- (f) Twelve small pneumatic hammers which are worked from the compressors for the riveting of boilers and concrete machine drums.
- (g) Four cutting machines which are capable of cutting plates up to 15 mm. thick.

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- (h) Five cranes which were constructed in the works themselves, two of 10 tons, two of 15 tons and one of 25 tons capacity.
19. The equipment of the Assembly Shed of the Boilermaking Shop consists of:
- (a) Two old cold rollers.
 - (b) One cutting machine to cut and trim steel plates.
 - (c) Thirty-four electric arc welding installations of 300 amperes which were made by Braun-Bovery and Elin.
 - (d) A crane of 15 tons capacity.
20. The Locksmith's Shop has the following equipment:
- (a) Five Wagner centrifugal electric presses for the manufacture of matrices, three with 12 h.p. motors and two with 8 h.p. motors.
 - (b) Four Schute-Suchard electric cutting machines to cut steel plates, each with a 5 h.p. motor.
 - (c) Twelve 1949 drilling machines, ten of them German and two Swedish.
 - (d) Seven grinding machines, all operated by one 7 h.p. motor.
 - (e) Two machines for cutting steel plates.
 - (f) Auxiliary equipment consists of 25 bench vices.
21. Other installations in the works consist of:
- (a) A 15 h.p. crane mounted on rails which runs the full length of the works in the direction of Strada Istrati.
 - (b) Two gasoline traction engines which run between the works and the Filaret station. With the works they travel on the rails of the 15 h.p. crane.
 - (c) Depots for materials, reserve machinery and spare parts.
22. In July 1951, large quantities of spare parts for machines and 180 new electric motors were stored in the Steaua Rosie depots. These were stocks bought by the works previous to the nationalization. These together with the 350 tons of armament steel were evaluated at 55 million lei in December 1950.
23. The types and origins of raw materials are as follows:
- (a) Steel billets which are 2 m. long and either 8 or 10 cm. square. They come from Resita, Hunedoara and Ferdinand.
 - (b) Cast iron, from Hunedoara.
 - (c) Scrap, origin unknown.
 - (d) Aluminum from a depot somewhere near Ploesti, probably Soviet-owned. This depot supplies wrecked aircraft that are melted down in the Steaua Rosie foundry. The depot at Ploesti is mainly supplied by aircraft parts from Eastern Germany. This aluminum scrap is sent

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to Steaua Rosie by the Soviets for the production of specially ordered items. Aluminum is also supplied by the Vasile Roaita factory at Ploesti (this is presumably an error for Brasov), which occasionally sends a consignment made up of 8 kgm. aluminum bars.

- (e) Bronze, origin unknown.
24. Steaua Rosie receives about 110 tons of raw materials each week. Of this, about 10 tons are made up of aluminum and some bronze, 70 tons of steel billets and cast iron, and the remainder scrap iron.
25. Products which are manufactured by Steaua Rosie consist of:
- (a) Boilers: Originally Steaua Rosie made boilers for mobile and stationary steam engines. Complete boilers were only made from 1950 onwards, these having previously been produced without such fittings as valves, etc. In July 1951, production of boilers was stopped again.
 - (b) Concrete mixers: These are of two sorts:
 - (i) Mixers with diesel engines supplied by the Independenta factory at Sibiu, which also manufactures gasoline engines. Both engines have two cylinders and are modeled after the Hanomag engines. These mixers are for export to the USSR and for internal Rumanian consumption.
 - (ii) Mixers for local use only which are fitted with electric motors supplied by the Dinamo factory in Bucharest. The Steaua mixing machine is a copy of one made by a factory at Dortmund.
 - (c) Hand-operated elevators, 15-ton and 20-ton.
 - (d) Ship's winches are made without motors. The Soviets who buy these have them fitted with diesel engines from the Independenta factory before shipping them to the USSR.
 - (e) Gear boxes which are good copies of a British type gear box and can be used for gantry bridges, pumps and any other installations requiring a multiple transmission system.
 - (f) Electric gantry bridges are made with a lifting capacity of 10, 15 and 25 tons. The 10 and 15 ton bridges have 15 h.p. motors and the 25 ton models have a 25 h.p. motor. The motors are all supplied by the Dinamo factory in Bucharest.
 - (g) Special pumps for mines, having a capacity of not less than 65 cu. m. per hour.
 - (h) Centrifugal pumps with small capacities for use in chemical factories.
 - (i) Taps and valves made in diameters of $1\frac{1}{2}$, 2, $2\frac{1}{2}$ and 3 inches; those of $1\frac{1}{2}$ inches are made of copper and the larger ones of cast iron.
 - (j) Small boilers (up to 15 atmospheres) are made in accordance with special Soviet specifications, probably for their chemical industries.
 - (k) The calenders which are manufactured are special rolling machines for use in mills of various types. They have a capacity of $3\frac{1}{2}$ tons and are made to Soviet specifications, probably for their chemical industries.
 - (l) Pumps are made to Soviet specifications for their chemical industries but have not been accepted by the Soviets.

