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The chemical factory at Novaky near Prievidza (Q49/T97) produces basic chemicals and gases, and has a large research department which works under the direction of the Military Technical Institute (VTU).

1. Production departments are designated by code symbols. Departments E-16 and E-21 are under special control of the Ministry of National Defense.

2. Department E-2 electrolyzes salt solution. Since this operation produces the basic products chlorine and sodium hydroxide, it is considered by plant officials to be the most important production operation in the factory. Because this process must be uninterrupted, three eight-hour shifts of 30 men each work on it.

   a. The main raw material used in this operation, sodium chloride, is obtained from the USSR, and a stock pile of 300 to 450 tons, 96-98 percent pure, enough for 15 to 20 days, is kept on hand. The daily capacity of sodium hydroxide production is 3,500 to 4,000 kgs.

   b. In a separate building of the E-2 complex (see Attachment B, #20) chlorine is liquefied under pressure of from 8-10 atmospheres (Czech measurement) in compressors specially sealed with sulphuric acid. In the production of hydrochloric acid, three ovens are employed to fuse hydrogen and chlorine according to the formula: $H_2 + Cl_2 = 2\ HCl$. About two-thirds of the entire chlorine production is liquefied. Removal of the compressors would cripple the entire process.

   c. There is a shortage of the type of graphite used in electrodes in the electrolysis operation. [redacted] As a result, the research institute is experimenting with a substitute called magnetite.

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3. Department E-16 produces concentrated sodium hydroxide and hypochloride. Sodium hydroxide, produced by electrolysis, is evaporated in iron ladles which are placed in furnaces with movable grates.

4. Department E-20 produces acetylene and trichlorethylene. Because acetylene is a gas which, when mixed with air, forms an explosive, it is produced only in the exact quantities needed for the production of trichlorethylene. The acetylene is purified by the use of a chemical called "Katalysol", the formula

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of which is not reported. Two tower distilleries are used for the distillation of raw trichlorethylene, which is stabilized by adding small quantities (about 0.05 percent) of mentholated spirits. Daily production averages 800 to 1,000 kgs of trichlorethylene. Because of its highly inflammable nature, rigid fire precautions are enforced.

5. Department E-21 makes ethylene, glycol, and dichlorethane. These compounds are produced under the supervision of the Ministry of Defense. Military guards are stationed at all the entrances and allow only the employees of that building to enter.

a. Ethylene is produced in two furnaces each heated by 24 special electric coils. The furnaces are filled with a dehydrating catalyst, active aluminum trioxide. This catalyst lasts for about 3½ months at working temperature of 250 to 300 degrees centigrade. Daily production of ethylene is 150 cubic meters.

b. Glycol is produced by the use of chlorhydrin and ethyleneoxide. The code markings are:

D_1 - Monoglycol
D_2 - Diglycol
D_3 - Triglycol
D_n - Polyglycols

c. Diglycol is the main product and the daily productive capacity is 80 to 100 kgs, but because this quantity is considered insufficient by plant technicians, a new refraction furnace with a daily capacity of 800 to 1000 kgs is under construction. The MNO keeps strict control over this product. Col. Ing. Kohlik of VTU, and several high-ranking officers make a monthly inspection.

d. Experiments on glycol-nitrifying are being carried out at "Synthesia" in Semtin (050/L94) in a plant built with German reparations material. There are also facilities for the daily production of 30 kgs of ethyleneoxide, and undisclosed amounts of concentrated chlorhydrin for experimental purposes.

e. In 1948 the equipment for the production of dichlorethane was delivered from France, but production has not yet begun. Numerous orders for dichlorethane have been placed by the USSR.

6. Manufacture of synthetic materials of the polyvinylchloride group was to have begun in 1949, but because the special enameled autoclaves were not delivered from France it has been delayed.

7. Products made at this factory are sold to the following customers:

a. Sodium hydroxide

(1) Vistra factory for synthetic fiber in Bratislava (P49/X99).

(2) Dynamit-Nobel auxiliary factory for synthetic fiber in Senice.

(3) Bata-Svit at Gottwaldov (Zlin - P50/021), and the Batizovce (Q50/D58) factory for synthetic fibers.

(4) Tri-Lipy factory for toilet articles in Pezinok (P49/T00).

(5) Association for Chemical Products, a national enterprise in Levice (Q49/U01). The factory produces soap and laundering agents.

(6) Refinery for mineral oil at Dubova.

(7) Poland and Hungary are the only foreign customers for sodium hydroxide.

A great quantity of liquefied chlorine is used domestically and some is exported to France, Poland, and Hungary.

b. Trichlorethylene

Most of this material goes to the USSR, although Poland, Hungary and Rumania are also customers.

c. Dichlorethane

Production has not been started, but the USSR has placed orders.

