



Die Beauftragte der Bundesregierung
für Kultur und Medien



Final report of the preliminary study

“Forced Labor of Political Prisoners in Prisons of the GDR”

Authors:

Samuel Kunze (Humboldt University of Berlin, Chair for History of Eastern Europe)

Dr. Markus Mirschel (Humboldt University of Berlin, Chair for History of Eastern Europe)

Participating institutions:

Humboldt University of Berlin, Chair for History of Eastern Europe

Union of Victims' Associations of Communist Tyranny e.V.

Project manager:

Prof. Dr. Jörg Baberowski (Humboldt University of Berlin, Chair for History of Eastern Europe)

Funding body:

The Federal Government Commissioner for Culture and the Media (BKM)

Project number:

funding project ZMII6-FKZ:2523GB210P

HU project CAREgio PSP:D.02645.00.512023

Berlin, 29.02.2024

Table of Contents

1	Introduction	6
1.1	Mission and aim of the preliminary study	6
1.2	Evaluated archive holdings	7
1.3	Evaluation of forced labor in the GDR from the perspective of the rule of law.....	9
1.4	Forced and compulsory labor in the Federal Republic of Germany	11
1.5	Forced labor in GDR practice	12
2	Evidence of supply chains for products co-produced by political prisoners and exported to the Federal Republic of Germany.....	12
2.1	The German-German trade	12
2.2	The “Esda complex”	13
2.2.1	Women's tights as a source for foreign currency	13
2.2.2	The path of the product	14
2.2.3	Prison labor for export	15
2.3	The “ELMO complex”	15
2.3.1	Electric motors as a source for foreign currency	17
2.3.2	The path of the product	18
2.3.3	Prison labor for export	19
2.4	The “ORWO complex”	19
2.4.1	Audio cassettes as a source of foreign currency.....	20
2.4.2	The path of the product	21
2.4.3	Prison labor for export	22
2.5	The “Pentacon complex”	23
2.5.1	SLR cameras as a source of foreign currency	24
2.5.2	The path of the product	25
2.5.3	Prison labor for export	25
3	Proof of damage to health.....	26
3.1	Forced labor as a health risk	26
3.2	Classification in the state of research on the effects of political imprisonment	28
3.3	Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)	28
3.3.1	Description of the production process	30
3.3.2	Health hazards during chlorine production	32
3.3.3	Description of the real production plant and the protective measures, combined with injury reports and a description of the exposure of the prisoners	35
3.3.4	Summary	39

3.4	Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg	40
3.4.1	Description of the production process	41
3.4.2	Health hazards during electroplating	44
3.4.3	Description of the real production plant and protective measures, combined with injury reports and a description of the exposure of the prisoners	46
3.4.4	Summary	47
3.5	Employment of prisoners in the Cottbus Prison on behalf of the VEB Sprelawerke Spremberg	48
3.5.1	The production	48
3.5.2	The material used	48
3.5.3	Laboratory results	48
3.5.4	Acute and chronic hazards	49
3.5.5	Desiderata of Analyses	49
3.6	List of hazardous substances	50
3.7	Employment of prisoners for Esda in the Hoheneck Prison	51
3.7.1	The health hazards of sewing work	52
3.7.2	Description of the real production conditions, combined with prisoners' reports of injuries	57
3.7.3	Summary	58
4	Conclusion and outlook	58
	Attachments	61
	Notes	107

Abstract

This report presents the results of the scientific preliminary study "Forced Labor of Political Prisoners in Prisons of the GDR". The study was funded by the Minister of State for Culture and the Media, Claudia Roth (BKM). It was initiated and scientifically accompanied by the Union of Victims' Associations of Communist Tyranny (UOKG). The preliminary study was carried out by Professor Jörg Baberowski, Humboldt University of Berlin, Chair for History of Eastern Europe. The authors are Dr. Markus Mirschel and Samuel Kunze.

The report uses four examples to show that supply chains for individual products co-produced by political prisoners can be traced from the manufacturing facilities in the GDR through several intermediate instances to West German end customers or sellers. It describes (1.) the path of women's tights produced by VEB Strumpfkombinat Esda Thalheim in the GDR from the Hoheneck Prison to bulk buyers such as ALDI Nord in the Federal Republic. (2.) the supply chain of electric motors produced by VEB Elektromotorenwerk (ELMO) Grünhain in the prisons of Hoheneck, Torgau, Waldheim, Luckau and Brandenburg, among others, up to the West German company Josef Scheppach Maschinenfabrik GmbH & Co. in Ichenhausen. (3.) the path of the Praktica cameras from VEB Pentacon with its production department in the Cottbus Prison up to West German mail-order houses such as Quelle and Otto. (4.) the supply chain of audio cassettes manufactured by VEB Magnetbandfabrik Dessau in the Dessau Prison to the company Magna.

With regard to the health consequences of forced labor, the final report shows probable links between the specific working conditions in four factories where political prisoners were forced to work and the long-term health complaints reported by those affected. The effects of high mercury exposure are traced for the chlorine plants of the Bitterfeld Chemical Combine, and the long-term consequences of exposure to chromium VI compounds are traced for the electroplating department of VEB Metallwaren Naumburg (MeWa) in the Naumburg Prison. In addition, the preliminary study proves possible connections between the working conditions in the tailoring department of the Hoheneck Prison and chronic musculoskeletal disorders of the affected workers. For the work area of the VEB Sprelawerke Spremberg in the Cottbus Prison, initial insights into the health consequences of the prison work are presented.

1.1 Mission and aim of the preliminary study

1 Introduction

Note on the use of language

To begin with, a note on the use of language is necessary. Some researchers dealing with the national socialism have pointed out that the term “forced labor” during the era of National Socialism is closely associated with the idea of “extermination through labor” and that this idea could be transferred to other contexts (GDR, France, Soviet Union, China or other historical periods). This danger can certainly be ruled out in the field of science, school education and serious journalism. The authors use the term in the sense of international trilingual legal texts, where “forced labor” is defined as the English term “forced labour” and the French term “travail forcé”.

1.1 Mission and aim of the preliminary study

Even more than 30 years after the Peaceful Revolution, forced labor in the GDR remains a desired research topic in many respects. There are studies on the conditions of forced labor in the prisons, on the state-owned enterprises (VEB) that profited from it and on the structures of the associated GDR foreign trade. On the other hand, only a few valid statements can be made about the extent of the exploitation of political prisoners and the long-term effects on the health of those affected. This is where the planned main study should follow up this study and attempt to close the existing gaps in knowledge by tracing the supply chains for products co-produced by political prisoners and systematically investigate the causal links between working conditions and damage to the health of those affected. In this way, the state, the economy and the public are to be sensitized to the concerns of those affected and thus create the basis for unbureaucratic assistance and benefits as well as appropriate compensation payments.

The aim of this preliminary study was, to prove by examples that it is possible on the basis of documents in various archives to identify individual supply chains between the production facilities in prisons in the GDR, other authorities and district authorities of the Federal Republic of Germany, up to end customers and end buyers (e.g. department store chains) for certain products. The second aim was to investigate the extent to which a causal link can be established between the working conditions of forced labor and the health impairments described by those affected.

The preliminary study was financed by the Federal Commissioner for Culture and the Media, Minister of State Claudia Roth. It was carried out by two research assistants and two student assistants at the Chair for history of Eastern Europe at the Humboldt University in Berlin under the direction of Prof. Dr. Jörg Baberowski. Originally, the preliminary study was to be completed between March and December 2023. Due to various delays and personnel changes (Dr. Markus Mirschel left the project in November 2023), it was completed between May 2023 and February 2024.

1.2 Evaluated archive holdings

A large number of archive records of varying provenance were evaluated for the preliminary study. The following provides a brief overview of the archives used and the holdings consulted there.

The records of the Federal Intelligence Service (BND), the Treuhandstelle für Interzonenhandel (TSI = agency for interzone trade) and the Federal Chancellery were evaluated at the Federal Archive in Koblenz. The BND files contain information on GDR companies that was gathered by the foreign intelligence service both from publicly accessible sources and by interviewing refugees and workers who had escaped from the GDR. The records of the TSI and the Federal Chancellery primarily contain reports on the regular negotiations between the TSI and the Ministry of Foreign Trade of the GDR, in which the extent for export products from the GDR and other aspects about the trade between both German States (so called German-German trade) were discussed.

In the Federal Archives at Lichterfelde, the records of the SED (Socialist Unity Party, the governing party in GDR) as well as of various state organs of the GDR were examined.

The files of the SED leadership contain information on the management of the economy and domestic trade as well as the use of prisoners as labor force. The records of the Ministry of the Interior, the Council of Ministers, the State Planning Commission, the Committee of the Workers' and Farmers' Inspectorate, the Ministry of Transport and the different Ministries of Industry (for Chemical Industry, for Light Industry, for District managed Industries and Food Industry) provide information on the production and export of individual products as well as on the cooperation of companies and combines with prisons. At the Stasi (= state security service of GDR) Archive as a part of the Federal Archives files from various departments belonging to the headquarters in Berlin as well as records of individual district and county administrations were investigated. These files

1.2 Evaluated archive holdings

dealt with a variety of topics, including the activities of the Commercial Coordination (KoKo) operations, production and export issues, accidents and workplace safety in AEBs (= companies where prisoners had to work) and the activities of certain individuals.

At the Saxony-Anhalt State Archives in Merseburg, reports of the Volkspolizei (=People's Police) and the prisons were analyzed. These files contain information about the use of prisoners in the companies of the Halle district as well as information about working conditions in companies where prisoners had to work (AEBs). The files of the Workers' and Farmers' Committee and the associations of state-owned enterprises also provided information on production and working conditions. In Magdeburg special case files on VEB ELMO Wernigerode (a company producing electric motors in Wernigerode) and the records of the People's Police were investigated. These files contained information on the organization and implementation of prisoner deployment in prisons in Brandenburg and Torgau as well as on the production and export activities of VEB ELMO Wernigerode.

Files of the People's Police and various prisons as well as the records of several state-owned companies in which prisoners were deployed were examined at the Brandenburg State Main Archive. This made it possible to reconstruct the working conditions in the companies and their cooperation with the prisons. They also provide insights into the organization of production and distribution at various VEB ELMO factories.

At the Saxon State Archives in Dresden, the records of the combine VEB Elektromaschinenbau Dresden (a combine producing electrical machines) and its associated companies were analyzed. This examination allowed conclusions to be drawn about production processes within the combine and its involvement in trade between both German countries (so called German-German trade). At the location in Chemnitz the inheritances of VEB Esda (a company producing tights and socks) were examined, allowing conclusions to be drawn about its export activities and the negotiation processes associated with trade between both German countries. In addition, several holdings relating to VEB ELMO Grünhain were analyzed.

In the city archives in Dessau, the records of the city administration on the prison labor camp "Strafvollzugsabteilung Dessau" and the VEB Magnetbandfabrik (a company producing cassettes and tapes) were inspected.

Some of the holdings relevant to the preliminary study could not be analyzed as planned, i.e. files from the Stasi Records Archive, the preparation and provision of which by the authority's staff was only partially accessible during the processing period, partly due to

1.3 Evaluation of forced labor in the GDR from the perspective of the rule of law

the archive's move to a new location. In the Federal Archives in Lichterfelde, and other state archives, important records could not be analyzed because they have not yet been archived or have only been partially archived. In the Saxony-Anhalt State Archives in Merseburg, for example, this applies to the files of the prison department of the Halle district for the 1980s and the records of VEB ELMO Wernigerode. For a main study, individual negotiations with the respective archives will be necessary in order to explore the possibilities of making the relevant holdings available purposefully. For a main study such an agreement has already been reached with today's Luckau-Duben prison, which, after a thorough examination, signaled its willingness to give access to the records of the GDR youth prison in Luckau concerning young prisoners who had to work for ELMO.

1.3 Evaluation of forced labor in the GDR from the perspective of the rule of law

Since the 1950s, both forced labor and prison labor have been protected by international human rights conventions adopted by the United Nations (UN) and the International Labor Organization (ILO). This includes the resolute will of the signatory states to abolish forced labor in general (ILO 29). Along the way, certain categories of prisoners and uses of forced or compulsory labor were banned (ILO 105). This includes punitive and educational measures against political opponents or members of religion in the form of forced or compulsory labor. According to ILO 105, forced and compulsory labor may also not be used for economic purposes.

The "Minimum Principles for the Treatment of Prisoners" of 1955 apply to all prisoners, even if they are used for forced or compulsory labor in contravention of the rules, which provide for maximum harmonization of living and working conditions with the conditions of free people in the surrounding area.

The GDR initially had not signed any of the international rules. As part of the CSCE process, Basket 3 "Human Rights", the "Minimum Principles" were finally signed in 1977. None of the international agreements were adhered to.

To the extent that politically and religiously motivated prisoners were used for compulsory or forced labor in the GDR, this can be considered outlawed forced labor according to ILO 105. The same applies to work that had to be carried out for economic purposes. This was definitely the case from the end of the 1950s. It was during this time that the work of prisoners began to be incorporated into the GDR's national economic plan.

1.3 Evaluation of forced labor in the GDR from the perspective of the rule of law

Contrary to popular belief, there was no obligation to work in the GDR that could be derived from the GDR constitution. The constitution, which was valid from 1949 to 1968, did not contain any statements about the obligation of GDR citizens to work. The constitution also does not state that prisoners were obliged to work: "The penal system is based on the idea of educating those capable of improvement through joint productive work." (Art. 137, 1949)

The constitution that came into force in 1968 contained the formula that applied to all citizens: "The right to work and the duty to work form a unity." According to GDR right, too, this formula is not to be regarded as an individual right to be implemented directly, but as a general constitutional objective from which no direct consequences can be derived (Cf. the catalog of "Fundamental Rights and Fundamental Duties" Art. 19 to 41, 1968).

Until 1968, forced labor was enforced in the prisons of the GDR without any legal basis. Only formalities such as pay, working standards and insurance issues were regulated, but not the legal status in the prison system. Nevertheless, plans were developed for the "one hundred percent" use of prisoners.

For the first time, the GDR's Prison Act of January 12, 1968 obliged all "prisoners capable of work to perform work." This obligation was generally permitted under international law in 1968, but not the planned use of prisoners in the national economy and the use of prisoners who were imprisoned for political or religious reasons. Punishment in the form of "work education" was also prohibited. However, certain minimum standards were prescribed. These regulations agreed under international law were not adhered to.

With the Prison Act of December 19, 1974, the economic purpose of prison labor was disclosed for the first time (§ 29 SVWG, 1974). From this time onwards, state-sanctioned forced labor in the GDR was to be referred to as such in accordance with international law.

In the 1977 version of the Prison Act, in the context of the CSCE negotiations, Basket 3 "Human Rights", labor education was abolished as a separate type of punishment and the labor education camps were dissolve. In doing so, the GDR thus fulfilled one of the requirements of ILO 105, albeit without acceding to the convention. Further demands were continuously violated.

1.4 Forced and compulsory labor in the Federal Republic of Germany

In the context of the CSCE negotiations, the GDR felt compelled to recognize the minimum principles for the treatment of prisoners. However, it fulfilled its reporting obligation to the UN only in a rudimentary manner. In principle, nothing changed in the form and treatment of prisoners.

Consequently, anyone trading with the GDR had to expect that the imported products or components were manufactured using forced labor, which was outlawed under international law.

1.4 Forced and compulsory labor in the Federal Republic of Germany

The Federal Republic of Germany has acceded to all of the above-mentioned conventions. It has defined its relationship to forced and compulsory labor in Article 12 of the Basic Law as a judicially and legally possible restriction of the fundamental right to freedom of occupation in accordance with the human rights conventions of the United Nations and Europe. Any rights violated in this context are enforceable in court. The structure of prisoners' obligation to work in Germany is nevertheless the subject of controversial debate today. According to the Federal Constitutional Court, there is a permanent task to maintain the qualitative difference between compulsory work and forced labor. The legal standard is laid down, for example, in the Federal Prison Act of March 16, 1976.

It is desirable and morally imperative that the German government, the public, the economy and not least the citizens take this standard achieved in Germany into account in an appropriate manner. The new Supply Chain Act is a step in this direction. There has already been a moral obligation in the past, particularly in view of the special German-German situation. First of all, this includes knowledge of the production conditions.

The legal form and conditions of forced labor in the GDR were known to the public in the Federal Republic of Germany or could at least be experienced to some extent with little research effort. As early as 1953, the UN Economic and Social Council published the results of a worldwide investigation about various forms of forced labor. It came to the conclusion that forced labor was used on a large scale in the Soviet Union and the people's democracies linked to it.¹ The topic was also raised several times in the German Bundestag. There was a fire attack on the Swedish company IKEA, accusing the company of exploiting forced laborers.

1.5 Forced labor in GDR practice

1.5 Forced labor in GDR practice

The use of prisoners was aimed at exploiting their labor for the benefit of the state planned economy. From the 1950s until the end of the GDR, 15,000 to 30,000 prisoners were forced to work every year and were mainly used in areas where civilian workers did not want to work due to poor working conditions. Unlike working civilian people, prisoners had no way to reject the work. Such a refusal inevitably led to disciplinary measures, which could range from the withdrawal of privileges such as receiving visitors and parcels to three weeks of solitary confinement with minimal food.² The scope of systematic forced labor in the prisons or labor battalions of the GDR, as well as the extent of dimension within the entire GDR economic system, can only be understood if the internal mechanisms are researched and supply chains and working conditions are revealed.

2 Evidence of supply chains for products co-produced by political prisoners and exported to the Federal Republic of Germany

2.1 The German-German trade

The Treuhandstelle für Interzonenhandel (TSI) was a West German key institution in trade between the GDR and the Federal Republic. In recurring consultations, the TSI and the Ministry of Foreign Trade and Economic Affairs (MAW/H) of the GDR clarified product groups, quotas and the handling of mutual trade. For its part, TSI maintained close connections to the Federal German Ministries of Economics or Food, Agriculture and Forestry in Bonn, for example. The TSI communicated the products and quantities to the West German companies and retail chains or took “requests” to the MAW/H.

In the GDR, the items and quantities negotiated by the MAW/H were forwarded to the foreign trade companies (AHB). These forwarded the corresponding orders to the responsible combines and to the subordinate state-owned enterprises (VEBs). In order to prevent competition in GDR foreign trade AHBs established themselves in product fields that were as clearly defined as possible. The details of German-German trade were coordinated between agents/representative companies in the Federal Republic and the manufacturing combines or VEBs in the GDR. This system was intended to minimize direct contacts between West German companies and East German production companies. This ensured that the exchange of information, for example on forced labor, remained limited. The mutual exchange of goods was conducted via so-called clearing

units (Verrechnungseinheiten, VE), allowing two non-convertible currencies could thus be offset against each other. Mutual trade was the product of the economic interests of both states. It provided the GDR with urgently needed foreign currency as well as the opportunity to make use of West German technologies. For the Federal Republic, this resulted in cheap imports for its own market despite protectionist efforts.

2.2 The “Esda complex”

The proof of a complete supply chain for the product of women's tights from the VEB Strumpfkombinat Esda Thalheim was based on the research of the historian Tobias Wunschik.³ His relevant investigation proves the connection between the Hoheneck Prison and the administration of the VEB Feinstrumpfwerke Esda as well as the inclusion of forced labor in the manufacturing processes of the VEB products.⁴ Following on from that, the relevant documents in the Saxon State Archives in Chemnitz (export orders, delivery bills and internal accounts of the VEB Strumpfkombinat Esda Thalheim) and in the Federal Archives in Koblenz (TSI reports) were examined for the preliminary study based on the reconstruction of the supply chain of the “Sayonara” brand from the producing VEB to the final seller ALDI Nord. The basic prerequisites for the export production of this combine and the exemplary supply chain are described below.

Supply chains for other products could be reproduced in connection with future research about the “Esda complex”. In addition, the circle of end sellers in the Federal Republic at that time (Hertie Waren- und Kaufhaus, Kaufhaus Group, Horten or Karstadt) could be proved. The distribution of further products from GDR production (men's, women's and children's socks and men's suits) can be documented through in-depth investigation. Research in other archives should concentrate on finding evidence of the direct delivery of products to VEB Esda that were manufactured by female prisoners in the Hoheneck Prison.

2.2.1 Women's tights as a source for foreign currency

The textile production sector was an exposed component of the GDR export economy. In particular, the export of women's tights from VEB Strumpfkombinat Esda Thalheim developed into an important foreign exchange business for the GDR between the 1960s and the late 1980s.

The foreign trade company (AHB) TextilCommerz was responsible for VEB Strumpfkombinat Esda Thalheim. Orders, product requests and (changing) quotas were

2.2 The “Esda complex”

sent directly to the AHB via a network of West German agents such as Klawitter, Salzmann or Steiniger. AHB forwarded them to the responsible combine and the exporting company VEB Feinstrumpferwerke Esda. In the “Esda complex”, the agent companies⁵ formed the direct link between TextilCommerz and the companies in the GDR and the end sellers or bulk buyers (such as Nolte KG [ALDI Süd] or Albrecht Einkauf OHG [ALDI Nord]) in the Federal Republic. The VEB Strumpfkombinat Esda Thalheim was well aware of current developments on the West German market through visits by its own sales staff to potential new and established regular customers. There is also evidence of return visits by employees of West German companies or representatives of TSI.⁶ The annual export quotas for women's tights to West Germany amounted to around 30 to 45 million units or pairs - a figure that lasted until the mid-1980s.⁷

2.2.2 The path of the product

The production and export of the tights deliveries took place in a complete system. (**Attachment 17**) Once (1.) the export quotas had been agreed between TSI and MAW/H and individual orders had been received via the intermediate suppliers, (2.) the products were ordered by TextilCommerz directly from VEB Feinstrumpferwerke Esda in Thalheim. After receipt of the order the VEB awarded (3.) in each case internal invoice and individual order numbers (EA), to which the desired product (such as the brand “Sayonara”) and the quantity ordered were assigned.⁸ Using the so-called forms for M-invoice currency invoicing, (4.) the respective quantity was converted into invoicing units (PU) via the unit price. In the case of a large order with the EA number 91209 for ALDI Nord dated September 15, 1988, an export order for 6.4 million women's tights of the brand “Sayonara” was placed. (**Attachment 1**) Around half a million pairs of tights were to be delivered each month, spread over 2,000 pallets and with a total weight of almost 400 tons. The price per tights was 0.68 PU, which corresponded to a total export volume of around 4.35 million PU. Deliveries were made by VEB Deutrans vehicles, which had to use the Herleshausen border checkpoint.⁹ The goods were (5.) brought together from the VEB factories (Factory 1: Thalheim; Factory 3: Auerbach and probably from Hoheneck production)¹⁰ (**Attachment 2**) and (6.) packaged, labeled, priced and prepared for dispatch according to ALDI Nord's requirements. (**Attachment 3**) Delivery was made (7.) to the intermediate dealer Steiniger in the Federal Republic of Germany.¹¹ After the goods were dispatched for export, (8.) a note from VEB Feinstrumpferwerke Esda was sent to TextilCommerz with instructions for invoicing. The final purchasers (Nolte KG [ALDI Süd] or Albrecht Einkauf OHG [ALDI Nord]) remained identifiable by name on the VEB's

internal documents. According to the note on the export orders Steiniger received six percent commission as a distributor from both ALDI groups - calculated on the value of the goods handled in each case. Even though the delivery quantity for the example EA 91209 was reduced during the year 1989, the number of units remained high.¹² (Attachment 4)

2.2.3 Prison labor for export

In order to ensure the fulfillment of the plan and exports, the VEB Feinstrumpfwerke Esda Thalheim used female prisoners from the Hoheneck Prison. Whereas in 1972 “only” 132 “Hoheneck women” worked for the VEB compared to the planned 144, in 1977 it planned to employ 160 prisoners. Due to prison releases, the number had to be reduced to 100 and leveled off at 71 female forced laborers due to the amnesty in 1987. There is evidence that political prisoners were involved in production. The historian Tobias Wunschik calculates that 70 female prison laborers per year produced around 9 million tights, which corresponded to about 10 percent of Western production and about 8 million Valuta marks per year.¹³

2.3 The “ELMO complex”

Due to the complexity of the VEB Elektromaschinenbau Dresden combine, three strongly export-oriented electric motor factories of the combine were taken into consideration. Some of these were and still are located in Grünhain, Thurm and Wernigerode. The work of the VEB Elektromaschinenbau Dresden combine was researched in the Saxon State Archives in Dresden (Sächsisches Hauptstaatsarchiv, SächStAD). This revealed important information about the combine’s export business and the fact that prisoners were extensively involved in production at various times in the prisons in Hoheneck, Torgau, Waldheim, Luckau and Brandenburg.

The files of the Grünhain and Thurm factories are held at the Saxon State Archives in Chemnitz (Sächsisches Staatsarchiv Chemnitz – SächStAC) and can be researched there. Due to time constraints, only the holdings relating to the VEB Elektromotorenwerk (ELMO) Grünhain could be examined so far – here in particular the holdings on exports and sales to the Federal Republic of Germany and the non-socialist economic area (NSW), as well as annual business reports and reports of directors’ meetings and contracts on cooperation between the VEB and the Hoheneck Prison.

2.3 The “ELMO complex”

For the factory in Wernigerode, for the first time, holdings were investigated at the Saxony-Anhalt State Archives (LASA) in Magdeburg. The relevant files on the connection between the VEB ELMO Wernigerode and Brandenburg prison were inspected at the Brandenburg State Main Archive (BLHA). The holdings of the Ministry of the Interior of the GDR (Mdl) and the TSI at the Federal Archives in Koblenz and Berlin were used for the investigation.

Until the completion of this final report, the ELMO files in the Stasi Records Archive (StUA) could not yet be investigated. Requested files should still be made available in October/November 2023. Unfortunately, there were delays due to the move to a new location. An “application for access to non-anonymized documents in accordance with § 32 para. 1 sentence 1 no. 7 StUG” was submitted.

There are also delays in researching the holdings of the VEB ELMO Wernigerode in the state archive of Saxony-Anhalt. The stock is currently undeveloped and very incomplete. According to the archive, the holdings important for the supply chains were not handed over to the archive in 1999. According to the assumption of the project staff and the archive these documents could still be stored in the company archive of the legal successor or even have been destroyed.

In the future, the remaining holdings of the Stasi documents archive should be included in the investigation once they have been made available, but longer processing periods should be planned. Furthermore, the research in the Saxon State Archives Chemnitz on the files of the VEB ELMO Thurm must be completed. One possible research direction results from the possibility that meaningful archival records have not been handed over to the state archives – an inclusion of the company archives is conceivable. However, sufficient time must be allowed for this as well as with regard to the holdings of VEB ELMO Wernigerode. At the suggestion of the project staff, the state archive in Magdeburg is continually opening up these documents as required and reconfiguring them for possible research.

The assumption that products of the “ELMO complex” were also manufactured in the Luckau prison could be confirmed so far. The Luckau-Duben Prison in Brandenburg recently signaled the possibility of researching the files about the Luckau Prison that have been handed over there. The prison is currently checking how much effort it would take to make the files available.

For future research into the “ELMO complex”, the inclusion of other ELMO locations would be a good idea. The electric motor factories at the former Dessau and Hartha factories should be considered in this connection. VEB ELMO Hartha in particular served the sector for miniature motors with an output of less than one kilowatt (kW). The Hartha factory can be traced back to so-called “supplement deliveries” of West German home electronics products. Access to the important export and foreign trade items of the ELMO companies remains decisive.

The connections between the VEB ELMO Wernigerode and the Brandenburg Prison, which have so far been well documented by the project staff, as well as the verifiable use of political prisoners in the so-called production area 5 (FB5) in Brandenburg, must be prospectively supplemented by possible end customers of the VEB ELMO Wernigerode. Evidence that production in Brandenburg was used primarily for export can already be provided.¹⁴ (**Attachment 5**)

In order to arrive further substantial results for the highly complex VEB ELMO, the archive holdings that have not yet been investigated would have to be examined as part of a main study.

2.3.1 Electric motors as a source for foreign currency

The electric motor production sector was an important part of the GDR export economy. In particular, the export of so-called standard and small motors from the VEB Elektromaschinenbau Dresden combine developed into an important foreign exchange business until the late 1980s. With around 23,000 employees in 1977, the combine was a heavyweight of GDR industrial production.¹⁵ At the end of the GDR, thirteen companies (including the parent company VEB Sachsenwerk Niedersedlitz) belonged to the VEB Elektromaschinenbau Dresden combine. Companies producing standard and small motors that had a demonstrably high proportion of exports to the NSW (non-socialist economic area) were considered important. The Grünhain, Thurm and Wernigerode electric motor factories exported tens of thousands of motors with an output of between 1 and 160 kW to end customers in the Federal Republic of Germany. In the following, the VEB Elektromotorenwerk Grünhain forms the starting point for proving a chain from production in the GDR to the delivery of electric motors to end customers in the Federal Republic. (**Attachment 18**)

2.3 The “ELMO complex”

2.3.2 The path of the product

Once (1.) the export quotas had been agreed between TSI and the MAW/H and individual orders had been received, (2.) arrangements were made between the MAW/H and the responsible AHB (Foreign Trade company) Elektrotechnik Export-Import. The AHB then (3.) clarified the feasibility of the delivery with the plant directors of the export-oriented VEB and (4.) forced the inclusion of the margins in the annual plans. With the above-mentioned ELMO companies (5.), further agreements on the products requested by West German companies were made via the company Wittenbecher & Co. (WiCo), the general agent for electric motors in the Federal Republic. From the late 1970s, WiCo was run as a so-called mixed company, which was assigned to the Commercial Coordination (KoKo) division and operated with a high proportion of GDR capital in the Federal Republic.¹⁶ This can be verified. WiCo determined (6.) the West German demand via a nationwide network of regional representatives and negotiated (7.) orders directly with the respective ELMO company. Conversely, WiCo (8.) coordinated delivery to the end customer, possible returns and warranty cases. WiCo acted as a link in the pricing of GDR motors on the West German market.¹⁷ (**Attachment 6**)

In the case of VEB ELMO Grünhain, WiCo (a.) controlled the agreements between the VEB and the end customer Josef Scheppach Maschinenfabrik GmbH & Co (Scheppach) in Ichenhausen. This involved (b.) capacities and the technical feasibility of special motors for installation in western shredders and various models of circular saws. WiCo (c.) passed on technical drawings from Scheppach to the VEB in Grünhain for this purpose and (d.) took care of the delivery of missing components that could not be produced in the GDR (temperature sensors, luster terminals) to the VEB via Scheppach.¹⁸ (**Attachment 7**) Scheppach had (e.) adapted technical drawings for a “single-phase standard motor with operating capacitor, with brake, temperature monitor and special shaft end” submitted directly from the VEB.¹⁹(**Attachment 8**) Once an order had been placed, (f.) the motors could be planned and scheduled for production.²⁰ (**Attachment 9**) In the months of September and November 1988 (g.) VEB ELMO Grünhain delivered 3,400 motors (1,200 EBM 80 K2-SW 56, 1,000 EBM 80G2-SX 56 and 1,200 DOMA 80 K2-SQ 56) to Scheppach.²¹ (**Attachment 10**) The companies ATIKA (motors for cement mixers), AL-KO (motors for lawnmowers) or “shredder drives” of the type EBM 80 K2 for the Swiss-based company RÜTSCHI belong to companies to which VEB ELMO Grünhain supplied motors via WiCo.²² (**Attachment 11**) Just in 1985 ATIKA received 4,000 “fully protected” EBMW 71 K 4-SE 52 motors²³ (**Attachment 12 and 13**). Regular meetings

between WiCo and VEB ELMO Grünhain took place both in the Federal Republic and in the VEB plants.²⁴ Especially at the spring and autumn trade fairs in Leipzig, the representatives of West German companies such as AEG, WiCo and others also met directly with engineers and sales staff from the VEB Elektromaschinenbau Dresden combine.²⁵ (**Attachment 14**)

2.3.3 Prison labor for export

In order to secure GDR exports and domestic supplies of standard and miniature motors the VEB Elektromaschinenbau Dresden combine worked together with various prisons. VEB ELMO Grünhain, for example, set up production facilities in the Hoheneck and Torgau prisons.²⁶ VEB ELMO Wernigerode, for example, had set up production facilities in the Brandenburg, Magdeburg and Torgau prisons.²⁷

As early as 1967, VEB ELMO Grünhain and the Hoheneck Prison concluded a “transfer agreement” for work rooms in the prison²⁸ - the usage agreement was updated in 1977.²⁹ The agreement between Hoheneck Prison and VEB ELMO Grünhain was amended in 1976 and was valid from the following year.³⁰ (**Attachment 15**) Similar to the “Esda complex”, the number of prisoners available from the Hoheneck Prison was also declining for the “ELMO complex”. While the contract partners agreed on 220 prisoners for production in 1972, the VEB had on their disposal only 100 forced laborers in 1977.³¹ The main tasks of the prisoners in ELMO production were the winding and coiling of components (as sub-supplies) for the VEB's electric motors. There is evidence that political prisoners were involved in the production. Manufacturing processes, which were increasingly mechanized in the civilian sector, remained purely manual work in the GDR prison system.³² Those responsible for the ELMO work command in the Torgau Prison experienced particular difficulties - the planned figures were rarely achieved.³³ (**Attachment 16**) For the prisons in Brandenburg and Torgau, the responsible companies even investigated suspicions of deliberate sabotage.³⁴

2.4 The “ORWO complex”

For the reconstruction of the supply chain of audio cassettes from the VEB Magnetbandfabrik Dessau, archive holdings of different provenance were investigated. The Federal Archives contain the records of the Ministry of Chemistry, the SED leadership, the TSI, the Federal Intelligence Service and the State Planning Commission, which were analyzed with regard to the planning, management and control of the audio

2.4 The “ORWO complex”

tape products. With regard to the export of the audio cassettes, the records of the AHB ORWO and Chemie were evaluated. In the Saxony-Anhalt State Archives, Merseburg Department, the research concentrated on the files of the People's Police, which organized the use of prisoners in the Halle district. Finally, the legacy of the general director of the Wolfen Photochemical Combine with regard to the magnetic tape factory was investigated at the archives of the Industry and Film Museum. The documents provide an insight into the use of prisoners in the magnetic tape factory and audio tape production, but only allow limited conclusions to be drawn about the export of audio tapes to West Germany and other countries of the non-socialist economic area.

