# INDUSTRIAL REGIONS OF BURSA ACCORDING TO THE CITY'S DRAINAGE MAP OF 1909<sup>1</sup>

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#### **SUMMARY**

One of the places standing out with especially silk fabric and floss silk production, the city of Bursa will never lose its value in historical phases of the Ottoman Empire. The emerge of Industrial Revolution and after European based industrial growth which influenced the entire world and increased incrementally in  $20^{th}$  century had changed the socio-economical and cultural ambiance in late eras of the Ottoman Empire with the political life and signs of this change had occurred in Bursa as well. There had been formed industrial districts with factories and works towards the production of silk yarn. It is possible to determine the factories that existed in past and also the ones been added in early  $20^{th}$  century and accordingly occurred industrial districts by consulting the original Drainage Map of 1909 of Bursa.

Key Words: Bursa, Industrialization, Factory made, Silk, Map.

## ÖZET

## 1909 Bursa Kanalizasyon Haritası'na Göre Bursa'daki Sanayi Bölgeleri

Özellikle ipekli kumaş ve ham ipek üretimi ile dikkat çeken mekânlardan birisi olan Bursa kenti, Osmanlı Devleti tarihsel evrelerinde değerini hiç yitirmeyecektir. Sanayi Devrimi'nin ortaya çıkışı ve ardından bütün dünyayı etkisi

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altına alan ve 20. yüzyılda katlanarak artan Avrupa merkezli endüstriyel gelişim, Osmanlı Devleti'nin son dönemlerinde politik yaşamla birlikte sosyo-ekonomik ve kültürel ortamı da önemli ölçüde dönüştürecek ve bu dönüşümün izleri Bursa'da da yakalanabilecektir. İpek ipliği üretimine dönük çalışmalar ve fabrikalarla sanayi bölgeleri oluşacaktır. Geçmişte var olan ve buna 20. yüzyıl başlarında eklemlenen fabrikaları ve buna bağlı olarak ortaya çıkan sanayi bölgelerini 1909 yılına ait orijinal Bursa Kanalizasyon Haritasına başvurarak saptamak mümkündür.

Anahtar Kelimeler: Bursa, Sanayileşme, Fabrikasyon üretim, İpek, Harita.

#### Introduction

In time of Ottoman Empire's existence, the signs of European centered industrial growth which was constantly significant and in 19th and 20th century increased incrementally in Bursa, was perceived deeply in terms of change in production sites. It is probable to determine that this growth has transferred through via diverse sources and one of them is maps. Maps are important sources which represents city's spatial structure and growth in city's historical researches.

The first map representing the change in Bursa is the one made by General Staff of Defense under the presidency of Suphi Bey between the years of 1861 – 1862 (exilic 1278). The other map appearing in Bursa City Annuaire is the one dated 1907. Drainage Map of Bursa dated 1909 which is the main subject of our research is prepared by a French insurance company. According to symbols used on the map it was drew by Reserooiro d'Alachar the painter and the full name of the map is the Structure and Distribution Plan of Drainage Network of the city of Bursa. A copy of 1909 Bursa Drainage Map is in the City Records of Bursa Metropolitan Municipality City Museum and factory sites can be defined on the map. The curator of City Museum dear Ahmet Erdönmez and one of the voluntaries of City Records, investigative writer dear Raif Kaplanoğlu provided the map for my research.

#### **Industrial Districts**

We started examining the map from the west of city and headed towards to the east. In addition every district was reviewed from south to north in itself. In this context, the southwestern end zone of the city is Demirkapı District and the southeastern end zones are Molla Arap and Hacı Sinan districts. According to map, the locations of districts from west to east and in themselves from south to north are as given:

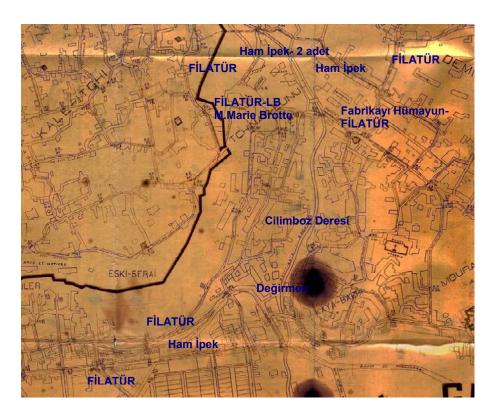
Demirkapı, Cilimboz Deresi, Çınarönü, Pınarbaşı, Türk mezarlığı, Maskem, Hocaalizade, Gökdere Vadisi, Karaağaç, Umurbey, Mollaarap.