8. The Research Department comes under the plant management and has no direct connection with the Production Department. It has worked on the following problems:

a. The manufacture of thiodiglycol, which is easily converted into yperite:

(1) The chemical formula for the production of thiodiglycol is:

CH_2 - OH	CH_2 - OH
CH_2 - OH	CH_2 S
CH_2 OH - Na_2S	CH_2
CH_2 - OH	CH_2 - OH
Monoglycol	Thiodiglycol

(2) This process has proved practical, but there has been some difficulty with purification by distillation. The problem was solved, however, by the use of vacuum and heating in a water bath. Production of thiodiglycol is to begin in 1951 as soon as daily production of glycol is increased to 80-100 kgs.

b. Research on the manufacture of chloracetophenon has been transferred to the VTU laboratories at Zemianske Kostolany (Q49/T96) with Capt Tatarka in charge. This product will be used as tear gas for training purposes. Chloracetophenon is being produced at a rate of 120 kg. per day.

c. The manufacture of cyanhydrin:

CH_2 - CH_2 - OH
CN

d. The manufacture of concentrated chlorhydrin:

(1) CH_2 - CH_2 - OH
CL

(2) Work on cyanhydrin and chlorhydrin was started on orders from VTU.

e. The manufacture of dioxane, used as a solvent for synthetic materials. The method used here closely resembles that used by the Germans.

f. The manufacture of a suitable catalyzer for spirit decomposition to produce ethylene:

(1) CH_3 - CH_2 - OH $\rightarrow$ $CH_2 = CH_2 + H_2$

(2) Aluminum trioxide is at present being used as the catalyst, but because of its high cost experiments are being made with a less expensive material.

g. Experiments on the manufacture of synthetic acetone from acetylene have proved successful, but production of synthetic acetone has not been included

in the Five Year Plan, because the USSR has promised to deliver it for less than it would cost to produce in Czechoslovakia.

h. Experiments on the polymerization of vinylchloride has proved successful. Production was scheduled for 1949, but it is uncertain when the special enameled autoclaves needed for production will be delivered from France.

i. Chlorination of naphthalene-chlornaphthalene. Chlornaphthalene is to be used as a solvent for synthetic materials at Novaky. Manufacture of this product has been included in the Five Year Plan.

j. Experiments on dolomite have proved unsuccessful. MgO and $MgCl_2$ will be produced in place of dolomite.

9. General management of the Novaky chemical factory: 25X1

a. Managing Director: Ing. Dusan Kosovlyanov, a Serb [redacted]

b. First Deputy Managing Director and Chief of the Planning and Construction Dept. Ing. Frantisek Jinda, a Czech [redacted] 25X1

c. Second Deputy Managing Director and Chief of the Research Institute: Ing. Mikulas Hrusovsky, a Slovak [redacted] 25X1

d. Chief of the Electrical Department and Deputy of the Research Institute: Dr. Ing. Miroslav Salamon, a Czech [redacted] 25X1

e. Control Chief of E-20 Production: Ing. Eugen Bransky, a Slovak [redacted] 25X1

10. Personnel in the Research Institute:

a. Chief of Analytical Department: Dr. Ing. Juraj Jelinek, a Czech [redacted] 25X1

b. Chief of the Synthetic Materials, vinylchloride group, Section: Ing. Josef Kucera, a Czech [redacted] 25X1

c. Chief of the Synthetic Acetone Section: Ing. Jan Skolka, a Slovak [redacted] 25X1

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d. Chief of the Chlor-naphthalene and Chlor-parafine Section: Ing. Severin Sulan, a Slovak [redacted] 25X1

e. Referent of Research on Novaky Coal Production: Ing. Juraj Porubsky, a Slovak [redacted] 25X1

f. Referent of Research on Dolomite: Ing. Frantisek Gregor, a Slovak [redacted] 25X1

g. Referent of Research on Inorganic Materials: Ladislav Mattay, a Slovak [redacted] 25X1

11. Chemical Technical School graduates include:

a. Inocent Privitzer, a Slovak [redacted] 25X1

b. Jan Mazanec, a Slovak [redacted] 25X1

c. Viliam Hanus, a Slovak [redacted] 25X1

d. Martin Dananaj, a Slovak [redacted] 25X1

e. Josef Valent, a Slovak [redacted] 25X1

12. Assistant Chemists are:

a. Michal Liska, a Slovak [redacted] 25X1

b. Frantisek Greissinger, former German, now a Czechoslovak citizen [redacted] 25X1

c. Anton Kollar, Slovak [redacted] 25X1

13. Physical Chemistry Department:

a. Chief: Dr. Ing. Miroslav Salamon (see page 4). 25X1

b. Deputy: Ing. Juraj Bartos, a Czech [redacted]

c. Referent: Ing. Zenon Kapisinsky, a Slovak [redacted] 25X1

14. Construction Engineering Department:

a. Chief: Ing. Frantisek Jinda (see page 4).

b. Deputy: Ing. Ludovit Ranostaj, a Slovak, technical head of the safety fire brigade. 25X1

c. Head of Fitter's Shop: Ing. Ernest Balaz, a Slovak [redacted]

d. Draftsman: Josef Komurka, a Czech [redacted] 25X1

e. Boiler Inspector: Ing. Jan Taller, a Czech.

f. Head of the Production Control of Chlorine-Liquefying: Frantisek Perutka, a Czech. 25X1

g. Assistant Draftsman: Jan Palkovic, a Slovak [redacted]

15. Piecework Planning Department:

a. Chief: Jaroslav Petricek, a Czech

b. Ladislav Hromadka, a Slovak

c. Ervin Kalman, a Czech.

d. Stefan Dobrotka, a Slovak.