The former company archive of the magnetic tape factory could not be found. Since it cannot be ruled out that these records were destroyed in the course of the privatization or restructuring of the magnetic tape factory after the end of the GDR, it would be necessary to have an access to alternative holdings for a main study. These could be found in the Federal Archives in Lichterfelde where some of the records relating to foreign trade are not yet evaluated completely. (e.g. DL 210: companies in the area of commercial coordination). It would also make sense to conduct a large-scale survey - which is not feasible within the scope of this preliminary study - of former executives or employees in charge of exports at the magnetic tape factory, AHB ORWO and Chemie, as well as the agents for films and magnetic tapes in the Federal Republic. This would possibly provide new information about intermediate dealers and end users of the audio cassettes as well as the participation of other companies in foreign trade.

2.4.1 Audio cassettes as a source of foreign currency

The magnetic tape production sector (audio, video and computer tapes) formed an important part of the GDR's export economy from the late 1970s onwards. The export of audio cassettes had its starting point in 1970, when, in line with the further development of magnetic sound equipment, the first audio tapes were produced for amateur use and were brought onto the market.³⁵ At this time, Filmfabrik Wolfen, the parent company of Fotochemisches Kombinat, was the only producer of audio cassettes in the GDR and, according to an intergovernmental decision in 1968, was also responsible to supply the entire economic area of the Council for Mutual Economic Assistance (RGW). In order to create the necessary production capacity, the magnetic tape factory was built in Dessau between 1970 and 1972 as part of the photochemical

combine. In 1978, mass production of the 60- and 90-minute K 60 and K 90 cassettes for private use began there.³⁶

While the majority of the audio cassettes were delivered to CMEA countries, the magnetic tape factory also exported to a lesser extent to West Germany and Berlin (West) as well as other countries in the NSW (non-socialist economic area). (**Attachment 19**) Initially, the quantities were manageable: in the first half of 1979, only 966 cassettes were delivered to countries of the non-socialist economic area.³⁷ This changed in the 1980s, when audio tape production was gradually expanded. The production of audio cassettes for export (to the Council for Mutual Economic Assistance (RGW) and to the non-socialist economic area (NSW) was to be increased up to 2,800,000 units by 1987.³⁸ Exports to the Federal Republic of Germany and Berlin (West) began in 1980 at the latest,³⁹ with audio tapes being supplied not only as finished cassettes but also as “piece goods in neutral design”, i.e. without a label.⁴⁰

2.4.2 The path of the product

As only a few documents on exports to the NSW (non-socialist economic area) could be found in the relevant state and private archives, it was not possible to determine a complete supply chain for individual audio cassette types. Nevertheless, two examples from 1982 show that audio cassettes produced in the magnetic tape factory were also sold to West Germany.

The first example concerns the delivery of cassettes to the Magna company in the Federal Republic of Germany. In a complaint report dated August 18, 1982, it is reported that the magnetic tape factory had received almost 40,000 cassettes of the type K 60 CrO₂ hifi (neutral). (**Attachment 20**) From this it can not only be concluded that the magnetic tape factory had difficulties in complying with agreed quality standards, but also that it was already exporting large numbers of audio cassettes to the Federal Republic at this time. The “in-house” AHB ORWO, which is named in the document as an intermediate dealer, played a key role in establishing trade relations with the Federal Republic.⁴¹

The second example concerns the delivery of audio tapes to the intermediate dealer Beroflex in Berlin (West). Beroflex (officially “Beroflex Kamera-Film Aktiengesellschaft”) was a trading company founded in 1969, based in Berlin (West) and Bad Kissingen. This company sold photo-technical and photochemical products such as cameras, camera

2.4 The “ORWO complex”

accessories, films and magnetic tapes from the GDR in West Germany (see 2.5.2). In a letter from the management of the magnetic tape factory to the photochemical combine dated September 12, 1982, it is reported that of the slightly more than 1 million K 60 LN (LN stands for Low Noise) audio cassettes produced exclusively for export a small proportion was also delivered to Berlin (West) during the first 8 months. (**Attachment 21**)

2.4.3 Prison labor for export

The use of prisoners in the magnetic tape factory began immediately after its commissioning in 1974. These mostly female prisoners came from various prisons and prison labor camps. Some of the prisoners came from the Bitterfeld Prison, with which the Wolfen film factory, as the parent company of the photochemical combine, concluded a corresponding agreement in 1974.⁴² At the same time, a new prison labor camp, the “Dessau prison department”⁴³, was set up in the direct vicinity of the magnetic tape factory. For this purpose, the accommodation of the construction workers who had helped to build the magnetic tape factory was converted into prisoner barracks and surrounded by fences and watchtowers. (**Attachment 22**) As the location was integrated into the industrial complex of the magnetic tape factory, it was barely recognizable as a prison labor camp from the outside. Initially, around 350 women were imprisoned in the Dessau Prison. Over the years, however, the premises were steadily expanded,⁴⁴ so that the number of female prisoners rose to almost 1,000 by 1989. The proportion of women sentenced for political reasons was around six percent. The majority of them had to perform forced labor in the magnetic tape factory, but they were also deployed in the Wolfen film factory and the Dessau factory for gas units.⁴⁵

Within the magnetic tape factory, the prisoners were mainly used in the so-called audio assembly department. There, the audio tape wound onto large rolls was cut into strips with cutting machines and then wound onto cassettes. The finished audio cassettes were then packed in boxes for delivery. (**Attachment 23**) The use of prisoners was essential for the production of audio cassettes in the magnetic tape factory. When in 1979 - as a result of the amnesty - a large number of prisoners were no longer available as workers, the magnetic tape factory was no longer able to meet its contracts concerning delivery figures.⁴⁶ For the whole of 1982, 177.5 prisoners were used in audio tape production. They were involved in the production of three types of audio cassettes: K 60 LN, K 60 Chrome and KR. (**Attachment 24**) The factory management even planned to increase the number of prisoners working in the magnetic tape factory in the following years.

Depending on the sales figures, their number was to rise to up to 300 by the mid-1980s.
(Attachment 25)

2.5 The “Pentacon complex”

For the reconstruction of the supply chain of SLR cameras from the VEB Pentacon Dresden combine to the final seller of the product, specialist literature on the company history of VEB Pentacon and mail order catalogs of final sellers were consulted and evaluated in addition to the records in the Stasi archive.

The research in the Stasi archive focused on specific companies and sectors. A factual search was carried out. Files from the Main Department XVIII (National Economy) dominate, as all export companies in the GDR were of interest to the MfS (Ministry of State Security) and were therefore processed. At the level of the MfS district administrations and district offices, the files provide information on the legal framework conditions for GDR companies trading with West German firms. There are also overviews of companies in the Federal Republic that were active in the GDR and travel reports from business trips or relevant trade fairs. Files from the Commercial Coordination Working Group (AG BKK) are useful because they contain sensitive information on business partners and overviews of incorrect deliveries, i.e. problems that could massively jeopardize the GDR's foreign currency income. In addition, files from the Office of Management (BdL) were also investigated, as they contain orders and implementation instructions, for example on the remuneration of prisoners' work and its economic significance. Finally, files from Department VII (Prison System) were also inspected, insofar as they contained information on the conditions in the Cottbus Prison and the labor deployment company VEB Pentacon.

A special feature of file management in the former Ministry of State Security (MfS) are dossiers on individual cases that the MfS considered interesting. In the best-case scenario, these provide the researcher with a comprehensive overview of surviving documents of various provenance. In this specific case, the evaluated documents provide an insight into the structures of German-German trade based on the representative company Beroflex AG, based in the Federal Republic and Berlin (West).

The publication by Dr. Gerhard Jehmlich, head of the research and development department from 1963 to 1990, was consulted with regard to the company history of VEB Pentacon. His extensive work provides information on the history of the company's

2.5 The “Pentacon complex”

origins and the work of the research and development department over decades. Since the political prisoners rarely manufactured a product in its entirety, but often only carried out a few steps in a small-scale production process, this specialist knowledge is indispensable.

As already mentioned in the supply chain examples above, it is sometimes difficult to prove the direct connection between a VEB (state-owned company) using political prisoners for the production and the final seller in the Federal Republic of Germany only on the basis of archive material. For this reason, the reconstruction of the supply chain for VEB Pentacon's SLR cameras was based on catalogs from former mail-order companies, some of which still exist today, in order to be able to draw conclusions about the distribution of GDR products based on the range of products offered.

2.5.1 SLR cameras as a source of foreign currency

The export of 35mm SLR cameras from state-owned enterprises of the GDR can be documented from 1952 to 1989. Of the 9.85 million cameras produced during this period, 7.85 million were exported. This corresponds to an export quota of 80 percent.⁴⁷ (**Attachment 26**)

In the following, the figures from 1964 onwards will be examined in more detail, because it was only with the founding of VEB Pentacon Dresden in 1964 that work began on setting up a production facility in the Cottbus Prison. After the introduction of assembly line production as of 1965, production grew steadily. In 1984, a maximum annual production of approx. 450,000 SLR cameras was achieved.⁴⁸ After the integration of Pentacon into VEB Carl Zeiss Jena in 1985, production and exports fell steadily.

From 1964 to 1989, VEB Pentacon produced a total of more than 8 million SLR cameras, with an export rate of 80.4 percent. A total of 4.96 million cameras were delivered to the NSW (non-socialist economic area). This means that 62.8 percent of total production was used to get foreign currency. Only 17.6 percent was exported to the Socialist Economic Area and 19.6 percent was made available to the domestic market. (**Attachment 27**)

At the beginning, the foreign trade company “AHB Kamera-Film Export/Import” was responsible for the export of SLR cameras and later, from around the mid/end of the 1970s, the AHB Heimelectric.

2.5.2 The path of the product

Until 1968, products from the GDR photo industry were sold in the Federal Republic of Germany and Berlin (West) via five representative companies. The company Beroflex AG was founded on February 12, 1969. Originally, the company was to be founded with a GDR capital shareholding in order to be able to exert direct influence, but this was not possible due to the German Military Government Act No. 53. The GDR hoped that the merger would result in a more effective sales organization for its products.

The product range of Beroflex AG included “in particular products of the VEB Kombinat Pentacon (SLR cameras) including the corresponding additional lenses [...] products of the photochemical combine Wolfen and relevant products of the VEB Carl Zeiss Jena.” (**Attachment 28**) The turnover rose from DM 14 million in 1969 and DM 20 million in 1971 to over DM 25 million in 1972. (**Attachment 29**) The agent company Beroflex AG acted as a so-called middleman and was paid by AHB (foreign trade company) for distribution. For 1970 it received 1.8 million units of account (VE), for 1971 only 1.5 million VE despite the increase in turnover and for 1972 1.9 million VE.⁴⁹ (**Attachment 30**)

There were three customer groups for the SLR cameras sold by Beroflex AG: “traditional specialist retailers; purchasing associations for specialist retailers, e.g. Ring-Foto; the department store and mail order business with a market share of around 40% with a slight upward trend.”

Among the aggravating factors concerning business with department stores and mail order companies “the abandonment of the Praktica company name and production under a private label” and “extraordinary price pressure” were mentioned.⁵⁰ (**Attachment 31**)

VEB Pentacon's Praktica cameras were sold under its own name by mail order companies Neckermann and Otto (**Attachment 32, Attachment 33**) as well as under numerous trademarks such as Revue at Quelle (**Attachment 34**) and Hanimex at Otto. (**Attachment 35**)

2.5.3 Prison labor for export

From 1964, a VEB Pentacon production facility was set up in the Cottbus Prison. Cottbus was designed for 800 to 1,200 prisoners, of whom around 600 were imprisoned for political reasons. 250 to 300 prisoners from Cottbus Prison worked for VEB Pentacon.

3.1 Forced labor as a health risk

The company was aware that most of them were political prisoners.⁵¹ The prisoners were deployed at the beginning of the production chain and had to carry out the punching operations (cutting and bending) and deburring of the die-cast parts for the housing, the so-called penti-frame. The first work steps were carried out both at the main plant in Dresden and at Cottbus Prison. Up to 40 machines were used in Cottbus and only 10 in Dresden. According to this, 80 percent of the housings were produced using forced laborers.⁵²

The Praktica cameras offered in the catalogs of Neckermann, Otto and Quelle (MTL 5, Super TL 1000, Super TL 2) were manufactured by VEB Pentacon and belong to the Praktica L series. All Praktica L models (with the exception of the VLC model) used a standardized housing. (**Attachment 36**) 75 percent of the L-series cameras were exported to Western Europe, especially to the Federal Republic of Germany. VEB Pentacon manufactured contract products with a different look for the trading companies Photo Porst and Quelle.⁵³

3 Proof of damage to health

3.1 Forced labor as a health risk

Political prisoners in the GDR were not only forced to work, but often had to perform this work under conditions that were harmful to their health and sometimes life-threatening. The GDR regulations on occupational safety in the VEBs (state-owned companies) and production areas of the prison were not adhered to, and they were even deliberately ignored. For the companies the primary objective when deploying prisoners was to maintain production and for the prison to prevent any escape attempts by prisoners from the work detachments. The health of the prisoners, on the other hand, played only a subordinate role and their endangerment was only considered a problem if the prisoners were unavailable for work.

The horizon of interpretation for the situation in individual industrial workplaces in the presentation of GDR history is formed by the effects of the planned economy in the version since the 11th Plenum of the Central Committee (ZK) of the SED in 1965, with the modifications introduced by Erich Honecker in the early 1970s under the slogan “Unity of economic and social policy”. These actually led to a relatively short phase of noticeable increases in prosperity for the population towards the mid-1970s. However, these improvements were only achieved on the basis of a backlog of investment in

infrastructure and industry as well as a regular increase in the GDR's foreign debt, which culminated in an impending insolvency in the early 1980s. With regard to the industrial workplace, this misguided development was reflected in the perception that maintenance cycles for technical systems were not adhered to, necessary general repairs were not carried out and even simple modernizations could not be carried out. The plants – briefly described – were “run to wear and tear”. Health and safety regulations, which were written down exactly, were often not even adhered to in practice. Prescribed health and safety equipment was not issued and defined working conditions were not adhered to.⁵⁴

It can be assumed that in many areas similar violations would have to be described for civilian workplaces as for prisoners. In some areas, it can certainly be assumed that the workplaces of prisoners were much worse in terms of occupational health and safety than those of civilian workers. There is also an essential difference between prisoners and civilian workers. Civilian workers could quit their jobs at any time. In view of the shortage of workers in industry, they were able to find new jobs easily. According to the consensus of current research, this circumstance led to the use of prisoners in areas with increased cancellation rates of civilian workers.

This preliminary study investigated the following health damage presumably caused by forced labor: damage caused by inhaling toxic fumes during the electroplating of metal parts and chronic mercury poisoning due to prolonged exposure during chlorine production; exposure to dust in the „Sprelacart“ production (special laminate panels bonded with synthetic resin, which were developed in the GDR); mechanical overstraining of the spine and limbs due to disregarded performance requirements in the production of textiles. In addition, a first attempt is made to systematize exposure to toxic substances.

The following explanations are based on a broad range of sources. Firstly, in order to reconstruct the working conditions in the selected companies, a systematic evaluation of the existing research literature was carried out. Secondly, relevant files were researched in the state archives in Saxony-Anhalt and Saxony as well as in the Federal Archives in Berlin and Koblenz. Thirdly, the reports of former forced laborers were analyzed with regard to the conditions at the time and, in individual cases, telephone interviews were conducted with those affected. Fourthly, in order to be able to assess the effects of working conditions on former prisoners, relevant publications by the Federal Institute for Occupational Safety and Health, the German Social Accident

3.2 Classification in the state of research on the effects of political imprisonment

Insurance and individual industrial sectors were evaluated. Fifthly, a systematic research and analysis of medical studies dealing with the long-term effects of the respective hazardous situation at the workplace was carried out.

3.2 Classification in the state of research on the effects of political imprisonment

In order to be able to classify the long-term health effects of forced labor, the consequences of political imprisonment must first be considered as a superordinate phenomenon. In medical research, it is undisputed that imprisonment for political reasons has a negative impact on the mental health of those affected. The associated experience of traumatic stress can lead not only to post-traumatic stress disorder (PTSD), but also to depression, addiction disorders, suicide attempts, anxiety, sleep and eating disorders. Furthermore, former political prisoners are also exposed to a greater risk of cardiovascular and inflammatory diseases as well as metabolic and autoimmune diseases. A research project carried out at the Charité in Berlin has demonstrated these general findings for political imprisonment on the basis of comprehensive studies, including those imprisoned for political reasons in the GDR. On the basis of a comparison with the average population, the researchers were able to prove that former political prisoners were subject to a sometimes greatly increased risk of all suspected physical and mental illnesses, despite gender-specific differences.⁵⁵

This preliminary study builds on these findings, but goes beyond them in its approach. The following explanations are based on the assumption that the health problems suffered by former political prisoners are not only caused by the traumatic stress caused by the prison situation, but also by the specific conditions under which the prisoners had to perform forced labor during their imprisonment.

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

A particularly vivid example of the health-threatening conditions of forced labor in the GDR is the deployment of prisoners from the Bitterfeld Prison to work in the chlorine plants of the Bitterfeld chemical combine (CKB). The chemical industry in the GDR, especially in the so-called chemical triangle of Halle-Leipzig-Bitterfeld, had been based on the abundantly available natural resources of central Germany such as potash, limestone and lignite since the Weimar Republic. The processes used for their extraction destroyed the landscape and polluted the groundwater. The chemical processing stages

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

were cost-intensive and required high investments in the construction and maintenance of filter systems as well as environmentally sound management of the waste products. As a result, the international trend moved away from coal-based processing towards petrochemicals, which used crude oil and natural gas as raw materials. The VEB Petrolchemisches Kombinat Schwedt (Petrochemical combine Schwedt) was founded in 1958. The Leuna plant was expanded. In view of the planned replacement of coal chemistry by Soviet crude oil in the medium term, the carbon plants were “driven on wear and tear”.

This meant that their maintenance was neglected and unavoidable new construction was reduced to a minimum. As a result, vast numbers of auxiliary staff had to be “installed” in the relatively highly automated systems to compensate for their high susceptibility to faults.

This applies to almost all areas of carbon chemistry (lignite mining and electricity generation, limestone mining, the carbide and chlorine processing stages). The oil crises that occurred in the 1970s also made natural gas and oil, which had previously been purchased cheaply from the “friend country”, more expensive. The price of oil tripled within a few years. Both in the energy sector and in the chemical industry, the GDR now resorted to carbon chemistry despite plants that had actually been written off. Despite high wage payments staff left the lignite industry and the combines in Buna and Bitterfeld. They were replaced by members of the National People's Army (NVA) (mostly construction soldiers), prisoners and so-called contract workers (often summarized under the term „special workers (SAK)“⁵⁶

A small number of prisoners were already working at the CKB at the end of the 1960s. As part of a cooperation agreement between the combine and the Bitterfeld Prison, their number was greatly increased in 1974. Up to 111 prisoners had to work in chlorine plants I and III, where conditions were particularly miserable and hazardous to health (as in the VEB Kombinat Chemische Werke Buna in Schkopau). In Plant I, their employment lasted until 4 December 1989; in Plant III, it ended significantly after its modernization in 1986. Plant II does not appear in the files in connection with prisoners. Plant IV was built in the mid-1970s and was considered modern and secure. A considerable number of the prisoners deployed were political prisoners.⁵⁷

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

3.3.1 Description of the production process

For a better understanding, the production process of the Chlorine plants I and III is outlined below. Chlorine is a highly aggressive and reactive gas. It was used episodically as a poison gas during the First World War, but was later substituted by various war gases. The best-known application of chlorine is in the plastic material polyvinyl chloride (PVC), which was used for many decades. Due to specific additives PVC has proved unsuitable for applications such as household articles, food processing etc. and has been increasingly replaced by other plastic materials since the 1970s. However, there is an almost incalculable number of other processes in which chlorine acts as a starting material. In this respect, the Bitterfeld and Buna chlorine factories were among the core areas of the chemical industry.⁵⁸

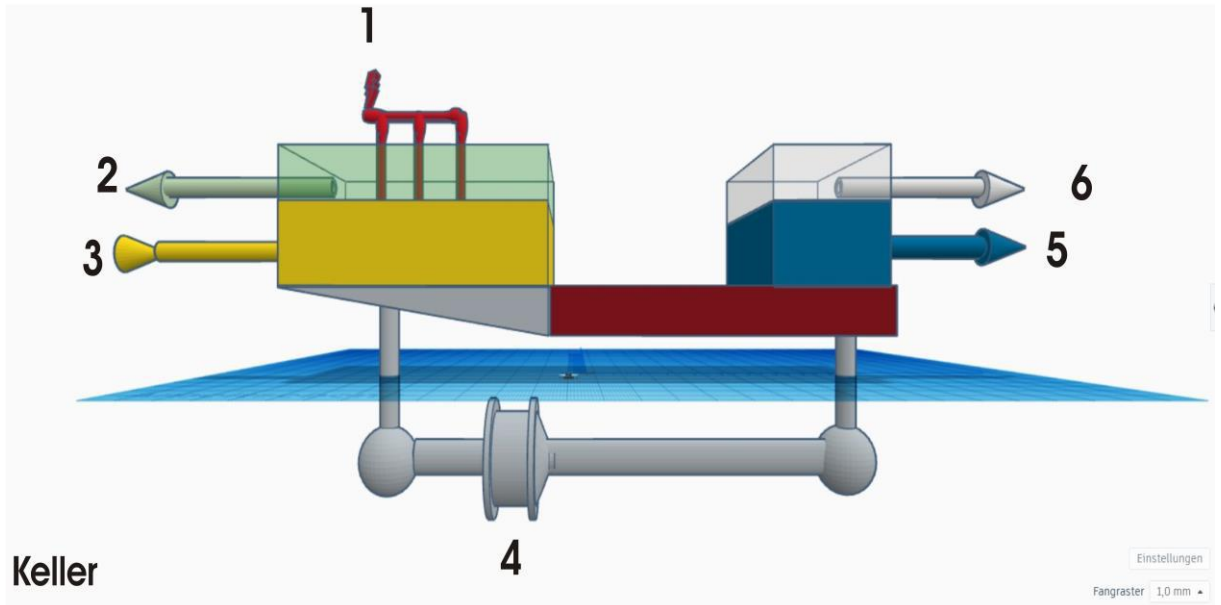
The chlorine production process is very simple: a large container is filled with a solution of (usually) rock salt (sodium chloride). Electrodes are immersed in the solution and a low voltage is applied to them. The chlorine dissolves from the sodium and rises as a gas at one of the electrodes. If it is possible to collect all of the chlorine without any of it escaping into the air, the first part of the process has been successful. Hydrogen rises at the other electrode. This must also be completely collected. If it were released into the room air, highly explosive oxyhydrogen gas would be produced. In this case, one spark would be enough to cause an explosion. However, the two gases must not mix. Otherwise, chlorine oxyhydrogen gas would be produced, which can also explode under the exclusion of oxygen. Caustic soda remains in the tank, which can be used together with the chlorine to manufacture chemical products.

Further parameters must be optimized for the practical design of the production plants, such as power consumption, required quality of the end products and assessment of environmental hazards. There are therefore four basic types of chlorine production plant. These basic types do not need to be explained here, as the so-called amalgam process was used in the two Bitterfeld chlorine plant I and III, where prisoners had to work (as in Buna). In this process, an amalgam mixture of sodium or potassium and mercury is produced at the mercury cathode. The amalgam is then washed out with water in a so-called decomposer, whereby alkali solution (sodium or potassium hydroxide) and hydrogen are obtained. The remaining mercury is returned to the process.

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

SIMPLIFIED PROCESS DIAGRAM OF CHLORINE PRODUCTION USING THE AMALGAM PROCESS

Produktionshalle



LEGEND/DESCRIPTION:

- 1 POWER SUPPLY THROUGH GRAPHITE ANODES. THESE HAD TO BE ADJUSTED MANUALLY AT REGULAR INTERVALS. THE VOLTAGE WAS SAFE, BUT THE PROXIMITY TO THE VAPORIZING EQUIPMENT WAS DANGEROUS.
- 2 CHLORINE END PRODUCT. AS LONG AS ALL PIPES AND THE REACTION TANK WERE TIGHT, THERE WAS NO DANGER. HOWEVER, THE PIPELINES RAN FOR SEVERAL KILOMETERS THROUGH THE FACTORY. THERE WERE APPARENTLY REPEATED INCIDENTS WITH ESCAPING CHLORINE.
- 3 THE STARTING PRODUCT WAS A SALT SOLUTION (MAINLY SODIUM CHLORIDE). LEAKING PIPES COULD CAUSE IRRITATIONS TO THE EYES AND MUCOUS MEMBRANES.
- 4 THE MERCURY-AMALGAM CYCLE RAN IN THE BASEMENT. BOTH OFFICIAL REPORTS AND EYEWITNESS ACCOUNTS MENTION EXTREMELY LARGE QUANTITIES OF LEAKED MERCURY.
- 5 THE END PRODUCT CAUSTIC SODA (THERE ARE VARIOUS NAMES) WAS HIGHLY DANGEROUS AT A CONCENTRATION OF APPROX. 35% AND CAUSED BURNS TO THE SKIN, EYES AND MUCOUS MEMBRANES FOLLOWED BY A LONG HEALING PROCESS.
- 6 END PRODUCT HYDROGEN. A HIGHLY EXPLOSIVE GAS. NO HYDROGEN DEFLAGRATIONS WITHIN THE PLANTS ARE KNOWN TO DATE.

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

3.3.2 Health hazards during chlorine production

The health hazards mentioned in the previous section are summarized below. Chlorine, caustic soda and mercury are the main health hazards in connection with chlorine production. While the first two substances are only briefly discussed, the explanations concentrate on the long-term health effects of mercury. Hydrogen and the used highly concentrated brine (salt solution) are excluded from the presentation.

Chlorine

Provided that the systems are properly maintained, chlorine production is not harmless, but in principle it is controllable. The majority of chlorine accidents still occur today in the areas of storage, transportation and applications (swimming pools, pulp mills).⁵⁹ According to contemporary witnesses, there were sporadic cases of chlorine outbreaks in production in the GDR. Christian Sachse, a Buna worker in 1973, reported experiencing two outbreaks every few months. With regard to chlorine, precautionary measures must be taken, especially in the event of accidents (e.g. burst pipes, defective valves, deflagrations). These include

- forced ventilation of the entire hall,
- open escape routes,
- gas masks or at least safe retreat rooms,
- protective goggles (chlorine attacks the eyes),
- regular training in the event of an accident,
- work regime analogous to production facilities at risk of explosion.

Irregularly occurring accidents at the end users of the chlorine within the CKB (chemical combine Bitterfeld) and the 25-kilometer-long pipe network are not considered here.⁶⁰

Caustic soda

Caustic soda is dangerous for eyes and skin even in low concentrations (5%). In the amalgam process, the concentration of caustic soda is already very high in the reaction tank. Today's safety data sheets warn of "severe skin burns and serious eye damage" as well as the inhalation of aerosols. Protective suits are prescribed and unprotected persons must be kept away.⁶¹ Caustic soda was mainly released through defective pipe systems and during repair work.

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

Mercury

Mercury poses the greatest risk of both acute and chronic damage to health in chlorine production. Health problems with a high number of poisonings, suspected occupational illnesses and several deaths from mercury poisoning were already known and documented in GDR times.⁶²

Workers at CKB (chemical combine Bitterfeld) were exposed to mercury primarily through the vapors generated during the production process. In addition, they also came into contact with the liquid waste products (caustic soda, water), which always contained mercury residues. However, this was (as in Buna) only the case in exceptional cases (e.g. during maintenance and repair of pipe bridges), so that this area is not taken into account here.

Until the second half of the 1980s, the reaction tanks in Plants I and III had to be regularly readjusted manually. During this work, which affected every single cell several times a day, mercury vapors escaped into the room air, which is why the air had to be monitored to ensure that a specified maximum workplace concentration was not exceeded. The mercury was in various states (amalgam, metallic mercury) at the bottom of the tank. There, the substances were moved by pumps in a circulation system. Large quantities of metallic mercury could escape from the circulation system (pumps are mechanically susceptible) or from leaking tanks.

In metallic form, mercury is relatively harmless even in large quantities. However, toxic vapors of high toxicity are produced by evaporation even at room temperature. A distinction must be made between acute and chronic poisoning. The temperature above the tubs was up to 60°C, which accelerated evaporation extremely. As the mercury vapors also partially condensed again, the metallic mercury could condense in the workshop and in work clothing and be carried very far. As mercury vapors are heavier than air, areas close to the ground and basements in particular must be monitored. The following precautionary measures must be taken:

- Forced ventilation, open escape routes,
- Monitoring of all production rooms and ancillary rooms (toilets) for concentrations of mercury vapors,
- when working with metallic mercury, especially in basements: full protection, gas mask,

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

- for all other work: Ban on eating and smoking in the production hall, strict separation of work and travel clothing (black and white separation), strict hygiene regulations (intensive showering, washing hands before eating),
- strict separation of work clothes in laundries,
- regular urine and blood tests.

Inhaled mercury vapors are absorbed by the lungs and almost 80 percent of them enter the bloodstream, where they are rapidly distributed throughout the body. The remaining 20 percent is given off after a short time.⁶³ The inhaled mercury vapors not only accumulate in the kidneys and liver, but also break through the blood-brain barrier, which is supposed to protect the sensitive brain metabolism from harmful influences, and therefore has a direct effect on the central nervous system. Some of the mercury remaining in the body is metabolized, oxidized and transformed into various forms of inorganic mercury.⁶⁴

Acute and chronic mercury poisoning

Mercury in its various forms acts as a powerful cellular and protoplasmic toxin that damages the human body in many places simultaneously. Acute mercury poisoning caused by inhaling large quantities results in a variety of symptoms. According to a leaflet published by the Federal Office for Occupational Safety and Health, these include shortness of breath, coughing, chest pain, chills, nausea and vomiting. Very high levels of inhaled mercury gas can also lead to bloody diarrhoea, death of the mucous membranes (mucosal necrosis) in the small and large intestine and kidney dysfunction.⁶⁵

With prolonged exposure to mercury, a subchronic or chronic form of poisoning can develop. In addition to initially occurring general symptoms such as fatigue, headaches and aching limbs, this is accompanied by severe psychological, motoric and cognitive abnormalities. Psychological consequential damages include, among other things, variously pronounced anxiety disorders, mood instability and loss of motivation through to a gradual general loss of personality. The musculoskeletal system is frequently affected by tremors, which often begin with the fingers and gradually progress to shaking movements of the hands, arms, head and legs. In many cases, those affected also suffer from sensory disturbances in the trunk and extremities as well as language problems such as a slurred speech. In some cases, these symptoms are accompanied by a loss of memory.⁶⁶

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

Current state of knowledge

A number of scientific studies have investigated the causal relationship between high mercury exposure in the workplace and chronic health problems.⁶⁷ Two studies in particular allow conclusions to be drawn about the long-term health consequences of forced labor in chlorine plants. In 2010, Hermann Bubke published a study in which he investigated the effects of long-term mercury exposure on workers in the extraction of natural gas in Salzwedel, Saxony-Anhalt, between the 1970s and the early 1990s. He came to the conclusion that the majority of workers who had high concentrations of mercury in their blood or urine during their work suffer from health problems today. He found out that those affected were also exposed to other highly toxic substances such as lead or lithium. Ultimately, however, he holds long-term exposure to mercury primarily responsible for the health damage, which is why the latter should be recognized as an occupational disease.⁶⁸ Howard Frumkin and a number of other authors pursued a similar question in their study from 2001, in which they looked at the health consequences of long-term exposure to mercury among workers in an American electrolysis factory. They also came to the conclusion that the affected workers suffered from far more health problems than a comparison group, with the degree of severity depending on the duration of exposure and the maximum dose of mercury ingested. According to Frumkin and his co-authors, many of the mercury-related symptoms diminish over time, but can still be measured years after the end of exposure.⁶⁹

3.3.3 Description of the real production plant and the protective measures, combined with injury reports and a description of the exposure of the prisoners

In the chlorine plants I and III, the prisoners produced chlorine, caustic soda and hydrogen using the amalgam process. The prisoners' main task was to clean the tanks and to check and replace the graphite anodes when they were worn out. This was hard and difficult work, as a large number of screws (in each of the 156 baths there were 16 beams with 30 bolts each) had to be loosened again and again and under a high power input.⁷⁰ (**Attachment 37** and, in contrast, **Attachment 38**) In addition, the prisoners were also used for repair work.⁷¹

The production facilities in chlorine plants I and III had been built around 1936. According to an MfS (Ministry for state security in the GDR) report, production there had taken place “without any significant new investments since that time. Therefore, according to

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

the responsible managers, the termination of production has been discussed several times in recent years due to signs of wear and tear.” However, a central decision was made to continue production “until 1990 and beyond”.⁷² Due to their obsolescence, the production facilities were extremely dilapidated, meaning that accidents were a daily occurrence. Small explosions in the electrolysis tanks occurred again and again, releasing toxic chlorine vapors and spraying caustic soda lye. Although the caustic solution did not cause any chronic illnesses, it may have led to permanent eye damage and scars. The danger posed to the prisoners by such accidents was enhanced by the fact that there was no functioning ventilation system.⁷³ Although a forced ventilation system was supposedly installed in 1982 to extract and clean the air containing mercury and replace it with fresh air⁷⁴, the few photos that exist of the production hall do not show any evidence of this. (**Attachment 39**) Until 1981, the doors were also walled up and passive air circulation was further impaired by screens.⁷⁵

The greatest danger to the prisoners came from contact with mercury. This occurred mainly in two places in the production hall. Above the vats, mercury vapor was produced due to the high temperatures and it concentrated in the air. In the basement, all reaction substances including mercury ran together in pipes on the ceiling. The mercury escaped from damaged pipes and porous rubber seals, evaporated and collected in gaseous form on the floor, as mercury vapor is heavier than air. The mercury vapor condensed back into liquid mercury on the floor, forming so-called little balls in the cracks of the dilapidated floor, and in some cases also forming veritable puddles. In all situations, bodies and clothing were contaminated with mercury.