Muradiye, Cilimboz Deresi, Kayabaşı, Kaleiçi, Hisar, Ulucami, Nasuhpaşa, Gökdere Vadisi, Setbaşı, Hacı İskender, Hacı Sinan.

Tophane, Çatalfırın, Hanlar Bölgesi, Bedreddin, Gökdere Vadisi.

Yahudiler, Bulgarlar, Deveciler, Tatarlar.

Our source for acquiring the information on the 1909 dated map which is our main material for the research and especially the ownership information of the factories is the Annuaire Oriental (Salname-i Şarki- Şark Yıllıkları).



## 1- FLOSS SILK-Silk Cocoon, 2- FILATURE-Silk Yarn

In Demirkapı District of the western end zone which is the starting point of our examination, there is a filature. Because there are no relevant symbols it was not possible to determine the ownership.

When we headed towards the left side of Demirkapı which is the east of city, at the right side (to west) of Cilimboz Brook in Çınarönü District, Fabrika-i Humayun attracts the attention. There is a silk cocoon

manufacturing factory located just above to the south. There is a filature abbreviated LB which is owned by M. Marie Brotte in 1914 and managed by her sibling with its 60 unwinding machines (Annuarie Oriental 1914: 1411), 1921 later on rented out in 1921 on left side of Cilimboz to the east on Cilimboz street. (Annuarie Oriental 1921: 1304.)

There are two silk cocoon manufacturing factory and a filature which we cannot determine the ownership because there are no abbreviations for the factories in the same region.

When headed downwards to the north of Çınarönü district and moved to east of Kayabaşı District which is one of the largest Greek districts of Bursa, at the right side of Cilimboz (the west of the brook) a mill stands out.

Between Kayabaşı and Yahudilik at the south of Altıparmak Avenue there is a filature and a silk cocoon manufacturing factory adjoining, and when we move to east towards the street there is a separate filature. There were no abbreviations for these factories therefore we were not able to determine their managers

On the map, for districts Pınarbaşı, Kaleiçi, Tophane, Turkish Cemetery, Hisar, Çatalfırın, Bulgarlar, Maksem, Ulucami-Inns District, Deveciler, Hocaalizade, Nasuh Paşa, Bedreddin, Tatarlar there are no expressions of manufacturers, production units or factories. In this region especially Maksem, Ulucamii and Inns District stands out as a bazaar area, Hocaalizade as a school area, and Nasuh Paşa region as an area of governmental buildings. Additionally Tatarlar and Deveciler region is an accommodation area for caravans. In the region called Kayhan to the west of Bedreddin District there is the Tobacco Regie.

According to the map, when we head towards to east from the districts we mentioned above which are practically at the center of the city in 1909, there is the Gökdere Valley. In reference to our determination on map the most important manufacturing center of the city is the left side of Gökdere, the east of the city. At that period of time Karaağaç, Setbaşı, Yeşil, Umurbey, Hacı İskender, Namazgâh, Mollarap, Hacı Sinan districts are present in the eastern region of the city.

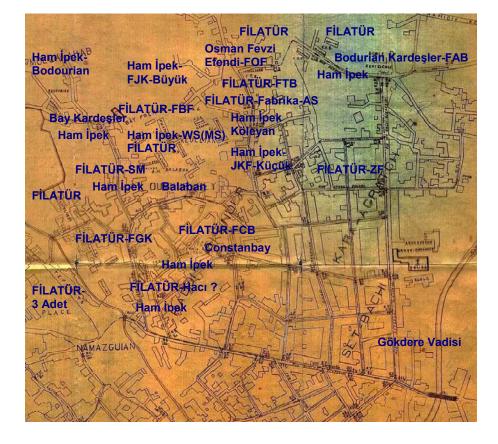
In Karaağaç District, further at the Setbaşı Avenue there is the İpekçilik Okulu (School of Seri culturing). At the left side of the school to the east, there is a filature abbreviated FAB, which was owned by Boduryan brothers and managed by them in 1913 with 40 unwinding machines (Annuarie Oriental 1913: 1838), and afterwards, managed by Sarim Aghamyan and continued working with 100 unwinding machines. (Annuarie

Oriental 1914: 1411.) Just across the filature there is a silk cocoon manufacturing factory.

