PREVIOUS ORIGINS AND HISTORY OF THE COMPANY FILTROS ANOIA, S.A.

Technical datasheet

"PREVIOUS ORIGINS AND HISTORY OF THE COMPANY FILTROS ANOIA S.A."
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PREVIOUS, ORIGINS AND HISTORY OF THE COMPANY FILTROS ANOIA, S.A.

0. Introduction

In the summer of 2016, and following a family tradition, with 16 full years, I worked about a month and a half at the company Filtros Anoia, S.A. It is a factory that produces filter papers for laboratories and also for industrial use and is one of the few that exist throughout the world with its own production. It is currently certified in accordance with ISO 9001, ISO 14001, Laboratorio Isega (Germany) and with the European Health Registry by the Generalitat de Catalunya. Its products reach today in 135 countries.

After a few days working, the company fascinated me: filter paper, still today, is one of the elements with which you achieve excellent results in the filtration of fine chemicals, vegetable oils, fats , wines, liquors, cosmetics, juices, and in general all kinds of liquids that need a degree of perfection in their filtration process.

The architecture of part of his buildings and his machine of producing the paper also interested me from the beginning. But the most interesting was its history. It is certain that this company is very old and its origin was fixed in 1897, although some people pointed to a previous but uncertain origin. Therefore, the first objective of the work was to know whether this company had actually been founded in 1897 or the foundation was prior to that date.

One day in January 2017 I met the President of Filtros Anoia, S.A., Dr. Marc Sala i Escardó who asked me for my studies and the traditional TREC. The point is that, between my passion for history and the fascination with the origin of the company, I decided to know for sure what was the authentic origin of Filtros Anoia, SA, known in other times as the Paper Molí de la Vila, Molí de la Marquesa or even nowadays like Cal Ròmul.1

The official version of Filtros Anoia for quite some years says that the origin of the company dates from 1897.2 For this research I want to show that the date of foundation of the precedents of Filtros Anoia dates back to the forties of the eighteenth century. The work I present to you attempts to demonstrate this hypothesis mainly.

Secondly, to present the life of the people of Sant Pere Riudebitlles in the years of the foundation of the paper mill, that is, in the mid-18th century. How they lived, how was the people, to which they dedicated themselves and their greatest suffering.

1. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Pages 1219 through 1231. "Industrialización y el Desarrollo Económico de España". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University of Barcelona

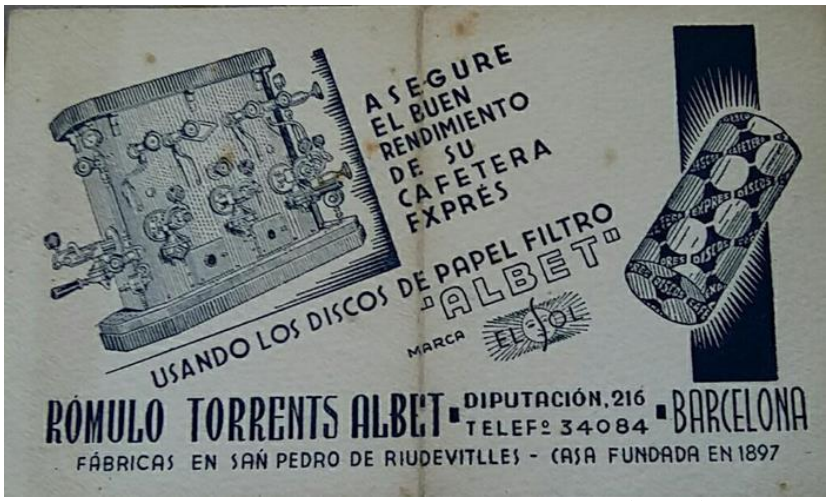
2. "General Catalog Filtros Anoia 2014", page 7
www.fanoia.com
"Anoia Filters. Company Profile ". October 2008

Third, know the life of the people who worked in the numerous paper mills in the bowling basin of the Bitlles river. What jobs they did, how much they won, where they lived, when they rested, they ate, etc. In this way, you can evaluate the current conditions. A trip through the tunnel of time.

Finally, and as a technical complement, a journey through the history of the paper from its invention and also from geography: where paper was first produced, with what materials. Also a review of the artisan technique and machineries that throughout history have used mills to manufacture paper.

As a complement, an interview, an important session of photographs, handmade paper practices, chronology and ephemeris. Without forgetting the gratitude.

The difficulties in finding sources of information have been important. Most of them are places where they can not be consulted (Lyon Marquis Archive) or even if the documents have not been interpreted (Information from the former mill of Josep Torrents i Alegre). That is why we can say that in many cases the information has been obtained just as if it was a rescue.



Publicity of the 1930s where the date of the foundation (wrong) was specified in 1897. See lower right part: "House founded in 1897"

1.1 Geographic and historical description

Filtros Anoia, the company responsible for this study, is located in Sant Pere de Riudebitlles, a village located in the Anoia - Riudebitlles basin and specifically on the banks of the River Bitlles. The strategic location of Sant Pere de Riudebitlles, at the same time as a river with permanent flow throughout the year, was essential for the birth of what would be the most important littering area in Catalonia in the XVIIIth century.

Rainfall in this area is rather scarce. Although we do not have a long series of rain at Sant Pere de Riudebitlles, a data collection from 1915 to 2005 in Sant Quintí de Mediona exceeds 606 mm or liters per square meter on average, with a maximum of 979.5 liters in 1996 and a minimum of 300.8 to 19664. The Bitlles River has its birth in La Llacuna area where several streams are attached to the Rofes gorge. Until its passage through Sant Quintí de Mediona its flow disappears when the drought comes and will not be permanent until it receives the contribution of the Gods. The river passes through Sant Pere Riudebitlles, Torrelavit and finally ends at the Anoia river near Sant Sadurní d'Anoia, with a length of 34 km.5

The water that emerges in Sant Quintí de Mediona reaches Sant Pere by a reservoir and an aqueduct, called Pont Nou, which saves the descent of the Torrent del Guilló (old Torrent de Lloveta) of about 25 meters at its maximum point 80 meters long. Until the great restoration of the years 1987 and 1988, financed by the Diputación Provincial de Barcelona, it was thought that the rec and the aqueduct date back to the 18th century, but the works discovered arches covered by vegetation with clear medieval invoice, probably from 11th or 12th centuries. It is confirmed by a sentence in favor of the Monastery of Sant Pere from 1281 on the use of "the bridge to irrigate the lands of the monastery" .7

On January 27, 1011 there is the donation of the executors of the deceased Wadaldi to the monastery of Sant Cugat of houses, corrals, lands, mills and waters of the river Bitlles, underground and elevated, which were located at the end of Kastrum Mediona. 8 The water of the river that crosses this aqueduct was given in conjunction with the term of Sant Pere by Guifré and his wife Guisla, counts of Cerdanya, in the Benedictine monastery of Sant Martí de l'Isola Gallinara, in 1012.9

On September 7, 1428, the bull of annexation of the Benedictine priory of Sant Pere Riudebitlles to the monastery of Montserrat is signed, who will be the direct jurisdictional gentleman of the municipal district and its waters.10

It is believed that some of the strong earthquakes of 1427 or 1428 could have dropped a part of the aqueduct.

3. Delgado (1991). Page 206. The production in the Riudebitlles basin of the year 1775 was 12,400 manufactured grapes, 10,3% of the total, in 13 paper mills (figures of J.M. Madurell reviewed by M. Gutiérrez)

4. Joaquim Ferrer (1930). Atlas Pluviometric de Catalunya,
5. Patxot Memories,
6. Montserrat Bustos. Meteorological Service of Catalonia
   Xavier Argemí

3. Bitlles River. Enciclopèdia Catalana, Barcelona. Grup Enciclopèdia Catalana

4. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1220. "La industrialización y el desarrollo económico de España". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University of Barcelona

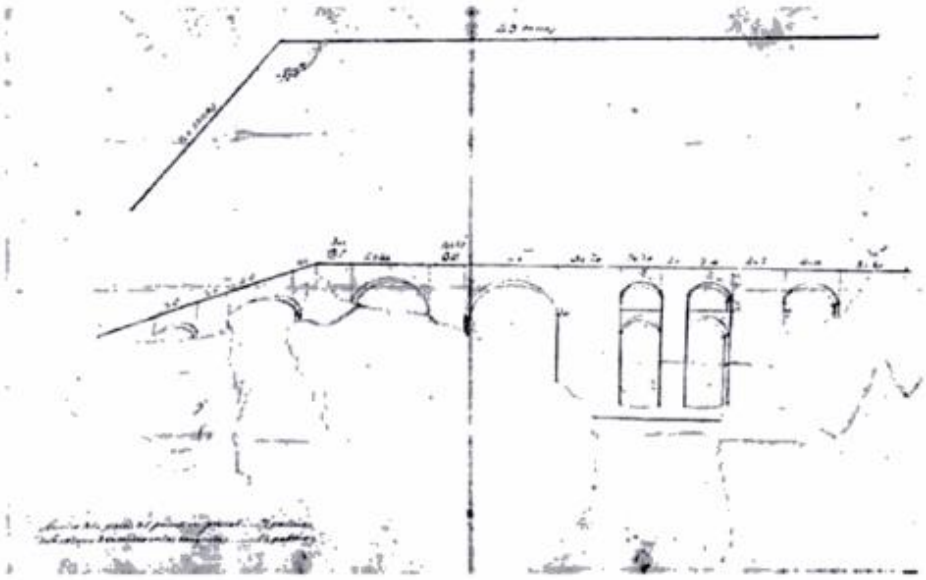
5. A. Bragado, manuscript of Montserrat, letter R, page 201

6. Revista Memoria (1990) 172

7. Àngels Torrents in the written press

8. Annals de Montserrat, manuscript

Drawing of the New Bridge made in the 18th century



One hundred years later, in 1527, the abbot of Montserrat Pedro de Burgos and the monastery community granted the license to Joan Miquel, a farmer from Sant Pere, to build one or more flour mills or paper mills in a piece of land called Lloranàs. This was the first stone of the future paper industry of Sant Pere Riudebitlles.11

On August 7, 1672 the works commissioned by the monastery of Montserrat begin with the tithes12 of the town of Sant Pere. Its cost was 475 pounds in Barcelona. The construction master was Gaspar Claver from the town of Olesa de Montserrat. 13
Twenty-four years later the work continues. According to a note dated May 18, 1696, of the Jurors of the University of Sant Pere, now, the master of works was Bartomeu Jonano14
The works finished in 1721, but 4 or 6 years later it is known that two arcades sank due to "passing too much water" according to statements by the mayor of that time.15
The contract to bridge the bridge was signed between Agustí Cirera, master of houses in Barcelona and Anton Joan Rovira. Restoration of the damage was completed in 1728.16
On December 23, 1728, master works Arcángel Badia fell from the bridge when he worked and died. In 1732 the same happened with Antoni Banach, master of houses in Barcelona.
On December 21, 1783, a piece of bridge fell and the people of the village placed wooden canals and the restoration of the dam was restructured to two master builders from Puigdàlber, Josep and Joan Via, who finished the work on April 4, 1792.17

11. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1221. "La industrialización y el desarrollo económico de España". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University of Barcelona

12. The tithes or decimos, from Latin decimum (tenth part), is a tax or census of 10% on the harvest of the peasants aimed at ensuring the maintenance of the clergy.

13. Cultural heritage maps. Diputació de Barcelona

14. Àngels Torrents. Article in the press

15. Àngels Torrents. Article in press

16. Memoria Magazine 1990: 172

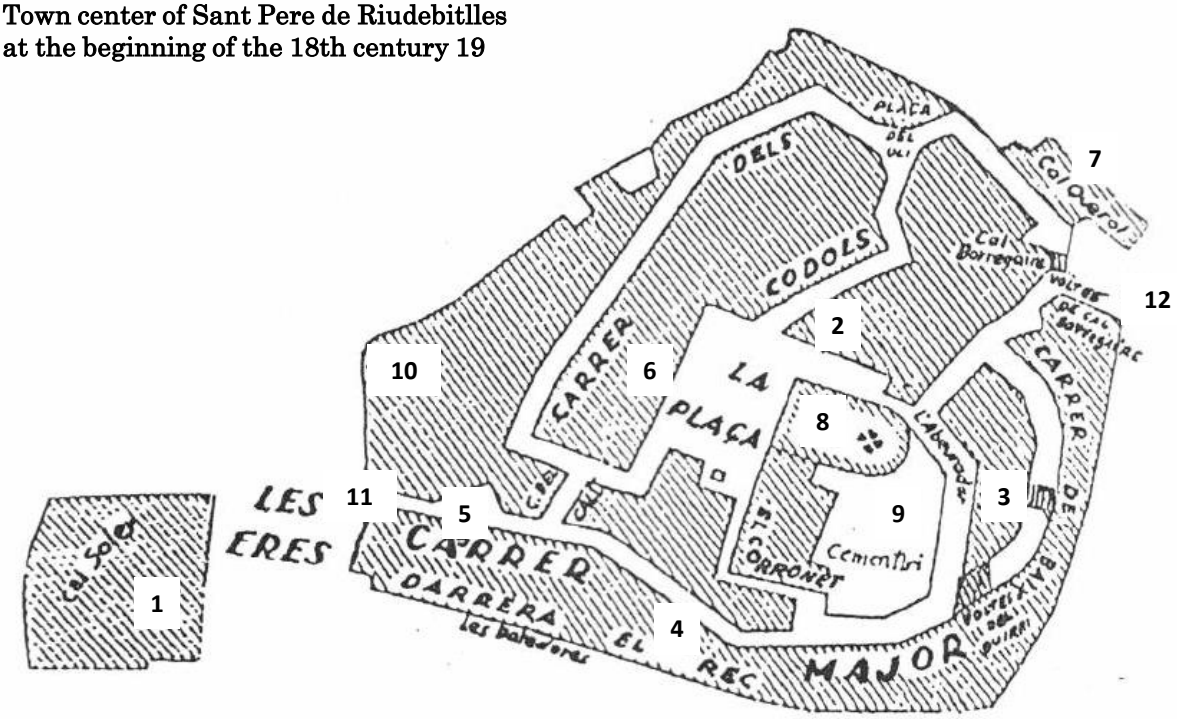
17. https://www.flickr.com/photos/11299883@N08/9269830227/

Once described two of the necessary elements for the 18th century paper industry: the water and the engineering work that allowed it to arrive, we will analyze the same town of Sant Pere Riudebitlles at the end of the 17th century.