Instead of repairing the obvious damage to the production plant and protecting the prisoners in this way, the management countered this problem by forming special groups of prisoners who at first had to flush the mercury away with water hoses and then collect it in buckets or metal bottles.⁷⁶ These bottles could weigh up to 30 kg, which shows the large amount of mercury leaking out. A quote from Dr. Karl Ender, who was appointed environmental officer at CKB (Chemical combine Bitterfeld) in 1990, shows just how great the environmental impact of these leaks was:

“There were times when there were large puddles of mercury on the floor of the electrolysis plant, so people had to be assigned to sweep up the mercury with dustpans and hand brushes. It always forms little balls. These were then filled into buckets and returned to the circuit. About 200 to 300 grams per ton of

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

chlorine produced went into the environment. [...] So we released about 4 to 5 tons of mercury per year into the rivers via the wastewater. “⁷⁷

The danger posed to the forced laborers by the mercury that was released resulted not only from the dilapidated production facilities, but above all from the gross disregard of the occupational health and safety guidelines that also applied in the GDR. The prisoners were not sufficiently informed about the dangers of mercury, nor were they provided with protective clothing and respiratory masks.⁷⁸ (**Attachment 40**) In addition, the usual strict separation of work clothes and uniforms (the so-called black/white separation) was not observed. The prisoners were transported directly back to the prison at the end of their shift and only there they could change their clothes.⁷⁹ This not only led to contamination of the prisoners' accommodation with mercury, but also of the buses used to transport the prisoners.⁸⁰ For 1984, it is also reported that the work clothes and towels were not changed for two weeks and that the towels were “better cleaning rags”.⁸¹

The management of the CKB (Chemical combine Bitterfeld) was aware of the dangers posed by the escaping mercury. Although increased mercury levels in the air were determined during measurements - in the early 1980s, the levels in the vats were sometimes 14 to 16 times higher than the legally prescribed maximum⁸² - those responsible made little effort to improve working conditions. Until 1982, not even the serial blood and urine tests of prisoners were carried out despite the fact that they were actually prescribed and had already been ordered⁸³ by the MfS (Ministry for state security of the GDR):

“According to a letter from the Ministry of Public Health dated January 29, 1982, prisoners had to undergo a monthly mercury test with regard to their urine and blood. This instruction was overruled by the general directors of the VEB Chemiekombinat Bitterfeld (chemical combine Bitterfeld) and the VEB Chemische Werke Buna (chemical factory Buna) on February 18, 1982, by raising an objection against this letter to the Ministry of Health and the Ministry of Chemical Industry. “⁸⁴

After four weeks of investigations had finally begun, 109 prisoners had to be “taken out” from the production process between January 1982 and March 1983 because the mercury levels had exceeded the limit values. In this case, “removal” meant being assigned to a different workplace until the blood and urine levels were back below the

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

limit values. With an occupancy rate of 116 prisoners, the number of “removals” was probably relatively high.⁸⁵ Another report for the period of January to April 1983 summarizes: “Taking into account the normal departures of 32 prisoners, practically [...] 2/3 of the prisoners in this area were exchanged within 4 months.” It was suggested that no more political prisoners (who were imprisoned because of their attempt to escape from the GDR) should work in the chlorine factories.⁸⁶

The mercury exposure of the prisoners who had to work in the chlorine factories remained high despite temporary transfers to other work areas. Justus Vesting summarizes the situation in 1986:

“The evaluation of almost 50 certificates of analysis from December 1985 to December 1986, on which the measurement results of the urine tests were recorded, revealed that the prescribed limits were repeatedly exceeded. The critical value of 500 µg of mercury per liter of urine was exceeded in 25% of the prisoners, and in two of them it was even more than twice as high.”⁸⁷

The drastic effects of this exposure became apparent in 1980 and 1981, when two prisoners working in the chlorine factories were confirmed to have died of acute mercury poisoning.⁸⁸ One of the prisoners still had 1,520 µg of mercury per liter of urine after being transferred to hospital. The maximum permissible value in the GDR was 200µg/l.⁸⁹ The Ministry for State Security (MfS) subsequently found extensive deficiencies and violations of occupational health and safety guidelines, but the economic benefits of the plant were considered too important to stop production.⁹⁰ Thus, even after the deaths, the chlorine factories at CKB (Chemical combine Bitterfeld) continued to operate largely unchanged and the prisoners' mercury exposure remained high.⁹¹ A medical dissertation from 1984 shows that this was a structural problem in GDR industry. The author Peter Wetzel describes the sometimes extreme levels of mercury contamination in chlorine factories and, with regard to Buna, for example, reports on a so-called „Hg [mercury] collector“ who was found to have a value of 5747 and a furnace operator who was found to have a value of 3505 µg/l urine.⁹² Against this background, it is not surprising that serious violations were again uncovered at CKB (Chemical combine Bitterfeld) and in Buna factory in 1986. Unsealed barrels of “enriched mercury sludge” were found in the basement of the CKB production facility. The prisoners were forced to continue production “under special precautions”.⁹³

3.3 Employment of prisoners in chlorine plants I and III in the VEB Chemiekombinat Bitterfeld (CKB = chemical combine Bitterfeld)

The catastrophic working conditions in the chlorine factories caused massive damage to the health of some of the prisoners. Holger Rossmann, for example, a political prisoner who had to work in the chlorine factories for twelve months, reported that he had suffered from severe concentration disorders since his imprisonment and was therefore unable to complete his studies.⁹⁴

3.3.4 Summary

Intensive contact with chlorine was already recognized as an occupational disease (BK 81) in the GDR. After 1990, an occupational injury caused by chlorine and mercury to a worker who had been employed in chlorine production for a long period of time was heard by the Berlin/Brandenburg State Social Court (LSG).⁹⁵ The case is, of course, very individual and will therefore not be discussed here. According to a decision by the LSG Saxony-Anhalt, the claim of a former prisoner was rejected in 2010, despite the consultation of an expert. This decision is apparently based on a lack of detailed knowledge of the court. For example, it did not take note of the mercury concentrations recorded around 1980. Although an interpretation of the decision is extremely interesting due to the reference to the rehabilitation laws, it cannot be provided here.⁹⁶

How should the risk of former prisoners suffering long-term health damage from working in the chlorine factories be assessed from a scientific perspective? On the one hand, it should be noted that the test persons examined in the two studies on mercury often worked in their professions for very long periods of time, whereas the prisoners concerned generally only had to work in the CKB chlorine plants for a few months or years.⁹⁷ On the other hand, the studies make it clear that exposure to mercury vapors in high concentrations generally leads to damage to health. As described above, the mercury levels in the chlorine plants at the prisoners' workplaces were in some cases extremely far above the maximum workplace concentrations (MAK) valid in the GDR (which in turn were far higher than the currently valid values). Taking these findings together, a causal link between forced labor and the health impairments described today by those affected is highly probable. It is therefore necessary to systematically examine the former forced laborers for signs of chronic mercury poisoning and, in the event of positive findings, to provide them with appropriate assistance and compensation without delay.

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

In the 1980s, conditions in the electroplating production department of VEB Metallwaren (MeWa) Naumburg were demonstrably hazardous to health. Prisoners from the Naumburg Prison had to produce door fittings and hinges for the company MeWa Naumburg from as early as 1963. At the end of the 1970s, the product range there was expanded to include casters for the feet of furniture, swivel chairs and pull-out rails. (**Attachment 41**) A significant proportion of these products were produced for export, primarily for the Swedish furniture chain store IKEA. In many cases, the prisoners used for forced labor were political prisoners, most of whom had been convicted of attempted escape from the GDR (in 1974 this applied to 286 out of a total of 720 prisoners, and in 1989 it still applied to 30 out of 468 prisoners). From the mid-1970s, the prisoners were deployed both inside the prison in a specially equipped barrack and in several outside work areas and had to carry out a variety of different activities. These included not only punching, drilling, filing, deburring and assembling metal parts, but also coating them with various metals using electroplating technology. In September 1989, 57 prisoners were working in three brigades in this area.⁹⁸

The working conditions prevailing in the electroplating plant at MeWa Naumburg can only be understood against the background of the specific situation in which the industrial companies of the GDR found themselves in the 1970s and 1980s. Evidence of this is provided by a decision of the GDR Council of Ministers in 1981, which was preceded by a comprehensive investigation of all major electroplating plants.⁹⁹ As this was a classified Confidential Classified Document (VVS), it can be assumed that the situation was described reasonably realistically. Since 1977, the associated inspections had revealed that the pollutants and toxins produced in the operation of galvanic plants had been released into the regional drinking water reservoirs by around 150 companies each year. In the first half of 1981 alone, 22 drinking water supply hazards occurred, affecting 37,200 inhabitants. The report lists the heavy metals “cadmium, mercury, lead, nickel, chromium, cobalt, zinc and tin” as the main hazards. The report states the following about an expert opinion from the Geology Department of the Leipzig District Council: “At VEB Galvanotechnik Leipzig (a galvanic company in Leipzig), cyanides and chromates are leaking into the groundwater from worn-out equipment, posing a major risk to a number of businesses and facilities such as Milchhof Leipzig (a dairy farm), VEB Turmbräu (a brewery), the hotels ‘Astoria’ and ‘Mercur’ and others. In the upper

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

groundwater in the area of this operation, the permissible limit values of 1 mg/l chromates and 10-20 mg/l cyanides are significantly exceeded.” It proved necessary to constantly pump out the contaminated groundwater and to switch to deeper layers for drinking water. The conclusion was: “The facilities in question would have to be closed.” A further report from 1988 leads to the conclusion that, with the exception of the protection of the groundwater from this immediate danger, no further investments were made.¹⁰⁰

The electroplating production area of MeWa Naumburg was located together with the paint shop outside of the Naumburg plant in a separate production hall. According to contemporary witnesses, in addition to a dip tank used for pre-treatment of the workpieces, the production hall had two so-called automatic loading machines for coating the small parts with chrome and nickel. (**Attachment 42**) This was a crane system that was used to immerse racks filled with small parts in several electrolyte and rinsing basins. The prisoners' task was to hang the workpieces in these racks and, after they had passed through the various dipping tanks, to remove them again and pack them on pallets.¹⁰¹

It can be assumed that electroplating by prisoners at MeWa - in contrast to the Zschopau motorcycle factory, for example - had the character of a small-scale production. This means, for example, that protective devices were improvised rather than used as standard (this can be seen to some extent in historical photographs).¹⁰² A photo from 1974 (VEB Norematt Nossen) shows such small-scale production and the associated protective measures.¹⁰³ (**Attachment 43**)

3.4.1 Description of the production process

In order to assess the credibility of contemporary witness reports with regard to the working conditions at MeWa Naumburg, the technological process of chrome plating is outlined below with a focus on the potential hazards directly at the workplace. This can be divided into three steps: 1. pre-treatment, 2. electroplating, 3. post-treatment.

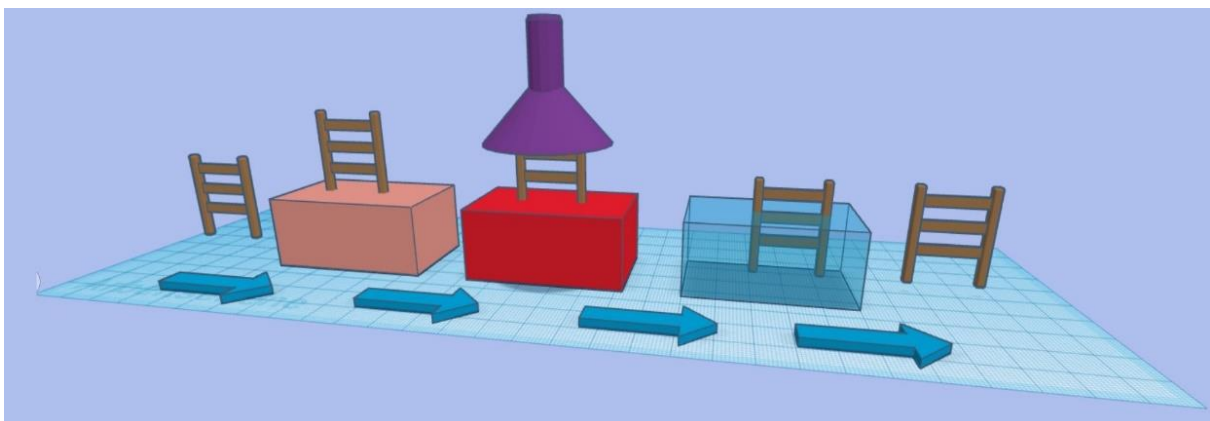
1. Pre-treatment consists of removing grease and other deposits from the surface of the workpieces and making them receptive to the metal coating. An immersion bath (tank) is used for this purpose. In a second step, the surfaces are chemically “roughened” again (pickling). The substances that can be used vary (acids, alkalis, organic substances), but all cause skin and eye irritation. Protective gloves,

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

possibly protective clothing, eye and face protection are necessary. Touching the wet, unrinsed workpieces causes - depending on the chemical -, more or less intense skin irritations. In case of injury, a doctor should be consulted. Some protective measures can be neglected using closed, well-maintained systems. Today, chemicals are also gradually being replaced. After degreasing and pickling, the workpiece is rinsed with clear water. If rinsing residues get into drinking water or waters, this can pose a serious threat to humans and wildlife. Waste water treatment and the return of "unused" chemicals to the process (recycling) is a problem that occurs in all technological stages.

2. As a rule, the workpieces are already suspended in this state in special racks, which are immersed in the baths with the electrolyte and electrically bonded. The electrical voltage required for this is only a few volts and is also completely harmless in connection with liquids. A special mixture of chromium (VI) acid and sulphuric acid is used for electroplating. The dangers posed by these substances are described in detail in section 3.4.2. The chromium in the electrolyte migrates under the effect of the electrical voltage in the direction of the inserted workpieces and attaches itself to their surface. The racks are then removed from the galvanisation bath.
3. After completion of the electroplating process, the toxic reaction liquids are removed in a third tank by rinsing with particularly pure water. Depending on the process, the wet workpieces that emerge from the last rinse may be highly contaminated with residues of the electrolyte (in this case chromium (VI) acid) or other toxic chromium compounds, which is why the waste water must be subjected to special treatment and direct skin contact must be avoided.

PROCESS DIAGRAM



3.4 Employment of prisoners in the electroplating department of VEB Metallwaren
(MeWa (metal goods)) Naumburg

	Charging	Degreasing/ pickling	Galvanizing/ electroplating	Rinsing	Removal
Procedure	Workpieces are suspended in a rack	The suspended workpieces are immersed in several baths and rinsed in the meantime.	The suspended workpieces are immersed in the electrolyte and coated with chrome.	The suspended workpieces are rinsed with (running) water.	The workpieces are removed from the racks, dried and packaged.
Materials	none	acids and alkalis with high aggressiveness are used alternatingly	Highly toxic chromic (VI) acid and sulphuric acid are used, as well as wetting agents to suppress the formation of bubbles.	Residues of electrolyte, sulphuric acid and toxic by-products due to excessive carry-over rates	Depending on the carry-over rate, the wet workpieces contain residues of electrolyte, sulphuric acid and electroplating sludge.
Hazards	Simple, non-hazardous manual work.	Intermediate touching dangerous. Danger when changing to the electroplating bath.	Intermediate touching dangerous. Danger when changing to the electroplating bath. Formation of Aerosols on the surface, By-products such as chromium trioxide, chromic anhydride.	Intermediate contact dangerous. Danger when changing to the rinsing bath.	Intermediate contact dangerous due to contamination of the rinsing water.
Protective means	none	Rubber gloves, aprons, rubber boots, safety goggles	Extraction and filter system, forced ventilation, Rubber gloves, aprons, rubber boots, safety goggles.	Rubber gloves, aprons, rubber boots, safety goggles.	Rubber gloves, aprons, rubber boots, safety goggles

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

3.4.2 Health hazards during electroplating

The health hazards mentioned in the previous section are summarized below.

Degreasing and pickling

Strong acids and alkalis are used. Skin contact with undiluted substances is only to be feared during maintenance of the systems. The diluted substances are dangerous for the eyes and permanent skin contact (e.g. when loading and unloading workpieces).

Galvanizing bath

At least two substances are used: chromium (VI) acid and sulphuric acid. Chromium (VI) acid is highly toxic. The lethal dose for adults is 1 to 2 grams. Symptoms of poisoning are described as “hemoptysis, cyanosis, aspiration or cardiac standstill”. Skin contact, penetration into the eyes and mucous membranes must be avoided. Therefore, long rubber gloves (up to the elbow), aprons or protective suits, suitable waterproof footwear and safety goggles are used as protective measures. A further hazard comes from aerosols. Their formation is described as follows: Gaseous hydrogen is produced in the electroplating bath in a side reaction when sulphuric acid is added as a reaction enhancer for technological reasons. This by-product has proven to be difficult to control. The rising hydrogen bubbles are harmless if an oxyhydrogen reaction can be ruled out. However, they burst on the surface of the bath and take with them microscopically small droplets of toxic chromium (VI) acid, which spread as aerosols in the air we breathe. Chromic acid aerosols are known to be carcinogenic substances, although the “degree of danger” is assessed differently.¹⁰⁴ The World Health Organization (WHO) confirmed as early as 1958 that chromium (VI) compounds are dangerous and set a limit value of 0.05 mg/l in drinking water. For this reason, the reaction vessels in modern plants are largely closed and have a suction device with a connected filter system. The formation of bubbles is reduced by additional wetting agents. If forced ventilation is installed in the production hall, damage to the workplace is at least minimized.¹⁰⁵ Further strong irritant effects in this type of chrome plating are also attributed to the aerosols of sulphuric acid. It is not least because of these aerosols that electroplating operations now require a permit.

Rinsing

After rinsing, there is a possibility of contact with highly diluted, but still demonstrably highly toxic residues of the electrolyte or by-products. Such waste water must be purified

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

at great expense. Continuous skin contact during discharge work is likely to lead to skin damage of unknown type and extent.

Current state of knowledge

Damage caused by handling chromium (VI) compounds, in particular during electroplating, has been recognized as occupational disease no. 1103 in the Federal Republic of Germany since 1981. Dusts, fumes, vapors and mists can be harmful to health. The eyes, skin, gastrointestinal tract, respiratory tract, kidneys, liver, bone marrow and central nervous system can be affected.¹⁰⁶

The health risk posed by high exposure to chromium VI compounds in the workplace is confirmed by a number of recent studies and specified with regard to various symptom groups. A comprehensive overview that reflects the current state of research is provided by a double study published in the USA in 2021.¹⁰⁷ For this large-scale meta-analysis, the authors evaluated the publications of various national health authorities as well as the results of numerous studies with human and animal test subjects. The study concludes that exposure to chromium VI compounds in the workplace poses an enormous health risk to the workers concerned.

They not only confirm the risk of chronic diseases of the upper respiratory tract (ulcers and nasal septum perforations), the lungs (pulmonary fibrosis, asthma, chronic obstructive pulmonary disease (COPD)) and the skin ("chromate ulcers", allergic eczema), but also show the possibility of other incurable diseases due to a chromium VI-related disruption of the immune system.¹⁰⁸ Furthermore, the authors of the study show that chromium VI compounds can cause lung, nasal and sinus cancer and possibly also stomach and laryngeal cancer.¹⁰⁹ In addition to the dose level, the duration of exposure is decisive for the risk posed to workers by chromium VI compounds. On the one hand, the authors state that the subjects of the studies they included had generally worked with such chromium compounds for many years and that the health risk, especially with regard to cancer¹¹⁰, increases with increasing duration of employment.¹¹¹ On the other hand, they also note that, for example, in animal experiments with chromium-contaminated water, changes in the blood of the animals or toxic effects of the chromium could be detected after only a few weeks.¹¹²

In addition to chromium VI compounds, other hazardous substances are used in electroplating. In addition to the various acids, these mainly include nickel compounds. According to various scientific studies, these are far less toxic than chromium VI

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

compounds, but nevertheless pose a considerable health risk to the respective worker.¹¹³ The protective measures required for this are similar to those for the use of chromium VI compounds and, in addition to the prescribed edge extraction on the process container, may also include its covering or the use of a ventilation system.¹¹⁴

3.4.3 Description of the real production plant and protective measures, combined with injury reports and a description of the exposure of the prisoners

Working in the electroplating production area at MeWa Naumburg was extremely dangerous for prisoners, as they were largely unprotected against the chemicals used there. The prisoners came into contact with these chemicals in two ways: via the surface of their hands when hanging up the still dripping wet electroplated workpieces, and via the air in the room, in which the aerosols escaping from the electrolyte baths accumulated. According to consistent eyewitness reports, the plant management took virtually no measures to ensure any kind of occupational safety. For example, there was neither an edge extraction system on the feeding machines nor were wetting agents used to reduce the escaping emissions. Furthermore, there was no window or technical system for the supply of fresh air, meaning that ventilation was only provided via a single pipe on the ceiling of the production hall. The problem of the highly contaminated indoor air was exacerbated by the fact that the passageway to the neighboring paint shop was open and the vapors released there were also drawn into the production hall. Despite intensive research, it was not possible to obtain any official information on the contamination of the indoor air in the production hall with the chemicals released, but contemporary witnesses believed they were living in a veritable "poison kitchen".¹¹⁵

According to contemporary witnesses, another serious deficiency was the lack of suitable protective clothing. For example, the forced laborers working at the loading machines were given fabric gloves, but these were soaked through within a very short time, so that they were unable to protect their hands. In addition, the plant management had not provided the urgently needed breathing masks or face or body protection. The prisoners, moreover, had not received any danger briefing before starting their work. According to the contemporary witnesses, they simply had no way of protecting themselves from the effects of the chemicals.¹¹⁶

The immediate consequences of the lack of occupational safety were serious accidents such as chemical burns to the eyes, hands and other parts of the body caused by acid splashing out. Frank Herrmann, a witness at the time, reported an incident in which he

3.4 Employment of prisoners in the electroplating department of VEB Metallwaren (MeWa (metal goods)) Naumburg

got the chemicals used for electroplating in his eye and suffered severe pain as a result. He was only very lucky to have escaped permanent damage.¹¹⁷ On the other hand, daily contact with the chemicals led to further health problems after a short time. During his time at MeWa Naumburg, Dirk Meinert had to remove the galvanized workpieces from the racks while they were still wet and pack them on pallets. He reports that eczema and skin rashes developed on his hands and forearms after a short time and that he also developed a chesty cough.¹¹⁸ Dirk Jangel even lost consciousness after six months at work and developed extremely severe nosebleeds.¹¹⁹

In Dirk Meinert's case, his symptoms persisted even after his imprisonment. In a telephone interview, he described how even today, more than 40 years after the end of his work at MeWa Naumburg, he still suffers from numerous symptoms. These included not only severe skin problems such as psoriasis and eczema on his hands and frequent cracking of the skin, but also a reduced lung volume and a persistent chesty cough.¹²⁰

3.4.4 Summary

If we apply the current state of knowledge to the conditions prevailing in the electroplating plant at MeWa Naumburg and the long-term health problems reported by the prisoners, we come to a similar conclusion to the previous example of the chlorine factory at the CBK (chemical combine Bitterfeld). On the one hand, the prisoners used at MeWa Naumburg were generally only exposed to the dangerous chlorine-VI compounds for a few months or years, which is a relatively short period of time compared to the test persons in the various scientific studies. On the other hand, due to the lack of any protective measures, the chromium VI compounds had an unhindered effect and therefore probably in high doses on the forced laborers. This is shown not least by the fact that the prisoners often developed symptoms of respiratory and skin diseases during their imprisonment, in addition to the chemical burns caused by accidents. Exposure to other chemicals used in galvanization/electroplating, especially the various acids and nickel compounds, also had an important effect. Although these were less dangerous than the chromium VI compounds, they enhanced their harmful effects. Taking these factors into account, it is highly probable that there is a causal link between the prisoners' work in galvanization and the long-term health damage reported by those affected. Against this background, it is absolutely necessary not only to systematically examine the former prisoners for signs of chromium-related damage, but

3.5 Employment of prisoners in the Cottbus Prison on behalf of the VEB Sprelawerke Spremberg

also to sensitize them to the risk of cancer and provide them with the necessary medical preventive measures.

3.5 Employment of prisoners in the Cottbus Prison on behalf of the VEB Sprelawerke Spremberg

(a company where special laminate panels bonded with synthetic resins were produced)

Prisoners at the Cottbus Prison repeatedly spoke of their work in the department of Sprelawerke, which they claimed was hazardous to their health. The research literature assumes that prisoners carried out work orders for VEB Sprelawerke Spremberg (Sprela) in a workshop on the grounds of the Cottbus Prison between 1973 and at least 1987. At times, prisoners may also have been directly involved in the production of Sprelacart panels at VEB Sprela.¹²¹ The working conditions in the “Sprelacart” workshop are described below.

3.5.1 The production

Production took place in a small hall (ceiling height probably approx. 3 meters, small barred windows). No traces of a ventilation system can be seen on the historical photos. (**Attachment 44**) A circular opening with a maximum diameter of 60 cm indicates a single ventilator. There were various machines in the room (lathes, drills, saws) with which blanks (bushings and bearings) were cut to a prescribed size. Machining processes were used (grinding, drilling, milling). The blanks consisted of a hardened mixture of resins and paper or fabric.

3.5.2 The material used

As VEB Sprelawerke produced the plastic material Sprelacart, it was assumed for a long time that the prisoners in Cottbus Prison had to process Sprelacart. However, the preliminary materials kept in the exhibition of the Human Rights Centre Cottbus (MRZ), so-called semi-finished products (**Attachment 45**), which were also recognized as such by the prisoners, were not made of Sprelacart. This was the result of a chemical analysis commissioned by the MRZ.¹²²

3.5.3 Laboratory results

The laboratory came to the conclusion that the samples were a hard paper material consisting of a fabric and a resin as a composite material. In the GDR, these materials

3.5 Employment of prisoners in the Cottbus Prison on behalf of the VEB Sprelawerke Spremberg

were referred to as laminates in accordance with TGL 15372 (1.7.1976).¹²³ The paper or fabric used for this purpose was probably largely harmless, as long as it was not asbestos paper. In the 1980s, VEB Sprelawerke manufactured bushings (plain bearings) from Hgw (hard fabric) 2088 and 2028 (see data sheet for TGL 6558/03 dated January 1, 1983).¹²⁴ Phenol-cresol is specified as the resin used. In the laboratory analysis commissioned, “increased concentrations of p-cresol” were detected accordingly. In total, the laboratory found around 20 substances with a similar effect “in appreciable concentrations”. Outstanding concentrations were recorded for p-cresol, 2,4-xylenol and phenol.

3.5.4 Acute and chronic hazards

The Gesis substance database attributes the following main acute effects to phenol, p-cresol and 2,4-xylenol (slightly differing): “strong irritant and corrosive effect on mucous membranes and skin, risk of severe eye damage, disruption of the central nervous and cardiovascular systems, damage to kidneys and blood.” Phenol is also attested to have the following chronic pathogenic effects: “gastrointestinal and nervous disorders, damage to kidneys, liver, blood, tissue changes.”¹²⁵ Probably to avoid the worst acute consequences, the prisoners were given milk every day (this practice is also known from other facilities with production conditions that were harmful to health).¹²⁶

3.5.5 Desiderata of Analyses

Neither the exposure of the workers via the room air nor via the dust generated during production could be sufficiently taken into account by the laboratory analysis. However, these constituted a significant impact factor, which could possibly assume considerable proportions with a prison term of 18 months and almost daily 8-hour disposition. For this reason, statements from affected prisoners are included here: “The room was shrouded in a thick fog of fine plastic dust. And the closer you got to the machines, the thicker this cloud of dust became around the workplace. We had to sweep every evening. There would be about 1/2 cm of fine dust that had settled out of the air. We stood in the Sprela hall in this thick fog of dust and had to unscrew plastic pipes.”¹²⁷ There are several reports about the lack of an extraction device. It is clear that the hard fabrics caused a large amount of dust during machining processes (sawing, turning). A Cottbus prisoner reported “routine X-rays of the lungs”.¹²⁸ They were obviously aware of the dangers of

3.6 List of hazardous substances

dust exposure. It must be taken into account that prisoners were usually exposed to this situation for months to years.

Another potentially pathogenic factor could be the fact that the chips or dust produced briefly heated the plastics to several hundred degrees. The resulting chemical changes are not clear. Various eyewitness reports suggest that chemical changes occurred during the machining process: “The odor was described as a mixture of cooling/lubricating oils and burnt plastic.”¹²⁹

In the event of a fire, which can possibly be used for comparison, irritant or toxic smoke or gases with similar properties to those described above are produced according to current knowledge.

3.6 List of hazardous substances

In the course of the research, a number of other hazardous substances became known with which prisoners came into contact during forced labor without adequate protection. The following overview lists these substances as well as those already known, the prisoners' activities associated with them and the possible damage to health that may have resulted. This is a preliminary list which would have to be verified, expanded and differentiated in a main study.

Acting substances	Activity/source	Possible damage to health
Chlorine	Chlorine electrolysis/amalgam process	Among others damage to the lungs and respiratory organs ¹³⁰
Mercury	Chlorine electrolysis/amalgam process	Shortness of breath, cough, chest pain, chills, nausea, vomiting, bloody diarrhea, mucosal necrosis in the small and large intestine, kidney dysfunction ¹³¹
Sulphur compounds	Coke smelting plants, ironworks	<i>Research still outstanding</i>
Acetaldehyde Acrylic aldehyde Glutaral (Glutardialdehyde) colophony Propan-2-ol Propionaldehyde (Propanal)	Soldering work	Among others irritation of the eyes and skin, chemical burns ¹³²
Fluorine	Aluminum production	<i>Research still outstanding</i>

3.7 Employment of prisoners for Esda in the Hoheneck Prison

Caustic soda cadmium chromium <ul style="list-style-type: none"> • chromic acid cyanides <ul style="list-style-type: none"> • hydrogen cyanide(hydrocyanic acid) • arsenic nickel lead vanadium trichloroethene zinc	Electroplating processes	Chemical burns ¹³³ Among others dermatitis Cancer (esp. lung cancer) (genotoxic and carcinogenic effects) Ulceration in the nasal area Asthma ¹³⁴
Sulphuric acid Nitric acid Hydrochloric acid Hydrofluoric acid Phosphoric acid	Pickling process during electroplating	Irritation of the respiratory tract due to vapors, Sensitization of the skin ¹³⁵
Perchloroethylene	Cleaning work	<i>Research still outstanding</i>
Alkylphenols	Work with hard paper material	Acute: attack of the mucous membranes and skin, effects on the cardiovascular system; chronic: allergic skin diseases; long-term: genetic mutation ¹³⁶
Formaldehyde	Work with hard paper material	Acute: irritant effect on respiratory tract, irritant up to caustic effect on eyes and skin chronic: nervous skin; disorders, damage to kidneys, liver, blood, tissue alteration; long-term: carcinogenic, genetic mutation ¹³⁷

3.7 Employment of prisoners for Esda in the Hoheneck Prison

Another, completely different example of the health-threatening conditions of forced labor in the GDR prison system is textile production in the Hoheneck Prison. In Hoheneck Castle, which was used as a women's prison from 1950, the prisoners initially had to carry out general work such as heating the ovens. Gradually, however, workshops were set up in the prison, creating an infrastructure for the systematic exploitation of the imprisoned women. The companies profiting from the forced labor included the VEB ELMO combine and the VEB Waschgerätewerk Schwarzenberg (a company where washing machines were produced). However, the main focus of forced labor in Hoheneck

3.7 Employment of prisoners for Esda in the Hoheneck Prison

was on the manufacture of various textile products. In addition to the VEB Strumpfkombinat Esda, the VEB Kombinat Oberbekleidung Lößnitz (a company where outerwear was produced) and the VEB Planet Wäschekonfektion Eppendorf (a company where underwear was produced) also had production facilities there. As already explained for the Esda complex, in Hoheneck and the associated work departments production took place primarily for export to West Germany from the 1960s onwards. A large proportion of the female prisoners were sentenced for political reasons.¹³⁸ In the workshops in the north wing of the prison, they mainly had to carry out sewing work. This included converting old police and army uniforms into prisoners' clothing or uniforms for the armed forces of the GDR as well as attaching seams to tights and bed linen.¹³⁹

3.7.1 The health hazards of sewing work

The following section is dedicated to the health risks to which sewing workers are generally exposed. Following a brief description of a typical sewing workplace, the specifics of sewing work as a form of manual activity are explained. This is followed by an explanation of the current occupational health and safety standards for sewing workplaces and a summary of the latest research findings on the health risks that may arise if these are not observed.

Structure of a sewing workstation

A sewing workstation essentially consists of a table with a sewing machine on it and a chair on which the sewer sits while working. At modern sewing machine workstations, the table is height-adjustable so that you can also work standing up. On one side (usually the left) of the sewing machine table, the raw material is placed on another table, in a container or on the floor. On the other side, there is usually a container or table for the finished sewing product. The worker (usually a woman) can usually reach both the raw material and the container or table for the finished product without having to leave her sitting or standing position in front of the sewing machine table.