On the north side of the avenue, there is a filature abbreviated FOF, which was owned by Osman Fevzi Effendi and managed by Bellart and Stussy (J) in 1913 with 80 unwinding machines (Annuarie Oriental 1913: 1838) and later on rented out in 1921(Annuarie Oriental 1921: 1304) with the same number of machines that was not changed since 1914 (Annuarie Oriental 1914: 1411). On the same region, there is a filature which was owned by again Osman Fevzi Effendi and managed by Doktor Stalinides in 1913 with 60 unwinding machines (Annuarie Oriental 1913: 1838), and after managed by Nubar Kamburyan in 1914 and continued its existence with again 60 unwinding machines (Annuarie Oriental 1914: 1411) and in 1921 appears to be in rent with 60 unwinding machines (Annuarie Oriental 1921: 1304).

When we move towards the east there is another filature. Abbreviated FTB on the map although there is not any information in Annuaire Oriental which we obtain information about factories from, we could not determine the ownership. When we head down to north side, at the south side of Sakaldöken Avenue there is another filature that has no significant ownership.

When we move through east from Karaağaç District, there is the Umurbey District at east which is considered as the most important factory site of southern region. There is a silk cocoon manufacturing factory which was owned and managed by Köleyan<sup>i</sup> between 1914 (Annuarie Oriental 1914: 1411) and 1921 (Annuarie Oriental 1921: 1304). In the same area there is a large silk cocoon manufacturing factory abbreviated FJK which was owned by Köleyan and managed by Terail Payen with 84 unwinding machines (Annuarie Oriental 1914, s: 1411), and there is another silk cocoon manufacturing factory abbreviated FJK but probably should be FMK, which is owned by Mihran Köleyan and managed by Keropik from Yenisehir in 1913 (Annuarie Oriental 1913: 1838), later on owned by Mihran Köleyan again with no significant manager in 1914 with 32 unwinding machines (Annuarie Oriental 1914: 1411).



More to the south, there is a factory abbreviated AS, which was owned by Ahmet Sabri and managed by Nubar Kamburyan in 1913 with 52 unwinding machines (Annuarie Oriental 1913: 1838), afterwards rented out in 1914 with its 52 unwinding machines (Annuarie Oriental 1914: 1411).

When we move towards east from factories of Ahmet Sabri and Köleyan there is a filature abbreviated FBF which is owned and managed by Bay Brothers in 1913 (Annuarie Oriental 1913: 1838) and 1914 with 60 unwinding machines, and just across there is a silk cacoon manufacturing factory owned by Bay Brothers (Annuarie Oriental 1914: 1411).

At north there is a filature abbreviated SM which was owned by Manuk Balaban and managed by Emirze in 1914 (Annuarie Oriental 1914: 1411) and 1921 (Annuarie Oriental 1921: 1304) with 72 unwinding machines, and next to it there is a silk cocoon manufacturing factory.

In the same area there is a filature abbreviated WS but probably should be MS, which was owned by Hacı Ali Paşa and managed by J.

Köleyan with 48 unwinding machines (Annuarie Oriental 1914: 1411), and in 1921 owned by O. Kardikyan and managed by himself with its 48 unwinding machines (Annuarie Oriental 1921: 1304), with an adjacent silk cocoon manufacturing factory.

When we head through the north from Umurbey, at the right side of Hacı İskender District which is to west, there is a filature and a silk cocoon manufacturing factory abbreviated FCB and owned by Constanbay

When we move through left which is to east, there is a filature abbreviated FGK which was owned by Garabed Kimiziyan and rented out with 30 unwinding machines in 1913 (Annuarie Oriental 1913: 1838, and just across there is a silk cocoon manufacturing factory owned by Hacı? on İshak Şah Avenue.