In the last years of the 17th century the town of Sant Pere Riudebitlles was formed by a series of streets around the church. The houses were constructed so that they simultaneously made the protective function as if it were a wall, which gave the towns a feeling of a closed villa. In fact there were two entrance doors: The Eres portal and the Baix portal. This structure allowed a better defense of its inhabitants.18

The oldest houses in Sant Pere date from the 11th century with the Romanesque church.

Town center of Sant Pere de Riudebitlles at the beginning of the 18th century 19

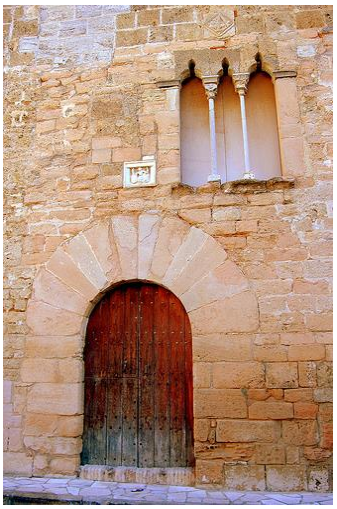


1 Cal Soler
2 Casa Olzinelles
3 Casa Salelles (Marquesos de Llió)
4 Cal Casa Gran
5 Ca l'Olivella
6 Cal Rafecas
7 Cal Querol
8 Església
9 Cementiri
10 Hospital
11 Portal de les Eres
12 Portal de Baix

18. Àngels Torrents Degree Thesis: The population of Sant Pere Riudebitlles (1675 - 1799)

19. Sant Pere de Riudebitlles - 18th Century. Urban core. Early eighteenth century. Page 3

Next to the church was the noble house of Olzinelles, which later became a convent of Dominican monks. This family was one of the richest in the village in the 18th century. Behind the church and in front of the old cemetery, there is, still nowadays, the family house of Salelles, which later belonged to the Marquis of Llió. It is a 13th-14th century mansion with a Gothic façade. Shows two series of four windows, bipartite ones up and tripartite those of down windows and elegant columns. A stately and majestic portal, under the stone shield of the house of Llió.20
The Marquis de Llió, Joseph Francesch de Móra Catà and Salelles, was the impeller Antoni Joan Rovira of the business precedents of Filtros Anoia and the paper industry in Sant Pere Riudebitlles in general.



The Carrer Major and Carrer dels Còdols, nowadays called Carrer dels Quadres, surround the square of the church. On Carrer Major was the most important of the town and where were the most important and stately houses (Ca l'Olivella, Cal Casa Gran ...). The street of Els Còdols had this name because the land was formed by streams (pebbles) and it was not of earth like the rest.
The street of the Call, where the Jews once lived, and Carrer de les Voltes are secondary streets that communicated the main streets and the square.
At the top of the main street and outside the town there was a great era to beat the wheat in front of a large mansion house, Cal Soler, which dates from 1516.21. This house was outside the village core and that is why It has solid and thick walls that made it very difficult to access.

The hospital of Sant Pere Riudebitlles has been known since 1617, which worked well into the nineteenth century. The hospitals were built outside the villages to avoid the risk of contagion that existed at the time.

The population of San Pedro at that time was about 300 inhabitants. The population was divided between craft, services and agriculture.
Within the group of craftsmen we find that related to the textile sector such as paraires22 and linen weavers. We also found paperers, but only 6% of the population. And finally, a small group of craftsmen who covered the basic needs of the inhabitants: a master of houses, a carpenter, two blacksmiths and two tailors, an espardenyo and a miller of flour.
To the service group we could count on a surgeon, probably working in the hospital, a school teacher, a hermit, a gentleman, a doctor in law and two soldiers (the context in the middle of the War of Succession).

20. http://catalunyamedieval.es/palau-del-marques-de-llio-sant-pere-de-Riudebitlles-alt-penedes

21. Sant Pere de Riudebitlles - 18th Century. Urban core. Early eighteenth century. Page 4

22. The paraire was a person who had an office to buy and prepare the wool before it was turned into cloth. From the 13th century until the beginning of the 19th century, it was an essential figure in the Catalan textile industry
23. Soria and Ràfols, Ramon. Barcanova Dictionary of the history of Catalonia. Barcanova, 1989.

But the most important sector was the primary one, as much by the number of people that they dedicated as the economic impact. Agriculture occupied almost half of the population of San Pedro. The main crops were the traditional dry land (wheat, forment23, hemp, vines, olives and beans). The cultivation techniques were old and surely the fallow was used as a resting system of the land, forced by the absence of fertilizers. The orchard crops were located on the banks of the river or near the river, where vegetable and fruit trees such as pomeres, pear trees, quince, walnut, cherry trees or plums were planted.

So the society of the time and more specifically in the Penedès region, depended directly or indirectly on agricultural production. For that reason, in a year of scarce harvest, the risk of malnutrition was present and could lead to diseases and even pests, with an increase in mortality. See table of the population and the data to the year 1717:

Population of Sant Pere de Riudebitlles 1497 - 191025

Year	1497*	1515*	1553*	1717	1787	1857	1877	1887	1900	1910
Inhabitants	37	22	40	164	890	1.915	1.602	1.623	1.614	1.622

Famines together with wars make the population's natural growth scarce or even a few years negative. In particular, and with data from the 1705-1709 period, there is a negative growth of 58 people, mostly small children and women.26 This situation will be extended during the first years of the 18th century, in a context of very low procreation and with few marriages.

After the War of Succession, the situation improves, partly thanks to the opening of some paper mills. In any case, years like 1725 and 1738 they again give negative growth and make the recovery of the demographics slow and irregular. The toughest months were in the summer, when gastrointestinal disorders appeared, induced by a lack of hygiene and high temperatures. Typhoid caused a high mortality in winter due to nutritional deficiencies, while smallpox attacked children in spring.

Coming to the 40's of the eighteenth century, with the installation of paper mills, the situation improves when the economy no longer depends only on agriculture. With this scenario, adult mortality is low, the infant is still high but the birth rate increases with the celebration of more marriages. Economic stability improves.
As a result of all this, the social structure begins to change towards the second half of the century and the population grows. The old town no longer admits houses and a certain urban change begins in Sant Pere. The increase in the population forces farmers to increase agricultural production by reducing the fallow leaves the soil unproductive for a good part of the year and the cultivation of legumes that fertilize the soil extends. The completion of the works of the Pont Nou in 1721 causes the surface of irrigation to increase, helped by the construction of the Communal Department, name known as the river of the city.

Water, with the right infrastructures, is the engine of the two most important economic activities: agricultural and industrial activity.

23. The forment is a variety of hard wheat formerly cultivated in areas of the interior of Catalonia https://ca.wikipedia.org/wiki/Blat

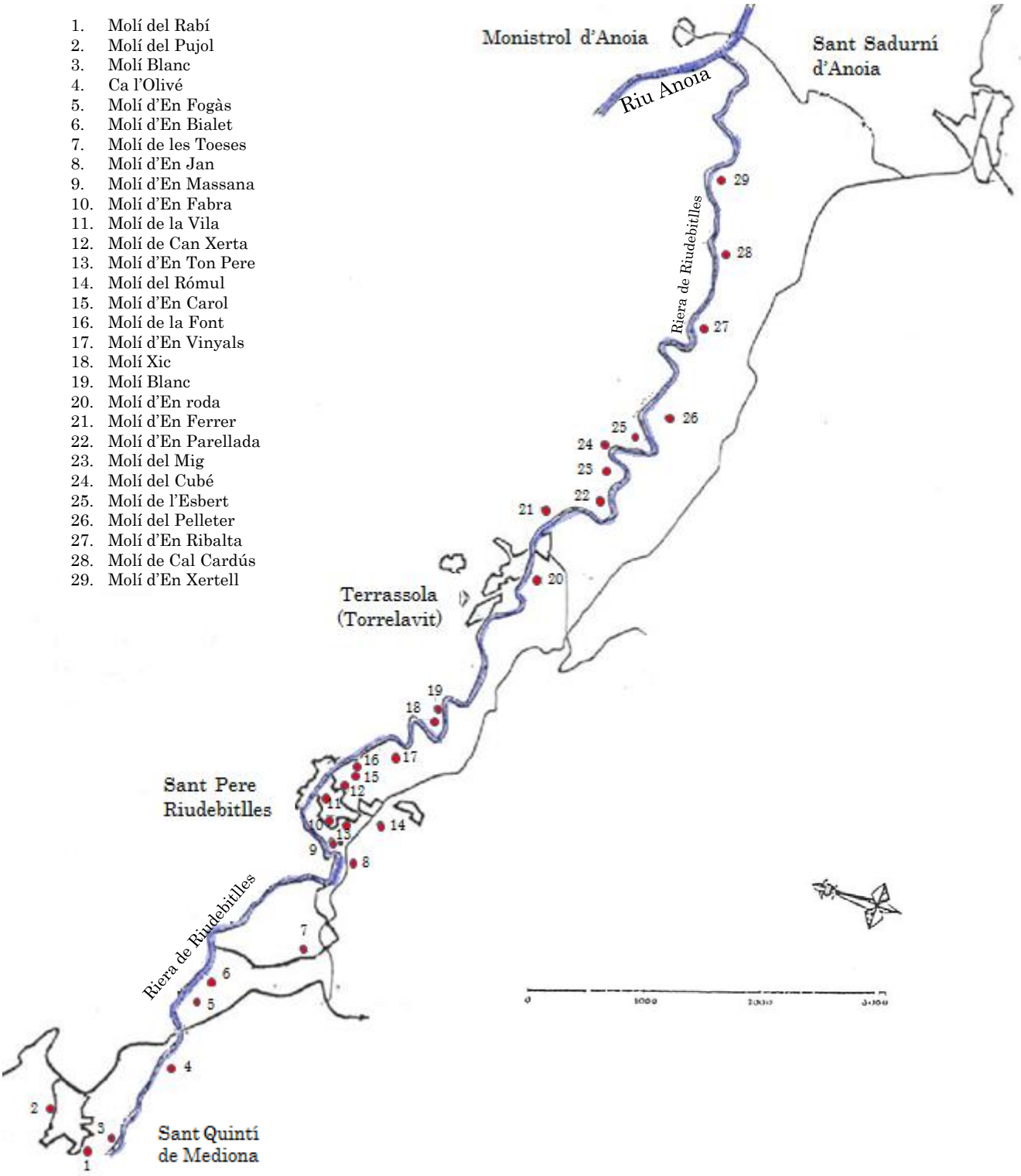
24. It is called fallow, to the technique by which the land is left without sowing or cultivating during one or more vegetative cycles https://ca.wikipedia.org/wiki/Guaret

25. Marked with * the years in which the census was made by fires (houses). https://ca.wikipedia.org/wiki/Sant_Pere_de_Riudebitlles

26. Sant Pere de Riudebitlles - 18th century. Urban core. Early eighteenth century. Page 6

Paper mills in the Riera de Riudebitlles in the eighteenth century

1. Molí del Rabí
2. Molí del Pujol
3. Molí Blanc
4. Ca l'Olivé
5. Molí d'En Fogàs
6. Molí d'En Bialet
7. Molí de les Toeses
8. Molí d'En Jan
9. Molí d'En Massana
10. Molí d'En Fabra
11. Molí de la Vila
12. Molí de Can Xerta
13. Molí d'En Ton Pere
14. Molí del Rómul
15. Molí d'En Carol
16. Molí de la Font
17. Molí d'En Vinyals
18. Molí Xic
19. Molí Blanc
20. Molí d'En roda
21. Molí d'En Ferrer
22. Molí d'En Parellada
23. Molí del Mig
24. Molí del Cubé
25. Molí de l'Esbert
26. Molí del Pelleter
27. Molí d'En Ribalta
28. Molí de Cal Cardús
29. Molí d'En Xertell



27. Fixed drawing of Oriol Valls original

Thus, more paper mills are built: Molí del Massana, Cal Ròmul (Anoia Filters precedent), Cal Ton del Pere, Cal Xerta, Cal Querol and Molí de la Font. Between Cal Ròmul and Cal Ton del Pere there was another called "El Molinet", which some documents cite it as the "Molí de Moray". Molí de la Font also called "Molí Fontanillas", in addition to the Molins de Dalt, also called Can Jan (Cal Moliner, Cal Jan, Cal Ros, Molí del Massana and the Old Mill of flour).