Sewing work as a manual activity hazardous to health

Sewing work falls under the category of manual activities, which, according to the Federal Institute for Occupational Safety and Health, places high demands on the musculoskeletal system: "Manual work processes are a type of stress with uniform, repetitive movements and exertion of force. The activities are usually carried out in a

3.7 Employment of prisoners for Esda in the Hoheneck Prison

stationary position while sitting or standing. They can cause discomfort and irritate the eyes, tense muscles and wear out the joints. ¹⁴⁰ Two regions of the body are particularly affected by this strain: the upper extremities or the hand-arm-shoulder system and the complex of the spine and legs. The upper extremities are a functional unit consisting of bones, muscles, tendons and nerves, which enable fast and precise actions in a wide range of movement and strength, but are also extremely susceptible to failure. Manual work predominantly strains the smaller muscle groups of the hand-arm-shoulder system, which can easily lead to overloading and incorrect loading. If no effective recovery breaks are taken, this can lead to general complaints such as unspecific neck, shoulder or arm pain as well as clinical pictures such as carpal tunnel syndrome, degenerative joint changes or diseases of the tendons and tendon sheaths. The spine and legs are exposed to increased strain during manual activities such as sewing machine work, as the head, torso and legs must be kept still for precise work. This constant posture leads to painful muscle fatigue, which is avoided by “slouching” and other incorrect postures. This can lead to tension in the lumbar spine and various illnesses. In this context, chronic diseases of the bursa caused by constant strain on the spine are recognized as occupational diseases because of permanent pressure (BK No. 2105), pressure damage to the nerves (BK No. 2106) or hypothenar-thenar hammer syndrome (BK No. 2114).¹⁴¹

3.7 Employment of prisoners for Esda in the Hoheneck Prison



FIGURE: NON-ERGONOMIC SEWING WORKPLACE WITH IDENTIFICATION OF AREAS OF INCREASED HEALTH RISK. **SOURCE:** DGVU: ERGONOMICS AT SEWING WORKPLACES.142

Occupational safety measures for sewing workplaces

In order to minimize the health risks posed by sewing work, one-sided and monotonous strain must be reduced as far as possible and changes of posture to the most favorable body positions must be encouraged. According to a guide published by the German Social Accident Insurance (DGVU), ergonomic optimization of the sewing workstation is essential. The following working conditions must be provided:

- Table surface size and shape adapted to the sewing material,
- Sufficient adjustability of the sewing table (in height and inclination) for adaptation to body dimensions and type of sewing task,
- Use of an armrest,
- good visibility in the working area of the sewing needle,
- good operability of the foot control and other operating elements while sitting or standing,

3.7 Employment of prisoners for Esda in the Hoheneck Prison

- a suitable and adjustable work swivel chair that allows dynamic sitting and is easy to move to the workstation,
- Ensuring freedom of movement for sitting and standing postures,
- Consideration of different working heights when sitting and standing when providing materials,
- Ensuring optimal lighting at the sewing workstation depending on the color and brightness of the material and thread, the activities at the workstation and its surroundings.¹⁴³

In addition to the ergonomic design of the workplace, the following measures are necessary:

- Ensuring a healthy air temperature,
- Separation/shielding of neighboring workplaces with noise emissions,
- promoting the health-oriented behavior of employees by instructing them on the correct use of ergonomic work equipment and practicing their use as well as offering physical training and balancing sports or gymnastics at the workplace.¹⁴⁴

Current state of knowledge

If these and other measures are not taken into account when designing sewing workplaces, negative health consequences are extremely probable. Numerous scientific studies have shown that sewing workers are at risk of numerous illnesses, especially in developing countries and emerging markets with very low occupational health and safety standards. Sewing work has a particularly negative impact on the musculoskeletal system of female workers. Various studies have found that more than half of them suffer from persistent pain in the back (up to 60 percent), neck (up to 60.7 percent) and shoulders (up to 50.2 percent). Muscle weakness was also frequently recorded in the areas affected by work (21.5 percent), general muscular discomfort (68.1 percent), numbness (43 percent) and stiffness (25.9 percent).¹⁴⁵

The causes of musculoskeletal complaints are diverse. The greatest influence is attributed to ergonomic risk factors. Due to unsuitable work equipment (non-adjustable tables, chairs without backrests, material dispensing at an unsuitable height), sewing work is usually carried out in unhealthy postures (bent and twisted). This puts excessive strain on the back and neck in particular. Furthermore, the wrists and elbows are also affected, as the same hand movements are performed over and over again when operating the sewing machine.¹⁴⁶ This excessive strain is exacerbated if sewers work for

3.7 Employment of prisoners for Esda in the Hoheneck Prison

many hours at a time and do not take adequate breaks (3-5 minutes per hour worked). If the workers suffer from pre-existing physical conditions, the risk of neck pain in particular increases.¹⁴⁷

In addition to these physical factors, musculoskeletal complaints also result from the high psychological strain of sewing work. Stress caused by a high workload (e.g. payment per workpiece and not per hour) or a lack of social support from colleagues has a demonstrably negative effect on the musculoskeletal system.¹⁴⁸ The reason for this is that work-related stress increases muscle tension and reduces blood flow to the muscles, thereby reducing both their performance and their ability to regenerate. Micro-injuries and overloading become more likely. In addition, psychological overload also has a negative effect on posture, thus exacerbating the physical risk factors.¹⁴⁹

In addition to ergonomic risk factors and stress, the environmental conditions in sewing factories, particularly the air temperature, can also have a negative impact on the health of workers. Temperatures that are too cold during work trigger the body's protective reflexes, such as hunching over, which increases muscle strain, particularly in the back and neck. Temperatures that are too warm also lead to increased stress and faster fatigue, as the body has to use additional resources to regulate body temperature.¹⁵⁰

The physical, psychological and environmental factors listed do not only damage the health of sewers with regard to the musculoskeletal system. A meta-study from 2021 lists numerous other complaints caused by sewing work. In addition to gynecological problems (including cervical cancer, infertility), neurological complaints (including headaches, tremors), respiratory problems (including asthma), digestive problems (including hyperacidity, heartburn), these include cardiovascular problems and eye problems.¹⁵¹

How high is the risk of sewers suffering from one or more of these health complaints in the long term? A study from 1989 came to the conclusion that the illnesses typical of sewers are not just acute or short-term complaints. Rather, female workers at sewing machines are also affected by more long-term physical limitations than a comparable group of female workers.¹⁵² The occurrence of long-term health problems, especially to the musculoskeletal system, depends above all on the duration of sewing work. For example, the probability of sewers suffering from chronic neck and shoulder problems increases from 1.8 or 1.5 (for a period of employment of up to 7 years) to 2.5 or 4 (for a

period of employment of 7-15 years) to 3.4 or 6.8 (for a period of employment of more than 15 years) compared to the normal population.¹⁵³

3.7.2 Description of the real production conditions, combined with prisoners' reports of injuries

The working conditions of the female prisoners used in textile production in Hoheneck Prison were harmful to their health in several respects. On the one hand, this concerned the environmental conditions. Former inmates reported not only permanently high levels of dust due to inadequate ventilation in the workrooms, but also extremely cold temperatures in winter and unbearable heat in summer. A considerable heat load of up to 60° C room temperature came from the so-called hot molders, who were put up in the same hall and were used to shape nylon stockings. This work, which was described as harmful to health, cannot be discussed here.¹⁵⁴

Secondly, the sewing stations were completely inadequately equipped.

Despite the fact that height-adjustable chairs had been necessary for the sewing work, female prisoners had to carry out their work on simple, straight, hard and unsprung wooden chairs or non-adjustable swivel chairs.¹⁵⁵ As the use of cushions was not permitted,¹⁵⁶ the inmates tried to find the chair that best suited their height by trying out different workstations and securing it for themselves from their fellow inmates at the start of each shift.

However, as these attempts were not necessarily successful, prisoners had to operate their sewing machines in a bent position for many hours.¹⁵⁷

Despite these conditions and the poor condition of the outdated sewing machines, very high and in many cases unachievable work standards were imposed on the women. In 1988, for example, the prisoners were supposed to assemble 287 bed covers or 674 pillows at the side seams in a single shift. If the women did not reach this quota, they were banned from shopping, receiving parcels or visiting or had to rework the missing pieces in their free time. In addition, the forced laborers were hardly allowed to take breaks. Even going to the toilet during working hours was regulated or at times completely forbidden by the guards.¹⁵⁸

The negative consequences of the working conditions in Hoheneck Prison were diverse. The high standard requirements resulted in enormous psychological pressure, which not only had a negative impact on the women's mental health, but also on their physical

3.7 Employment of prisoners for Esda in the Hoheneck Prison

well-being. Contemporary witnesses reported symptoms such as palpitations, insomnia, loss of appetite and dizziness. As a result of the unergonomic conditions, the prisoners often suffered from pain in their torso and upper body after a short time. This usually affected the back and spine, but in many cases also the neck, shoulders and arms. The longer the shift lasted, the more severe the pain became. In some cases, these symptoms were also accompanied by dizziness and migraines.¹⁵⁹ While some of the former forced laborers made a full recovery after the end of their imprisonment and the musculoskeletal complaints in particular disappeared, others continued to suffer from pain.¹⁶⁰

3.7.3 Summary

Looking at the working conditions in the sewing room at Hoheneck Prison from the perspective of scientific studies on the health effects of sewing work in developing and emerging countries, a causal link between the physical complaints reported by former Hoheneck women and the prison work at the time is likely. On the one hand, it should be noted that the risk of chronic damage to the musculoskeletal system from sewing work only increases with longer periods of employment. On the other hand, the physical and psychological strain on the prisoners in Hoheneck was extremely high despite their comparatively short period of employment of only a few months or years. The workers were not only exposed to extremely adverse external conditions (cold, heat, dust) and had to carry out their work with completely unergonomic work equipment (chairs, tables), but were above all exposed to extreme stress due to the extremely high standard requirements and the threat of sanctions in the event of non-compliance. Depending on the physical and mental constitution of the individual prisoners, this constellation could have led to permanent damage. It is therefore urgently necessary to systematically examine the former prisoners for the wide range of possible health problems caused by sewing.

4 Conclusion and outlook

This preliminary study forms a basis for a longer-term main study. On the basis of the collected findings, both subject areas, supply chains and health impacts, should be investigated systematically and as comprehensively as possible. The resources required for this include the personnel costs for two research assistants (TV-L E 13) and two

3.7 Employment of prisoners for Esda in the Hoheneck Prison

student assistants, as well as travel costs for archive research. It is estimated that the project will take around 30 months to complete.

With regard to thematic area I, the supply chains identified in the preliminary study are to be supplemented by any missing parts or, with regards to other producers or end customers. In addition to state archives, company archives would also have to be located and analyzed.

In particular, there is evidence that forced labor in GDR prisons and in external work departments concerned large parts of the GDR's planned economy.¹⁶¹ It can therefore be assumed that more products and product supplies flowed into GDR export goods than previously assumed and documented. Within the Esda and ELMO complexes alone, further supply chains for certain brands and products from the GDR could be reconstructed. According to current knowledge, it can be assumed that the VEB Elektromotorenwerk Hartha, for example, supplied miniature motors for West German home entertainment electronics. The toy, furniture and chemical industries of the GDR are still insufficiently researched fields of forced labor and represent a profound desideratum for research. A general difficulty lies in the lack of access to the export and foreign trade documents of both German states, which are important for supply chains to the Federal Republic of Germany. In addition to the reports of former forced laborers, the (undoubtedly problematic) contemporary testimony of the industrial, combine and company nomenclatura as well as West German decision-makers should also be included in the investigation.

With regard to health effects, it is planned to investigate all hazardous substances identified by the end of the preliminary study with regard to their effects on the health of those affected. To this end, wide-ranging research would be conducted into the working conditions under which the respective substances were released. Similar to the procedure for chronic mercury poisoning and chromium VI compounds, the research literature and eyewitness accounts would have to be evaluated and the relevant archives at federal, state and, if necessary, district level would have to be searched for relevant records from the GDR authorities. In the case that no toxicological studies are available on individual substances, it is planned to interview occupational physicians from relevant state occupational safety institutions or research facilities. In addition to the issue of toxic substances, there are plans to investigate consequential damage to health resulting from disproportionately heavy physical work carried out without the usual aids. In addition to the clothing industry, other sectors such as the German Reichsbahn (German

3.7 Employment of prisoners for Esda in the Hoheneck Prison

railway company) and lignite mining should also be examined. In turn, the working conditions would first have to be investigated and then compared with the current findings of occupational health and safety and medicine with regard to their health consequences. As a result, the main study would provide a comprehensive overview of the exploitation of political prisoners in the GDR for the benefit of the German-German trade based on the supply chains for a large number of products. At the same time, it could provide information on the extent to which there are causal links between forced labor and the long-term health impairments of those affected. The project could thus create a scientific basis for realigning the state support and compensation system for those affected and, in this way, make the announcements by the federal government in the coalition agreement¹⁶² a reality.

Attachments

Attachment 1

Export order to Steiniger for Albrecht Einkauf oHG, dated 15.09.1988.
Source: SächStAC, 31362/ EA 5833, n.p. (Saxon State Archives)

Export-Auftrag

File mit umrandeten Nummern bitte in allen Dokumenten und Schriftverkehr angeben

AHB-Kontor (9) 43611 / J. Vorg.-Nr. (9) 91209 / Zahl. Vorschr. (9) 64 / Datum

Exp.-Vertr.-Nr. / Imp.-Vertr.-Nr. / Rauf.-Autr.-Nr. / Abk.-Nr./Anr.-Jahr / Imp.-Lk.-Nr. / Käufer

1989 / Pos.-Nr./Unterl. 1/2 / gültig bis

Verkäufer: **TEXTILCOMMERZ**
eigeneiger Außenhandelsbetrieb der DDR
DR - 9040 Karl-Marx-Stadt, Bahnhofstraße 4-6, Postfach 61
Telefax: 64 50 - Telex: 320 - Drahtwort: teccoa
Verbindung: Staatsbank der DDR - Konto-Nr.: 6211-18-268
GHA u. Konto-Nr.:

Frachtempf.:
Fa. R. Steiniger GmbH
Boschstr.
D-5024 Pulheim

Käufer:
Fa. Albrecht Einkauf oHG
Eckenbergstr. 16
D-4300 Essen 13 BRD

Verpackung:
LKW durch
EB Deutrans
auf EUR-Austausch-Paletten

Transportart: Thalheim

Verpackungsmittel: LKW durch
EB Deutrans
auf EUR-Austausch-Paletten

Lieferbedingung: Frachttirei Bestimmung
station einschl. Verpackung, Versicherung
von Haus zu Haus deckt Käufer

Zahlungsbedingung: kein Bankinkasso

Lieferterminus: s. unten
Terminänderung lt. Abruf
vorbehalten

Avisierung an Käufer/Frachtempfänger durch Lieferere:

Bezeichnung und Nummer	Anzahl und Art der Verpackung - Warenbezeichnung - Code	Gewicht brutto	Kubatur m ³
	2000 Paletten	280.000 kg	
		104.480 kg	

Bezeichnung (Beschreibung) der Ware	Code	Menge u. Einh.	Preis in	
			Stück	VE gesamt
Damenstrumpfhosen nahtlos 20 den Ferse, ohne Zwickel Artikel 638 127		6.400.000	-,68	4.352.000,--
(Nettopreis für Kunde -,65 VE)				

Verpackung: "Sayonara" - Briefverpackung
Größen und Farben bekannt

Termine:	31.1.	28.2.	31.3.	30.4.	31.5.	30.6.	31.7.	31.8.	30.9.
	320	560	560	560	560	560	560	560	560
	31.10.	30.11.	31.12.89						
	480	560	560	TStück ab Werk					

Leistungsbedingungen: Zahlung durch Überweisung des Rechnungsbetrages
an Textilcommerz, Konto Nr. 6835-11-8025, bei der Deutschen
AußenhandelsbankAG, Berlin, innerhalb von 14 Tagen reinnetto nach
Empfang der Ware durch den Spediteur.

Vermerk: WF 3fach, Packliste 2fach

Der BZG ist beim GKP Herleshausen zu hinterlegen und auf der
Reise des Bl.4 durch unterschriebenen Vermerk zu bestätigen.

Konto der Deutschen Außenhandelsbank AG, DDR - 1080 Berlin

in
wegen

Textilwerke Esda
Betriebs-
Pulheim

12. Der Verkäufer verkauft dem Käufer o. a. Ware/Leistungen auf der
Grundlage der in diesem Vertrag festgelegten Bedingungen und
erteilt dem Lieferer den Auftrag zur Lieferung.

13. Der Export-Auftrag besteht aus 1 Blatt
Karl-Marx-Stadt, den 15.9.88

den
07578010/6-22100

den
28.11.88
(Prägestempel und Unterschrift)

AHB

Textilcommerz
Unterschriften
BN 9009069 9

6 % Provision für
Fa. Steiniger

07

PA 2094
Refinanzierung
Verpackungskosten
ca. 14.000,-- M

Industriepreis - IAP/BP
Preis per Einheit Gesamt
Artikel 638 127
6.400.000 Paar
BP: 2,58 = 16.512.000,--
+ Preisverf.
-,34825 2.228.800,--
+ 2 % GS 330.240,--
BP ges.: 19.071.040,--
IAP ges.: 77.632.000,--

Attachment 2

Delivery note/receipt, dated 11.05.1989.

Source: SächStAC, 31362/EA 5833, n. p. (Saxon State Archives)

Thalheim, den 11.05. 1989

Lieferschein
Empfangsschein Nr. 048669

von/für Versand Werk 1, Thalheim

für/von Versand Werk 3, Auerbach

Wir empfangen EA 91209 - Firma Albrecht, Essen
Sie empfangen

10 Paletten Damenstrumpfhosen
Art. 638127

brutto: 1500,- kg

worüber ich – wir – hiermit quittiere(n)

Unterschrift

Unterschrift

III/6/13 133/11 1 KIG 8/81

Attachment 3

Dispatch preparation for EA 91209, dated 28.04.1989.

Source: SächStAC, 31362/EA 5833, o. P. (Saxon State Archives)

363

Thüringen, am 28. 4. 1989

Sendeschrift: Wappenstein

EA 91209 TL: _____

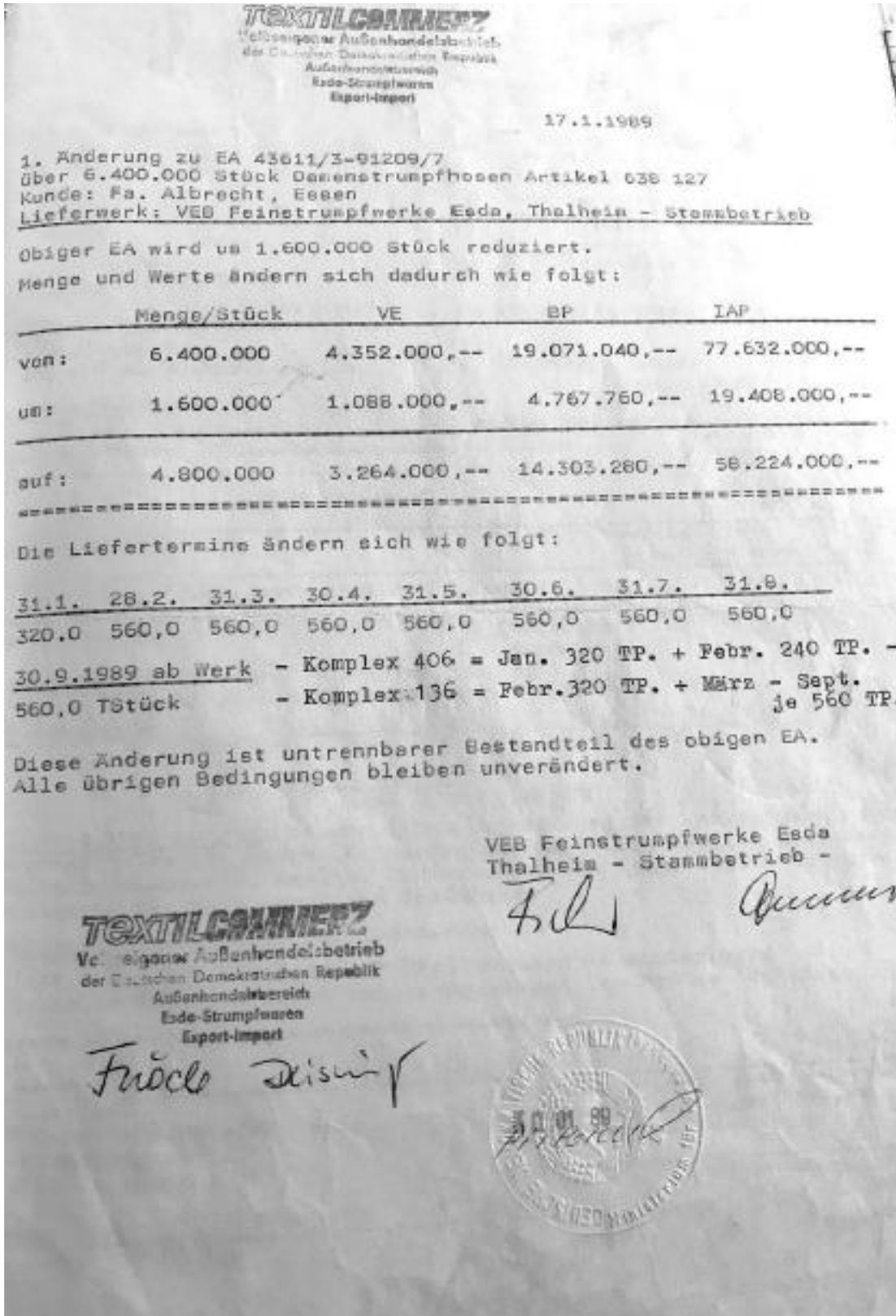
299

Titel	Vahl	Farbe	Gesamtmenge	I	II	III
127	L/II	543-552	<u>246.400</u>			
Komplex 136						
K						

Verlag und Korb der Deutschen Buchvertriebsanstalt AG, 10245 Berlin

Attachment 4

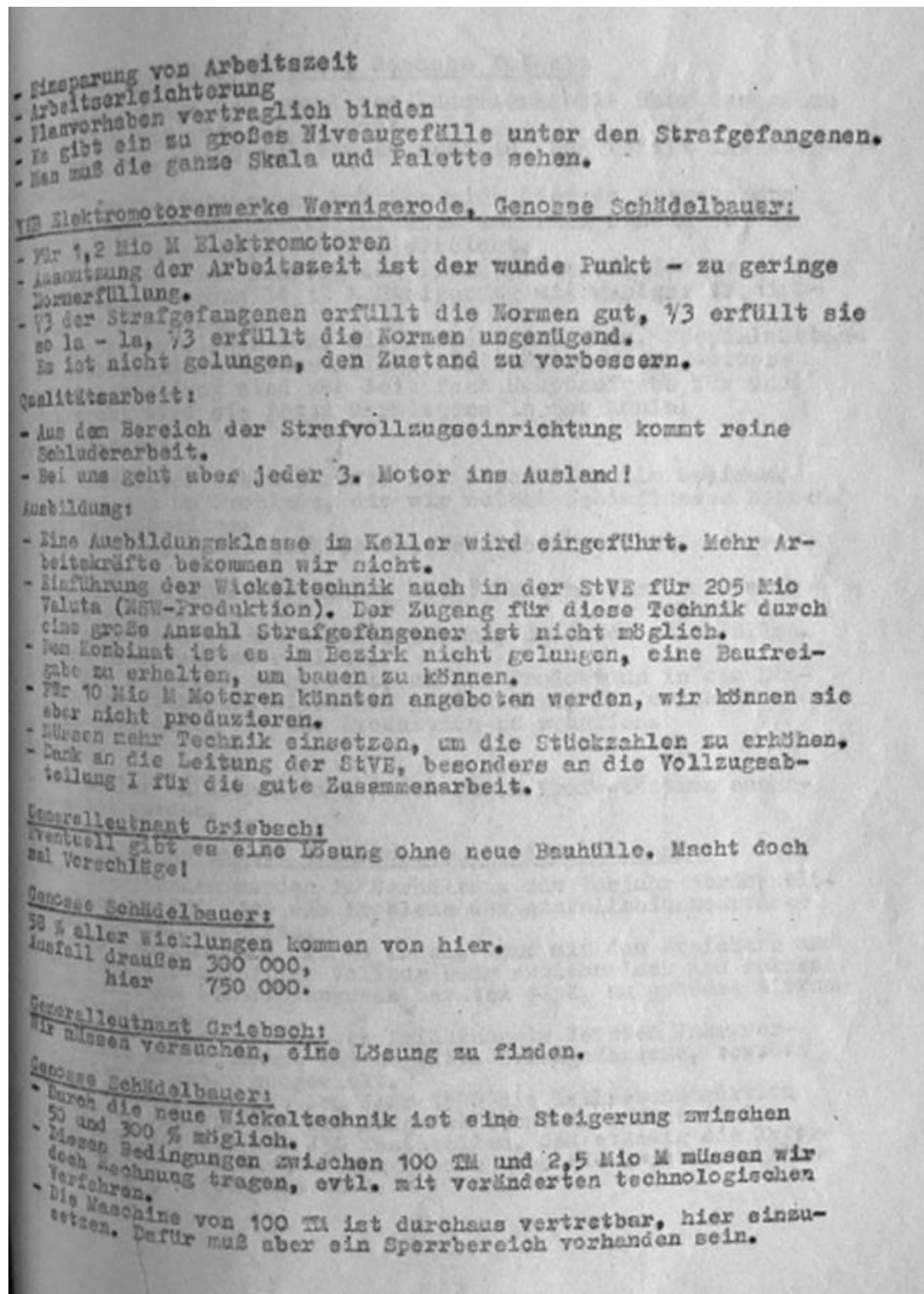
Extract from letter from TextilCommerz to the company VEB Feinstrumpfwerke Esda, dated 17.01.1989. Source: SächStAC, 31362/EA 5833, o. P. (Saxon State Archives)



Attachment 5

(Extract) "Minutes of the consultation between the head of the BDVP Potsdam and the directors of the parent company of the AEB (companies where prisoners had to work) in the Brandenburg Prison on 13th March 1986", dated 01.05.1986

Source: Brandenburg State Archives, 471/BDVP PdM 1723, o.P.



Attachment 6

(Extract) Minutes of the business trip to the Federal Republic of Germany, undated [June 1988].
 Source: SächsStAC, 31000/297 2, o. P. (Saxon State Archives)

17.6.88 f. Wico 440

TITE, TV

Das Resultat der vom 6.6. bis 11.6.1988 durchgeführten Dienstreise nach der BRD wurden in Übereinstimmung mit der Fa. Wittenbecher folgende Ergebnisse erzielt und folgende Maßnahmen vereinbart:

Fa. Scheppach Ichenhausen

1. Häckslermotoren

- Juni-Quote kommt pünktlich von Grünhain techn. Ausführung gemäß Aktennotiz 26.5. Telex Elmo Grünhain v. 3.6. nicht möglich
- 500 Lüsterklammern für Juni-Quote werden von Scheppach beige stellt
- neuer Auftrag für Sept/Nov. 88 - Wert ca. 300.000 Termine i. D.
- für Schaltarmontage in Grünhain prüft H. Neubert Technik Material DM 2,50 (mit 3,-- angehen, da noch Verhandlung, 10 % Bauer berücksichtigen)
- bei DQMA z.Teil Verwechslung der Bezeichnung der Anschlußstutzen
- einlige Bremsen lösen nicht

2. Absaugmotoren EBM 63 G2

- aus techn. Gründen storno des laufenden Auftrags in beidseitigem Einvernehmen
- EMG gibt am 13.6. Nachricht, was angearbeitet
- 100 Stück 240 V, 50 Hz müssen am 29.6. bei Scheppach angeliefert werden

3. Nallsiebmotoren EBM 63 K4 ~~4903-3~~ SJ33

- Abwicklung über Bauer
- Bauer an Scheppach 53,--
- Wico an Bauer 47,--
- EMG an Wico 47,--
- Liefertermin D-Serie 100 Stück; müssen am 29.6. angeliefert werden

30.6. 100x
4903-3

4. Sägemotoren

- Angebot DQMA 80G2/EBMW 90L läuft noch (10.000 Stück)
- Angebot EBM 80K2/G2/DQMA 80K2 analog Koberausführung angeblich zu teuer, Forderung Scheppach - DM 80,-- nicht realisierbar
- zunächst zu Häcklerpreisen angeboten
- Bauer prüft kurzfristig vorliegende Wettbewerbsangebote bei Scheppach

Problem:

- Koberpreise
- Häcklerpreise Scheppach
- 10 % Spanne Bauer

Attachment 7

Message from WiCo to ELMO Grünhain, dated 16.08.1988.

Source: SächsStAC, 31000/297 2, o. P. (Saxon State Archives)

*
78087 vemgr dd
8579153a wic d
16/aug/88 11:12h
dok.-nr., kennung: 7289x, matwi/6498
datum, uhrzeit: 16.08.88, 10:52

an : elmo gruenhain, z. hd. herrn boerner
von : wittenbecher + co gmbh, 4300 essen 18, ringstr. 48

betr : rueckladung an ihr werk

bei antwort bitte code angeben : yxx matwi

gestern hat lkw mit kennzeichen ty 65-91 folgende ware ueber-
nommen:

- 213 reklamierte motoren von kober
 - s. unser fs 7009x vom 05.08.88
- 32 reklamierte motoren scheppach
 - s. unser fs 6944x vom 03.08.88
- 1 reklamierter motor ebm 63 g2, b3/b14
 - s. unser fs 6283x / rekl. bauer

✓ 1.700 dioden fuer auftraege pollmeier

✓ 1.000 temperaturfuehler s.01.135.05.300 gelb
(im lsch sind 888 stueck aufgefuehrt)
diese bitte fuer bestellungen kober ver-
wenden, wenn in den zeichnungen "gelb"
vermerkt ist

✓ 1.314 temperaturfuehler s.01.135.05.300/200/300 doppel-fuehler
fuer ds-motoren scheppach

✓ 2.130 temperaturfuehler s.01.140.05.300 (schwarz)
- diese fuer bestellungen scheppach verwenden, da hier
kennzeichnung erfolgt.

erbitten ihre bestaetigung bei wareneingang.

mfg
wico

milling/dal

nnnn
+++*
78087 vemgr dd
8579153a wic d

AA

AK

AAO

Attachments

Attachment 8

Stamped plan of a „Single-phase standard motor“ from Scheppach.
 Source: Sächs-StAC, 31000/ 297 2, o. P. (Saxon State Archives)

Anschlußfläche des Flansches liegt mit Wellenbund in einer Ebene
 Lufteintritt
 Drehrichtung: rechts
 Die Maßangaben sind nur verbindlich mit der Auftragsbestätigung.
 - 4. März 1938

JOSEF SCHEPPACH
 Maschinenfabrik GmbH & Co.
 Günzburger Straße 59
 85794 Scheidegg
 08.04.88 / v. A. / W.

2) Masse ohne Kondensator
 1) Mindestabstand für Lufteintritt

Typ	b ₁	b ₁₀	b ₆₂	b ₃₁	b ₃₂	d ₁₀	d ₂₀	d ₂₂	d ₂₄	d ₂₅	d ₃₀	d ₃₃	d ₃₅	r ₃₁₅	h ₅	h ₅₁	l ₇	l ₁₀	l ₂₀	l ₂₁	l ₃₀	l ₃₄	l ₉₀	l ₁₂₀	Flüßfeder TGL 9500	Masse K ₂ 2pol	Masse K ₂ 4pol					
EBM 80	K2-SX 56 G2-SX 56	6	98	86	86	86	86	86	86	86	100	M 6	M 6	120	80	157	Fy 11	Fy 16	80°	21,5	228,5	40°	40°	3°	12°	297	130	16°	80°	86x8x28	13,7	13,7

VEB Elektromotorenwerk Grünhain
 Betrieb des
 VEB Kombinat Elektromaschinenbau

Einphasen - Standardmotor
Kurzschlußläufer
 mit Betriebskondensator, mit Bremse, Temperaturwächter, Sonderwellenende
 Bauform: IM 3609 TGL RW 246, Schutzgrad: H49, Außenlüfter IP 20 TGL RW 247

Gezeichnet: 23.2.88
 Geprüft: 24.2.88
 Name: Pickett
 Normgröße: M 610.32-SX (2.88)
 Ersetzt:
 Ersetzt durch:

IP 54

Attachment 9

Note Krause [ELMO] to Bartel [WiCo], dated 21.06.88.

Source: SächsStAC, 31000/297 2, o. P. (Saxon State Archives)

2-1.6.88

FS Wico
2. H. Herrn Bartel - Bitte sofort auf dem Tisch -

Betr.: Auftrag des Fr. Seppach

Um den gewünschten LT auch nur ~~etwa~~ ^{annähernd} halten zu können,
müssen wir heute mit der Fertigung beginnen. Aus diesem Grunde
wurde auch entschieden, DDR-Lüsterklammern zu verwenden.
Entscheidung wurde in Absprache und mit Zustimmung
unseres Betriebsleiters, Herrn Hellwig, getroffen.

mfq
ETG
Krause

Krause

Attachments

Attachment 10

(Extract) from consultations after a visit of Mr. Hellwig (director), dated 16.06.1988.
Source: SächsStAC, 31000/297 2, o. P. (Saxon State Archives)

qa 0115060 - dt
*
115060 etz dd
78087 vemgr dd 1132 16.06.88 14.52 wa

etei
k 24 - kolln. krause

sandten folgendes fs an fa. wittenbecher/brd

auftrag fa. scheppach 5903

in auswertung des besuches unseres betriebsdirektors. herrn.
hellwig. bestaetigen wir wie folgt:

1.200 ebm 80 k 2-sw 56	liefertermin: 600x september 88 600x november 88
1.000 ebm 80 q2-sx 56	500x september 88 500x november 88
1.200 doma 80 k2-sa 56	600x september 88 600x november 88

m f g
veb elmo grue nhain
friedrich

*
115060 etz dd
78087 vemgr dd

Attachment 11

(Extract) „Measures for evaluating the LFM (delivered quantities)“, dated 11.04.1988.
Source: SächsStAC, 31000/297 2, o. P. (Saxon State Archives)

- 5 -

11. Schweiz/Rüetschi

11.1. Für Ende März ist eine Maximallieferung der Motoren EAM 80 G 4 für Fa. Sutter vorzunehmen.

V: AA T: 31. 03. 88

11.2. Bei der Montage vorgenannter Motoren ist besonders Augenmerk auf den Einbau der Fliehkraftschalter zu legen.

V: F/Q T: während der Montage

11.3. Von EMG ist zu prüfen, ob Unterlagen für die Herstellung eines Prüfgerätes zum Test von Fliehkraftschaltern an Rüetschi übergeben werden können.

V: T/A T: 15. 04. 88

11.4. Die Transporttechnologie für den innerbetrieblichen Transport ist dahingehend zu ändern, daß Erschütterungen weitestgehend ausgeschlossen werden.

V: T/F T: 15. 04. 88

11.5. Bei Motoren der Typen EAM 80 G4-SJ³³ und EAM 80 G 4-SL³³ ist in der Fertigung darauf zu achten, daß auf das Wellenende kein Schutzlack mehr angebracht wird.

V: AAO/FF T: 31. 03. 88

23/88 v. 15.4.88
TE, QF, FL, TR, AV, AHO

11.6. Überweisung von 2 622.80 Sfr an AHF/EM zur Weiterleitung an Rüetschi für "Umbauten und Modifizierungsarbeiten".

V: AA T: 15. 04. 88

11.7. Überweisung von 900.- Sfr an AHF/EM zur Weiterleitung an Rüetschi für das "Umkleben des Anlaßkondensators auf Wunsch des Kunden".