Towards east from İshak Şah District, above the Teleferik Region and at the left side -which is east- of Hacı İskender District there are three filatures with no significant ownership and in the same area to the east of Umurbey District there is a filature. Finally in the eastern end zone in Molla Arap District there is another silk cocoon manufacturing factory with the name Boduryan (Annuarie Oriental 1914: 1411).<sup>ii</sup>

## **Conclusion**

The first data we reached by examinations on the map is that there are two main industrial districts in Bursa. The first one is the industrial district located at the west of the city and the surrounding of Cilimboz Brook. Neither filatures nor silk manufacturing factories located by the brook which attracts our attention. Only Fabrikayı Humayun filature is just besides the brook. The others are located at relatively inner parts. Especially filatures located at upper parts of the Altıparmak Avenue are absolutely far from the brook. These were probably managed with water carried by channels from the brook. Another data shaped is that the number of factories is not so many in Cilimboz region.

The second industrial district is the east of the city and this area is the main important and compact zone. The result of previous researches and articles published consequently is that the industrial buildings on the east wing of the city are generally located in Gökdere Valley. But as seen in our examination neither filatures nor silk manufacturing factories are located near brook which is the Gökdere Valley. Furthermore they are fixed considerably at inner areas. The most compact district is Umur Bey. Presumably factories located here benefit from the springs. Exactly on the foothills of Uludag, Umur Bey District is fed with spring water coming from

the mountain. The other industrial zone, Hacı İskender District and factories located at east benefit from Namazgah Brook – water from Teferrüç.

The research of Leila Erder, who is the first to examine the factories in Bursa, is a reference for most of the others in later researches. Erder made her statements about the subject based on the map which was prepared by the General Staff of Defence under the presidency of Suphi Bey between the years 1861-1862. In result of her examination on the map, Erder states that there are two effective factors in determination of factory growth areas. The first one is closeness to springs and the other is closeness to areas in which cheap and effective labor can be used (Erder, 1976: 224). In the first approach, the idea of streams are used for disposal of wastes in both silk production and post-production is overwhelming. Yet the statement is not exactly true due to information given above.

The second statement on factory establishment areas is rather realistic for they were built in districts where Greeks and Armenians live in Bursa therefore labor force can be acquired easily. There are non-Muslim women in silk production in Bursa with a high percentage. Establishing of factories near the areas offering labor made it easy to obtain the labor force and transportation (putting away the transportation costs) of this labor to factory (Kaygalak, 2008: 172.). In addition with her another statement about factory locations, Erder indicates that the southwestern section of the city (Cilimboz) appeared later than the southeastern section (Gökdere) where the population was higher (Erder, 1976: 225, 226). This can be observed by factory distribution on the map of 1909.

When these districts overviewed in terms of industrial appearances only the silk production sites can be seen. Therefore, we deduce that silk production was the only industrial approach in Bursa in 1909. But considering that the map was made by French and production in factories was not for local hand looms in Bursa but for looms in Lyon which is the heart of silk production in France, and the silk exportation in the second half of 19<sup>th</sup> century was to France (Erder; 1976: 125, 126), it is highly possible that only these production centers were shown on the map.

The silk factories in Bursa appear as filature, which produces silk and as establishments producing silk cocoon. In 1824 as early 19<sup>th</sup> century, usage of unwinding machines and softening the cocoons via steam in Lyon the silk production center of France accelerated the unwinding process. This implementation started in Lyon reached Bursa almost 10 years later and primitive handlooms were replaced by filatures with steam powered unwinding machines in Bursa. Humayun Silk Factory was established as a state investment in the second half of 19<sup>th</sup> century (Dalsar, 1960: 411). Work had been carried out in all periods to increase the silk production in Bursa

and to keep the trade alive. In 1909 silk production and trade had been one of the most important sections in city's economical life.

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## **Endnote**

<sup>i</sup> The abbreviation is probably JKF

Annuarie Oriental 1914, pg: 1411, there is a factory abbreviated FSB which was owned and managed by Simonik Bodouryan and factories abbreviated FHB which were owned and managed by A. Bodouryan.