The first documented news of a paper mill in Sant Pere corresponds to the writing of the establishment granted on November 8, 1625, in favor of Onofre Moret, a paper collector from Sabadell, then a resident of Sant Pere Riudebitlles.

The history of the paper industry began on December 30, 1717, when Jeroni de Miquel Tormo and Recasens formalized the sale of a draper mill to Antoni Rovira and Antoni Joan Rovira, watchmakers of Barcelona who were the main drivers of the implantation of the paper industry to the town. Buyers looked for the economic alliance of Josep de Mora i Catà, first Marquess de Llió. He accepted and signed on June 28, 1748, the construction of a perpetual society for the construction and exploitation of paper mills.28

This would be the point of no return that would make society and the economy of the time change radically.
The creation of paper mills increases the supply of labor. First of the workers in charge of the construction of the mills and necessary infrastructures and later of the paper workers. The arrival of workers from neighboring towns is sought after for a stable job, which is evidenced by the appearance of new surnames registered in the town as of the forties:

29

LIST OF MOST COMMON SURNAMES IN ST PERE DE RIUDEBITLLE

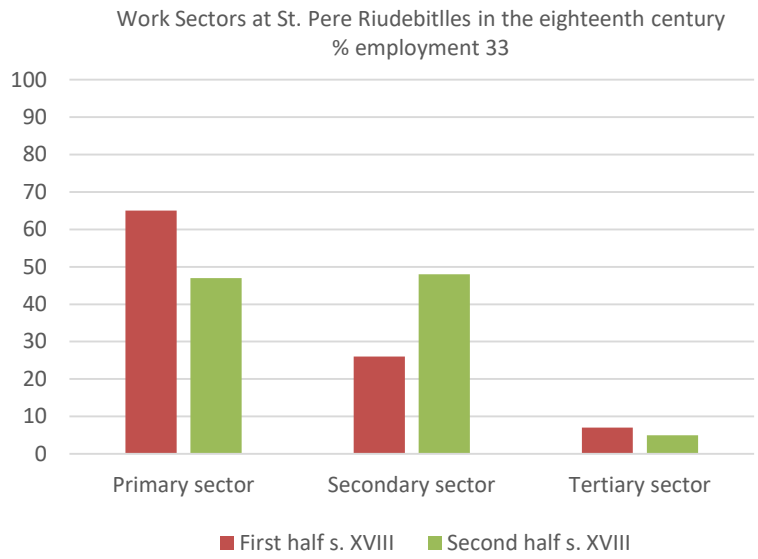
1675 - 1739	1740 - 1799
1. Puig d'Angolas	1. Esteva
2. Olivella	2. Puig d'Angolas
3. Esteva	3. Rius
4. Rafecas	4. Romeu
5. Vallès	5. Olivella
6. Sabater	6. Valls
7. Sellarès	7. Cardús
8. Ferrer	8. Rovira
9. Romeu	9. Castany
10. Castany	10. Vallès
11. Grau	11. Ferrer
12. Valls	12. Miquel de Carreró
13. Casals	13. Miquel del Solà
14. Rius de la Casa Gran	14. Sabater

It also occurs in the distribution by sectors. Although peasants are still the majority, their specific weight is significantly reduced and increased in relation to paper mills (masters of houses, carpenters, blacksmiths, boilers, etc.).

The arrival to Sant Pere de dones is superior to the arrival of men due mainly to Catalan law (the heir stays with the house and the lands). In the period 1760 - 1799, 187 men and 211 foreign women arrived at the town.

28. Sant Pere de Riudebitlles - 18th century. Urban core. Early eighteenth century. Page 9

29. Source: Àngels Torrents



It is very interesting to see the specialty of each one of the paper mills.
El Molí del Mig manufactured paper floret30, the Molí de Baix made paper towels.31

It seems that by this time, the hospital of San Pedro has a strong activity, since doctors and surgeons work in a total of 8 and 2 apothecaries.32

These changes lead to important qualitative improvements for the population, but infectious diseases can not be eliminated due to lack of knowledge and hygiene, which basically affect children, although the strong birth rate of this period guarantees a more or less stable growth of the population.

As a consequence of this flow of immigration and the increase in the birth rate, the town expands outside the closed nucleus of the previous century. The danger of robberies and looting is reduced and the new constructions do not take defensive measures at the time of building them. The houses follow the lines of old paths or around important ancestral homes, such as Carrer de Sant Quintí, Carrer del Trull (next to the oil mill or hospital street).
New Street was also opened at this time, like the Neighborhood of the Other Side, on the other side of the river, occupied at that time by farmers especially.
At that time there was no bridge to cross the river and it was not until later that a wooden bridge was built that, taking advantage of the ruins of the demolition of the old convent of nuns, served to overcome the difference in height riera.33

As for Calle Vilafranca, there is no doubt that the houses were built along the road to Vilafranca and around the old manor house of Cal Sabaté. These houses were built on land of Cal Sabaté and their inhabitants had to pay a census as rent for the lot. Until well into this century, the census has remained symbolically.34

30. "First-class paper, very white and bright." Catalan Dictionary - Valencian - Balearic. Institut d'Estudis Catalans

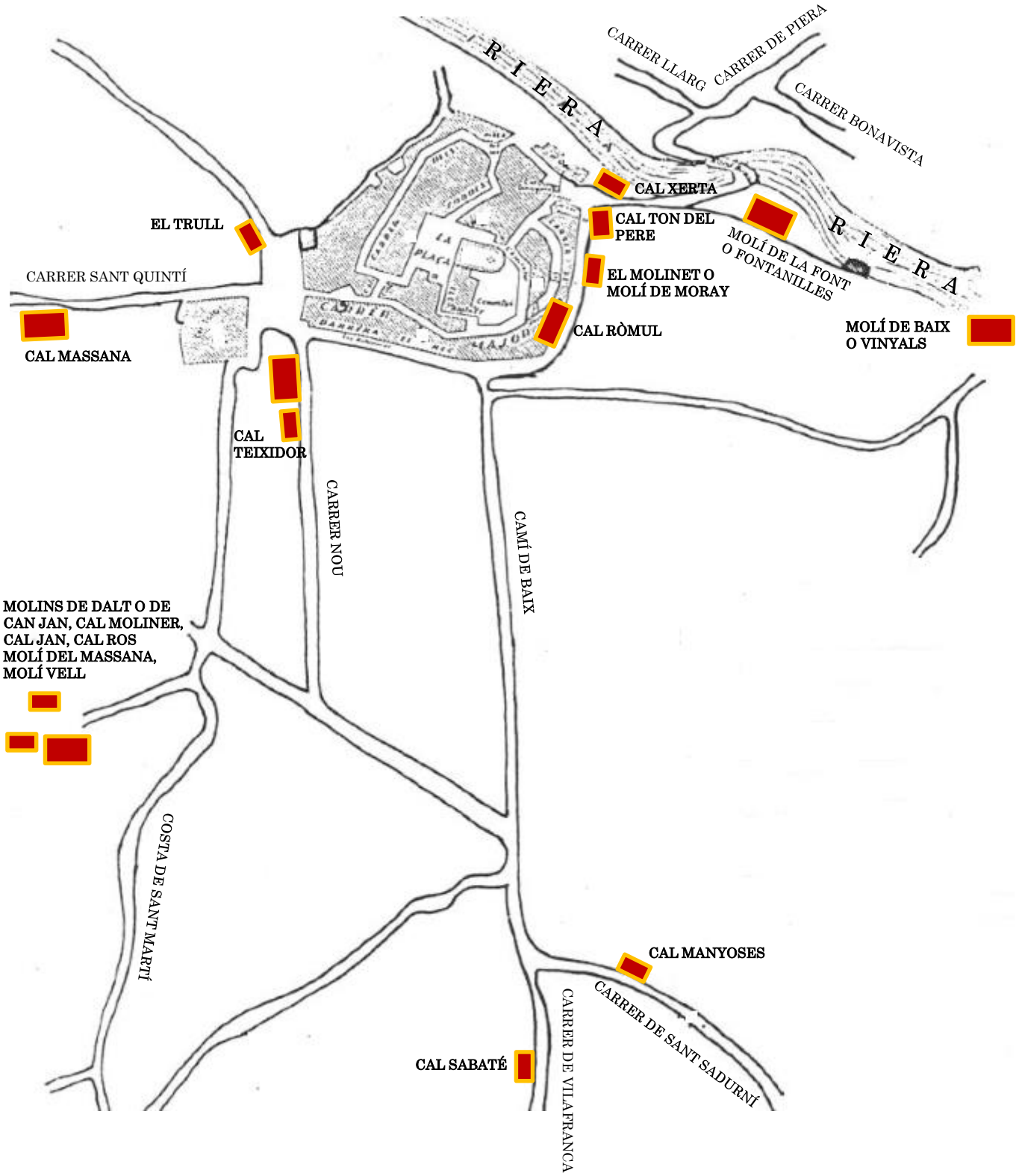
31. "Paper is manufactured from paste of the more ordinary cloth, which absorbs the ink and therefore is not useful for writing." Catalan Dictionary - Valencian - Balearic. Institut d'Estudis Catalans

32. The apothecaries and apothecaries were the pioneers of the pharmacists. They sold drugs and medications for the sick. The word "Apothecarius" comes from Latin and means "shopkeeper"
33. https://ca.wikipedia.org/wiki/Apotecari

34. Source: Àngels Torrents

35. Sant Pere de Riudebitlles - 18th Century. Urban core. Early eighteenth century. Page 9

Sant Pere Riudebitlles and neighborhoods in the 18th century



35. Sant Pere de Riudebitlles - 18th century. Urban core. Early eighteenth century. Page 16
Adapted drawing of the original

Sant Sadurní Street was built around the ancestral home of Cal Manyoses, following the path to Sant Sadurní. The road with its current layout was not opened until 1884.

Towards the middle of the 18th century the economic situation improved and this led to the restoration and expansion of the parish church (1756 - 1779). The chapel of St. Jerome was also renovated, dating from 1575.
There was another called chapel of Sant Domènec in the same Riudebitlles stream and excavated on the rock of which there are no remains because the land yielded as a result of the successive streams. According to the popular voice, Sant Domènec is the landlord of the water and for that reason, paperbacks in the Anoia basin revered their image to their visits.

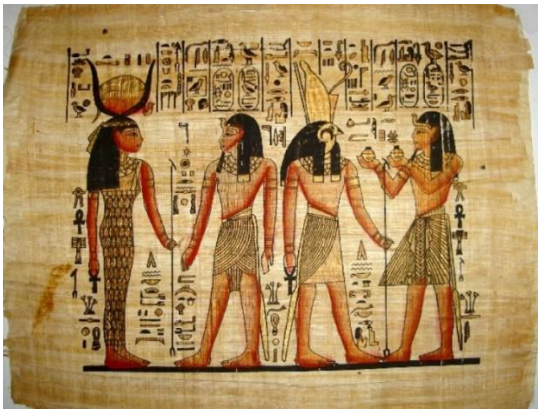
The town's Festa Major was celebrated earlier on the day of Saint Peter on June 29. Later he moved to July 15, Sant Enric, and finally in the first week of August so that the peasants went better, since during those dates the field work was very few. Even today, this last date is maintained.

1.2 Paper manufacturing process in the eighteenth century

Papyruses

The Egyptian civilization invented an antecedent of the paper called papyrus, about 3,000 years ago B.C. and in the time of the first dynasty.

Raw material from papyrus was extracted from papyrus (Cyperus papyrus), from Greek papyrus. It is an aquatic plant common in some parts of the Mediterranean basin, particularly in Egypt and especially on the banks of the Nile River. It is a palustre swan from the family of cypresses that is used as food, to make basketware, strings, clothes, small boats, when burned as an aromatic plant, and its root 'uses as wood its main function being the elaboration of the support of the ancient manuscripts.36



In order to prepare the papyrus, the stalks were first started and only the lowest and thickest part was used. She peeled with a knife and left only the marrow by making very thin strips that put them together, side by side, covering very lightly to form a layer. On top of this, another layer is placed in the opposite direction. Finally the two layers are pressed and pressed, to unite the layers and form the blade. Once pressed, the leaves dry in the sun and polish with a stone to set them with bones or ivory. The papyrus that was to be used to write was starch coated. They searched several sheets and they appeared in the form of rolls.37

The use of papyruses goes from about 3,000 years B.C. Until the tenth century of our era.

The parchment

The parchment is a material made from cow's skin, sheep or goat, especially polished to be able to write it on top. The skin follows a process of hair removal, tanning and stretching in order to get the sheets with which the books or rolls were made in the Ancient Age and the Middle Ages.38

36. https://ca.wikipedia.org/wiki/Papir

37. "The Paper". http://www.santperederiudebitlles.cat/web/documents

38. https://ca.wikipedia.org/wiki/Pergamí

The name comes from the city of Pérgamo, in the area of Asia Minor where it was manufactured between the years 258 to 197 B.C., during the kingdom of Eumendes II begins to use the parchment. At first this material did not represent any competition for papyrus, but when the Arabs spread through the Mediterranean, the parchment became the first place in writing material.

The paper

The paper is a material produced with vegetable fibers adhered to each other in the form of a thin film. The first sheet of paper arose in the year 105 at A.C. in China.39

The invention of the paper was somewhat casual, since what was sought was to create a kind of economic fabric for people with little money for the winter. According to tradition, the invention is due to Han Hsin, who lived between 247 and 194 at J.C. and he devoted himself to mixing the remaining figs after washing the buds of the silk worm to sprout them. Han Hsin mixed the filadis with water and once the fibers were very clean, they beat them in a fine sieve with bamboo rods. At that moment he saw how the fibers were scattered across the surface of the sieve and joined together forming a delicate felt, which, placed between two fabrics, formed a drink that kept the heat of the human body.