V: AA T: 15. 04. 88

11.8. Für die an Rüetschi gelieferten Schredderantriebe vom Typ EBM 80 K 2 sind nochmals folgende Überprüfungen vorzunehmen:

- wurden tatsächlich wie vom Kunden gefordert 2 RS-Lager eingesetzt? ja
- wurde am D-Lagerschild der Zentrierend abgedreht (wie gefordert) oder nicht? ja

Nach erfolgter Überprüfung ist im Werk eine Auswertung vorzunehmen und eine Stellungnahme an Rüetschi zu senden. 2f

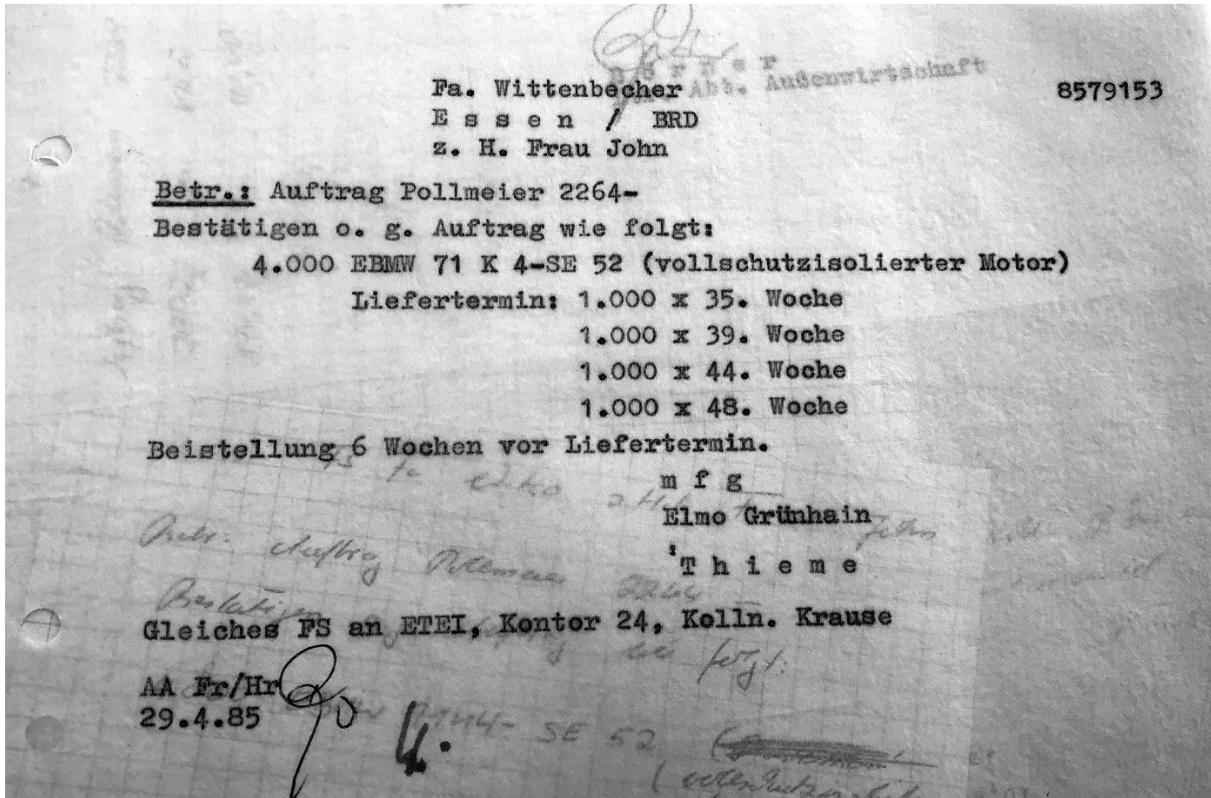
V: AK/AAO T: 15.04. 88

- 6 -

Attachment 12

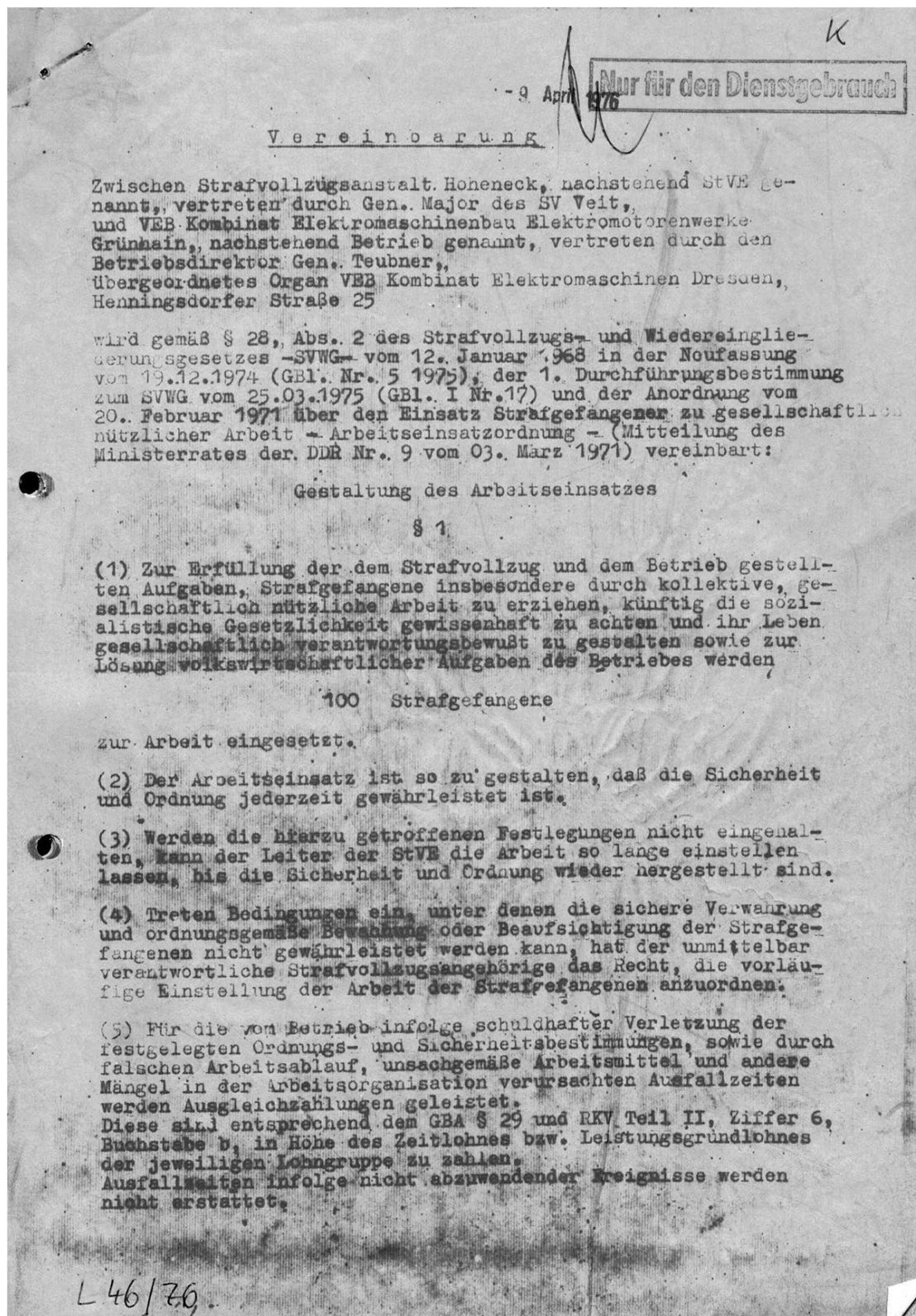
„Order Pollmeier 2264“, dated 29.04.85.

Source: SächsStAC, 31000/297 2, o. P. (Saxon State Archives)



Attachment 15

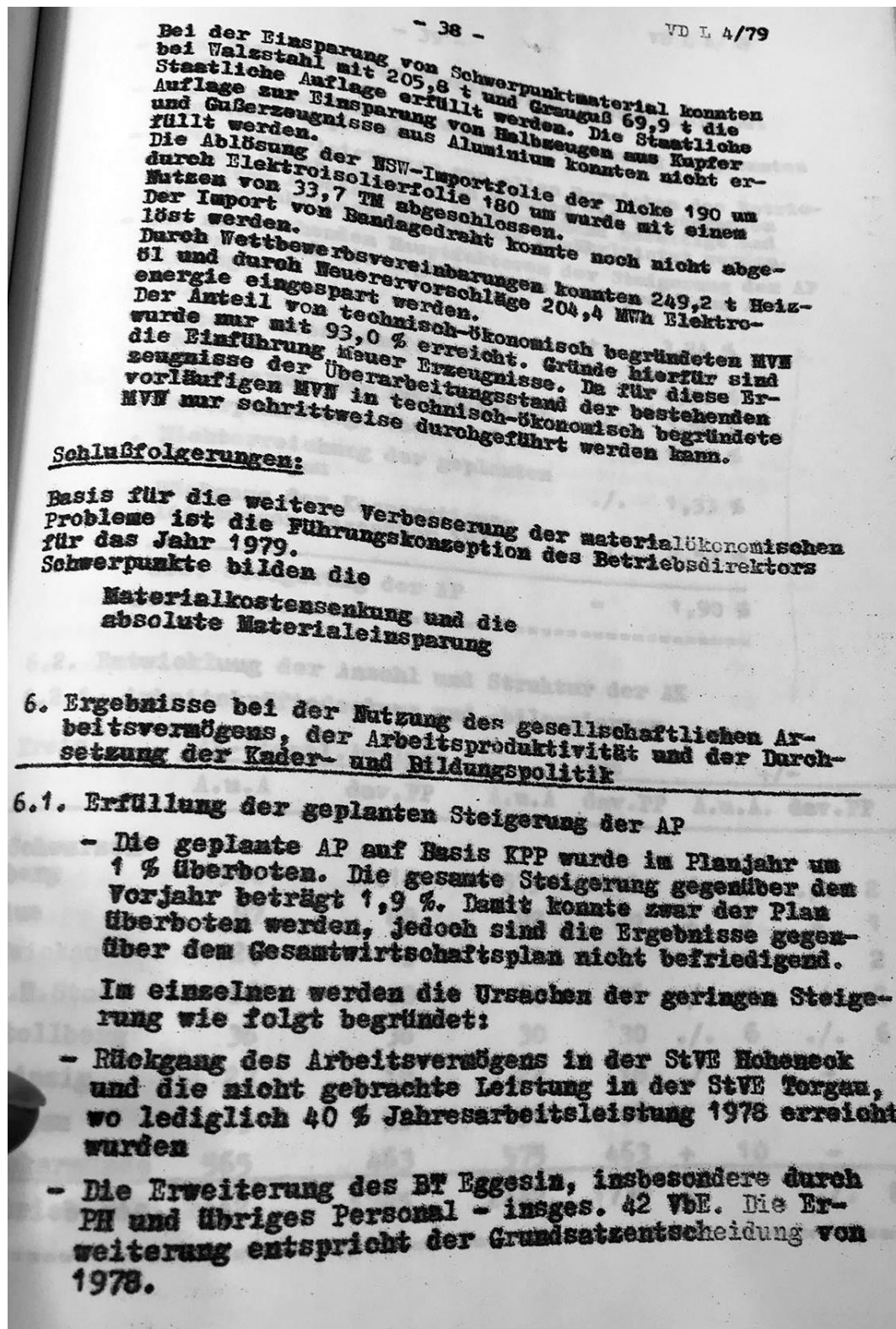
(Extract) Agreement between Hoheneck Prison and VEB ELMO Grünhain, dated 09.04.1976.
Source: SächsStAC, 31000/192 3, o. P. (Saxon State Archives)



Attachment 16

(Extract) „Annual business report 1979“.

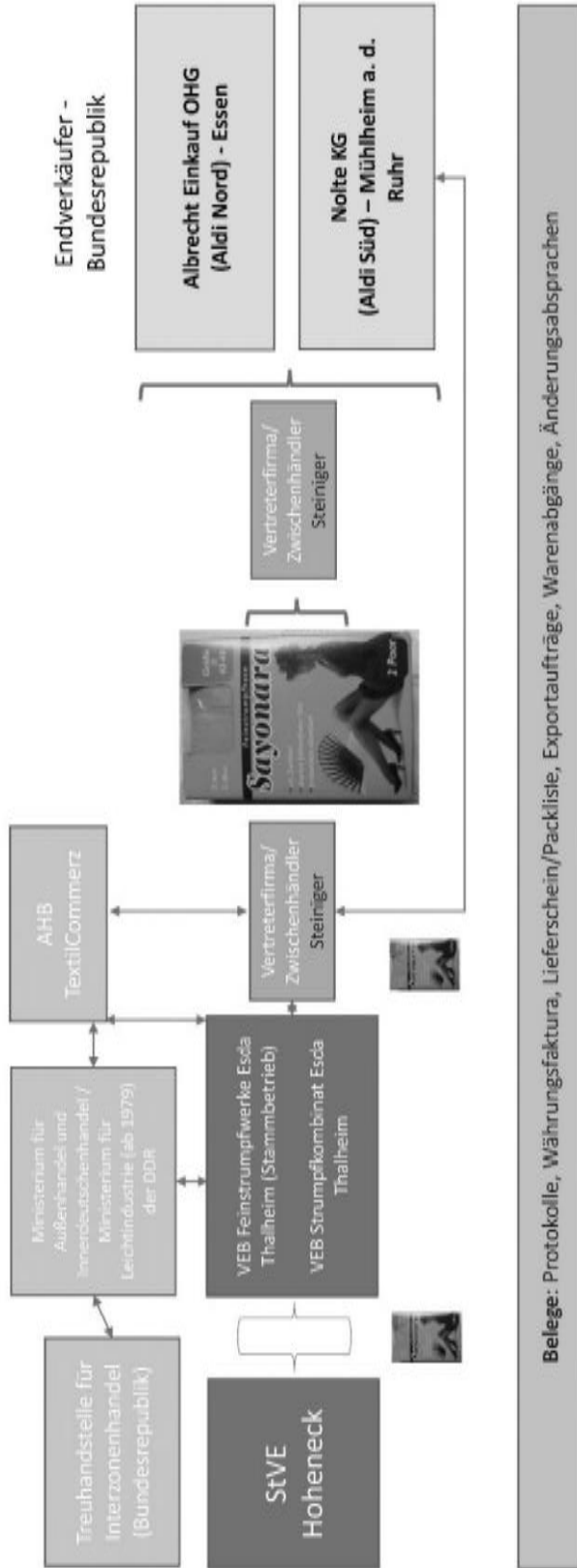
Source: SächsStAC, 31000/307 5, o. P. (Saxon State Archives)



Attachment 17

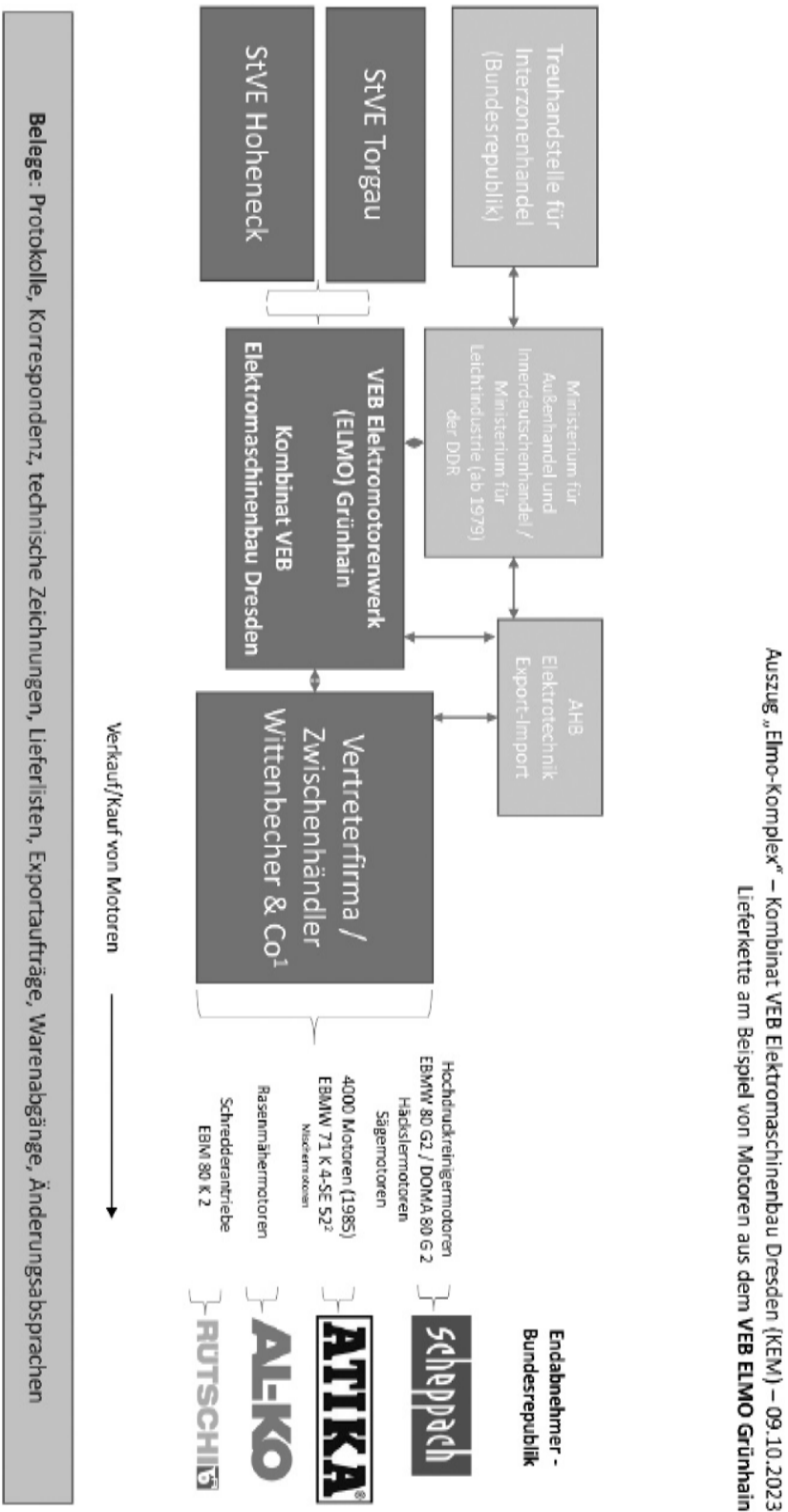
Extract „Esda-complex“ - Supply chain using the example of women's tights “Sayonara”

Auszug „Esda-Komplex“ – VEB Feinstrumpfwerke Esda Thalheim – 09.10.2023
Lieferkette am Beispiel Damenfeinstrumpfhose **Sayonara**



Attachment 18

Extract „ELMO-complex“ – supply chain using the example of motors from VEB ELMO Grünhain

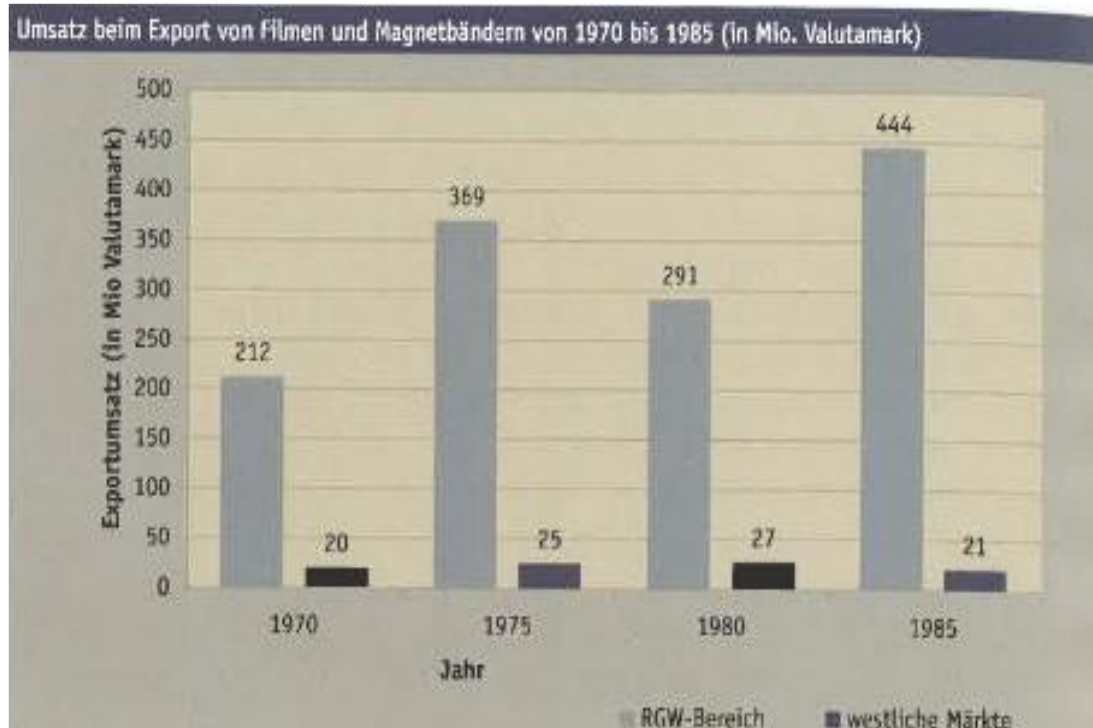


¹ Wittenbecher & Co = Generalvertretung – ELMO-Produkte in BRD – Koko-Komplex – Belege: u.a. BArch, DL 226/2554

² EBMW 71 K 4-SE 52 = Einphasenmotor [E], Betriebskondensator [B], Motor als Widerstandläufer [MW], 71er Achsenhöhe; Schutzgrad [K] – Sonderausführung [SE]

Attachment 19

Export turnover of the photochemical combine, including the magnetic tape factory 1970 - 1985. Source: Karlsch: Die AGFA-ORWO-Story, S. 174. (The AGFA-ORWO Story, p. 174)



Attachment 20

Notification of complaint about audio cassettes K 60 CrO₂ by the West German company Magna dated 18.8.1982.

Source: Preparation material for the complex report 1983, in: AIFW, GD 1796, o. P.

2. Sonstiges

2.1 Fallmeldung zu Exportreklamation MbK K 60 CrO₂ hifi (neutral)

- Am 18. 8. 1982 wurden von der Fa. Magna/Westberlin 39,260 Stck K 60 CrO₂ hifi (neutral) als Reklamation angeliefert. (Anlage 5)

Das entspricht einem wertmäßigen Umfang von 657,605 TM (IAP bzw. 19,63 TVM.

Als Reklamationsgrund werden angegeben:

- Einschnitte im Vorspannband
- Knicke im Vorspannband
- Beschädigungen der Bandkante
- fehlerhafte Klebestellen(schief)
- eingerissene Klebestellen
- Kassetten verölt

Reklamiert wurde damit die gesamte Teillieferung Nr. 5 gemäß Vertrag Nr. 22 842/21 099

- Wer ist beauftragt mit Bearbeitung der Reklamation?

- Welche Arbeitsaufträge wurden ausgelöst?

- Durch wen und wo soll die Aussortierung vorgenommen werden?

- Bis wann ist die Reklamationsbearbeitung abgeschlossen?

- Wie soll die Reklamation bei Berechtigung abgeschlossen werden?

F.: Der abgeschlossene Wirtschaftsvertrag ist auf Qualitätsfestlegungen zu überprüfen (statistische Qualitätskontrolle, p -Wert)

V.: BD MBF, in Abstimmung mit GR, SL TKO

T.: 17. 9. 1982

F.: Die Reklamationsbearbeitung ist bis 30. 9. 1982 abzuschließen.

V.: BD

T.: 30. 9. 1982

F.: Durch BD MBF sind die materielle Verantwortlichkeit zu überprüfen und disziplinarische Maßnahmen einzuleiten.

V.:BD

T.: 30. 9. 1982

F.: Durch BD sind Maßnahmen festzulegen, die eine Wiederholung derartiger Reklamationen vermeiden.

V.:BD

T.: 8. 10. 1982

Attachment 21

*Proof of (numerically small) exports of cassettes K 60 LN during the first 8 months in 1981.
Source: Letter from Magnetbandfabrik to Fotochemisches Kombinat, dated 12.09.1982, in:
AIFW, GD 1792, o. P.*

- 4 -

Insgesamt sind im Jahre 1982 im VEB MBF Dessau 677 Mn Kassettenband zu produzieren. Davon für den VEB CFW Prennitz 473 Mn,
VEB DS Berlin 204 Mn

Per 31.8. wurden ausgeliefert :

Davon für den VEB CFW	451 Mn
VEB DS	319,7"
	131,3"

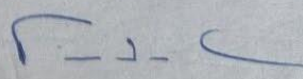
Die Produktion von Kassetten K 60 LN erfolgte im VEB MBF Dessau 1982 ausschließlich für den Export.

Insgesamt wurden 1982 per 31.8. 1.094 T Stück = 98,5 Mn produziert.

Zur Auslieferung kamen per 31.8.1982 843,3 T Stück = 75,9 Mn, die an folgende Abnehmer exportiert wurden:

UdSSR	0,4	T	Stück
Rumänien	496,5		"
Ungarn	40,0		"
MVR	80,0		"
Albanien	5,0		"
Vietnam	19,7		"
SPRJ	165,0		"
Korea	17,7		"
Frankreich	5,0		"
Schweden	2,0		"
Forum	10,0		"
Beroflex, WB	2,0		"

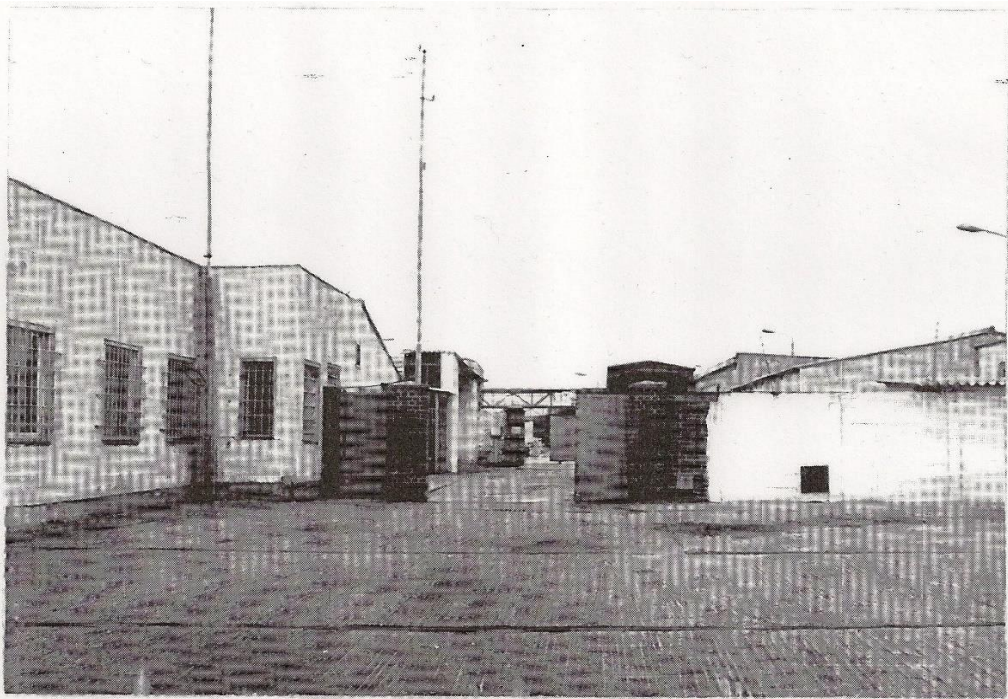
Exportreklamationen wegen Tonhöhenschwankungen liegen nicht vor.


 Kaduk
 Betriebsdirektor

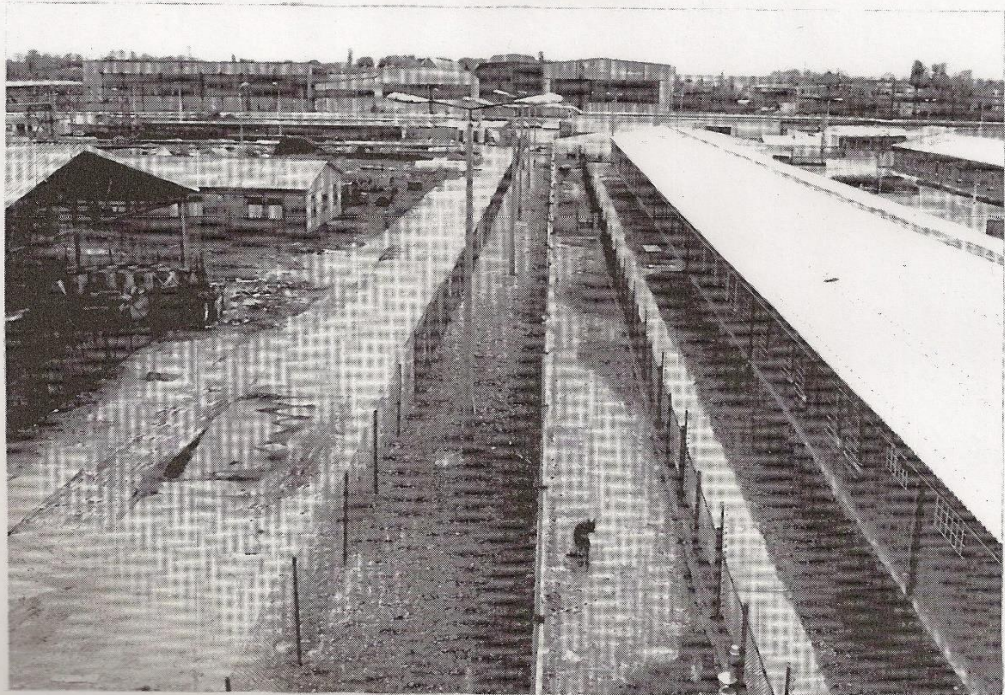
Attachment 22

View of the labor camp directly adjacent to the magnetic tape factory. The upper picture dates from 2008, the lower one probably from the 1980s.

Source: Manfred Buchta's collection.



Blick auf Haupteingangstor 1 mit Wachgebäude

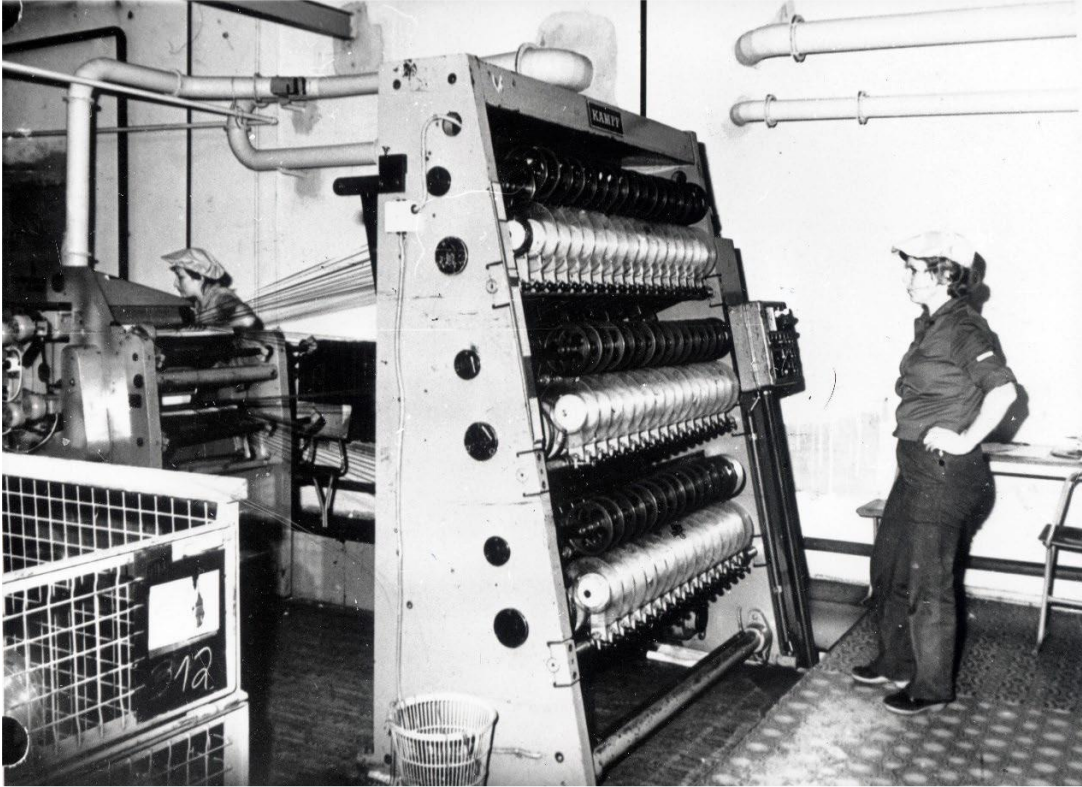


Blick Postenturm 1 Nordostseite Umwehrungssystem

Attachments

Attachment 23

Female prisoners during assembly and packaging at the Wolfen magnetic tape factory. Source: Manfred Buchta's collection.



Attachment 24

Proof of the participation of the prisoners (referred to here as special workers (SAK)) in the production of the K60 LN, K60 Chrom, KR) cassettes intended for export.

Source: Determinations from protocols Rele [sic!] on 1.4.82 and complex report on 24.5.82, in: AIFW, GD 1796, o. P.

- zu hohe Rückweisquote bei Kassetten der Wicklerinnen (SAK)

	1. Hj. 1982	Juni 1982
K 60 LN	11,6 %	17,9 %
K 60 Chrom	6,3 %	6,3 %
KR	6,8 %	4,5 %

- System der Eilgußprüfung z. Zt. nicht wirksam, da etwa 3 Std. unter Bedingungen des Strafvollzuges benötigt werden von Beschichten - Schneiden - elektroakustische - Prüfung. (planmäßig sind 3 Std. vorgesehen)

- ungenügende Stabilität der Schneidemaschinen (ca. 10 - 20 % außerplanmäßige Ausfallzeiten)

- Auslastung der eingesetzten 177,5 SAK (1. Hj.) nicht möglich. Nötwendig sind nach WAO-Studie 1981 und technologischer Konzeption nur 129 SAK.