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- (m) Stone crushers.
 - (n) In April 1951, production was begun on drilling rods with taps, fish-tail borers, and 12 kgm. metal balls. Their end use is unknown.
 - (o) Chains are made to order for Sovromtractor in Stalin (Brasov). Each link weighs 800 grms. Production began in February or March 1951.
 - (p) Hooks for 3 and 5-ton cranes.
 - (q) Electric injector nozzles, which are used for various types of steam engines. The model manufactured is a good copy of the Standard injector and is supplied with a one h.p. motor made by Dinamo.
26. The Soviets are constantly pressing for greater production and object to all delays, even those which are caused by shortages or raw materials or mechanical breakdowns. Production is supervised by representatives of a Soviet organization known as SKK (Armistice Control Commission - Szojuzne Kontrol Komisija). It may be assumed that the actual production is also the maximum production capacity of the works. The main obstacles to be overcome are the shortage of raw materials, the deterioration of the machinery, and sabotage. (Sabotage frequently consists of sand being thrown into the machinery and short circuits. There were fourteen examples of this in 1950 and twenty cases up to July 1951.) According to officials figures, the production plan for the first six months of 1951 has been exceeded by 6 percent for some items and by 18 percent for others.
27. The Production Plan for 1951 was as follows:
- (a) Six steam boilers per month (figure is certain).
 - (b) One hundred fifty concrete mixers per month (figure is certain).
 - (c) One hundred twenty hand elevators (approximate figure).
 - (d) Thirty-five gear boxes per month (figure is certain).
 - (e) Four gantry bridges per month (figure is certain).
 - (f) Sixty centrifugal pumps per month (figure not certain).
 - (g) Fifteen thousand taps per month (figure not certain).
 - (h) Thirty-five stone crushers per month (figure is certain).
 - (i) Two hundred hooks for cranes (figure not certain).
 - (j) Two hundred forty electric injector nozzles (approximate figure).
28. Other production and special orders for 1951 are:
- (a) Fifteen anchor winches in 1950 and the first half of 1951 (figure is certain).
 - (b) One mine pump per month (figure is certain).
 - (c) A batch of 40 and a batch of 12 small steam boilers especially ordered by the Soviets (approximate figure).

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- (d) Two calenders per month, as ordered by the Soviets (figure is certain).
 - (e) Special water pumps. These are built to Soviet specification but the order will not be taken up by the Soviets.
 - (f) From April 1951, sixty oil drilling rods per month (figure not certain).
 - (g) Sixty fishtail borers per month from April 1951 (figure not certain).
 - (h) Metal balls (no details).
 - (i) Chains (no details).
29. The following change in the Plan was made for the third quarter of 1951: After the production of steam boilers was transferred to the Vulcan works, Steaua Rosie was instructed to produce an extra 150 concrete mixers per month, making a total of 300. It is not believed that this is possible.
30. No production details are available on the Five Year Plan.
31. The only country to which Steaua Rosie products are exported is the USSR. Up to July 1951, these exports were all credited to the Armistice Agreement. This fact is generally known; nevertheless, four workers disappeared because they were overheard discussing it. Technical data on the machinery is inscribed in Russian and either Leningrad, Kharkov or Odessa is given as the place of origin. In the factory these inscriptions are covered up with a removable metal plate so that the inscription cannot be seen by the Rumanian workers. The machinery is exported via Constanta after being checked on the premises by representatives of the SKK.
32. The following sales are made in Rumania:
- (a) The gantry bridges go to Resita, Ferdinand and Cic (sic) (which is in charge of the Bicaz electrification project).
 - (b) The Concordia Factory at Ploesti receives all the drilling equipment.
 - (c) Sovromtractor receives the entire production of chains.
 - (d) Other local purchasers receive 40 percent of the hand elevators; 50 percent of the concrete mixers, of which 85 percent have electric motors and the remainder are oil driven; all the taps; all the hooks for cranes; 50 percent of the electric injector nozzles.
33. Exports to the USSR for 1951 comprised the following:
- (a) All the production of large steam boilers.
 - (b) All the anchor winches.
 - (c) Fifty percent of the concrete mixers.
 - (d) Sixty percent of the hand elevators.
 - (e) All the gear boxes.
 - (f) All the mine pumps.
 - (g) All the centrifugal pumps.