It is not known who, however, hooked this type of fabric on bamboo or tamarind tablets, but it was found that, with a paintbrush and paint made with a kind of lacquer, it could be plastered on its surface. The first findings of these papers have been discovered on the banks of the Gobi Desert and date from a hundred years to A.C. The antecedent of the paper is considered.

Meanwhile, China was used for care40 or strips of bamboo or wood and bones, also the silk fabric, but the latter was too expensive and was not strong enough.

But the paper, as we know it today, was invented between the years 150 and 250 d. A.C. For the eunuch Cai Lun, counselor of the Chinese emperor I of the Hun Oriental Dynasty.41

39. "The Paper". http://www.santperederiudebitlles.cat/web/documents

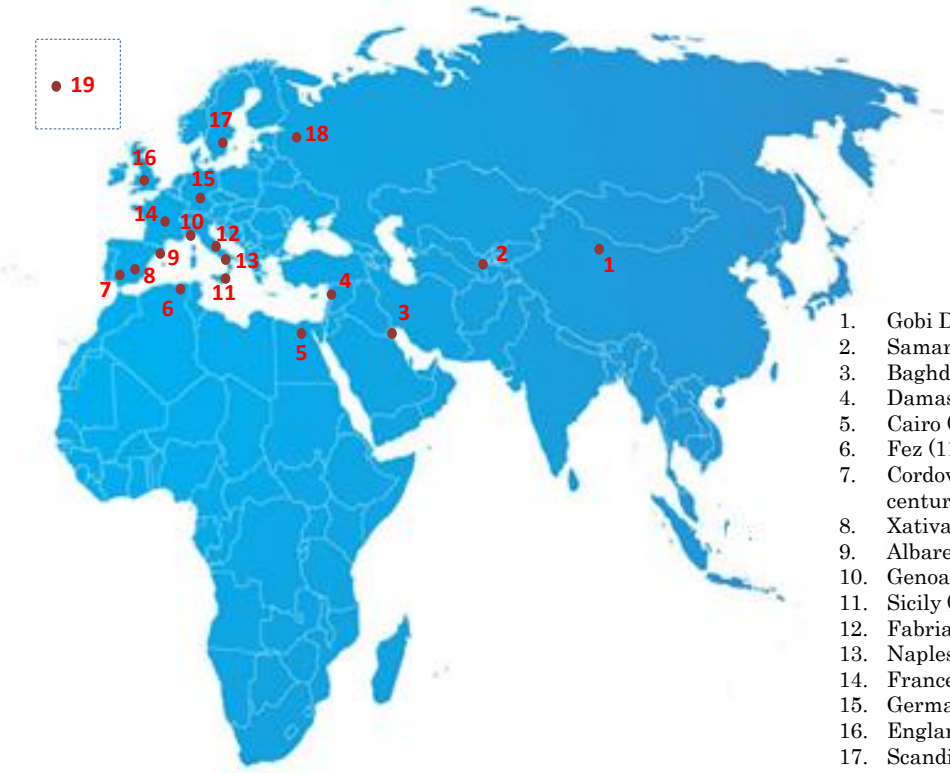
40. Caring is a cornea in the form of plates produced from the shell of the turtle cares (Eretmochely Imbricata), a turtle in endangered. https://ca.wikipedia.org/wiki/Carei

41. https://en.wikipedia.org/wiki/Papel

Cai Lun, after doing many tests, produced a paste made up of vegetable fibers and added as binding a substance that was released from agar-agar seaweed when they were boiled. This product was the binding that was missing to give consistency to the vegetable paste to form the paper.42

The Chinese kept the secret of the manufacture of the paper until 751, during the episode of struggles between the Chinese and Arabs in Eastern Turkey. The Arabs made as prisoner Chinese paper makers who took the secret. Finally, the Arabs scattered the procedure around the world. The first factory was installed in Samarkand, now Uzbekistan, then in Damascus, Baghdad, Cairo, Sudan, the Mediterranean coast (including Fes (now Morocco), Ceuta, in Castile, and later to the Crown of Aragon and later to all of Europe.

The journey of paper throughout history43



1. Gobi Desert (1st century BC)
2. Samarkand (751 BC)
3. Baghdad (year 794)
4. Damascus (year 985)
5. Cairo (8th century)
6. Fez (11th century)
7. Cordova (early twelfth century)
8. Xativa (1150)
9. Albarells (year 1193)
10. Genoa (1276 year)
11. Sicily (year 1308)
12. Fabriano (year 1377)
13. Naples (14th century)
14. France (1388 year)
15. Germany (Nuremberg 1390)
16. England (1494)
17. Scandinavia (1573)
18. Russia (16th century)
19. Philadelphia USA (year 1690)

So, the Arabs scatter the Chinese technique of paper making and also bring two important innovations: the replacement of cotton for the cellulose fiber and the application of the hydraulic mill for batan the raw material in substitution of the mortar manual

42. "El Papel", page 4. http://www.santperederiudebitlles.cat/web/documents

43. "El Papel", El camino del papel hasta nosotros, page 5, expanded by the author of this work. http://www.santperederiudebitlles.cat/web/documents

The first paper mills of the Iberian Peninsula are found in the south, specifically in Córdoba (early 12th century), following the same movement of geographical expansion (Xàtiva, Capellades, La Riba, Girona, Manresa, etc.) and always at the along with constant water courses.44 In Catalonia, the first paper mill documented by the historian Oriol Valls is the Mill of Albarells, of Santa Maria del Camí and dates from 1193.45. There is also evidence in the s. XV of other paperwork establishments in Sant Martí de Provençals and northern Catalonia, but it is not until the end of the 19th century. XVII that there is a real increase in the construction of new mills. These mills are mostly built in the area of the northern Mediterranean coast (Catalonia) for various reasons that make up a favorable geographic, demographic and technical framework:

1. It is a basically limestone area. The dissolved lime that contains this water facilitates the union of paper fibers.

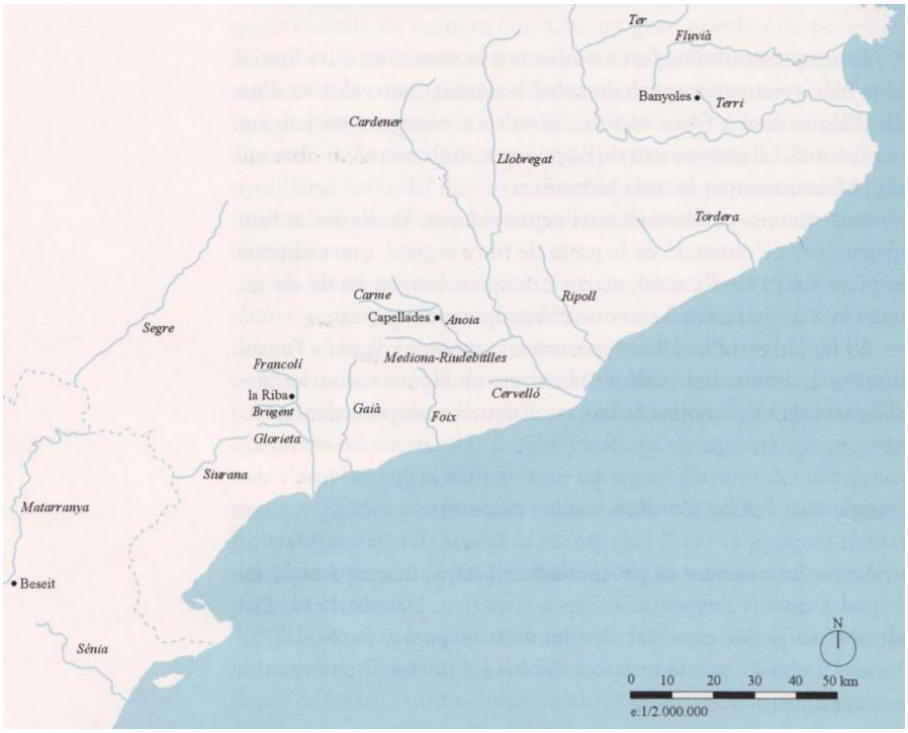
2. Because of the same lime, the paper achieves a more intense target than with less calcareous waters.

3. The relief of the mountains of these areas gives to the water obstacles a drop that increases the hydraulic force to move the wheels of the mills.

4. The density of the population, especially in the province of Barcelona, provided an important quantity of the raw material needed at that time: the cloth.

5. This same population was, at the same time, the first market to exit the role produced by this industry.

Main river basins with paper mills in Catalonia46



44. "The Paper", page 4. http://www.santperederiudebitlles.cat/web/documents

45. "Valls Sobirà, Oriol. The history of paper in Spain. Flight. I, II and III. Empresa Nacional de Celulosas, SA. Madrid, 1982.

46. Xavier Pagès Rabal 2012. "Els Molins Paperers de Catalunya, an approach for its heritage protection" Master University student in Urban Management and Valuation.
Polytechnic University of Catalonia.
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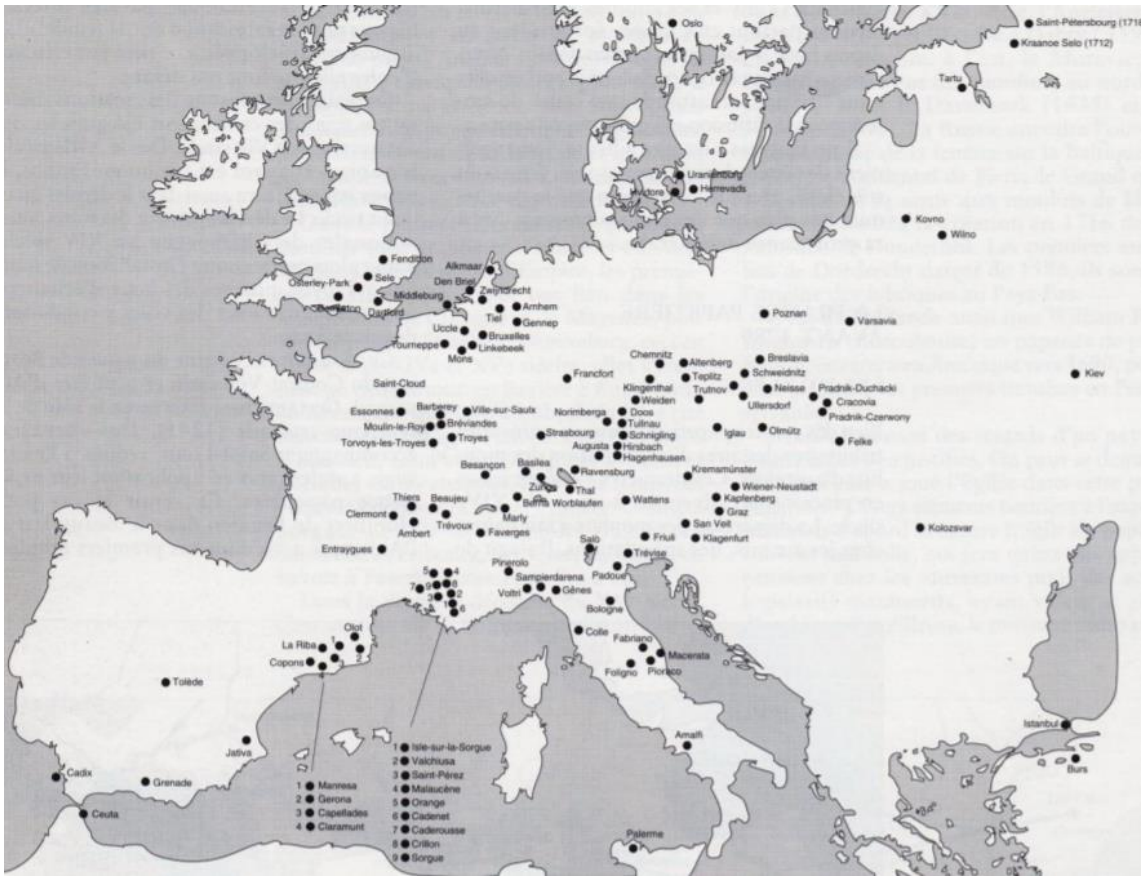
During the s. XVIII the emergence of the paper industry was favored among other factors for the protectionist measures of the state, such as the ban on the export of cloth (1628) or the restriction of importation of foreign paper, which halted the strong competition of paper from Genoa and from France. Another measure that contributed to promoting the paper industry in Catalonia was the granting in 1788 of the monopoly of the market for overseas colonies to Catalan paperers.
It was at this time when a large part of the paper mills were built and paper producer areas such as Anoia, Mediona-Riudebitlles, La Riba, Olot and Banyoles were consolidated, but the most important area was Anoia and the most important concentration of mills and production being Capellades the most important center in Spain.
It is also during this time that paper-making families emerge that would eventually receive a reputation as a paper mill, such as Romaní, Romeu, Soteras or Serra, with mills that produced beard paper 47 of excellent quality to supply Spain and colonies. We are talking about a production of 15,000 rays per year (7 million and a half sheets).

Another factor in the expansion of the sector was the lack of cofrades and guilds due to the geographical dispersion of the Molins and the litter areas, as well as the small number of operators that occupied these industries. That the sector was free of impositions, laws and regulations and could be fully developed.