Die Schlußfolgerungen zu einer effektiveren Produktionsdurchführung sind bis auf die absolute Erhöhung der Produktion zu akzeptieren. Einer absoluten Erhöhung der Produktion stehen ein ungesicherter Absatz, nicht gesicherte Bereitstellung von CC-Kassetten gegenüber.

Die Schlußfolgerungen und Maßnahmen zur Entwicklung des Produktionsabschnittes sind zu global. Konkrete Maßnahmen sind darzustellen. (z. B. wie wird Digitalkassettenkonfektionierung erweitert; in welchem Umfang kann das Vorhaben AST Erweiterung Audiobandkonfektionierung entlastet werden)

Aussagen zur Verbesserung der Technologie sind nicht getroffen worden.

Erarbeitung von ^{Arbeits}Schlußfolgerung und Maßnahmeplan zur Entwicklung des Produktionsabschnittes bis 1985 unter Berücksichtigung der Verbesserung der Technologie.

V. : BD
T. : 30.10. 82

Attachment 25

Planned expansion of the use of prisoners in the magnetic tape factory until 1985.

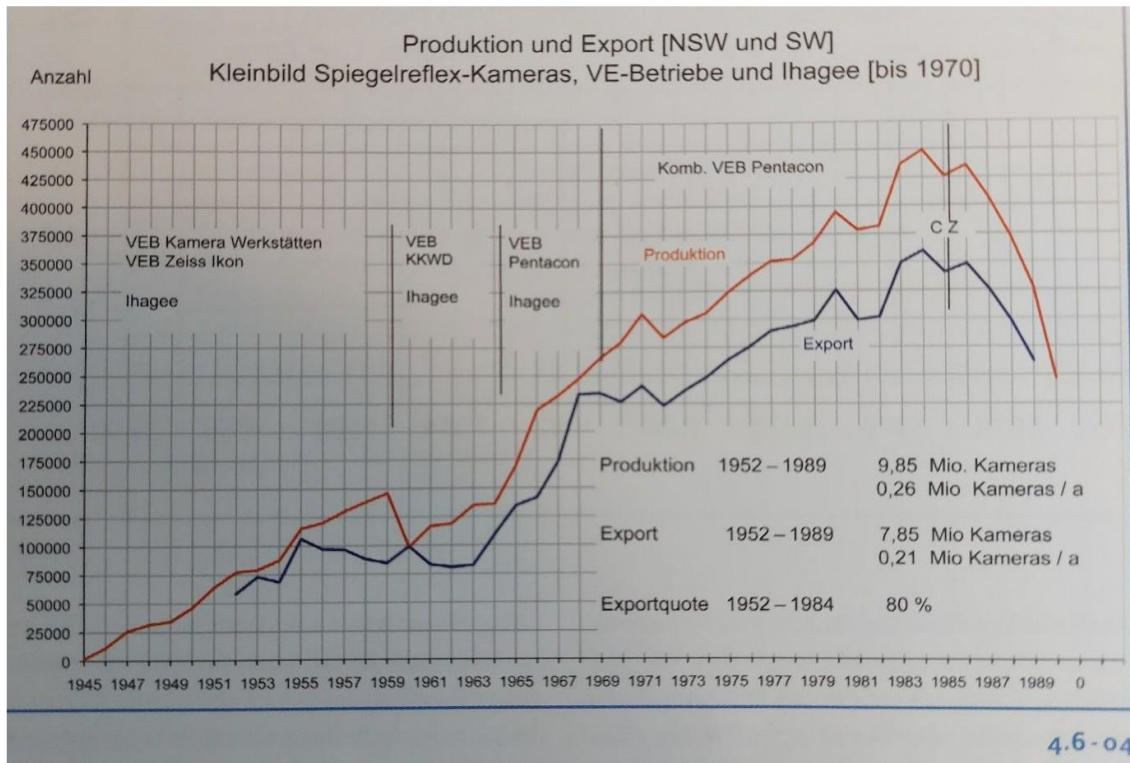
Source: Expansion of the audio assembly of the VEB Magnetbandfabrik Dessau and expansion of the Dessau penal facility - AST Dokumentation VEB Magnetbandfabrik, 15.12.1982, in: AIFW, GD 1796, n. p.e

Problem	Arbeitsstand	Entscheidungsvorschlag
3.1 Kapazitätsauslastung unbefriedigend	Die Kapazitätsauslastung der technischen Einrichtung wird in Verbindung mit der Neuanlage verbessert. Als echte Kapazitätsenerweiterung sind nur anzusehen: <ul style="list-style-type: none"> - eine Schneidemaschine - zwei Wickeltische für Audiokassetten - sechs Wickeltische für Digitalkassetten - Prüfplätze 	Kapazitätsentwicklung und Bedarf sind unter Berücksichtigung einer hohen Auslastung der vorhandenen Grundfonds in Übereinstimmung zu bringen. <i>u/Tag Ziel:</i> <i>effekt. Maschinenlaufzeit</i> <i>Ziel:</i>
3.2 Kapazität und Produktionsfläche	Bei 2,55 Mill. Stck. Kassetten und 500 Mm Meterware ist im Basisjahr eine Produktionsfläche von 2.100 m ² vorhanden. (Produktions- und Nebenflächen.) Für weitere 2,0 Mill. Stck. Kassetten und 200 Mm Meterware wird eine weitere Produktionsfläche von ca. 3.100 M ² konzipiert (Produktions- und Nebenflächen). Davon sind ca. 200 m ² Flächenbedarf für die zusätzlich aufgenommene CO-Kassettenmontage (900 TStck.)	Es sind zweckmäßige Relationen zwischen den Punkten 3.1 und 3.2 herzustellen.
4. Arbeitskräftebedarf und -deckung		
4.1 Fehlender Nachweis zur Übereinstimmung von Arbeitsplätzen und Arbeitskräftemehrbedarf	Vorhanden sind 1982 120 SAK und 99 zivile Arbeitskräfte. Im Basisjahr 1985 sind vorgesehen 160 SAK und 99 zivile Arbeitskräfte. Im Erfolgsjahr soll die Zahl ansteigen auf 300 SAK und 153 zivile Arbeitskräfte. Es werden im Verhältnis nur wenige neue Arbeitsplätze geschaffen. Ein verändertes Brigade- oder Schichtsystem ist nicht vorgesehen. (Die AK-Anzahl für die Kassettenmontage ist nicht ersichtlich.)	In Verbindung mit den zu schaffenden Arbeitsplätzen ist der arbeitsplatzbezogene Nachweis für die benötigten SAK und zivilen Kräfte zu führen.

Attachment 26

Overview of production and export of 35 mm SLR cameras

Source: Jehmlich: *Der VEB Pentacon Dresden*, S. 178, Grafik 4.6 – 04. (Jehmlich: *The VEB Pentacon Dresden*, p. 178)



Attachment 27

Overview of production and export of 35 mm SLR cameras by year.

Source: Jehmlich: Der VEB Pentacon Dresden, S. 228, Grafik 8.0 – 03.

Produktion, Export und Inlandvertrieb von Spiegelreflexkameras des Kombinat VEB Pentacon Dresden						
	Kleinbild					Mittelformat 6 × 6
	Produktion ¹	Export	Export	Export	Inland	Produktion ²
		Gesamt	NSW	SW		
1964	52 574	43 477	35 347	8 130	9 097	4 407
1965	65 598	52 745	42 442	10 303	12 853	3 530
1966	113 341	89 883	70 873	19 010	23 458	4 461
1967	132 830	104 020	82 390	21 630	28 810	3 500
1968	145 430	117 906	100 722	17 184	27 524	9 100
1969	167 100	135 175	118 680	16 495	31 925	10 000
1970	279 643	226 500	193 887	32 613	53 134	11 558
1971	304 970	240 800	185 816	54 984	64 170	12 547
1972	283 774	223 000	169 376	53 624	60 774	9 993
1973	297 437	236 600	169 726	66 874	60 837	8 500
1974	305 502	247 900	182 574	65 326	57 602	9 500
1975	323 813	263 700	192 092	71 608	60 113	11 198
1976	338 609	275 400	196 012	79 388	63 209	12 500
1977	351 430	289 500	209 465	80 035	61 930	12 500
1978	352 980	293 300	214 932	78 368	59 680	12 700
1979	368 104	298 700	215 791	82 909	69 404	12 774
1980	394 736	325 600	244 346	81 254	69 136	11 600
1981	378 899	299 000	237 280	61 720	79 899	6 705
1982	382 106	301 530	241 975	59 555	80 576	6 554
1983	436 854	349 483	288 281	61 202	87 371	7 018
1984	449 332	359 960	299 006	60 954	89 372	7 000
1985	426 032	340 830	285 686	55 144	85 202	6 000
1986	435 531	348 425	295 116	53 309	87 106	5 780
1987	406 971	325 570	266 642	58 928	81 401	4 590
1988	372 157	297 720	234 030	63 690	74 437	3 740
1989	327 879	262 311	187 667	74 644	65 568	4 479
64 – 89	7 893 623	6 349 035	4 960 154	1 388 881	1 544 588	212 234
%-Anteil	100,0	80,4	62,8	17,6	19,6	

Attachment 28

Information about the company Beroflex Kamera-Film-AG, Berlin-West dated 20.02.1974.
Source: BArch, MfS, HA XVIII/Nr. 35928, S.2. (Federal Archives, Ministry of state security of GDR)

BSTU
0002

AKB Kamerafilm Ksp./Imp.
Kontrollbeauftragter

20.2.1974.

Vertrauliche Dienstsache				
Nachweis-Bereich	Lfd. Nr.	Jahr	Ausf.-Nr.	Blatt

Information

über die Firma Beroflex Kamera-Film-AG, Berlin - West

1.0 Zur Firma Beroflex AG

Bis zum Jahre 1968 wurde der Vertrieb in der DDR und Berlin (West) der Erzeugnisse aus der Produktion der Fotoindustrie der DDR durch 5 verschiedene Vertretersfirmen durchgeführt. Die Vertreterorganisationen waren nach den Vorstellungen des AKB zu sehr zerplittert und wurden als nicht leistungsfähig eingeschätzt. Es wurden deshalb große Aktivitäten entwickelt, um durch Zusammenschluß der verschiedenen Vertreter eine einzige Organisation zu bilden, welche kapitalkräftig, wirtschaftlich gesünder und damit schlagfähiger ist. Diese Vertreterorganisation sollte besser in der Lage sein, die steigenden Produktionszahlen der Kameraindustrie auf dem Markt DDR und Berlin (West) zu vertreiben.

Ursprüngliche Gedankengänge zur Gründung einer "Beroflex AG" mit Kapitalbeteiligung der DDR waren auf Grund bestehender gesetzlicher Bestimmungen nicht realisierbar. Die Aktivitäten führten schließlich am 12.2.1969 zur Gründung der

"Beroflex Kamera-Film-AG, Berlin (West)"

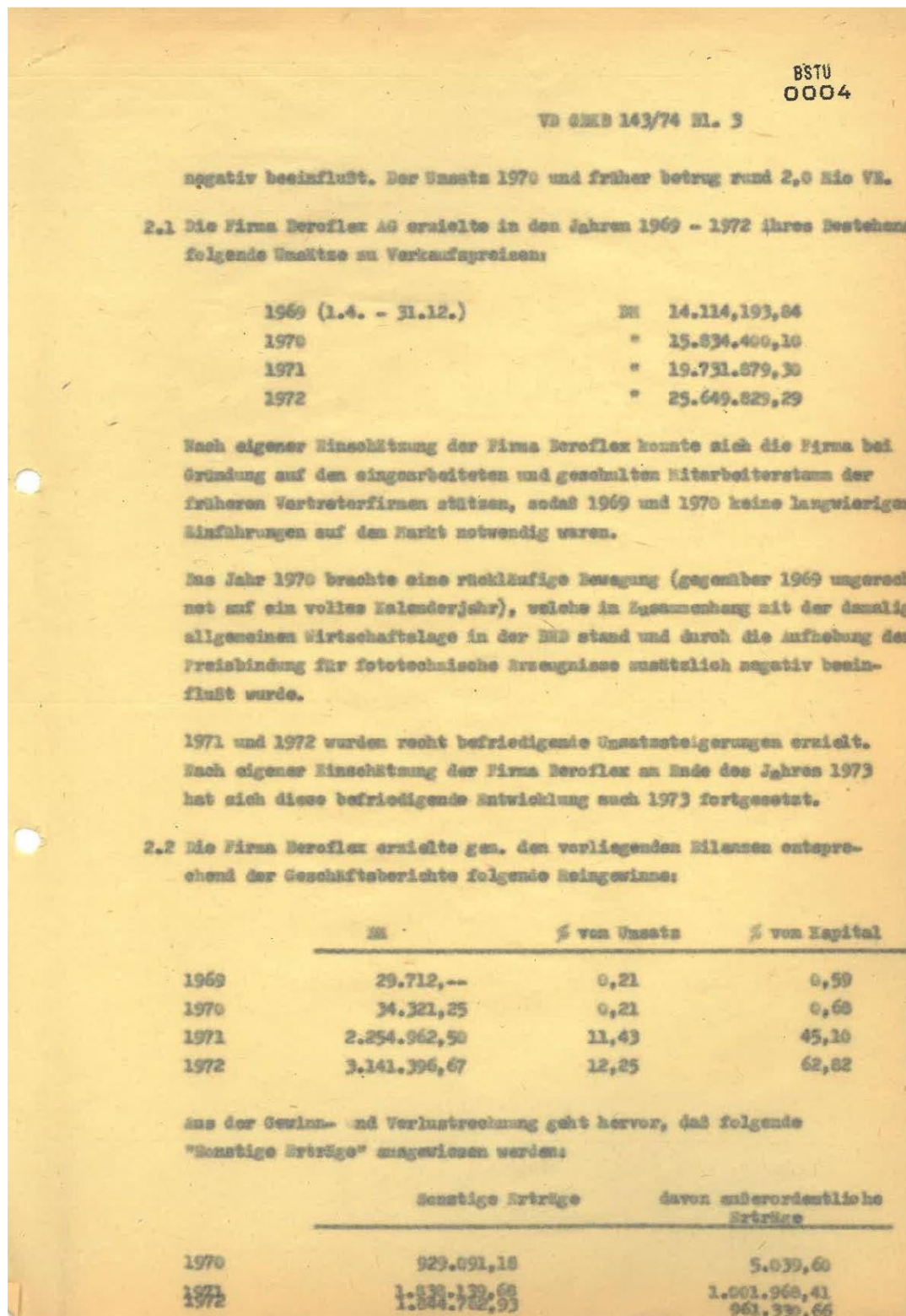
welche am 1.4.1969 die Tätigkeit aufnahm.

Gegenstand des Unternehmens ist der Handel mit Erzeugnissen der foto-technischen und fotochemischen Industrie. Die Gesellschaft ist in Berlin (West), Hamburg, Bad Hissingen, Minden, Köln, Frankfurt a./M., und München mit Verkaufsbüros vertreten.

Das Verkaufsprogramm umfaßt besonders Erzeugnisse des VEB Kombinat Pentacon (Spiegelreflexkameras) einschließlich der dazugehörigen Zusatzobjektive u.a. Zubehöre, Erzeugnisse des Fotochemischen Kombinates Wolfen (Amateurfilme) und einschlägige Produkte des VEB Carl Zeiss, Jena, u.a. Hierüber besitzt Beroflex langfristige Vertreterverträge mit dem AKB Kamerafilm. Außer den DDR-Erzeugnissen werden zur Komplettierung des Sortimentes auch japanische u.a. Erzeugnisse des westlichen Auslandes geführt. Dieser Anteil wird als gering bezeichnet.

Attachment 29

Information about the company Beroflex Kamera-Film-AG, Berlin-West dated 20.02.1974.
 Source: BArch, MfS, HA XVIII/Nr. 35928, S. 4. (Federal Archives, Ministry of state security of GDR)



Attachment 30

Information about the company Beroflex Kamera-Film-AG, Berlin-West dated 20.02.1974.

Source: BArch, MfS, HA XVIII/Nr. 35928, S. 5. (Federal Archives, Ministry of state security of GDR)

BSTU
0005

VD GDRB 143/74 Bl. 4

Eine Erläuterung der "Sonstigen Erträge" wird nicht gegeben. Es ist demzufolge nur schwer möglich, diese in ihren Quellen einzuschätzen. Zur Gegenüberstellung werden die in Buchwerk des AHB Kamerafilm ausgewiesenen nachträglichen Gutschriften, wie z.B. Boni, Skonti, Vergütungen für Werbung und VKE, Gutschriften für Beseitigung von Marktstörungen usw. angegeben, welche möglicherweise unter die "Sonstigen Erträge" der Firma Beroflex fallen könnten. Von AHB Kamerafilm wurden vergütet:

1970	1,8 Mio VE
1971	1,5 " "
1972	1,9 " "

Es ist wahrscheinlich, daß diese Summen, oder zumindest Teilbeträge wesentlicher Art, in die "Sonstigen Erträge" der Firma Beroflex eingegangen sind. Insofern erscheinen die sehr hohen "Sonstigen Erlöse" als wahrscheinlich und erklärbar.

Es kann aus diesen Grunde angenommen werden, daß die ausgewiesenen Reingewinne der Beroflex auf Gewinne, welche ursächlich mit dem Vertrieb der DDR-Erzeugnisse in Zusammenhang stehen, basieren.

Eine solche Einschätzung wird durch Beroflex insofern bestätigt, als in den Geschäftsberichten angegeben wird, daß die Lagerbestände durch verstärkte Umsatzergebnisse "wesentlich gesenkt werden konnten". Das bedeutet, daß durch den gestiegenen Umsatz es nicht mehr möglich war, durch Unterbewertung der Lagerbestände Gewinne zu verschleiern. Beroflex sagt dazu wörtlich:

"Die Vorräte sind zu Anschaffungskosten bewertet; insoweit aus der Marktsituation Abschläge erforderlich waren, sind entsprechend niedrigere Werte angesetzt worden."

Im Jahre 1969 wurden dadurch beispielsweise DM 621.194,66 Abwertung auf den Warenwert eingesetzt, wovon allein DM 437.622,44 "auf die vom AHB Kamerafilm stammende Ware" entfallen. Das Beispiel zeigt, wie dadurch die Gewinne surechtifiziert werden.

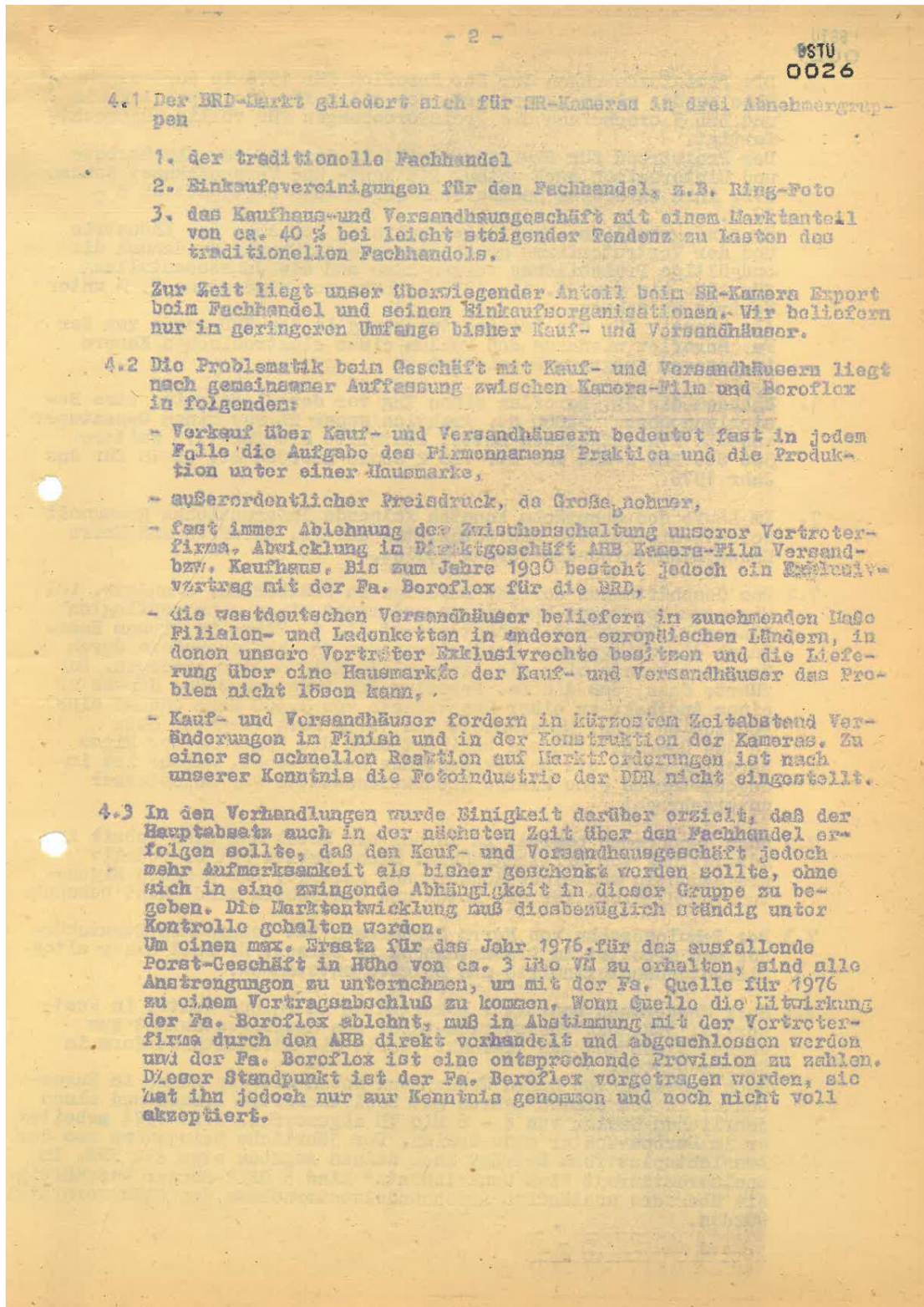
2.3 Die Lagerbestände entwickelten sich nach den Bilanzen der Beroflex AG wie folgt:

31.12.1969	DM 11.763.355,12
31.12.1970	" 13.851.140,04
31.12.1971	" 8.952.044,66
31.12.1972	" 7.658.337,12

Attachment 31

Report about a business trip of the general director of AHB Kamera-Film and the director of Pentacon Dresden to West Berlin on 3.10.1975 in order to visit Beroflex

Source: BArch Mfs HA XVIII Nr. 35928, S. 26. (Federal Archives, Ministry of state security of GDR)



Attachment 32

Proof of Praktica sale via mail order catalog

Source: Neckermann-Catalog, Spring and Summer 1986, p.. 1101.

Die Günstigen für Einsteiger!

11 Praktica „Super TL 1000“
nur 199⁹⁵

13 Praktica „MTL 5“
nur 249⁹⁵

11 Praktica „Super TL 1000“. Mit Objektiv Jena T 1:2,8/50 mm, Anschluß M 42. Filter-Ø 49 ES. TTL-Lichtmessung durch das Objektiv, Metall-Lamellen-Schlitzverschluss 1 sec bis 1/1000 sec und B. Mit-tenkontakt-Blitzschuh u. Kabelanschluß. Filmeinlege-automatik, Fresnell-Linse fürs einfach Scharfstellen.

8704/024		199.95
8976/733	Bereitschaftstasche	49.95
8975/400	BRILLANT HR 100 Farbfilm, 2er-Pack (je 24 Aufn.)	9.95
8986/658	Erf. Batterie "PX 625"	5.50

13 Praktica „MTL 5“ mit lichtstarkem Objektiv 1:1,8/50. Filter-Ø 49 ES, Anschluß M 42. TTL-Lichtmessung durch das Objektiv. Metall-Lamellen-Schlitzverschluss 1 sec bis 1/1000 sec und B. Eingebauter Selbstauslöser. **Getestet: Die baugleiche Praktica „MTL 3“ von Stiftung Warentest in Heft 4/82 mit „GUT“ bewertet.**

8704/172	Kamera	249.95
8976/733	Bereitschaftstasche	49.95
8975/400	BRILLANT HR 100 Farbfilm, 2er-Pack (24 Aufn.)	9.95
8986/658	Erf. Batterie "PX 625"	5.50

test
 Qualitätsurteil:
»GUT«
 4/82

Getestet:
 die baugleiche
 Praktica „MTL 3“

m. Obj. Pentacon 1:1,8/50 mm

Attachment 33

Proof of Praktica sale via mail order catalog

Source: Otto-Catalog, Fall and Winter 1977/78, p. 662.



Attachment 34

Proof of Praktica sales under a changed name via mail order catalog
 Source: Quelle Catalog Spring and Summer 1987, p. 892.

REVUE

... für den preiswerten Einstieg

FOTO-QUELLE

Ihr Spezialist rund ums Bild



1 | 199,-

Mit dem bewährten M 42 Schraubgewinde

1 REVUE ML. Mit 6linsigem Objektiv AUTO REVUENON 1:1,8/50 mm. Nachführbelichtungsmesser. Verschlusszeiten 1-1/1000 Sek. u. B. Selbstauslöser Filtergewinde M 49. Gew. 776 g. Einschließlich Batterie.
 B.-Nr. 051.090 nur DM 199.-
 Bereitschaftstasche. DM 37.90
 B.-Nr. 051.760
 Ersatzbatterie. DM 8.-
 B.-Nr. 698.026

3 REVUE AC 4 P1 DX Gehäuse. Mit Zeit- und Programm-Automatik. LED-Anzeige im Sucher, aut. Belichtung von 8 Sek. bis 1/1000 Sek. Belichtungszeit auch manuell einstellbar. Bei Filmen mit DX-Kodierung wird die Empfindlichkeit automatisch eingestellt (ASA 25-5000). Blitzsynchronisation bei 1/100 Sek. Ohne Batterien. Ohne Objektiv.
 B.-Nr. 051.059 nur DM 449.-

Gehäuse
3 | 449,-
 (O. Objektiv)

2 | 399,-

2 Komplet mit Objektiv 1,8/50 mm. Bereitschaftstasche und Batterien: **REVUE SC 4.** SLR-Kamera mit K-Bajonett, Belichtungszeit-Automatik; B, 1-1/2000 Sek. (auch manuell) Blitzsynchronisation bei 1/125 Sek. LED-Anzeige im Sucher, Metallschlitzverschluss, Selbstauslöser
 Best.-Nr. 051.072 DM 399.-



Ohne Bild Motor 4. für REVUE AC 4-Serie. Bis zu 2 Bilder/Sek. in Vierer-Intervallen bis zu 24 Bildern vorwählbar. Ohne Batterien.
 Best.-Nr. 051.400 DM 249.-
Batterien für REVUE Motor 4.
 Best.-Nr. 950.991 DM 8.-
Ohne Bild Augenmuschel für AC 4 P1 DX/AC 5 Digital.
 Best.-Nr. 051.493 DM 12.95

Zu dieser Kamera empfehlen wir unser Standard-Objektiv: 1:1,7/50 mm 6-Linser, mehrschichtvergütet, Filtergewinde M 49, K-Baj. Best.-Nr. 051.278 DM 129.-
Bereitschaftstasche dazu Best.-Nr. 051.740 DM 59.90

Gleich mitbestellen:
Batterie, 1-Stück-Packung. (Bitte 4x bestellen!)
 Best.-Nr. 695.566 DM 5.-

Attachment 35

Proof of Praktica sales under a changed name via mail order catalog.

Source: Otto-Catalog Fall and Winter 77/78, p. 662.



Attachment 36

Overview on parts of „Praktica L“-Models.

Source: Jehmlich: Der VEB Pentacon Dresden, S. 132.

Alle »Praktica L«-Modelle enthielten

- als selbstständige Baugruppe den Stahllamellen-Filmebenenverschluss (Kamera-Kennzeichen L).¹ Dieser Verschluss wurde ab 1970 auch in die »Exakta RTL 1000« eingebaut (Bild 2.3 - 18),
- variabel einsetzbare Baugruppen wie Aufzugs- sowie Spiegelgetriebe und Prismenstuhl,
- verchromte Deck- und Frontkappen aus Plaste, spritztechnisch aus ABS-Material hergestellt, wodurch die komplizierten und arbeitsaufwendigen Ziehprozesse der Metallkappen entfielen,
- ein einheitliches Kameragehäuse (Ausnahme: »Praktica VLC« mit Wechselsucher).

Attachment 37

Production plant in chlorine-3 operation before the modernisation

Source: Federal Archives, photo archive, 183-1987-1109-303.



Attachments

Attachment 38

Production plant in chlorine-3 operation after the modernisation

Source: Federal Archives, photo archive, 183-1987-1109-302.



Attachment 39

Exterior view of the Chlorine I or III workshop with bricked-up openings, screens and grating
Source: Borgmann, Reinhard/ Meesmann/Florian: „Den haben sie totgemacht“. (They killed him“). *Poisons in Prison*, documentary for KONTRASTE, from minute 0:11, available at: <https://www.bpb.de/mediathek/video/688/den-haben-sie-totgemacht/>
[Stand: 15.02.2024]



Attachment 40

Report of Holger Rossmann (born 9.9.1951)

“Working conditions

[...]

A short time later, on July 7, 1975, I joined the chlorine production department at Chlorine I. This was a major change, as the working conditions here were catastrophic and very harmful to health. Chlorine production took place in a large hall that was hermetically sealed. The windows were barred and there were only a few small openings where air could be exchanged, if at all.

The hall contained electrolysis baths measuring approx. 10 m x 5 m at relatively close intervals. These facilities dated from before the Second World War and had not been renovated since then. Their condition was correspondingly poor.

I was assigned to this department as a locksmith. We had to carry out repairs to these baths, which were constantly necessary. The temperature at the baths was extremely high due to the chemical process inside the bath and the high electrical currents that were conducted through large 30 cm thick copper plates, which made the work even more difficult.

Mercury flowed at the bottom of the bath as an electrode. The lye was located above it. Many carbon contacts were attached to the lid, which had to be repeatedly adjusted by hand so that they remained in permanent contact with the lye.

The baths were connected by a system of pipes that ran underneath the baths through which the lye ran. The chlorine gas produced in the baths was discharged through pipes for further processing. There was a rubber seal around the baths, where there were also leaks in the upper area, through which chlorine gas often (sic!) escaped, resulting in frequent explosions.

When such an explosion occurred, we were instructed to run quickly to the other side of the hall, where there were small window openings through which some fresh air came in to avoid the chlorine gas.

This chlorine gas was very aggressive and immediately triggered a coughing fit.

Some prisoners who did not get out of the danger zone in time suffered burns to their lungs from the chlorine gas.

In my time, there were not enough gas masks or protective masks available for such cases; only for a few people who had to go to the baths immediately in the event of an accident.

As these baths were very leaky, there was always a strong smell of chlorine. As a result, I suffered from constant nausea and loss of appetite

There were rubber seals around the outer edge of the baths, on which the edge of the baths stood. Due to the aggressive alkaline solutions, these rubber seals became porous over time and therefore leaked. The mercury then leaked out onto the hall floor, where large puddles of mercury formed, which inevitably evaporated at the extremely high temperatures in the baths.

Some prisoners had the task of flushing this mercury away into the cellar with a water hose, which was then supposed to run into the cellar, where it was collected in open channels. Since this flushing away could not always happen promptly, because it always happened at several baths, there was enough time for the mercury to evaporate.

[...]

The hall floor was made of concrete, was dilapidated in many places and had formed small cracks. The small globules of mercury leaked into the floor and could no longer be removed directly.

At certain intervals, pools were completely dismantled (frame and pedestal) in order to replace all the seals. Only the base plates were left standing.

In the course of the chemical process, a sludge (mercury compounds) had formed on these floor plates, which had to be removed by prisoners. This sludge also contained a lot of mercury pellets. During this cleaning process, the bath was of course open so that lots of mercury vapors could escape. At that time in 1975/76, there were no protective measures such as breathing masks for any of this work.

Among other things, we had to work as fitters under the baths, where the piping systems were, and replace defective pipes corroded by acid. We were particularly exposed to the fumes during this work because it was very hot there and everything was open at the top.

[...]

Attachments

Rusted bolts were removed from parts such as flanges during various locksmith work. As this work could not be done under the bath annex, it was carried out on a workbench in the middle of the hall.

During this work, mercury that was in and on the pipes even got onto this workbench, whose worktop was made of wood, on which the mercury pellets could adhere well due to the unevenness.

[...]

During my time here in Chlorine I (6.7.1975 to 28.6.1976), only prisoners worked in this hall. Civilian workers were only very rarely and briefly in the hall to instruct us. Civilian employees were not prepared to expose themselves to these health risks, not even for a lot of money.

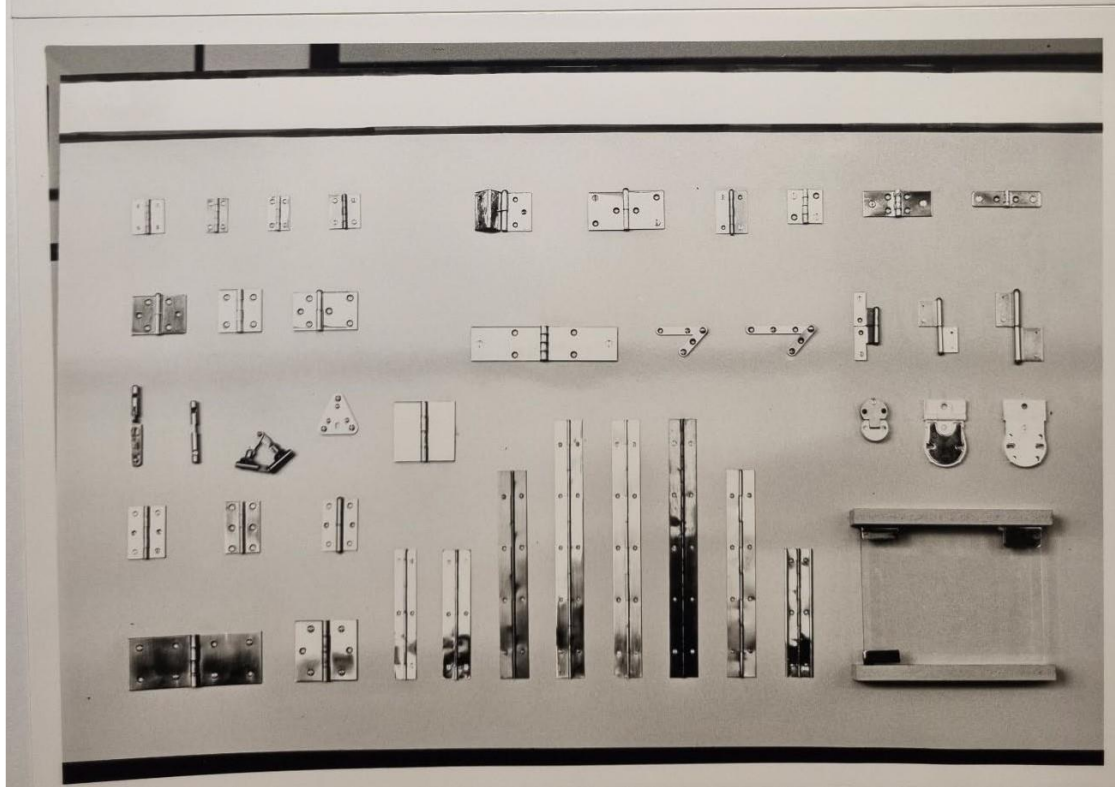
Therefore, only prisoners who were forced to work there and could not avoid these dangers were considered. It was therefore accepted that we prisoners would inevitably suffer damage to our health.”