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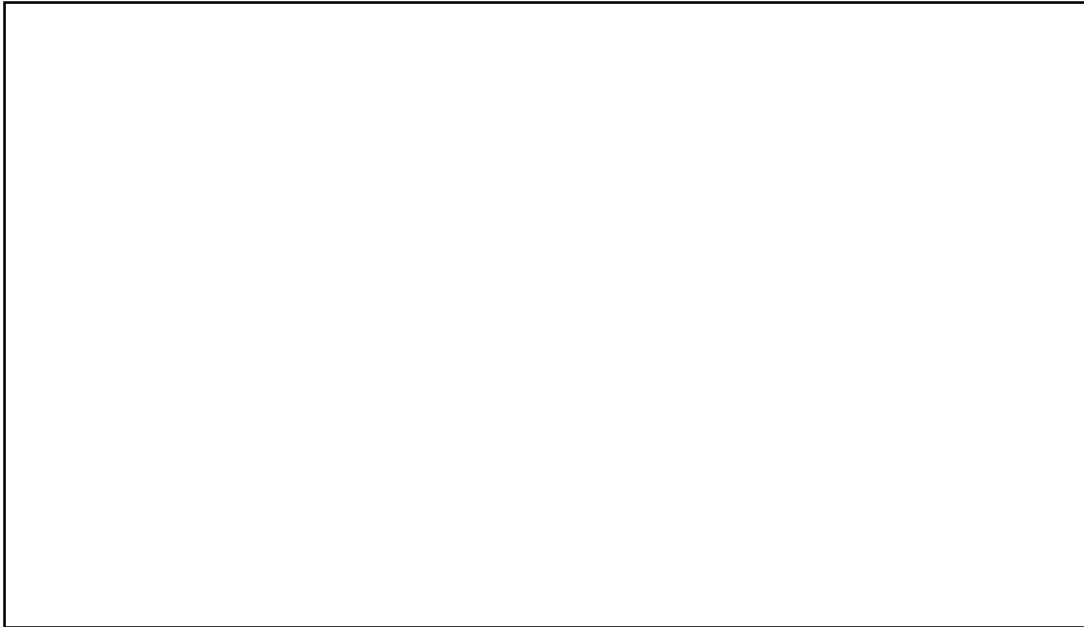
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- (h) All the small steam boilers for special purposes.
 - (i) All the calenders.
 - (j) All the special water pumps.
 - (k) Fifty percent of the electric injector nozzles.
34. Although 30 percent of the production machinery at Steaua Rosie is already 70 percent worn, no provision has been made in the Five Year Plan for replacements.
35. In May 1951, a number of new Czech and Polish machines, including a Raboma lathe, two planing machines and a lathe with a span of 5 m. between its center points (valued at 11 million lei), were delivered at Steaua Rosie. Everybody thought that this was new equipment for the works, but when the machines were about to be installed, orders arrived that they were to be repacked and shipped to the USSR.
36. The following miscellaneous information has been reported:
- (a) Tens of thousands of shells are still stored at Steaua Rosie.
 - (b) Twelve turret lathes which had been used for the manufacture of shells were still standing in the yard. They are not being employed for peacetime production. [Date of information: July 1951]
 - (c) In March 1951, the Cugir works received an arms contract worth 14,000 million lei. (The original order for this is in the files of the Manager of Cugir at the Ministry of Metallurgy and Chemical Industry.)
37. An improvement on the ordinary type of lathe has been invented at Steaua Rosie by which the cutting edge can be fixed without moving on ball bearings, which are not available in Rumania. A total of 290 such lathes were produced by the 25X1 works and have been sent to factories all over the country.

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