Main paperwork centers in Europe between the 8th and 17th centuries48



47. Tub paper, made with high quality cloth and hand, sheet by sheet, used in luxury editions, and has its edges without cut down.
http://glossaris.servidor-alicante.com/termes-artistics/paper-de-barba

48. Xavier Pagès Rabal 2012. "Els Molins Paperers de Catalunya, an approach for its heritage protection" Master University student in Urban Management and Valuation.
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In any case not all were advantages and at the end of the 18th century the paper industry encountered a series of problems that in the short term became unresolvable:

1. The water, the energy-generating product to move the wheels of the Molins and at the same time to produce the paper, was a reason for a dispute between paper, batan, forge, textile lavatories, irrigated farmers (orchard). In the Mediterranean basin it was an irregular and generally scarce habitat.49

2. Raw materials such as cloths would be burnt because of the widespread inflation of the time and, above all, the excessive demand that caused competition between manufacturers to achieve a scarce product. It was the case that some Italian manufacturers, especially Genoese, bought cloths in Catalonia, to the detriment of the manufacturers of the country. 50

3. The cost to start up a paper mill was very high (45,706 Catalan pounds by the year 1790).

4. The artisan system used by paper mills did not allow an increase in production too important, which was a significant degree of inefficiency. This aspect was not resolved until the first machines were reached by mechanical system (Picardo system)

5. The colonial crisis with the progressive independence of territories.51

Entered the 19th century, the sector suffered a certain paralysis and in some cases it was converted to other industrial uses (El Catllar, Girona in 1845).
The successive Spanish governments were installed in the free economic policy, which allowed the importation of cheap papers manufactured outside the Spanish territory. Between 1822 and 1840 the mills were affected by civil wars.52
The channeling of capital to the textile sector and the most profitable rail infrastructures also damaged the paper industry, delaying investments for its modernization in some cases or causing the closure in others.
But it was domestic demand, which generated the necessary capital to make the investments that would allow to maintain the technological level of the sector, especially to the mills of the Anoia basin. On the other hand, the same can not be said of the paperwork in the Francolí basin - Brugent and Riba affected by the crisis in the colonial market.

49. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Pages 1219 to 1231. Industrialization and the Economic Development of Spain ". Volume II. Department of Geography and Studies Center. Demographic Autonomous University of Barcelona

50. El Papel ", page 7. http://www.santperederiudebitlles.cat/web/documents

51. Colombia and Mexico in 1810, Paraguay and Venezuela in 1811, Chile in 1818, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Peru and the Dominican Republic in 1821, Ecuador in 1822, Bolivia in 1825, Cuba in 1898

52. Realistic War (1821 - 1822), War of the "Malcontents" (1827), First Carlist War (1833-1840)

1.3 Organization of work and working conditions

Handmade paper production process

The manual preparation process has three distinct stages:

Preparation of the raw material
Paper manufacture
Finished

Preparation of the raw material

At that time, the raw material was the cloths of people's clothes, made with vegetable materials such as cotton, linen or hemp, also used ropes, boat sails, sandals, sacks and other similar products.53 These Materials are made of fibers that intertwined between themselves will allow the manufacture of writing paper, paper towel, drying paper or even filter paper.

The collection of these cloths was something of the drapaires, who went from town to town with their cars, buying old clothes by weight. In the early eighteenth century, the cloths were an abundant product and its price was very economical. But by the middle of the same century and at the same time the number of paper mills grew, the price of cloths rose to the point that it became a scarce product as the demand was rising. At certain times this raw material was exported to Italy, where an even higher price was paid because the manufacturers wanted to ensure the supply. Traginers were responsible for bringing the raw material to the mills regularly.

Once in the mill, a first choice was made according to quality criteria and separated by the following order: 54

1. Products made with thread and cotton: Designed for the production of high quality writing papers as manuscript documents.

2. Slab and hemp linen: For ordinary paper writing qualities.

3. Woolen cloths: For the manufacture of drying paper55 and cover paper.

In addition, the cloths were taken one by one to take off the buttons, remove the gutters 56, the buckles, scratch the porkness and separate by color. Of this work, which required attention and accuracy, women of a certain age called "triadores" were in charge. They separated the cloth in large wooden boxes.

53. Xavier Pagès Rabal 2012. "Els Molins Paperers de Catalunya, an approach for its heritage protection" Master University student in Urban Management and Valuation.
Polytechnic University of Catalonia.
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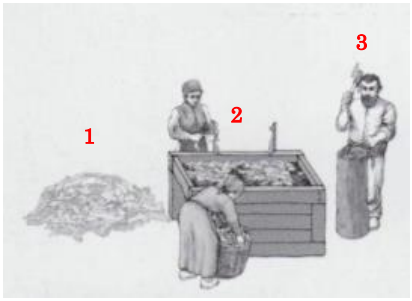
54. "El Papel", page 9. http://www.santperederiudebitlles.cat/web/documents

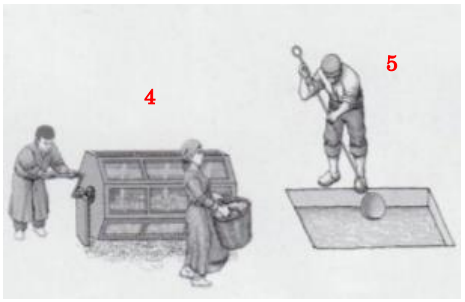
55. Drying paper is a type of paper that is used to absorb excess liquid substances (for example, ink) from the surface of the writing paper. At the chronological point of this work, the usual writing method was using feathers of birds and ink.
https://ca.wikipedia.org/wiki/Paper_assecant

56. A gas bottle is a part of a type of simple and safe closure that is used in various types of garments, to hold two pieces (usually clothes) or two parts of a piece. The complete fence consists of two metal parts: a gasket and A stick, which can be attached to each other
https://ca.wikipedia.org/wiki/Gafet

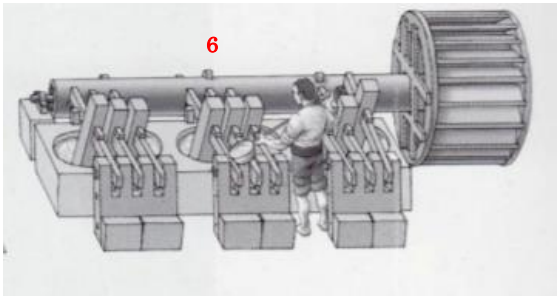
At each end of the spoiler there were knives in the vertical direction, called dallons, where the cloths were cut to the right size. These cloths were left to the rotters submerged in water between 1 and 5 weeks, depending on the quality and season of the year, where a fermentation process began to better remove cloth and get separate fibers.



1. Arrival of the cloths
2. Selection in boxes
3. Removing buttons and other parts



4. Sprayer lathe: pulse cleaning
5. Sprinkler: Fermentation



6. Batteries or mortars57

From the potter was poured into batteries or mortars where they were mixed with water with ash and read to whiten the pasta. This mechanism, driven by the force of water, hit the dough with wooden clubs about 20 or 30 hours and trenched it until it was reduced to paper fibers.
Each macaque had in its base iron nails of different shapes according to the purpose58:

- Nail in the form of a cut: to cut the cloths and to wash them at the same time
- Nail with a rom cut: To finish the cloths without masking them.
- Flat nail: to refine fibers leaving them soft and thin.

During the first mechanization in Catalonia in the s. XIX, the wooden mules were replaced by the Dutch pile in the pulp mill process.59 The Dutch pile, originally from the Netherlands, consisted of a series of conical moles provided with different nails that scattered the cloth with a lot More easily than mortars. It was also driven by the hydraulic force.

57. Drawings of the manufacturing process, source: Museu Molí Paperer de Capellades

58. "El Papel", page 10. http://www.santperederiudebitlles.cat/web/documents

59. Xavier Pagès Rabal 2012. "Els Molins Paperers de Catalunya, an approach for its heritage protection"
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Paper manufacture

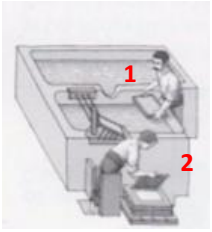
Now the paper pulp is well refined60 and finds it in optimal conditions to produce the paper leaf. This paste formed by fibers is collected with a large cup of copper with a long handle, removing it from the mortars is poured into the tub. Once there, the alabaster adds the amount of water needed. It's about making a paste more or less thick depending on the type of paper: higher density should be more resistant, lower density should be less resistant.

In the tub, an operator, the scavenger, constantly stirred the paste to keep the fibers in suspension and that they did not decant to the bottom. Under the tub, it was frequent to have a boiler that kept the tub at a temperature of 30ºC. The alabrent, a skilled and experienced operator, was in charge of the most delicate operation: to obtain a sheet of paper with the help of a rectangular mold. An alabaster in the 18th century worked a 12-hour day and could produce up to 6,000 sheets of paper per day. The way to proceed in this process was to insert the mold with the iron mesh in the tub, followed by several movements to distribute the fibers on the surface of the mesh while the water is glue through the holes of the mesh.61

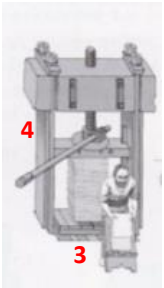
On each sheet, the signature of the manufacturer was placed with a thin wire splint by hand stitched on the trellis. This drawing was called watermark or watermark.62

Once the alabaster gets the leaf and helped from the mat, he is making a stack of leaves separated between them by a saial63 until an amount of 260 sheets that called mail, which had to be pressed to extract the water, first with the force of the workers and finally with the help of the turn, reducing the water content to 40%.

After this pressing process, the midwife separated the paper from the projections and the paper climbed to the viewpoint, the place where the sheets were hanging in strings thanks to the extensions and then there they dried up. During the process, a utensil was used as a "T" called spit. The paper had to dry out as soon as possible in 2 or 3 days and it was not good to leave it too long for it to dry. Meteorology sometimes complicated the operation of drying (rain, wind, heat in summer or cold in winter and the paper was gliding).



1. Formation of the sheet
2. Separation of the mold



3. Preparation of the stack of sheets
4. Pressed.

60. The refining consists of the process of defibrating and longitudinal cutting of the fibers according to the type of paper that is wanted to produce

61. The mesh was built with brass threads and the size of the holes varied according to the type of paper that was manufactured.

62. "El Papel", page 11. http://www.santperederiudebitlles.cat/web/documents

63. Saial: Burella wool fabric. http://dilc.org/saial/

5. Drying machines drying paper

Paper finish

Once the paper was dry, it had to follow the gluing operation. The purpose was that when it was written, the ink would not spread through the surface of the sheet. The tail was obtained from boiled animal meat and used to be donkeys, horses and thorns which they were going to pick up in Igualada.
This operation was very precise: if it was allowed to boil too much, the glue blurs the sheet of paper. If it was made little then the tail did not set enough.64

Once the tail was prepared, the leaves were impregnated and pressed to spread the tail across the surface of the sheet. The sheets were once again on the lookout for a new drying process.

The next process was a strict quality control. The accountants separated the sheets with defects on a long table: with water spots, the barbed, the short, the broken, the bent, the bends (with a bit of peak), and the costers.

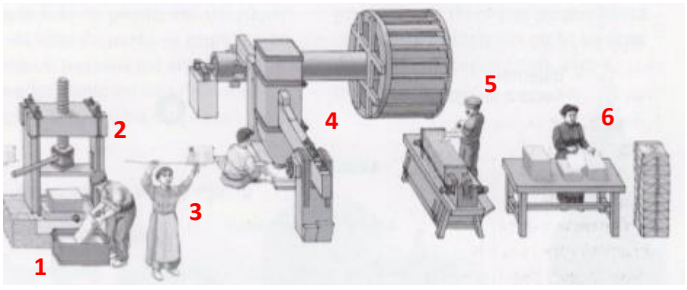
The following operation is the gloss that glittered on the surface of the paper. It was carried out with the mallet, a kind of big hammer driven by the hydraulic force that stung the piles of paper. It was a dangerous operation due to the risk of crushing his fingers.

Once the sheets were glazed they went through the bank of fretar, where with a knife and a sharpener the beards were cut and the leaves were to the same size all.

The sheets of paper were counted as follows:
- In hands (25 sheets)
- In peas (500 sheets)
- In bullets (10 pieces)

Finally, the logs put in the press 12 hours and then the room attendant wrapped them with costly papers (defective) and the type of paper, quality, name of the manufacturer and also origin was recorded. Now the paper could already be sent to the customer.

The transport of the paper was done with carriage thrown by cavalries and was very slow at that time.



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1. Gluing
2. Pressed
3. Drying of the tail
4. Satin
5. Fret bench
6. Counting and packing

64. "El Papel", página 12. http://www.santperederiudebitlles.cat/web/documents

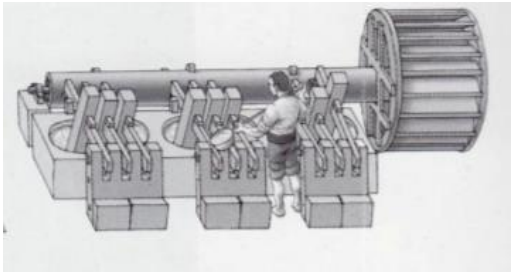
65. Source: Capellades Paper Mill Museum

Introduction of new manufacturing systems

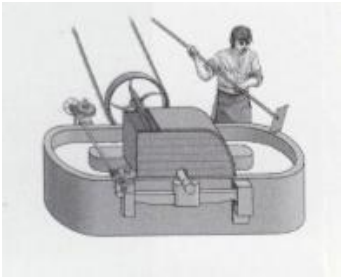
The artisan production system of the paper we have described is what was used in the mid-18th century. The changes towards an improvement in the systems of each one of the processes were slow and there was no total mechanization until the middle of the 20th century.