Source: Archive of the UOKG.

Attachment 41

Furniture fittings manufactured by MeWa in the 1980s.

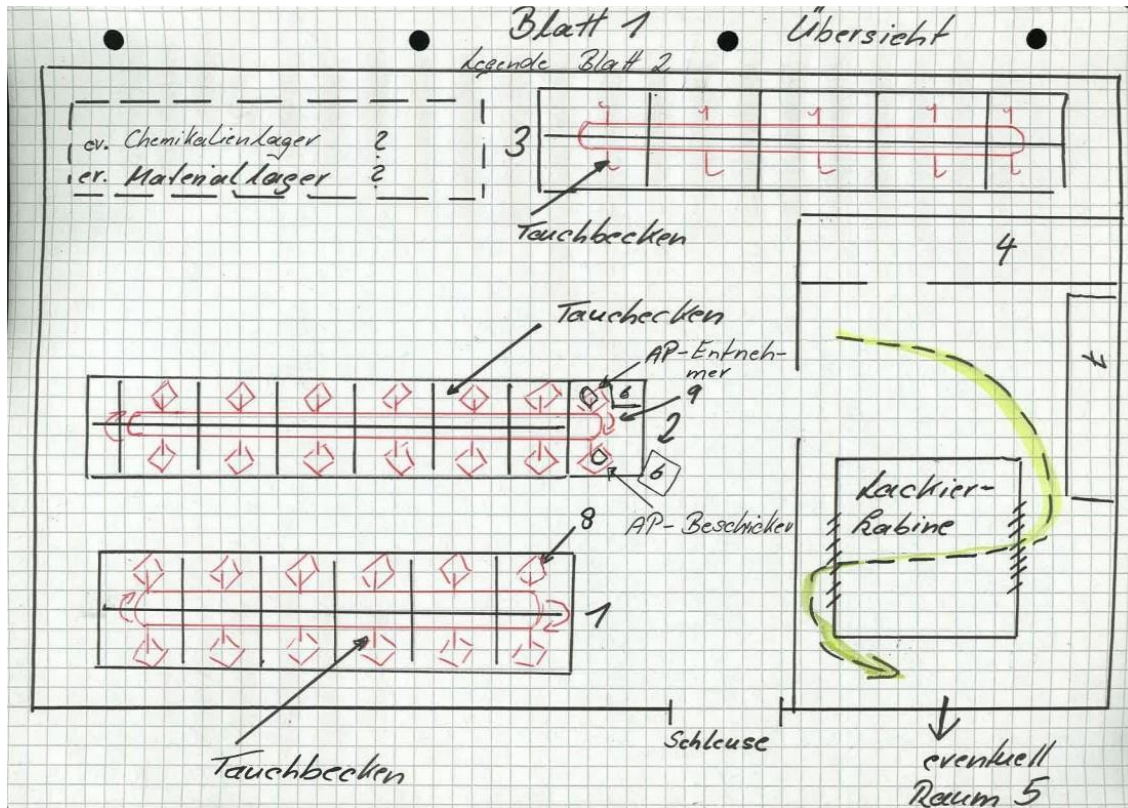
Source: BArch, DG 5/4703, o. P. (Federal Archives)

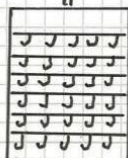



Attachment 42

Drawing of the structure of the electroplating department at MeWa according to Dirk Meinert's recollection.

Source: Dirk Meinert.



- Legende Zahlen
- 1 = Tauchstrecke Verbehandlung (unsicher)
 - 2 = Kleinteilbehandlung = mein AP (sicher in der Darstellung)
 - 3 = Verchromungsanlage (sicher)
 - 4 = Pausen - oder Umkleideraum (unsicher)
 - 5 = eventuell befand sich neben der Lackierkabine noch ein weiterer Raum
 - 6 = Gitterboxen für Kleinteile
 - 7 = Verfertigung Lackiererei
 - 8 = Kleinteilaufhängung → 
 - 9 =  = Laufrichtung

Attachment 43

Correct installation, protective clothing and extraction equipment (1974, VEB No-remat Nosse). Source: BArch, photo archive, 183-N0718-417.



Attachments

Attachment 44

Exterior view of Sprela production hall.

Source: Still image from a documentary by Matthias Katze.

Katze, Matthias: Das ehemalige Zuchthaus Cottbus, 2000, available at <https://youtu.be/TZaVunmUe3M?t=82> [as at: 07.02.2024], minute: 1:21.



Attachment 45

Semi-finished products from production for VEB Sprela.

Source: Photos from Christian Sachse, 2022



Notes:

¹ See Bülck, Hartwig: Zwangsarbeit im Friedensvölkerrecht (Forced labor under international law of peace), Göttingen 1953.

² cf Wölbern, Jan Philipp: Haftarbeit in der DDR (Prison work in GDR). Eine Zwischenbilanz (An interim result), in: Zeithistorische Forschungen 13, 1 (2016), Online edition, URL: <https://zeithistorische-forschungen.de/1-2016/5331>, Print edition pp. 86–107, here pp. 88–92, 103f. Continuing see Sachse, Christian: Das System der Zwangsarbeit in der SED-Diktatur. Die wirtschaftliche und politische Dimension (Forced Labor in the SED Dictatorship. The economic and political dimension), Berlin 2014;

³ Cf. Wunschik, Tobias: Knastware für den Klassenfeind. Häftlingsarbeit in der DDR, der Ost-West- Handel und die Staatssicherheit (1970–1989) Prison goods for the class enemy. Prison labor in the GDR, East-West trade and state security (1970-1989), Göttingen 2014.

⁴ Cf. *ibid.*, p. 184.

⁵ Für die Firma Klawitter & Co. GmbH siehe Protokoll, vom 11.12.1969, Signatur: Bundesarchiv (BArch), B 102/105956, o. P.; zur Firma Steiniger GmbH in Puhlheim vgl. Export-Auftrag, J. Vorg.-Nr. 61201, vom 20.11.1987, Signatur: (Sächsisches Staatsarchiv Chemnitz (SächStAC), 31363/EA 5849, o.P. und zur Firma Salzman vgl. Ausfuhrmeldung, vom 31.05.1989, Signatur: SächStAC, 31362/EA 5833, o. P. For the company Klawitter & Co. GmbH see Minutes of 11.12.1969, Signature: Bundesarchiv (Federal Archives) (BArch), B 102/105956, o. P.; for the company Steiniger GmbH in Puhlheim Cf. Export-Order, No. 61201, of 20.11.1987, Signature: (Sächsisches Staatsarchiv Chemnitz (Saxon State Archives Chemnitz) (SächStAC), 31363/EA 5849, o. P. and for the company Salzman Cf. export declaration of 31.05.1989, Signature: SächStAC (Saxon State Archives) 31362/EA 5833, o. P.

⁶ Vgl. Vermerk zum Besuch von Produktionsbetrieben in der DDR, vom 17.11.1977, Signatur: BArch, B 102/331415, o. P. sowie die DDR-Gegenüberlieferung „Bericht über die Besuche des Leiters der TSI, Dr. Rösch in Industriebetrieben der DDR in der Zeit vom 8.–10.11.1977“, Signatur: BArch DL 2/6395a, Bd. 1, o. P. Cf. Notes on visiting GDR production facilities dated 17.11.1977, Signature: BArch (Federal Archives), B 102/331415, o. P. as well as GDR counterpart “Report on the visits by the head of TSI, Dr. Rösch, to industrial companies in the GDR in the period 8-10 November 1977”, Signature: BArch (Federal Archives) DL 2/6395a, Bd. 1, o. P.

⁷ Für die 1970er Jahre siehe die Protokolle der Treffen zwischen der TSI und dem MAW/H., Signatur: BArch, B 102/443075, o. P. Für die Jahre 1980 und 1983 vgl. Wunschik: Knastware, S. 187. For the 1970s, see the minutes of the meetings between the TSI and the MAW/H,

Notes

Signature: BArch, (Federal Archives) B 102/443075, o. P. For the years 1980 and 1983
Cf. Wunschik: Knastware (Prison goods), p.187.

⁸ Vgl. etwa „Abrufe per 4.4.1988“, vom 29.03.1988, Signatur: SächStAC, 31363/EA 5849, o. P.
Cf. for instance „Call-offs as per 4.4.1988“, Signature: SächStAC (Saxon State Archives), 31363/EA 5849, o. P.

⁹ Vgl. Export-Auftrag an Steiniger für Albrecht Einkauf oHG, vom 15.09.1988, Signatur: SächStAC, 31362/EA 5833, o. P.
Cf. Export Order to Steiniger on behalf of Albrecht Einkauf oHG, of 15.09.1988, Signature: SächStAC, 31362/EA 5833, o. P.

¹⁰ Vgl. Lieferschein/Empfangsschein, vom 11.05.1989, Signatur: SächStAC, 31362/EA 5833, o.P.
Cf. Delivery note/Receipt, of 11.05.1989, Signature: SächStAC, 31362/EA 5833, o. P.

¹¹ Vgl. Versandbereitung für Einzelauftrag 91209, vom 28.04.1989, Signatur: SächStAC, 31362/EA 5833, o. P
Cf. dispatch preparation for single order 91209, of 28.04.1989, Signature: SächStAC, 31362/EA 5833, o. P

¹² Vgl. Schreiben von TextilCommerz an VEB Feinstrumpferwerke Esda, vom 17.01.1989, Signatur: SächStAC, 31362/EA 5833, o. P.
Cf. Letter from TextilCommerz to VEB Feinstrumpferwerke Esda, of 17.01.1989, Signature: SächStAC, 31362/EA 5833, o. P.

¹³ Vgl. Wunschik: Knastware, S. 184, 186 und 191 sowie für das Jahr 1977 „Veränderung des gesellschaftlichen Arbeitsvermögens und Maßnahmen zur Veränderung der Exportstruktur im VEB Strumpfkombinat `ESDA` Thalheim“, o. D. [1977], Signatur: BArch, DG 4/2062, Bd. 2, o. P.
Cf. Wunschik: Knastware (Prison goods), p. 184, 186 and 191 as well as for 1977 “Change in social working capital and measures to change the export structure in the VEB Strumpfkombinat 'ESDA' Thalheim”, undated. [1977], signature: BArch, DG 4/2062, vol. 2, n. p.

¹⁴ Vgl. „Protokoll der Beratung des Chefs der BDVP Potsdam mit den Direktoren der Stammbetriebe der Arbeitseinsatzbetriebe in der Strafvollzugsanstalt Brandenburg, am 13. März 1986, vom 01.05.1986, Signatur: Brandenburgisches Landeshauptarchiv (BLHA), 471/BDVP PdM 1723, o. P.
Cf. „Minutes of the consultation between the head of the BDVP Potsdam and the directors of the main operations of the work deployment companies in the Brandenburg prison, on March 13, 1986, dated May 1, 1986, Signature: Brandenburgisches Landeshauptarchiv (BLHA) (Brandenburg Main State Archive), 471/BDVP PdM 1723, n. p.

¹⁵ Vgl. Vermerk zum Besuch von Produktionsbetrieben in der DDR, vom 17.11.1977, Signatur: BArch, B 102/331415, o. P.; DDR-Gegenüberlieferung „Bericht über die Besuche des Leiters der TSI, Dr. Rösch in Industriebetrieben der DDR in der Zeit vom 8.–10.11.1977“, Signatur: BArch, DL 2/6395a, Bd. 1, o. P.

Cf. Notes on visiting GDR production facilities dated 17.11.1977, Signature: BArch (Federal Archives), B 102/331415, o. P. as well as GDR counterpart “Report on the visits by the head of TSI, Dr. Rösch, to industrial companies in the GDR in the period 8-10 November 1977”, Signature: BArch (Federal Archives) DL 2/6395a, Bd. 1, o. P.P.

¹⁶ Vgl. Beck, Wolfgang: Alles hat ein Ende – auch die Marktwirtschaft, Berlin 2023, S. 29 (Everything has an end - even the market economy), Berlin 2023, p. 29.

¹⁷ Vgl. Protokoll zur Dienstreise in die Bundesrepublik (Minutes on the business trip to the Federal Republic), undated [June 1988], Signature: SächsStAC, 31000/297 2, o. P.

¹⁸ Cf. Nachricht WiCo an ELMO Grünhain (Message from WiCo to ELMO) of 16.08.1988, Signature: ibid.

¹⁹ Cf. Abgestempelter Plan eines „Einphasen-Standardmotors“ (Stamped plan of a “single-phase standard motor”), Signature: ibid.

²⁰ Cf. Notiz Krause (ELMO) an Bartel (WiCo) (Note from Krause to Bartel), of 21.06.88, Signature: ibid.

²¹ Cf. Absprachen nach Besuch BD Hellwig (Agreements following the visit of Hellwig), of 16.06.1988; Angebot mit Preisvorschlägen für Gartenhäcksler (Offer with price proposals for garden shredders) to the company Scheppach, undated [1988], Signature: ibid.

²² Cf. „Maßnahmen zur Auswertung der LFM“, (Measures for evaluating the LFM) of 11.04.1988, Signature: ibid.

²³ Cf. „Auftrag Pollmeier 2264“, (Order Pollmeier 2264) of 29.04.85, signature: ibid.

²⁴ Cf. Gesprächszusammenfassung ELMO Grünhain mit Kunden und Vertretern bei WiCo am 14.10.1987, vom 16.10.1987, Signatur: ebd. (Summary of conversation between ELMO Grünhain and customers and representatives at WiCo on 14.10.1987, dated 16.10.1987, signature: ibid.)

²⁵ Cf. etwa: „Informationsblatt über Gespräche und Verhandlungen mit ausländischen Partnern“, vom 07.09.1977, Signatur: Sächsisches Staatsarchiv Dresden (SächsStAD),

11648/ Nr. 2.0031, o. P. "Information sheet on talks and negotiations with foreign partners", dated 07.09.1977, signature: Sächsisches Staatsarchiv Dresden (SächsStAD), 11648/ Nr. 2.0031, n. p.

²⁶ Für Torgau siehe Protokoll Nr. 8/77, Protokoll der GD-Sitzung, vom 06.10.1977, Signatur: SächsStAC, 31000/ 12 2, o. P.; für Hoheneck siehe „Überlassungsvertrag“ für Arbeitsräume, vom 12.10.1967, Signatur: SächsStAC, 31000/ 192 3, o. P.
For Torgau, see protocol no. 8/77, minutes of the GD meeting, dated 06.10.1977, signature: SächsStAC, 31000/ 12 2, n. p.; for Hoheneck, see "transfer contract" for workrooms, dated 12.10.1967, signature: SächsStAC, 31000/ 192 3, n. p.

²⁷ Für Brandenburg siehe etwa „Protokoll der Beratung des Chefs der BDVP Potsdam mit den Direktoren der Stammbetriebe der Arbeitseinsatzbetriebe in der Strafvollzugsanstalt Brandenburg, am 13. März 1986, vom 01.05.1986, Signatur: BLHA, 471/BDVP PdM 1723, o.P.
For Brandenburg, see, for example, "Minutes of the consultation between the head of the BDVP Potsdam and the directors of the main operations of the work deployment companies in the Brandenburg penal institution, March 13, 1986, dated May 1, 1986, signature: BLHA, 471/BDVP PdM 1723, n.p.

²⁸ Cf. „Überlassungsvertrag“ für Arbeitsräume vom 12.10.1967, Signatur: SächsStAC, 31000/192 3, o. P. „Transfer agreement“ on working spaces of 12.10.1967, signature: SächsStAC, 31000/ 192 3, o.p.

²⁹ Vgl. „Arbeitsordnung“ mit Nutzungsvertrag, 08.03.1977, Signatur: SächsStAC, 31000/192 3, o. P.
"Work regulations" with usage contract, 08.03.1977, signature: SächsStAC, 31000/192 3, o.P.

³⁰ Vgl. Vereinbarung zwischen der Strafvollzugsanstalt Hoheneck und VEB ELMO Grünhain, vom 09.04.1976, Signatur: SächsStAC, 31000/ 192 3, o. P. Die Bezeichnungen Strafvollzugsanstalt (StVA) und Strafvollzugs-einrichtung (StVE) variieren in den Quellen.
Agreement between Hoheneck Prison and VEB ELMO Grünhain, dated 09.04.1976, signature: SächsStAC, 31000/192 3, n. p. The names "Strafvollzugsanstalt" (StVA) and "Strafvollzugseinrichtung" (StVE) vary in the sources.

³¹ Cf. Ibid.

³² Vgl. Vereinbarung über den Arbeitseinsatz StVA Brandenburg und ELMO Wernigerode, vom 10.02.1986, Signatur: BLHA, 472/StVE Brbg 209, o. P.
Agreement on the work assignment Brandenburg Prison and ELMO Wernigerode, dated 10.02.1986, signature: BLHA, 472/StVE Brbg 209, o. P.

³³ Vgl. „Jahresgeschäftsbericht 1979“, Signatur: SächsStAC, 31000/307 5, o. P.

“Annual report 1979”, signature: SächsStAC, 31000/307 5, n. p.

³⁴ Vgl. etwa „Protokoll Nr. 12/83 über die Leitungssitzung“, vom 26.04.1983, Signatur: Landesarchiv Sachsen-Anhalt, Standort Magdeburg (LASAMdb), I 118/ Nr. 1-772 1, Bl. 110.

Cf. for example “Minutes No. 12/83 of the management meeting”, dated 26.04.1983, signature: Landesarchiv Sachsen-Anhalt, Standort Magdeburg (LASAMdb), I 118/ Nr. 1-772 1, Bl. 110

³⁵ Zur Geschichte der Magnetbandentwicklung siehe Finger, Erhard: Die Entwicklung des Magnettonbandes und die Filmfabrik Wolfen, in: Dessauer Kalender: Heimatliches Jahrbuch für Dessau-Roßlau und Umgebung 63 (2018), S. 96–119.

For the history of magnetic tape development, see Finger, Erhard: Die Entwicklung des Magnettonbandes und die Filmfabrik Wolfen, in: Dessauer Kalender: Heimatliches Jahrbuch für Dessau-Roßlau und Umgebung 63 (2018), pp. 96-119.

³⁶ Vgl. Bode, Herbert: Die Magnetbandfabrik, in: Dessauer Kalender. Heimatliches Jahrbuch für Dessau-Roßlau und Umgebung 52 (2008), S. 82–91, hier S. 84–87.

Weiterführend siehe auch Karlsch, Rainer/ Wagner, Paul Werner: Die AGFA-ORWO-Story. Geschichte der Filmfabrik Wolfen und ihrer Nachfolger, Berlin 2010, S. 174.

Cf. Bode, Herbert: The magnetic tape factory, in: Dessauer Kalender. Heimatliches Jahrbuch für Dessau-Roßlau und Umgebung 52 (2008), pp. 82-91, here pp. 84-87. For further

information, see also Karlsch, Rainer/ Wagner, Paul Werner: Die AGFA-ORWO-Story. Geschichte der Filmfabrik Wolfen und ihrer Nachfolger, Berlin 2010, p. 174.

³⁷ Vgl. Kennzifferübersicht, Stand 30.6.79, Signatur: Archiv des Industrie- und Filmmuseums Wolfen (AIFW), Bestand Generaldirektor (GD) 1640, o. P.

Cf. Index number overview, as of 30.6.79, signature: Archiv des Industrie- und Filmmuseums Wolfen (AIFW), Bestand Generaldirektor (GD) 1640, n. p.

³⁸ Vgl. „Erweiterung der Audiokonfektionierung des VEB Magnetbandfabrik Dessau und Erweiterung der Strafvollzugseinrichtung Dessau – AST Dokumentation VEB Magnetbandfabrik, 15.12.1982“, Signatur: AIFW, GD 1796, o. P.

Cf. “Expansion of the audio assembly of the VEB Magnetbandfabrik Dessau and expansion of the Dessau prison facility - AST documentation VEB Magnetbandfabrik, 15.12.1982”, signature: AIFW, GD 1796, n. p.

³⁹ Vgl. Erfüllung des NSW-Exportplanes im 1. Quartal 1981, 6.2.1981, Signatur: AIFW, GD 1794, o. P.

Cf. fulfillment of the NSW export plan in the 1st quarter of 1981, 6.2.1981, signature: AIFW, GD 1794, n. p.

⁴⁰ Vgl. Bericht über den Arbeitsstand, 30.6.1979, Signatur: AIFW, GD 1791, o. P.

Cf. report on the status of work, June 30, 1979, signature: AIFW, DG 1791, n.p.

⁴¹ Vgl. Vorbereitungsmaterial für Komplexbericht 1983, Signatur: AIFW, GD 1796, o. P.
Cf. preparatory material for Complex Report 1983, signature: AIFW, GD 1796, n.p.

⁴² Siehe Vereinbarung zwischen der Strafvollzugseinrichtung Bitterfeld und dem VEB
Filmfabrik Wolfen, Signatur: Landesarchiv Sachsen-Anhalt, Standort Merseburg
(LASAM), M555/Nr. 595, Bl. 141–149.

See agreement between the Bitterfeld Prison and the VEB Filmfabrik Wolfen, Signature:
Landesarchiv Sachsen-Anhalt, Standort Merseburg (LASAM), M555/Nr. 595, pp. 141-
149.

⁴³ Buchta bezeichnet die StVA als „Haftarbeitslager Dessau-Kochstedt“. Siehe Buchta,
Manfred: Das Haftarbeitslager Dessau-Kochstedt 1974 bis 1989, in: Gerbergasse 18.
Thüringer Vierteljahresschrift für Zeitgeschichte und Politik 51, 4 (2008), S. 23–24.
Buchta refers to the prison as the “Dessau-Kochstedt prison labor camp”. See Buchta,
Manfred: Das Haftarbeitslager Dessau-Kochstedt 1974 bis 1989, in: Gerbergasse 18.
Thüringer Vierteljahresschrift für Zeitgeschichte und Politik 51, 4 (2008), pp. 23-24.

⁴⁴ Zum Ausbau des Lagers siehe exemplarisch: Brief an den Rat der Stadt Dessau vom
15.10.1981, Betreff: Investitionsvorhaben „Erweiterung der Audiokonfektionierung des
VEB Magnetbandfabrik Dessau und der StVA“, Signatur: Bestand Manfred Buchta.
For an example of the expansion of the labor camp, see: Letter to the Dessau City
Council dated October 15, 1981, subject: Investment proposal “Expansion of the audio
assembly of the VEB Magnetbandfabrik Dessau and the StVA”, signature: Stock of
Manfred Buchta.

⁴⁵ Vgl. Buchta: Das Haftarbeitslager Dessau-Kochstedt, S. 23f.
Cf. Buchta: The Dessau-Kochstedt prison labor camp, p. 23f.

⁴⁶ Vgl. Protokoll über die Beratung am 27.11.1979 zwischen dem VEB
Magnetbandfabrik Dessau und dem SCK, Signatur: AIFM, GD 1640, o. P.
Cf. minutes of the meeting on November 27, 1979 between VEB Magnetbandfabrik
Dessau and the SCK, signature: AIFM, GD 1640, n.p.

⁴⁷ Vgl. Jehmlich, Gerhard: Der VEB Pentacon Dresden. Geschichte der Dresdner
Kamera- und Kinoindustrie nach 1945, Sandstein 2009, S. 175–179.
Cf. Jehmlich, Gerhard: The VEB Pentacon Dresden. History of the Dresden camera and
cinema industry after 1945, Sandstein 2009, pp. 175-179.

⁴⁸ Vgl. ebd., S. 177.
Cf. Ibid. P. 177

⁴⁹ Vgl. Information über die Firma Beroflex Kamera-Film-AG, Berlin-West, vom
20.02.1974, Signatur: BArch, MfS, HA XVIII/Nr. 35928, Bl. 2–8.

Cf. information on the company Beroflex Kamera-Film-AG, Berlin-West, dated February 20, 1974, signature: BArch, MfS, HA XVIII/Nr. 35928, sheets 2-8.

⁵⁰ Bericht über eine Dienstreise nach Westberlin am 3.10.1975 des Generaldirektors des AHB Kamera-Film, und des Kombinatdirektors des Kombinats Pentacon Dresden zum Besuch der Fa. Beroflex, Berlin-West, Signatur: BArch, MfS, HA XVIII/Nr. 35928, Bl. 25–29. Report on an official business trip to West Berlin on October 3, 1975 by the General Director of AHB Kamera-Film and the Combine Director of the Pentacon Dresden combine to visit Beroflex, Berlin-West, signature: BArch, MfS, HA XVIII/Nr. 35928, sheets 25-29.

⁵¹ Vgl. Jehmlich: Der VEB Pentacon Dresden, S. 112–114.
See Jehmlich: Der VEB Pentacon Dresden, pp. 112-114.

⁵² Vgl. ebd., S. 132.
Cf. Ibid. P. 132.

⁵³ Vgl. ebd., S. 132.
Cf. ibid. p. 132.

⁵⁴ Siehe dazu Steiner, Andre: Zwischen Konsumversprechen und Innovationszwang. Zum wirtschaftlichen Niedergang der DDR, in: Jaraus, Konrad H./Sabrow, Martin(Hg.): Weg in den Untergang. Der innere Zerfall der DDR, Göttingen 1999, S. 153–192; Steiner, Andre: Von Plan zu Plan. Eine Wirtschaftsgeschichte der DDR, Bonn 2007. See Steiner, Andre: Zwischen Konsumversprechen und Innovationszwang. On the economic decline of the GDR, in: Jaraus, Konrad H./Sabrow, Martin(eds.): Weg in den Untergang. Der innere Zerfall der DDR, Göttingen 1999, pp. 153-192; Steiner, Andre: Von Plan zu Plan. An Economic History of the GDR, Bonn 2007.

⁵⁵ Vgl. Vortrag von Tolou Maslahati auf der Konferenz "Verronnene Zeit" – Zweiter Bundeskongress politisch verfolgter Frauen in der SBZ und der DDR, 06.–08.10.2023, Titel: „Traumafolgestörungen. Körperliche und psychische Folgen politischer Haft“, abrufbar unter: <https://www.youtube.com/watch?v=W-zzDBriS8E> [Stand: 20.02.2024]. Siehe dazu weiterführend auch Maslahati, Tolou u. a.: Gesundheitliche Folgen politischer Haft in der Sowjetischen Besatzungszone und der Deutschen Demokratischen Republik, in: Psychother Psychosom Med Psychol 72, 7 (2022), S. 283–291. Cf. lecture by Tolou Maslahati at the conference "Verronnene Zeit" - Zweiter Bundeskongress politisch verfolgter Frauen in der SBZ und der DDR, 06.-08.10.2023, title: "Traumafolgestörungen. Physical and psychological consequences of political imprisonment", available at: <https://www.youtube.com/watch?v=W-zzDBriS8E> [as at: 20.02.2024]. For further information, see also Maslahati, Tolou et al: Gesundheitliche Folgen politischer Haft in der Sowjetischen Besatzungszone und der Deutschen Demokratischen Republik, in: Psychother Psychosom Med Psychol 72, 7 (2022), pp. 283-291.

⁵⁶ Vgl. Wunschik: Knastware, S. 43-48.

Cf. Wunschik: Knastware (Prison goods), pp. 43-48.

⁵⁷ Justus Vesting schätzt den Anteil der politischen Häftlinge in der StVE Bitterfeld für 1972 auf ca. 40 Prozent. Vgl. Vesting, Justus: Zwangsarbeit im Industriedreieck. Strafgefangene und Bausoldaten in der Industrie der DDR, Berlin 2012, S. 60f. Justus Vesting estimates the proportion of political prisoners in the Bitterfeld Prison at around 40 percent in 1972. Cf. Vesting, Justus: Forced labor in the industrial triangle. Prisoners and construction soldiers in the industry of the GDR, Berlin 2012, p. 60f.

⁵⁸ Siehe Henseling, Karl-Otto: Chlorchemie. Struktur und Entwicklung, Berlin 1990. See Henseling, Karl-Otto: Chlorchemie. Structure and development, Berlin 1990.

⁵⁹ Siehe Schwarz, Winfried: Chlor-Unfälle. Entwicklung der Chlorunfälle in der Bundesrepublik Deutschland von 1952 bis 1991, hrsg. im Auftrag von Greenpeace e.V., Hamburg 1992. See Schwarz, Winfried: Chlorine accidents. Entwicklung der Chlorunfälle in der Bundesrepublik Deutschland von 1952 bis 1991, published on behalf of Greenpeace e.V., Hamburg 1992.

⁶⁰ Vgl. die Aussagen von Dr. Karl Ender, ehemaliger Umweltbeauftragter des CKB in: Blum, Roland: Mitgift. Von schmutzigen Flüssen und blühenden Landschaften. Dokumentarfilm SWR, hr/rbb, 2014, Minute: 08:30. Cf. the statements of Dr. Karl Ender, former environmental officer of the CKB in: Blum, Roland: Mitgift. Of dirty rivers and blooming landscapes. Documentary SWR, hr/rbb, 2014, Minute: 08:30.

⁶¹ Siehe Sicherheitsdatenblatt gemäss Art. 53 der ChemV von 18.05.2005 (letzte Überarbeitung 6.11.2013). See safety data sheet according to Art. 53 of the ChemO of 18.05.2005 (last revision 6.11.2013).

⁶² Siehe Vesting: Zwangsarbeit. See Vesting: Forced labor

⁶³ Vgl. Bubke, Herrmann: Studie zur Kontamination von Arbeitnehmern mit Quecksilber bei der Erdgasförderung in der Altmark, o. O. 2010, abrufbar unter: <https://docplayer.org/28546328-Studie-zur-kontamina-tion-von-arbeitnehmern-mit-quecksilber-bei-der-erdgasfoerderung-in-der-altmark.html> [Stand: 25.09.2023], S. 7. Cf. Bubke, Herrmann: Studie zur Kontamination von Arbeitnehmern mit Quecksilber bei der Erdgasförderung in der Altmark, o. O. 2010, available at: <https://docplayer.org/28546328-Studie-zur-kontamina-tion-von-arbeitnehmern-mit-quecksilber-bei-der-erdgasfoerderung-in-der-altmark.html> [Status: 25.09.2023], p. 7.

⁶⁴ Vgl. Clarkson, Thomas W./ Magos, Laszlo: The Toxicology of Mercury and Its Chemical

Compounds, in: *Critical Reviews in Toxicology* 36 (2006), available: <https://www.tandfonline.com/doi/full/10.1080/10408440600845619> [Stand: 25.09.2023], pp. 609–662, here pp. 611– 617.

⁶⁵ Vgl. Bundesamt für Arbeitsschutz und Arbeitsmedizin (BAuA): Merkblatt zur BK Nr. 1102. Erkrankungen durch Quecksilber oder seine Verbindungen. Merkblatt zu BK Nr. 15 der Anl. 1 zur 7. BKVO, S. 2; Clarkson/Magos: *The Toxicology*, S. 19. Cf. Federal Office for Occupational Safety and Health (BAuA): Fact sheet on BK No. 1102. Diseases caused by mercury or its compounds. Fact sheet on BK No. 15 of Annex 1 to the 7th BKVO, p. 2; Clarkson/Magos: *The Toxicology*, p. 19.

⁶⁶ Vgl. BAuA: Merkblatt, 2f; Bubke: *Studie*, S. 8. Cf. BAuA: Fact sheet, 2f; Bubke: *Study*, p. 8.

⁶⁷ Einen detaillierten Überblick über die Forschungslage erlaubt die im Jahr 2006 veröffentlichte Übersichtsstudie von Clarkson und Magos. Siehe Clarkson/Magos: *The Toxicology*. The overview study by Clarkson and Magos published in 2006 provides a detailed overview of the research situation. See Clarkson/Magos: *The Toxicology*.

⁶⁸ Vgl. Bubke: *Studie*, S. 31f. Cf. Bubke: *study* p. 31 f.

⁶⁹ Cf. Frumkin, Howard/Letz, Richard u. a.: Health Effects of Long-Term Mercury Exposure Among Chloral-kali Plant Workers, in: *American Journal of Industrial Medicine* 39 (2001), S. 1–18, here pp 12–15.

⁷⁰ Vgl. Bildunterschrift zu Bild 183-1987-1109-303, Signatur: BArch, Bildarchiv, 183-1987-1109-303. Cf. caption to image 183-1987-1109-303, signature: BArch, Bildarchiv, 183-1987-1109-303.

⁷¹ Vgl. Vesting: *Zwangsarbeit*, S. 46–97. Cf. Vesting: *Forced labor*, pp. 46-97

⁷² „Information über Umstände der unnatürlichen Todesfälle von zwei im VEB CKB, Betriebsteil Chlor I zur Arbeit eingesetzten Strafgefangenen und daraus notwendig werdende Maßnahmen zur Durchsetzung der sozialistischen Gerechtigkeit“, vom 26. Juni 1981, Signatur: BArch, MfS, HA VII/Nr. 2349, Bl. 1. “Information on the circumstances of the unnatural deaths of two prisoners assigned to work at VEB CKB, Chlor I division, and the resulting measures necessary to enforce socialist justice”, dated June 26, 1981, signature: BArch, MfS, HA VII/Nr. 2349, Bl. 1.