16. Planning Department:

a. Chief: Ing. Frantisek Jinda.

b. Frantisek Daubner, a Slovak

17. Building Department:

a. Chief: Architect Hasenerohl

18. Electrical Department:

a. Chief: Dr. Ing. Miroslav Salamon.

b. Deputy: Ing. Anton Ruisl, a Slovak

c. Ing. Pavel Mravik, a Slovak

19. Administrative Department:

a. Chief: Ladislav Kotoulek, a Slovak

b. Branislav Stacho, a Slovak

20. Material Stores Department:

a. Chief: Alexander Geier, a Slovak

b. Rudolf Minarovic, a Slovak, former president of the Democratic Party.

c. Sujan, a Slovak.

d. Stefan Kluka, a Slovak.

e. Aladar Kalisky, a Slovak.

21. Accounting Department: Stefan Martos, a Slovak

22. Before the Ninth Party Congress only 70-80 workers out of approximately 780-800 workers were members of the Communist Party. The following is a list of the important KSC members at the factory:

a. Chairman of the KSC: Jan Gecy, a Slovak [redacted] 25X1

b. Secretary of the KSC: Josef Steffek, a Slovak [redacted] 25X1

c. Treasurer: Emil Jankeje, a Slovak [redacted] 25X1

23. Special Party Confidants:

a. Vincent Krahulec, a chemist in the glycol production section, a Slovak, [redacted] 25X1

b. Majdan, a Slovak [redacted] 25X1

c. Fulek, a Slovak [redacted] 25X1

d. Stefan Macek, a Slovak [redacted] 25X1

e. Certik, a Slovak [redacted] 25X1

24. Employees Council:

a. Chairman: Rudolf Gulaty, a Slovak [redacted] 25X1

b. Members: Koprda, a Slovak [redacted] 25X1

25. The commander of the factory militia is Jan Gecy. His deputy is Josef Steffek.

a. The militia is composed of 30-35 men, who are armed with rifles and side-arms while on duty. Only reliable Communists are members.

b. Eight men guard the plant area at night and two during the day. Two men are always assigned to building P-3.

26. Personnel at the experimental station of the VTU in Zemiansky Kostolany includes: 25X1

a. Chief of Station: Staff Capt. Olas (?), a Slovak [redacted]

b. Laboratory Director: Capt. Tatarka, a Slovak [redacted] 25X1

c. Education Officer: 2nd Lt. Miroslav Nemecek, a Czech from Prague, [redacted] 25X1

d. The technical personnel in the laboratory and experimental section are:

(1) Six chemistry students ("aspiranty")

(2) Four construction engineering students ("aspiranty")

(3) Six Army laboratory workers

(4) On 1 October 1949 this number was to be increased, the principal addition being technicians from the Novaky plant, who were being taken into military service. There are rather frequent personnel changes.

27. Projects of the Five Year Plan at Novaky include:

a. A steam-generated electric power station to be built between Novaky and Zemianske Kostolany. This plant's boilers will be fired by coal from Novaky, and the factories in Partizanske-Batovany, and Zemianske Kostolany will be supplied with power from this station.

b. A new carbide factory to be built in Novaky near the existing factory. Foundations have already been completed for this plant, which will hold two carbide furnaces.

c. The building of a modern calcium plant, which is in the planning stage, and plans for increasing the electrolysis capacity in the existing factory. The latter, however, is dependent on deliveries of special electrolytic equipment [redacted] 25X1

28. An outline of the factory's organization follows:

a. Production Department:

(1) E-2 Electrolysis of NaCl

(2) Liquefaction of chlorine and the production of hydrochloric acid

(3) E-16 Production of NaOH and sodium hypochloride

(4) E-20 Production of acetylene and trichlorethylene

(5) E-21 Production of ethylene, glycol, and dichlorethane.

b. Factory Research Department:

(1) Analytical Section

(2) Research on synthetic materials (vinylchloride group)

(3) Research on synthetic acetone

(4) Research on chlorinated hydrocarbon (chlornaphthalene and chlorparafine)

(5) Research on Novaky coal

(6) Research on dolomite

(7) Research in the field of inorganic materials

(8) Physical Chemistry Section

c. Construction Engineering Department:

(1) Construction Engineering [illegible]

(2) Locksmith shops

(3) Boiler and fuel inspectors

d. Piecework Planning Department

e. Planning Department

f. Maintenance Department

g. Electrical Department

h. Administrative Department

i. Personnel Department

j. Purchasing Department

k. Shipping Department

l. Production Record Department

m. Material Stores Department

29. Novaky is on the rail line connecting Bratislava, Leopoldov (P49/T43), and Prievidza. In 1949 Novaky was made a stop for the express train, attesting to the town's growing importance.

Attachments: A - Map of Novaky Chemical Factory in relation to its surroundings with key
B - Diagram of chemical factory with key
C - Diagram of E-2 production department with key