The most notable changes that occurred during the first mechanization in the late nineteenth century were:

- Replacement of the wooden clubs for the Dutch pile into the paper pulp production process.66

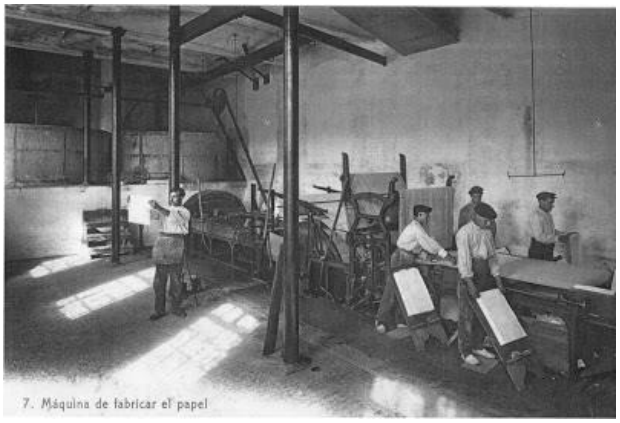


Maces system



Dutch pile

- Substitution of the skilled workers of the tub for the round machine in the elaboration of sheets of paper



Rolling machine made of paper67

The round machine was a semi-continuous mechanical system that allowed the formation of the paper full of automatic form but that does not incorporate automatic drying. With appeared from the round machine, at the beginning of the nineteenth century, implanted in Catalonia towards the end of the reference segment, with which it was achieved much more produced with the same quality that at the time, was at that moment how much the artisans of the tube, especially the alabaster ones, will lose their specialization and they began to coin the name of machinist and machinist assistants.68

66. Xavier Pagès Rabal 2012. "Els Molins Paperers de Catalunya, an approach for his patrimonial protection"
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67. http://fabricacio.blogspot.com.es/

68. http://fabricacio.blogspot.com.es/

It would not be until the middle of the 20th century that the factories of Sant Pere would see the flat table machine with mechanical drying for cylinders dryers, specifically in the Can Jan Mill. To Toeses was established in 1964 and at Cal Ròmul (Filtros Anoia) in 1967, which forced to build a new factory69 as we will see later.

The technical innovations of the early twentieth century did not consist solely in the introduction of machinery but also in the diversification of production. It seems that Sant Pere was producing more paper towels for paper and paper wrap for stores, while in Terrassola and Lavit it was used to making beard paper rather. In the middle of the century the production of corrugated cardboard began.

All these changes would not have been possible without replacing the original (hydraulic) power source for new energy (electricity, fuel oil and currently natural gas). Although hydropower is no longer used, many factories, even nowadays, are located on the banks of the river.

Another change was the raw material. The use of cloth was used for the use of recovered paper or the use of different types of virgin cellulose in the case of Filtros Anoia.

69. "El Papel", page 15. http://www.santperederiudebitlles.cat/web/documents

Round Machine

Also called "picard" or "picarda". It is a type of machine prior to the flat or continuous machine, which mimics the artisan manufacturing process.

You can make the paper discontinuously (sheet by sheet) for beard paper or filter paper and also continuously for paper specialties, such as bi-class70 for corrugated paper.

In this machine the metal cloth has a cylindrical shape and is almost submerged in the paste. When the drum rotates, the metal cloth collects the paste and the water is filtered through the meshes. The processes of drying and glazing were done later.

It began to be introduced to factories in the mid-nineteenth century and began to be replaced by flat-panel machines from the 50s and 60s of the 20th century in the Penedès.

Old round machine at the Cubé de Torrelavit71 Mill

Flat table Machine

It is the most common type of machine at present, although in Sant Pere Riudebitlles modern round machines are more common.

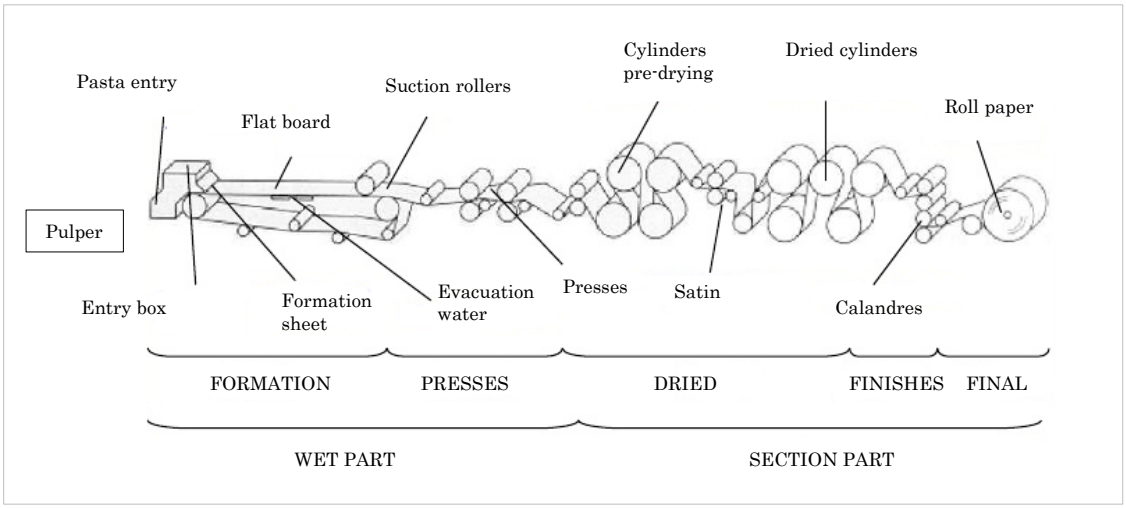
A pulper is formed where the mixture of water and the composition of cellulose are made. This paste enters the machine through the inlet box which allows a regular paste that is distributed over a nylon mesh that rotates continuously with two rollers and at the same time has a transverse movement to form a homogeneous distribution. Once the water is evacuated, thanks to the same gravity and forced suction systems the continuous blade separates from the nylon mesh and is collected by a bag, also continuous, which passes through the sheet of paper for the presses and if it is Required for the stucco Other bales put it in contact with the surface of the drying cylinders and finally it is completely formed by the final part of the machine where it is wound in the form of a coil.

70. Bi-class paper consists of two or more layers and is made from recycled material by 80%. There are three in Germany Bi-class paper type: T1, T2 and T3. The T1 is the one of better quality and the T3 the one of lower quality. In most papers of two Layers, the thickest base layer usually covers a higher quality surface layer. sdfhttp: //www.interempresas.net/Envase/Articulos/183452-Papel-kraft-biclase-fibra-virgen-cual-es-mejor-material-caras-carton-wavy.html

71. http://surtdecasa.cat/penedes/entorn/torrelavit-mira-al-riu

Some machines have, when leaving the paper, sensors to know in real time various parameters such as weight, thickness, humidity, etc. This is like hole detectors or other possible defects.

Modern flat table machine 72



Scheme of a modern flat table machine73

72. http://www.ippel.com.br/site/Mesas-Planas

73. Esquema millorat per l'autor des de http://www.ippel.com.br/site/Mesas-Planas

Organization and working conditions of paper mills

A paper mill at the beginning of the 20th century had, on average, twenty to twenty five workers between men and women. If the mill was located inside the village the workers were sleeping and eating at home. If the mill is outside the village (like most windmills on the river stretch between Sant Quintí de Mediona and Sant Pere Riudebitlles), then the workers often stayed to sleep in the same mill and they did life all the week at mill, except on Sunday, day which they were going to his house.

The direction of the paper mill corresponds to the bulletin board. In the last century, paper makers acted in a unique way. The manufacturer, who was the owner of the mill, took care of the purchase of raw materials and the sale of the paper with its name and brand, but for its manufacture it hired a person, called a bulletin board. The origin of this qualifier is that the owner paid an amount for each bullet of manufactured paper. The bulletin was also responsible for the manufacture and provided accommodation and food for all the staff in the building itself.74 The bulletin also lived in the same mill together with his family.

The paper mills not only gained fame in case they paid well or badly, but also if they served good food and in adequate quantity, although the salaries at that time were very low and the food was neither good nor abundant. In any case, working on a paper mill was a real privilege, just like getting a child as an apprentice.75

At the mill men and women worked in the same number, approximately. Men did the most skilled jobs (alabrent, ponedor, midwife, etc.) and those who demanded more physical strength (like turning the wet paper back into the back to dry it on the lookout). Women dedicated to jobs such as choosing paper, counting, packing or preparing cloths. As for the apprentices, each mill could have a couple or three. They went to work with 10 or 11 years and did all kinds of tasks: clean up spaces, go shopping in the village, help the accountant, take care of the children of the bulletin board or others and in return they paid for something76 and kept them up, enough important at that time.

Work hours at the factory were twelve to fourteen hours a day. The day began at five in the morning, when the pilaté at night77 woke up workers who slept in the mill. Towards 8 o'clock in the morning, it was breakfast and ten o'clock was stopped for ten minutes called "drink". At twelve they had an hour to eat, although many did it in 20 minutes and took the rest of the time to do the nap. For this reason they could not waste time talking while they were eating or asking for something from the table. So they had a very curious sign language: a blow on the table meant "Spend the porro", a blow followed by a fist meant "Pass me the pony", etc. 78

The day continued at one and four o'clock had another stop to make "drink" until six or seven o'clock in the afternoon, when the working day was over. This schedule varied according to summer or winter, given that at the beginning of the 20th century the electric light was very scarce or nonexistent and this did not allow adequate lighting. When it was done at night it was about to work.

74. Enric Carafí i Morera, Ramon Rovira i Tobella. 1998. 300 years, Gelida and Can Guarro. http://www.gelida.org/fm/fm1998.htm

75. "El Papel", page 16. http://www.santperederiudebitlles.cat/web/documents

76. Towards the year 1925 a student's salary could be 4 or 5 pesetas a month

77. Pilaté was the person who worked at night and was in charge of monitoring and preparing the pasta in order to take full advantage of it the energy of water.

78. "El Papel", página 17. http://www.santperederiudebitlles.cat/web/documents

Once the work was finished, people who did not sleep in the mill was going home 77 and those who were doing work or activities of all kinds: work in the orchard, fish in the same river, hunting in the nearby forests and hills, play cards, gatherings on the edge of the fire in winter. The women used to make crocheted stomachs or tights, wash their clothes, etc.

Workers of a paper mill from Torrelavit in the early twentieth century

The food at the factory consisted basically of stews such as escudella and beef, chickpeas, lentils or beans for lunch. Vegetables, bread soup, potatoes, bacon or herring for dinner. Bread and wine in abundance and for different fruit desserts in season.

Men and women were sleeping separatedly in the factory. The balancer and his family had separate rooms. In the case of marriages both were working and sleeping in the mill, if conditions allowed it, they had their own room.

Many mills used to have a little girl dedicated to take care of the balancer's family. Also a gardener and some apprentice who could do different tasks.

With regard to salaries, in 1925 the apprentices were paid the first two years of 4 to 5 pesetas each month, as well as maintenance and after that, it was considered to be an adult. Adults charged 7 to 9 dollars a month, but this depended on sex and the value, but there was no fixed salary. 80

The mill was fed daily at the nearest village: Sant Quintí, Sant Pere, Terrassola or even Sant Sadurní. The apprentice was in charge of going to buy food, but if the quantity was very large, then the food was taken to the mill in a car.
Once a week, usually on Sundays, bakers carried the bread of consumption for the whole week that the bulletin controlled and stored in a cool, ventilated place to keep it better.
Butchers came to the mills to supply them and also some fishmongers to carry herrings. Even a hawker to sell vines and threads that he said:

“Veta de Sant Celoni,
que es més forta que el dimoni”
“Veta manresana,
a cinc i a deu la cana”[81]

79. Source: Water interpretation center. Torrelavit

80. At the beginning of the 20th century, agreements did not yet exist that regulated the rights of workers, labor categories and those salaries.

81. "The Paper", page 17. http://www.santperederiudebitlles.cat/web/documents

On Carnival Mondays it was customary for groups of youngsters to go dressed up with a few grallers stopping at all mills and after playing some songs to dance, they were given something to eat and ended the party with a good meal.

For Sant Joan, Sant Pere, Sant Antoni or even Monday, there was also a dance to the mills where the people who knew how to play the accordion made dance to the workers and their families. It is also known that some mills even had some grams to brighten up the festivities.82

On Saint Augustine's day, water pattern (August 4) was festive for workers who used water to make their products, such as paper and indianaires. This day the wheels of the mill were tied with ropes or chains to make sure that day they would not work. This day the paperworkers from the Anoia basin went to visit and worship the image of Sant Domènec from the hermitage located in the municipal district of Sant Pere Riudebitlles. They had a dancing meal.
Also that same day, water was blessed, which was kept in new jugs, and kept to serve as a remedy against tertiary and quartan fever.83

82. "The Paper", page 18. http://www.santperederiudebitlles.cat/web/documents

83. Tertiary and quartan fever: It refers to exanthematic typhus, malaria and paludic fevers, very common in Catalonia and more in the areas with water basins, such as the Ebro delta and the Llobregat delta. Also in this case in the river basin of Bitlles.
Emili Giralt i Raventòs. 2008. Agrarian History of the Catalan Countries. Volume 3, page 475. Universe editions. Barcelona

Specific vocabulary for the manufacture of manual paper 84

Alabrent: Worker who with the shape or mold makes the sheet of paper in the tub. Tina official

Cracking bench: A wooden box placed on four legs, which is about one meter long and half width and height, on which it is firm, with strings, a package of one or two rays using across a lathe and with a large knife cut the leaves that excel too. The wooden tops on each side open up to pick up the sheets of paper. Of these caps, they call themselves wings.