⁷³ Vgl. Vesting: *Zwangsarbeit*, S. 97–99. Eine ausführliche Beschreibung der Arbeitsbedingungen ist in dem Erfahrungsbericht von Holger Rossmann enthalten, der als politischer Gefangener insgesamt 1 Jahr lang in Bitterfeld Zwangsarbeit leisten musste.

Vgl. Bericht von Holger Rossmann, Archiv der UOKG, S. 2f.

See Vesting: Zwangsarbeit(Forced labor), pp. 97-99. A detailed description of the working conditions can be found in the report by Holger Rossmann, who, as a political prisoner, had to perform forced labor in Bitterfeld for a total of one year. Cf. report by Holger Rossmann, Archive of the UOKG, p. 2f.

⁷⁴ Vgl. Information zur gegenwärtigen Lage zum Arbeitseinsatz der Strafgefangenen in den Arbeitseinsatz-betrieben Chlor I und Chlor III des VEB Chemiekombinat Bitterfeld vom 12. Oktober 1982“, Signatur: BArch, MfSm HA VII/Nr. 2348, Bl. 156–158, hier Bl. 157.

Cf. “Information on the current situation regarding the work deployment of prisoners in the Chlorine I and Chlorine III work deployment plants of the VEB Chemiekombinat Bitterfeld of October 12, 1982”, signature: BArch, MfSm HA VII/Nr. 2348, sheets 156-158, here sheet 157.

⁷⁵ Vgl. „Abschlußbericht zu den Untersuchungen und Maßnahmen zur vorbeugenden Verhinderung weiterer schwerwiegender Vorkommnisse in den Arbeitseinsatzbetrieben Chlor I und Chlor III des Chemischen Kombinats Bitterfeld vom 22. Dezember 1981“, Signatur: BArch, MfS, HA IX/Nr. 16798, Bl. 59–60.

Cf. “Final report on the investigations and measures to prevent further serious incidents in The Chlorine I and Chlorine III operations of the Bitterfeld Chemical Combine dated December 22, 1981”, signature: BArch, MfS, HA IX/Nr. 16798, pp. 59-60.

⁷⁶ Vgl. ebd.

Cf. Ibid.

⁷⁷ Ender in: Blum: Mitgift.

⁷⁸ Vgl. Rossmann, S. 2–5; Sauer, Stefan: Der missglückte Versuch, aus mir einen brauchbaren Menschen zu formen, Magdeburg 2022, S. 16f.

Cf. Rossmann, pp. 2-5; Sauer, Stefan: The failed attempt to turn me into a useful human being, Magdeburg 2022, pp. 16f.

⁷⁹ Vgl. „Information zur gegenwärtigen Lage“, Bl. 157.

Cf. “Information on the current situation”, p. 157.

⁸⁰ Vgl. „Information des FDGB zu einer tödlichen Berufskrankheit“, vom 24.04.1981, Signatur: BArch, MfS, Ast. Halle, MfS OD CKB/SA 1, Bl. 85f, abgedruckt in: Sauer: Der missglückte Versuch, S. 57f.

Cf. “Information from the FDGB on a fatal occupational disease”, dated 24.04.1981, Signature: BArch, MfS, Ast. Halle, MfS OD CKB/SA 1, p. 85f, reprinted in: Sauer: The failed attempt, p. 57f.

⁸⁰ Cf. Vesting: Zwangsarbeit, pp. 99–104, 111–113.

⁸¹ Cf. „Betrifft: Arbeitsschutzbekleidung, Information über Chemisches Kombinat Bitterfeld“, Chlor III vom 24. Januar 1984, Signatur: BArch, MfS, HA VII/Nr. 2348, Bl. 24. “Subject: Protective work clothing, information about Chemisches Kombinat Bitterfeld”, Chlorine III dated January 24, 1984, signature: BArch, MfS, HA VII/No. 2348, sheet 24.

⁸² Vgl. „Sachstandsbericht über die Ausnahmegenehmigungen infolge MAK-Wertüberschreitungen in den Elektrolysen P1/E1 und P1/E3“, vom 03.04.1981, Signatur: BArch, MfS, Ast. Halle, MfS BV Halle, Abt. XVIII/SA 7, Bl. 62, zitiert nach Vesting, Zwangsarbeit, S. 99.

Cf. “Status report on exemptions as a result of MAK values being exceeded in the P1/E1 and P1/E3 electrolysis plants”, dated 03.04.1981, signature: BArch, MfS, Ast. Halle, MfS BV Halle, Abt. XVIII/SA 7, Bl. 62, quoted from Vesting, Zwangsarbeit, p. 99.

⁸³ Vgl. „Abschlußbericht zu den Untersuchungen“, Bl. 60.

Cf. “Final report on the investigations”, p. 60.

⁸⁴ „Information zur gegenwärtigen Lage“, Bl. 156.

“Information on the current situation”, p. 156.

⁸⁵ Vgl. Kurzeinschätzung [des Leiters der StVE Bitterfeld] zur Situation in den Chlorbetrieben vom 06. April 1983, Signatur: BArch, MfS, HA IX/ Nr. 16798, Bl. 30-32. Cf. brief assessment [by the head of the Bitterfeld Prison] on the situation in the chlorine plants dated April 6, 1983, shelfmark: BArch, MfS, HA IX/ No. 16798, pp. 30-32.

⁸⁶ Einschätzung zum Stand Chlorproblematik in Bitterfeld vom 10. Mai 1983. Signatur: BArch, MfS, HA VII/ Nr. 2348, Bl. 66f.

Assessment of the status of the chlorine problem in Bitterfeld, May 10, 1983, signature: BArch, MfS, HA VII/ Nr. 2348, Bl. 66f.

⁸⁷ Vesting: Zwangsarbeit (Forced labor), p. 112.

⁸⁸ Vgl. „Information über Umstände der unnatürlichen Todesfälle“, Bl. 1.

Cf. “Information on the circumstances of the unnatural deaths”, p. 1.

⁸⁹ Ausführliche Diskussion und Belege finden sich bereits in der Magisterarbeit von Justus Vesting. Siehe Vesting, Justus: Zwangsarbeit im Chemiedreieck. Strafgefangene und Bausoldaten in der chemischen Industrie der DDR, 2002 (Manuskript). Detailed discussion and evidence can already be found in Justus Vesting's master's thesis.

See Vesting, Justus: Zwangsarbeit im Chemiedreieck. Strafgefangene und Bausoldaten in der chemischen Industrie der DDR (Prisoners and construction soldiers in the chemical industry), 2002 (manuscript).

⁹⁰ Vgl. Information der Hauptabteilung VII, vom 26.06.1981, Signatur: BArch, MfS, Ast. Halle, MfS OD CKB/ SA 1, Bl. 52–55, hier 52f, abgedruckt in Sauer: Der missglückte Versuch, S. 59f.

Cf. information from Main Department VII, dated 26.06.1981, signature: BArch, MfS, Ast. Halle, MfS OD CKB/ SA 1, pp. 52-55, here 52f, reprinted in Sauer: Der missglückte Versuch, (The failed attempt...) pp. 59f.

⁹¹ Vgl. Vesting: Zwangsarbeit, S. 99–104, 111–113; siehe auch Bericht über die „Ergebnisse einer Nachkontrolle in der StVE Bitterfeld zur Gewährleistung des Arbeits- und

Gesundheitsschutzes beim Arbeitseinsatz Strafgefangener in den Chlorbetrieben des CKB vom 16. November 1981“. Signatur: BArch, MfS, HA IX/Nr. 16798. Bl. 62-64.

Cf. Vesting: Forced labor, pp. 99-104, 111-113; see also report on the “Results of a follow-up inspection in the Bitterfeld Prison to ensure occupational health and safety during the deployment of prisoners in the chlorine plants of the CKB on 16 November 1981“. Signature: BArch, MfS, HA IX/No. 16798. pp. 62-64.

⁹² Wetzel, Peter: Untersuchungen des Expositionsrisikos Werkträger eines chemischen Großbetriebes. Diss. Martin-Luther-Universität 1984. Zitiert nach: Stief, Martin: „Stellt die Bürger ruhig“. Staatssicherheit und Umweltzerstörung im Chemierevier Halle–Bitterfeld, Göttingen 2019, S. 208.

Wetzel, Peter: Investigation of the exposure risk of workers in a large chemical plant. Diss. Martin Luther University 1984. Quoted from: Stief, Martin: “Stellt die Bürger ruhig“. State security and environmental destruction in the Halle-Bitterfeld chemical district, Göttingen 2019, p. 208.

⁹³ „Information zur Durchsetzung der Sicherheits-, Arbeits- und Gesundheitsschutzbestimmungen in den Chlorbetrieben der Chemiekombinate Bitterfeld und Buna vom 15. Juli 1986“, Signatur: BArch, MfS, HA VII/Nr. 6074, Bl. 61f. “Information on the enforcement of safety, occupational health and safety regulations in the chlorine plants of the Bitterfeld and Buna chemical combines dated July 15, 1986“, signature: BArch, MfS, HA VII/Nr. 6074, Bl. 61f.

⁹⁴ Von diesem Symptom berichtete Holger Rossmann in einem persönlichen Gespräch, das am 01./02.10.2023 mit ihm geführt wurde.

Holger Rossmann reported this symptom in a personal conversation with him on October 1 and 2, 2023.

⁹⁵ Siehe Landessozialgericht (LSG) der Länder Berlin und Brandenburg, Urteil vom 21.01.2010 - L 2 U 294/08 = openJur 2012, 12233./08

See Landessozialgericht (LSG) der Länder Berlin und Brandenburg, judgment of 21.01.2010 - L 2 U 294/08 = openJur 2012, 12233.

⁹⁶ Siehe LSG Sachsen-Anhalt, Urteil vom 12.10.2010 - L 7 VU 15/05 = openJur 2020, 26325.

See LSG Saxony-Anhalt, judgment of 12.10.2010 - L 7 VU 15/05 = openJur 2020, 26325.

⁹⁷ Laut eigener Aussage dauerte der Arbeitseinsatz von Holger Rossmann in den Chlorbetrieben 12 Monate. Vgl. Bericht von Holger Rossmann, S. 4. According to his own statement, Holger Rossmann's work in the chlorine plants lasted 12 months. See Holger Rossmann's report, p. 4.

⁹⁸ Vgl. Wunschik: Knastware, S. 150–153, 297; Neubert, Hildigurd/Bastian, Uwe: Schamlos ausgebeutet. Das System der Haftzwangsarbeit politischer Gefangener des SED-Staates, S. 123. Zu den Zahlen für 1989 vgl. Statistische Angaben über Verhaftete/Strafgefangene aus der Untersuchungshaftanstalt/Strafvollzugseinrichtung Naumburg, vom 06.09.89, Signatur: BArch, MfS, BV Halle, Abteilung VII/ Nr. 1049, Bl. 4, 8.

Cf. Wunschik: Knastware, pp. 150-153, 297; Neubert, Hildigurd/Bastian, Uwe: Schamlos ausgebeutet. Das System der Haftzwangsarbeit politischer Gefangener des SED-Staates, p. 123. For the figures for 1989, see Statistische Angaben über Verhaftete/Strafgefangene aus der Untersuchungshaftanstalt/Strafvollzugseinrichtung Naumburg, vom 06.09.89, Signatur: BArch, MfS, BV Halle, Abteilung VII/ Nr. 1049, Bl. 4, 8.

⁹⁹ Vgl. „Beschluß zum Bericht über die Ergebnisse der Überprüfung der Betriebe mit Galvanikanlagen und weiterer Betriebe, die mit Wasserschadstoffen umgehen (einschließlich Materialien) vom 21. Juli 1981, in: 3. Sitzung des Ministerrates vom 16. Juli 1981, Signatur: BArch, DC 20-I/3/1742 [alte Signatur], Bl. 92–132.

Cf. “Resolution on the report on the results of the inspection of companies with electroplating plants and other companies that handle water pollutants (including materials) of July 21, 1981, in: 3rd session of the Council of Ministers of July 16, 1981, signature: BArch, DC 20-I/3/1742 [old signature], pp. 92-132.

¹⁰⁰ Vgl. Präsidium des Ministerrates am 17. März 1988, Signatur: BArch, DC 20-I/4/6210 [alte Signatur], o. P.

Cf. Presidium of the Council of Ministers on March 17, 1988, signature: BArch, DC 20-I/4/6210 [old signature], n.p.

¹⁰¹ Diese Angaben gehen auf die Aussagen von Dirk Meinert zurück, der als politischer Häftling in Naumburg inhaftiert war und in den Jahren 1980/81 für ca. acht Monate in der Galvanik-Abteilung der MeWa Naumburg arbeiten musste. Das Gespräch mit Dirk Meinert wurde telefonisch am 12.12.2023 geführt.

This information is based on the testimony of Dirk Meinert, who was imprisoned in Naumburg as a political prisoner and had to work in the electroplating department of

MeWa Naumburg for around eight months in 1980/81. The interview with Dirk Meinert was conducted by telephone on 12.12.2023.

¹⁰² Cf. BArch, Fig. 183-A1207-0006-001.

¹⁰³ Cf. BArch, Fig. 183-N0718-417.

¹⁰⁴ Vgl. Wikipedia: Artikel Chromsäure, Abrufbar unter <https://de.wikipedia.org/wiki/Chroms%C3%A4ure> [Stand: 13. Januar 2024]. Cf. wikipedia: Article Chromic acid, available at <https://de.wikipedia.org/wiki/Chroms%C3%A4ure> [as of January 13, 2024].

¹⁰⁵ Zu den aktuell vorgeschriebenen Schutzmaßnahmen siehe Bundesministerium für Arbeit und Soziales (BMAS): Technische Regeln für Gefahrenstoffe [TRGS] 561. Tätigkeiten mit krebserzeugenden Metallen und ihren Verbindungen, Fassung 14.6.2021, GMBI 2017 [Nr. 43], S. 786–812, online abrufbar unter: https://www.baua.de/DE/Angebote/Regelwerk/TRGS/pdf/TRGS-561.pdf?_blob=publicationFile&v=1 [Stand: 12.01.2024].

For the currently prescribed protective measures, see Federal Ministry of Labor and Social Affairs (BMAS): Technische Regeln für Gefahrenstoffe [TRGS] 561. Tätigkeiten mit krebserzeugenden Metallen und ihren Verbindungen, Version 14.6.2021, GMBI 2017 [No. 43], pp. 786-812, available online at: https://www.baua.de/DE/Angebote/Regelwerk/TRGS/pdf/TRGS-561.pdf?_blob=publicationFile&v=1 [Status: 12.01.2024].

¹⁰⁶ Vgl. BAuA: Merkblatt zur BK Nr. 1103, S. 2–4.
Cf. BAuA: Fact sheet on BK No. 1103, p. 2-4.

¹⁰⁷ Siehe Hessel, Ellen V.S. u. a.: Occupational exposure to hexavalent chromium. Part I. Hazard assessment of non-cancer health effects, in: *Regulatory Toxicology and Pharmacology* 126 (2021), online abrufbar unter <https://pubmed.ncbi.nlm.nih.gov/34563613/> [16.11.2023]; Den Braver-Sewradj, Shelenie P. u. Occupational exposure to hexavalent chromium. Part II. Hazard assessment of carcinogenic effects, in: *Regulatory Toxicology and Pharmacology* 126 (2021), online abrufbar unter <https://pubmed.ncbi.nlm.nih.gov/34506880/> [Stand: 16.11.2023].

See Hessel, Ellen V.S. u. a.: Occupational exposure to hexavalent chromium. Part I. Hazard assessment of non-cancer health effects, in: *Regulatory Toxicology and Pharmacology* 126 (2021), online available under <https://pubmed.ncbi.nlm.nih.gov/34563613/> [16.11.2023]; Den Braver-Sewradj, Shelenie P. u.: Occupational exposure to hexavalent chromium. Part II. Hazard assessment of carcinogenic effects, in: *Regulatorische Toxikologie und Pharmakologie* 126 (2021), online available under <https://pubmed.ncbi.nlm.nih.gov/34506880/> [Stand: 16.11.2023].

¹⁰⁸ Cf. Hessel: Occupational exposure to hexavalent chromium, Part I, S. 16.

¹⁰⁹ Cf. Den Braver-Sewradj: Occupational exposure to hexavalent chromium, Part II, S. 17.

¹¹⁰ Krebserregende Effekte von Chrom-VI-Verbindungen sind beim Menschen für eine Beschäftigungsdauer ab 4 Jahren dokumentiert. Vgl. ebd., S. 11. Carcinogenic effects of chromium VI compounds have been documented in humans for an exposure period of 4 years or more. Cf. *ibid.*, p. 11.

¹¹¹ Cf. Hessel: Occupational exposure to hexavalent chromium, Part I, S. 16

¹¹² Cf. *ibid.*, S. 11f, 14f.

¹¹³ See Qayyum, Saba u. a.: Effect of Nickel and Chromium exposure on buccal cells of electroplaters, in: *Toxicology and Industrial Health* 28,1 (2012), pp. 74–82; Hsien-Wen u. a.: Nasal Septum lesion and lung function in workers exposed to chromic acid in electroplating factories, in: *International Archives of Occupation and Environmental Health* 70 (1997), pp. 272–276.

¹¹⁴ Cf. BMAS: TRGS 561, S. 32.

¹¹⁵ Hoffmann, Constantin: Ich musste raus. 13 Wege aus der DDR, Halle 2016, S. 156
Hoffmann, Constantin: I had to get out. 13 ways out of the GDR, Halle 2016, p. 156

¹¹⁶ Diese Beschreibungen gehen im Wesentlichen auf die Angaben von Dirk Meinert zurück. Gestützt werden sie von Dirk Jangel und Frank Herrmann, die ebenfalls in der Abteilung Galvanik der MeWa arbeiten mussten. Vgl. ebd.; Telefonat mit Dirk Meinert vom 12.12.2023; Sachse: Das System, S. 468f.

These descriptions are essentially based on the information provided by Dirk Meinert. They are supported by Dirk Jangel and Frank Herrmann, who also had to work in the electroplating department at MeWa. Cf. *ibid.*; telephone call with Dirk Meinert on 12.12.2023; Sachse: Das System, p. 468f.

¹¹⁷ Cf. Sachse: Das System, S. 468f.

¹¹⁸ Vgl. Telefonat mit Dirk Meinert.
Cf. Telephone call with Dirk Meinert.

¹¹⁹ Vgl. Hoffmann: Ich musste raus, S. 156.
Cf. Hoffmann: I had to get out, p. 156.

¹²⁰ Vgl. Telefonat mit Dirk Meinert.
Cf. Telephone call with Dirk Meinert

¹²¹ Vgl. Kittan, Thomas: „Große Schikanen gegen kleinen Eggersdorfer und seine Familie.

Erinnerung an Dieter Graeser“, in: Das Doppeldorf. Informationsblatt für Petershagen/Eggersdorf 33,406 (2022), S. 4–5, hier S. 4.

Cf. Kittan, Thomas: “Great harassment against little Eggersdorfer and his family. Remembrance of Dieter Graeser“, in: Das Doppeldorf. Information sheet for Petershagen/Eggersdorf 33,406 (2022), pp. 4-5, here p. 4.

¹²² Siehe Kurzbericht Nr. 2016.0525U über die Analytik und Auswertung von Materialproben durch NovaBiotec Dr. Fechter GmbH vom 26. Januar 2017. summary report no. 2016.0525U on the analysis and evaluation of material samples by NovaBiotec Dr. Fechter GmbH dated January 26, 2017

¹²³ Siehe Technischen Normen, Gütevorschriften und Lieferbedingungen (TGL) 15372/01, 1.7.1976. Abrufbar unter: tgl-15372-1-jul-1976.pdf (bbr-server.de) [Stand: 07.02.2024].

See Technical Standards, Quality Regulations and Delivery Conditions (TGL) 15372/01, 1.7.1976. Available at: tgl-15372-1-jul-1976.pdf (bbr-server.de) [as at: 07.02.2024].

¹²⁴ Siehe Technischen Normen, Gütevorschriften und Lieferbedingungen (TGL), 6558/03, 1.1.1983.

See Technical Standards, Quality Regulations and Delivery Conditions (TGL), 6558/03, 1.1.1983.

¹²⁵ Zitiert nach Kurzbericht, S. 7.

Quoted from the summary report, p. 7.

¹²⁶ Vgl. Fromm, Ludwig/Lippmann, Bernd: Das Konstruktionsbüro im Zuchthaus Cottbus, in: Stacheldraht Nr. 8 in 2020, S. 8–10, hier S. 8f.

Cf. Fromm, Ludwig/Lippmann, Bernd: Das Konstruktionsbüro im Zuchthaus Cottbus, in: Stacheldraht No. 8 in 2020, pp. 8-10, here pp. 8f.

¹²⁷ Zitiert nach Grußwort von Sylvia Wähling, in: Union der Opferverbände der Kommunistischen Gewaltherrschaft (UOKG)/Menschenrechtszentrum Cottbus (Hg.): Zwangsarbeit in politischer DDR-Haft. Internationales Tribunal, 11.–13. September 2020, Berlin 2021, S. 14–17, hier S. 15f.

Quoted from greeting by Sylvia Wähling, in: Union der Opferverbände der Kommunistischen Gewaltherrschaft (UOKG)/Menschenrechtszentrum Cottbus (ed.): Zwangsarbeit in politischer DDR-Haft. International Tribunal, September 11-13, 2020, Berlin 2021, pp. 14-17, here p. 15f.

¹²⁸ Papierfragebogen von [ID3455] der Datenbank der UOKG zur Zwangsarbeit politischer Häftlinge, aufgenommen am 6. Juni 2013.

Paper questionnaire from [ID3455] of the UOKG database on forced labor of political

prisoners, recorded on June 6, 2013.

¹²⁹ Vgl. Koch, Christian J. Th.: „Ohne Lüge leben“, München/Grünwald 2014 und Georgis Zech: „Das Sonntagskind: Ein deutsch-deutsches Familienschicksal“, Aachen 2012. Zitiert nach Kurzbericht, S. 3.

Cf. Koch, Christian J. Th.: “Ohne Lüge leben”, Munich/Grünwald 2014 and Georgis Zech: “Das Sonntagskind: Ein deutsch-deutsches Familienschicksal”, Aachen 2012. Quoted from short report, p. 3

¹³⁰ Vgl. Bericht von Holger Rossmann, S. 2f
Cf. Report by Holger Rossmann, p. 2f

¹³¹ Vgl. BAuA: Merkblatt zur BK Nr. 1102, S. 2; Clarkson/Magos: The Toxicology, S. 19.
Cf. BAuA: Fact sheet on BK No. 1102, p. 2; Clarkson/Magos: The Toxicology, p. 19.

¹³² Vgl. Deutsche Gesetzliche Unfallversicherung e.V. (DGUV): DGUV-Information 213–725, Manuelles Kolbenlöten mit bleifreien Lotlegierungen in der Elektro- und Elektronikindustrie. Empfehlungen Gefährdungs-ermittlung der Unfallversicherungsträger (EGU) nach der Gefahrstoffverordnung, 2018.
Cf. German Social Accident Insurance (DGUV): DGUV-Information 213-725, Manual soldering with lead-free solder alloys in the electrical and electronics industry. Recommendations for risk assessment by the accident insurance institutions (EGU) in accordance with the Hazardous Substances Ordinance, 2018.

¹³³ Vgl. DGUV: Branche Galvanik, DGUV Regel 109–602, 2017, S. 31.
Cf. DGUV: Electroplating sector, DGUV Rule 109-602, 2017, p. 31.

¹³⁴ Vgl. BMAS: Erkrankungen durch Chrom oder seine Verbindungen, BArbBl Heft 4/1981, Merkblatt zur BK Nr. 1103; Erkrankungen durch Cadmium oder seine Verbindungen, BArbBl Fachteil Arbeitsschutz 1963, 281, Merkblatt zur BK Nr. 1104. See BMAS: Diseases caused by chromium or its compounds, BArbBl Heft 4/1981, Merkblatt zur BK Nr. 1103; (Diseases caused by cadmium or its compounds), BArbBl Fachteil Arbeitsschutz 1963, 281, Merkblatt zur BK Nr. 1104.

¹³⁵ Vgl. DGUV: Branche Galvanik, S. 31
Cf. DGUV: Electroplating sector, p. 31

¹³⁶ Vgl. NovaBiotec, Dr. Fechter GmbH: Kurzberichtnr. 2016.0525U/2017-01-1 über die Analytik und Auswertung von Materialproben, 2016, S. 7; Umweltbundesamt GmbH, Hausstaub – Ein Indikator für Innenraumbelastung, Berichte BE-258, 2004, S. 36.
Cf. NovaBiotec, Dr. Fechter GmbH: Summary report no. 2016.0525U/2017-01-1 on the analysis and evaluation of material samples, 2016, p. 7. evaluation of material samples, 2016, p. 7; Umweltbundesamt GmbH, House dust - an indicator of indoor pollution, Reports BE-258, 2004, p. 36.

¹³⁷ Cf. *ibid.*

¹³⁸ Karin Schmidt geht für die 1970er und 1980er Jahre davon aus, dass ein Viertel bis ein Drittel der Gefangenen in Hoheneck aus politischen Gründen war. Tobias Wunschik setzt deren Zahl mit 145 von insgesamt 900 Gefangenen etwas niedriger an. Vgl. Schmidt, Karin: Zur Frage der Zwangsarbeit im Strafvollzug der DDR. Die „Pflicht zur Arbeit“ im Arbeiter- und Bauernstaat. Hildesheim 2011, S. 253; Wunschik: Knastware, S. 183.

Karin Schmidt assumes that a quarter to a third of the prisoners in Hoheneck in the 1970s and 1980s were there for political reasons. Tobias Wunschik puts their number somewhat lower at 145 out of a total of 900 prisoners

Cf. Schmidt, Karin: On the question of forced labor in the GDR prison system. The “duty to work” in the workers' and peasants' state. Hildesheim 2011, p. 253; Wunschik: Knastware, p. 183.

¹³⁹ Vgl. Schmidt: Zur Frage, S. 249–252; Neubert: Schamlos, S. 84f.

Cf. Schmidt: Zur Frage, pp. 249-252; Neubert: Schamlos, pp. 84f

¹⁴⁰ BAuA: Manuelle Arbeitsprozesse. Gefährdungsbeurteilung mit der Leitmerkmalmethode, Dortmund 2022, S. 2.

BAuA: Manual work processes. Risk assessment with the key characteristic method, Dortmund 2022, p. 2.

¹⁴¹ Cf. *ibid.*, pp. 9-12.

¹⁴² Vgl. DGUV: Information 203-023. Ergonomie an Näharbeitsplätzen. Ratgeber für die Praxis, Berlin 2019, abrufbar unter:

<https://publikationen.dguv.de/widgets/pdf/download/article/592> [Stand: 26.01.2024], S. 7.

Cf. DGUV: Information 203-023 Ergonomics at sewing workstations. Ratgeber für die Praxis, Berlin 2019, available at:

<https://publikationen.dguv.de/widgets/pdf/download/article/592> [as at: 26.01.2024], p. 7.

¹⁴³ Cf. *ibid.*, pp. 8-23.

¹⁴⁴ Cf. *ibid.*, pp. 7, 23.

¹⁴⁵ Cf. Lillypet, Santham u. a.: Health problems among garment factory workers. A narrative literature review, in: *Journal of Occupational Health and Epidemiology* 6,2 (2017), pp. 114–121, here p. 117.

¹⁴⁶ Cf. Habi, Monjurul: Ergonomic risk factor identification for sewing machine operators

through super-vised occupational therapy fieldwork in Bangladesh. A case study, in: *Work* 50 (2015) 357–362, here p. 359; Ahmad, Aftab u. a.: Investigation of ergonomic working conditions of sewing and cutting machine operators of clothing industry, in: *Industria textile* 72,3 (2021), pp. 309–314, here p. 311f; Sealetsa, Oanthata J./Thatcher, Andrew T.: Ergonomics issues among sewing machine operators in the textile manufacturing industry in Botswana, in: *Work* 38,3 (2011), pp. 279–289, here pp. 284–286; Chan, Jacqueline u.a.: Preventing Musculo-skeletal Disorders in Garment Workers. Preliminary Results Regarding Ergonomics Risk Factors and Pro-posed Interventions Among Sewing Machine Operators in the San Fransisco Bay Area, in: *Applied Occupational and Environmental Hygiene* 17,4 (2002), pp. 247–253, here p. 249f.

¹⁴⁷ Cf. Habi: Ergonomic risk factor, p. 359; Tafese, Ararso u. a.: Predictors of occupational exposure to neck and shoulder musculoskeletal disorders among sewing machine operators of garment industries in Ethiopia, in: *Science Journal of Public Health* (2014), pp. 577–583, here p. 581.

¹⁴⁸ Cf. Kaergaard, Anette/Andersen, Johan: Musculoskeletal disorders of the neck and shoulders in female sewing machine operators. Prevalence, incidence, and prognosis, in: *Occup Environ Med* 57 (2000), pp. 528–534, here p. 533; Tafese: Predictors, p. 582.

¹⁴⁹ Vgl. Widanarko, Baiduri u. a.: The combined effect of physical, psychosocial/organisational and/or environmental risk factors on the presence of work-related musculoskeletal symptoms and its consequences, in: *Applied Ergonomics* 45 (2014), pp. 1610–1621, here pp. 1614–1619.

¹⁵⁰ Cf. *ibid*, p. 1618.

¹⁵¹ Cf. Lillypet: Health problems, pp. 117–119.

¹⁵² Cf. Brisson, Chantai: Disability among female garment workers. A comparison with a national sample, in: *Scandinavian Journal of Work, Environment & Health* 15,5 (1989), pp. 323–328, here p. 326.

¹⁵³ See Andersen, Johan H./Gaardboe, Ove: Prevalence of Persistent Neck and Upper Limb Pain in a Historical Cohort of Sewing Machine Operators, in: *American Journal of Industrial Medicine* 24 (1993), pp. 677–687; dies.: Musculoskeletal Disorders of the Neck and Upper Limb Among Sewing Machine Operators. A Clinical Investigation, in: *American Journal of Industrial Medicine* 24 (1993), pp. 689–700. Chantai Brisson and her co-authors came to similar conclusion, see Brisson, Chantai et al.: Effect of duration of employment in piecework on severe disability among female garment workers, in: *Scandinavian Journal of Work, Environment & Health* 15,5 (1989), pp. 329–334.

¹⁵⁴ Siehe Originalaufnahmen in Anne Worst: „Westware aus dem Ostknast“, Dokumentation, MDR, 2012.

See original recordings in Anne Worst: “Westware aus dem Ostknast”, documentary, MDR, 2012.

¹⁵⁵ Diese Angaben gehen auf die Aussagen der in den 1980er Jahren in Hoheneck einsitzenden Hannelore Rutz und der Ende der 1970er Jahre einsitzenden Gabriele Stötzer zurück. Vgl. Telefonat mit Hannelore Rutz am 28.11.2023; Stötzer, Gabriele: Zwangsarbeitsalltag. Nähkommando Esda im Frauengefängnis Hoheneck, in: Horch und Guck 60 (2008), S. 36–39, hier S. 39.

This information is based on the statements of Hannelore Rutz, who was imprisoned in Hoheneck in the 1980s, and Gabriele Stötzer, who was imprisoned at the end of the 1970s.

Cf. telephone call with Hannelore Rutz on 28.11.2023; Stötzer, Gabriele: Zwangsarbeitsalltag. Esda sewing unit in Hoheneck women's prison, in: Horch und Guck 60 (2008), pp. 36-39, here p. 39.

¹⁵⁶ Cf. Neubert: Schamlos ausgebeutet, p. 85.

¹⁵⁷ Cf. Stötzer: Zwangsarbeiteralltag, p. 39.

¹⁵⁸ Cf. Schmidt: Zur Frage, pp. 250f.

¹⁵⁹ Cf. Neubert: Schamlos ausgebeutet, p. 85; Stötzer: Zwangsarbeitsalltag, p. 38f; Telephone call with Rutz

¹⁶⁰ Vgl. Hannelore Rutz gab bei ihrer Befragung an, dass sie selbst keine chronischen Gesundheitsschäden von der Haftarbeit in Hoheneck davongetragen habe. Gleichzeitig seien ihr jedoch Mitgefangene bekannt, die noch immer unter Rücken- und Nackenbeschwerden leiden würden. Bestätigt wird dies durch die groß-angelegte Befragung von Neubert, bei der vier Frauen angaben, infolge der Näharbeit in Hoheneck unter dauerhaften Schäden zu leiden. Vgl. Telefonat mit Rutz; Neubert: Schamlos ausgebeutet, S. 85.

Hannelore Rutz stated in her interview that she herself had not suffered any chronic health problems as a result of her prison work in Hoheneck. At the same time, however, she was aware of fellow prisoners who were still suffering from back and neck pain. This is confirmed by Neubert's large-scale survey, in which four women stated that they suffered permanent damage as a result of sewing work in Hoheneck. Cf. telephone call with Rutz; Neubert: Schamlos ausgebeutet (Shamelessly exploited), p. 85.

¹⁶¹ Zur Liste der Arbeitseinsatzbetriebe und Kommandos sowie der darin involvierten Häftlinge siehe Wunschik: Knastware, S. 289–305.

For a list of the companies where prisoners had to work and the prisoners involved, see Wunschik: Knastware (Prison goods), pp. 289-305.

¹⁶² Im Koalitionsvertrag heißt es dazu: „Im Einvernehmen mit den Ländern erleichtern wir die Beantragung und Bewilligung von Hilfen und Leistungen für Opfer der SED-Diktatur, insbesondere für gesundheitliche Folgeschäden, passen die Definition der Opfergruppen an die Forschung an und dynamisieren die SED-Opferrente.“ Mehr Fortschritt wagen – Bündnis für Freiheit, Gerechtigkeit und Nachhaltigkeit. Koalitionsvertrag 2021–2025 zwischen SPD, BÜNDNIS 90/DIE GRÜNEN und FDP, S. 88. The coalition agreement states: “In agreement with the federal states, we will facilitate the application for and approval of aid and benefits for victims of the SED dictatorship, in particular for consequential health damage, adapt the definition of victim groups to research and make SED pensions more dynamic.” Daring more progress - Alliance for freedom, justice and sustainability. Coalition agreement 2021-2025 between the SPD, BÜNDNIS 90/DIE GRÜNEN and the FDP, p. 88.