Lifting bench: Wooden device about 80 cm high where the midfielder puts the sheets of paper when it is separated from the saial. It has the form of a lectern or inclined plane, with two feet in front and a moving arm behind it.

Bench to put: Wood post about 60 x 60 cm, with two reinforcements at the bottom which, while keeping this post a little high ground, cause it to slide on some lanes down the press , once he has received enough paper, usually one post. Table Bench of the breeder. Bank to put.

Spindle: Each of the two thick pieces of wood, that are pointed towards one of the ends (wedge shape) and which are placed on the sash to press the posts. The thin parts are placed in the center to press the edge paper well. Sometimes the executioners are united by the slim corner and form a single body. The use of this piece is genuinely Catalan and, consequently, or the Spanish equivalent has been found.

Cover: Engraving that represents the mark or password of the paper, which was marked on the packages or bundles of paper and used to distinguish them. More modernly it was printed on a sheet that was sticking on the package and that also served as a propaganda. Cover

Carnassa: Leave that remain of the skins when they have been seasoned. They were used to make the glue.

Cylinder: Stack, mole, platinum and hat set, main elements of the Dutch battery, a defibrator machine invented in Holland around 1670. It is also called a cylinder shredder machine.

Nail: 1. Set of vertical planks in the form of battlements that are in the part of outside the battery. Hold the weavers from the clubs by means of a pin on which they swing. Gripe on front. 2. Each of the pieces similar to a copper or iron escarpment, finished with a cut, with teeth, or plains, about 12 cm in length, that are sewn at the base of the clubs of the batteries to trench the cloths

Counter: Room where counting, choosing, sealing and praising the paper.

Dalla: piece of dyed firmly vertically on the angles of the spoiler that serves to tear the cloths, separate the buttons and open the edges.

Devil: See wolf.

Espit: T-shaped wooden piece that serves to extend the paper to the strings of the viewpoint.

84. Oriol Valls i Subirà 1999. "Vocabulary parerer". First edition by the Capellades Paper Mill Museum. Posted by Workshop Editorial Mateu of Barcelona

Watermark: 1. Mark or password of the paper mill, made with very fine silver or copper threads, stitched on the veranda's sieve in the shape or mold of making the paper by hand, and more modernly in the bass drum of the round machine. 2. Fingerprint or transparent signal that the threads leave on the sheet of paper. There are those who call it a watermark.

Shape: Mold to make the paper by hand. It consists of a wooden frame reinforced below by a series of rows of knit section called wood or ribs. On top of this trellis a fabric made from copper yarns (formerly silver and, more previously, vegetable fibers) is placed, formed by the pontillons, horizontal threads and very often, and the corondel threads, that go in vertical sense and have a spacing of a few centimeters; The set forms the texture of the shape, which is then very visible, for transparency in the entire sheet of paper handmade on this type of mold. On the fabric the filigree or brand of the paperwork is couture.

Fringe sling: A sling of about 60 cm in length that serves to crumble or match the sheets of paper.

Carry: Each one of the wooden sausages stuffed in the tree of the wheel that stand about 10 cm. When rotating they hit the telera shoe and lift it up with the muffin that clutches the cloth that is in the tub. There are also in the tree of the setin mall.

Lifter: 1. Worker of the tub, ordered to separate the leaves of the saials when they leave the press and put them on the bench to remove or the endless bag of the round machine.

Wolf: Elongated wooden box, of square or hexagonal section. Inside there is a wooden shaft with built-in shafts that, when rolling, chop up against the cloths that have been placed beforehand and leaves them well spoiled. He has replaced the turn. It is also known as the machine of the lamp.

Mace: Parallelepiped wood block held by the telescope, smooth base or with keys according to the type. the clubs were of three different classes. The first ones, which corresponded to the cloth batteries, wore some nails with the alive cut, with bezel as the escarpments. Then they followed the clubs of the stacking batteries, with the broken or flat keys, or in the form of a merlet, and the last ones, the clubs of the refining, boasting or washing batteries, were smooth and did not have any key.

Mall: wooden or iron block placed vertically and driven to a telera, moved by the same system as the mace of the batteries. It helps to smooth the paper. Satin arm.

Mall of setin: See Mall.

Marrà: A wooden buckle of 50 x 50 x 50 cm, heavy enough, which is put in the press between the executioner and the masses. Genuine Catalan piece.

Marrassà: A double-edged ax that serves to break the ropes and soles of espadrille, before tearing them into the cloth pile.

Viewpoint: Local, usually on the last floor of the paper mills, where the paper extends to dry it

Mass: Rectangular shaped piece of flat wood that is placed on the ground when the paper is pressed. The masses can have different thicknesses and weights. There are some that are almost as large as marrà and others that only have 4 cm thick

Misó: Small mass of smooth flat wood that is placed on the mass. It is worthwhile to insist on the pieces of wood that are placed on the laying of paper when it has to be pressed. On the ground there is the bench to put. On the bench, the mail, which is a certain amount of sheets of paper (see mailing), with the salient interleaved and the saiala that covers them; On the shutter goes the watchman, follow the dragon, on one or several misses and then one or two misons.

Molina: Wooden cylinder of the Dutch, iron or stone pile, provided with bronze or steel knives arranged in parallel to the rotating tree. It serves to defibrate the cloth and make the pasta.

Beard paper: Handmade paper, in the tub, of fibers made of yarn or cotton from knitwear, made with the shape or mold. The beards that paste leaves perimeter give this name. Beard paper

Stack: Generic name of the semioviform stone sinks in which the cloth is crushed.

Dutch pile: oval shaped, made of stone or cement, made of cement, with a splint in the center, next to the mole and platinum. It serves to prepare the paper pulp.

Pusher: 1. A worker who takes the form of the alabrent and passes the sheet of paper on the salient that is on the bench to put. Next, he puts, on top of it, another salient and returns the shape to the alabaster by sliding it through the lever. Locker 2. Metallic cylinder lined with a felt or bathtub, placed on the bass drum of the paper making machine, which serves to drain the water from the sheet. Cylinder roll or dryer.

Mail: Set of 250 sheets of paper or half rays. In paper mills 261 sheets were always made. These eleven remaining were counted for those who chipped or costers. One post was, when leaving the press, these 261 sheets plus 262 projections, since the last sheet was also covered by a large bundle in four folds

Press: 1. Instrument completely necessary in all paper mill that serves to press the paper. Press 2. Two or more cylinders placed at the end of the paper making machine that serve to press the tape that forms the sheet of paper when passing between them when it leaves the machine.

Raima: Set of 500 sheets of paper, or twenty hands.

Saial: Bean of wool on which the mat transports or stacks the sheet of paper made with the shape. There must be as many sheets of paper as possible, plus a call to ask for it to be placed on the paper post.

Saiala: Large saial that is placed making four folds on the laying when pressing. Sayala.

Tina: Wood, stone or construction deposit, where the pastas already prepared to make the paper are placed. In the tub there is also the sponge of the alabrent, the palanqueta, the scavenger and the mosso. In front, between the tub and the press is the sponge of the mat. It is recommended that the angles of the tub are blunt to be able to clean it better. There are areas where the tub is oval or almost round. Name the true handmade paper.

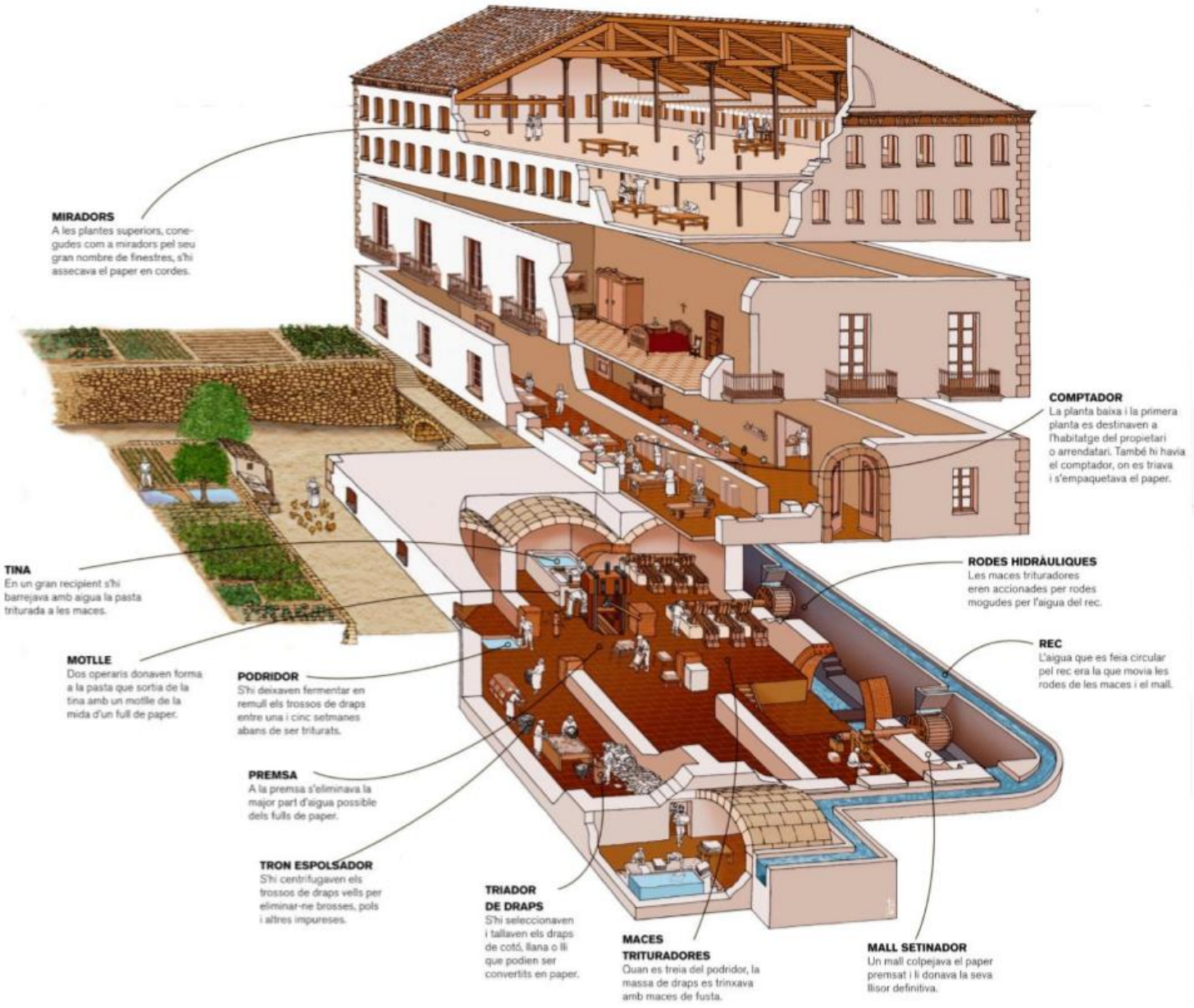
Telera: Wooden bar that is fastened to the nails by nails and holds the battery mallet or seams the paper. At the top end there is a shoe rack, which is where the cams of the wheel tree are stinging.

Torn of the press: Vertical tree that rotates on two bolts subject to the ground and the viento of the ship, with two barrons crossing it in the shape of a cross, one meter and half of the ground. Coupled with a string or strand set at half height, stretches the pernal that rolls the dice of the press. Four workers are needed.

Spindle lathe: Hexagonal wooden drum, with the sides of metal cloth - from chicken coop -, which is rolled by means of a handle. It is used to remove dust from cloths, land and erase them, after having torn them. See wolf

Window: Viewpoint window. The windows of these windows have a special device that allows them to be more or less open, as appropriate, to have more or less current of air.

Structure of a paper mill 85



85. Source: Capellades Paper Mill Museum

2 Fets històrics

2.1 Century XVIII. Predecessors

The first fact related to the history of the current Anoia Filters is found on December 30, 1717, when Antoni Rovira and Antoni Joan Rovira (father and son), Barcelona watchmakers from Majorcan origin, invested in the purchase of a flour mill and old paper mill Sant Pere Riudebitlles. The seller was Jeroni de Miquel Tormo and Requesens, Barcelona, licensed by Joseph Güell, the Minister of the Royal Criminal Council.86

Once the purchase of the mill had been formalized, it was necessary to restore the aqueduct that carried the water from the Riudebitlles to the irrigation system and was unused. The repair works, commissioned by the Rovira family, were completed four years later, in 1721, in accordance with the inscription of the firework stone at the base of the central pillar of the Pont Nou.

In 1724, once the restoration work of the Pont Nou was completed, the Rovira signs a contract with the paperwork of Sant Quintí de Mediona Pere Roca, for the industrial exploitation of the paper mill during a period of one year.87

We do not have data regarding the date of destruction, again, of the aqueduct, but according to the mayor of Sant Pere was *"passarhi massa aygua."* 88 It should be between 1724 and 1727. This meant a great tragedy for the people of the town, for the mills of the Rovira family and also for the Monastery of Montserrat, who saw the value of the tithes decreased significantly.89 As the injured parties were three, the Monastery of Montserrat, El Comú (on behalf of the people) and the owners of flour mills and paper. Finally the agreement comes as it appears in document number 15 dated in 1774 and that was honored by the three parties on October 17, 1727.

"*Primo: un conveni firmat ab dit Comu, a sos Regidors, y lo referit Joan Rovira, en la escrivania del Priorat de dit lloch, en poder del P. Joan Sunyer Prior predit a 17 de Octubre 1727 sobre lo pont, que hi ha de haver per passar la aygua per los molins, ab lo qual fou convingut. Primerament que dins un mes ques comensaria la obra per retornar dit Pont, tingues obligació de donar la aygua al Poble. It. que dit Rovira tingues obligacio de muntar la Pilastra de la banda de las esplanas de Pedra Picada y que en lo cor de la Paret, si hagues de posar turo, y una defensa al costat de la Pilastra de una part, y altra de Pedra Picada, de sinch palms de gruix, y que de dita Paret, que a les hores si trobaba, ser hagues de desfer dos ô tres cantos y fer altras obres par las quals lo comu promete donarly mil lliures, que per dit Conveni, una contracta per fer dit Pont a les hores solment....*"

According to the aforementioned agreement, the Comte de Sant Pere invested a significant amount of money, with the permission of the Priorat. The restoration of the Bridge was a reality and a year later, in 1728, the water reached mills and orchards.

86. Historical Archive of protocols of Barcelona. Pau Cabrer, manual years 1717 - 1718, sheet 45. Quoted by J.M. Madurell (1972)

87. Historic Archive of protocols of Barcelona. Francesc Busquet, manual years 1724, sheet 3. Quoted by J.M. Madurell (1972)

88. Archive of the Marquis de Llió. Document No. 13. Answer of the City Hall to the Marquesa in 1795

89. The papal bull of the union of the Benedictine priory of Sant Pere Riudebitlles in the monastery of Montserrat was signed at the Castle of Olesa de Montserrat on September 7 of the year 1428. From that date until the In 1801, the Monastery of Montserrat will be the direct jurisdictional gentleman of the term of Sant Pere and its waters, according to Annals de Montserrat (manuscript).

On January 4, 1728, Brother Anselm Freixes, chief of the rents of the Monastery of Montserrat, granted an establishment and a new license for the construction of a paper mill next to the flour mill to Antoni Joan Rovira in the municipal district of Sant Pere de Riudebitlles with the power to use water for its operation. That is why this date can be considered as the starting point for the litter industry in the river Bitlles basin.91

But to understand the birth of the litter industry in the Bitlles river basin and the creation of the precedents of the current Anoia Filters, it is essential to mention the presence of the Mora family, Marquesos de Llió, and more specifically the figure by Joseph Francesch de Móra i Catà, the first Marquis de Llió92, who owned a Gothic mansion in Sant Pere Riudebitlles. He asked for permission to the Monastery of Montserrat in 1748 to build a paper mill together with his house, as well as the permission to make use of the water in the drain. This mill would be known as Molí de la Vila or Molí de la Marquesa and I consider it the date of creation of Filters Anoia on January 2, 1748:

"Al sis de Novembre 1747 escriguí al Señor Abad de Montserrat demanantli lo permís per fer los molins de Sant Pere de Riudebitlles; tinguí diferents notícies positives de que no sem concediria, y alguna de elles dimanana del mateix capbrevador de Montserrat, en vista del que, el dia 2 de Gener 1748 demaní al Sr. Intendent establiment per fer Molins de las aiguas que discorren del terme de St. Pere Riudebitlles, lo que sem concedí en 9 de dit mes lo que va signat de nº 1."[93]

The first Marquis was an active and cultured person. Son of Joseph de Móra i Cirera and Francesca Catà and Vinyola. He studied in Barcelona and traveled throughout Europe (Paris, London, Amsterdam, Vienna). In 1729 he joined the Academy of Good Letters of Barcelona, of which he was later vice president and effective director. He was also the author of several books and studies that remain unpublished. He was a perpetual councilor of the city of Barcelona and an academic of the Real de Historia de Madrid.94

The Marquesses had properties all over Catalonia. In Sant Pere, as has already been said, apart from having many lands and mills, they kept the chapel of Sant Domingo (patch of paperers), near the river and near the mill of La Font.

Coat of Arms of the Marquesos de Llió95

90. An ancestor was a legal figure of the ecclesiastical world that used to demand the payment of the censuses and delays delayed. "The long feudal night: Thousand years of struggle between gentlemen and peasants." Gaspar Feliu. 2011

91. "The industrialization and the economic development of Spain". Dr. Jordi Nadal. University of Barcelona, publications and editions 1999

92. King Louis XV of France granted the title of Marquis de Llió to Joseph Francesch de Móra i Catà in 1749. The Spanish king Ferran VI converted it into a Spanish title in 1752.

93. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1221. "La industrialización y the economic development of spain ". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University of Barcelona

94. "Casal-mill of the Marquis of Llió. The history written in stone ". Program of the Festival of 1996. Josep Torrents i Alegre Historic Research Group.

95. Shield located at the door of the mill constructed in 1748 and called the mill of the Marquesa or mill of the Villa

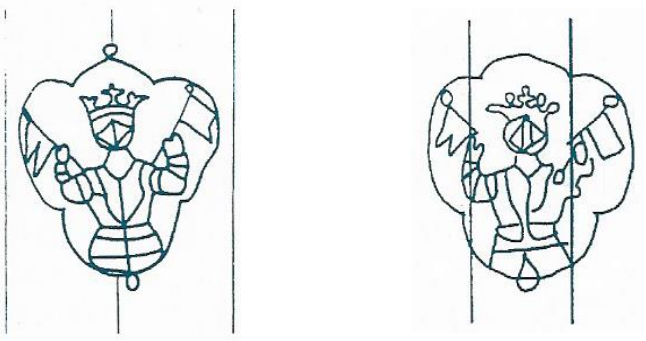
On June 28, 1748, the constitution of a Perpetual Society formed by the alliance was formalized, on the one hand by Joan Anton Rovira, watchmaker of Barcelona, who already had a permit from the abbey of Montserrat; and on the other hand the first Marquis of Llió Joseph Francesc de Móra i Catà. According to the pacts of the said company, the first would pay the censuses in Montserrat and the second the taxes in the Batllia.

The works of the paper mill begin and once the irrigation system has been opened to enter the water, the lawsuit arrives at the Court of the Real Intendance from the Abbot of Montserrat and the Council of Riudebitlles against Joseph Francesc de Móra i Catà . The said court fails against the Marquis and the court was demolished on October 28, 1748. The words of the court are clear:

"No dudo el Bayle del dicho lugar que es de la Jurisdicción del dicho Monasterio asistido del Prior que reside en el, monje del mismo Monasterio y de otro Monje que se crehe ser el Governador y asociado de mucha gente del Pueblo mandar romper y derivar la pared del nuevo conducto, y dada orden que en pena de carcel ninguno se atreviese trabajar en el" [96]

The lawsuit will end in a concord between Joseph Francesc de Móra and Catà and the abbot of Montserrat, signed in the same Monastery "by honor of the lordship."

The mill is then started with the production of writing paper, when most of the mills in the area were dedicated to the manufacture of paper towels or papers of inferior qualities. This deduction is obtained for two reasons: The writing paper of the Marqués mill uses filigree with the coat of arms of the Marquès of Llió, which marked each sheet of paper.97 On the other hand, the Marquis of Llió , a cultured and restless person, has many contacts in Barcelona and Madrid that facilitate the sale of paper for use in notarial documents, archives, libraries, etc. Therefore, the production of the mill in the second half of the XVIII century will basically cover consumption in domestic markets such as Catalonia and the city of Madrid.



Due to the payments made by Antoni Joan Rovira to its creditors, on November 30, 1760, this one was totally ruined and it put up the flour mill and the two paper mills called Dalt (now Cal Jan) and Baix on sell. The Marquès of Llió buys all the mills and becomes the largest owner of the Riudebitlles basin.98

96. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1226. "La industrialización y the economic development of spain ". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University
of Barcelona

97. "Casal-mill of the Marquis of Llió. The history written in stone ". Program of the Festival of 1996. Josep Torrents i Alegre Historic Research Group.

98. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1226. "La industrialización y the economic development of spain ". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University of Barcelona

Situation of the Molí del Marquès and other production centers owned by the Marquesos de Llió in 176099

1. Palacio de los Marquesos de Llió: Residencia y almacén del molino. Built in the 14th century.
2. Molí del Marquès or mill of Vila. First production center installed in 1748.
3. Cal Ton del Pere: He made pasta for the mill of the Marquis until 1986.
4. Molí de Baix

99. Josep Torrents i Alegre. The town and the location of the house-mill. "" The story written in stone. The casal-mill of the Marquis of Llió ".
Historic Research Group. Sant Pere Riudebitlles. 1996

Joseph Francesc de Móra i Catà, the first Marquis de Llió died in 1762 and his son Domingo Félix de Móra i Areny becomes the owner of the mills and lands of his father and also of the Molí del Marquès or the Villa. The same day of the death of his father, signs a concord about the flour mill of his property, where the inhabitants of San Pedro will have preference over any stranger to grind grain and olive.

In the late eighteenth century, the most important problems of the mill were the supply of raw material (cloth, fiber and meat) and maintain a volume of water necessary to move the wheels of the mill and as an indispensable part of the manufacture of the paper, especially in summers with drought, when the flow of the river fell. In spite of this, the consumption of paper grew of very important form, helped by several factors:

1- Increase in the consumption of official paper: The consumption of paper to make public documents, notaries and of all kinds increases, especially in the most important cities such as Barcelona and especially in Madrid. The public administration is an important client of the paper industry in the eighteenth century, as in the case of the "seats" of the State's role and other bodies of the Spanish State. The interest of the crown for the efficient execution of production planning had a double objective: not to stop the operation of state bureaucracy and to obtain the income that the "seal" provided to the "Real Estate." 100 The first Contract of these characteristics was signed in 1743, for the delivery of 10,000 rays. The supply of this type was made by a company formed by the watchmaker of Barcelona Alexandre Soler and members of the families Romaní and Guarro. The complement to the demand of paper for the "real seal" we find it in other official bodies, such as the manufacture of paper destined for the "Nueva Fábrica de Tabacos de Nueva España" .101 For example between 1771 1 and 1773, Anton Ferrer and Francesc Guarro had signed Three contracts that totaled 325,000 rays per year for five years, that is, approximately one-fifth of the productive capacity of the sector102

The production of writing paper in Catalonia in 1775 was as follows:

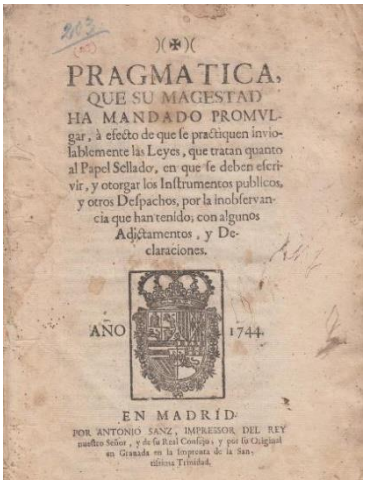
Zona	Raimes fabricades 1775 [103]	%
Anoia	42000	34,7
Riudebitlles	12400	10,2
Fran.-Brug.	30000	24,8
Foix-Gaià	3700	3,06
Fluvià-Terri	13700	11,3
Ripoll-Llob.	4200	3,4
Ter	4200	3,4
Tordera	2100	1,7
Cardener	5500	4,5
Cenia	3000	2,4
Total Catalunya	120.800	

100. “La manufactura paperera catalana a la segona meitat del segle XVIII: Una introducció”. Miquel Gutierrez i Poch. 1988 Pedralbes, Modern History Magazine. Page 359.

101. “La manufactura paperera catalana a la segona meitat del segle XVIII: Una introducció”. Miquel Gutierrez i Poch. 1988. Pedralbes, Modern History Magazine. Page 358

102. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1221. "La industrialización and the Economic Development of Spain ". Volume II. Department of Geography and Center for Demographic Studies. University Autonomous of Barcelona.

103. "Catalan paper manufacture in the second half of the XVIII century: An introduction". Miquel Gutierrez i Poch. 1988 Pedralbes, Modern History Magazine. Page 359.



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PRAGMATICA,

QUE SU MAGESTAD

HA MANDADO PROMVL-

gar, à efecto de que se practiquen inviolablemente las Leyes, que tratan quanto al Papel Sellado, en que se deben escrivir, y otorgar los Instrumentos publicos, y otros Despachos, por la inobservancia que han tenido; con algunos Adiçtamentos, y Declaraciones.

AÑO 1744.

EN MADRÍD:

POR ANTONIO SANZ, IMPRESSOR DEL REY nuestro Señor, y de su Real Consejo, y por su Original en Granada en la Imprenta de la Santissima Trinidad.

2. On the other hand Gütenberg printing press, invented in the 15th century, is becoming increasingly important and will need more paperwork to supply the units that begin printing books on the Iberian Peninsula. In the last almost three centuries since its invention, the number of illiterates is significantly reduced and the printing of literature and religious works is becoming increasingly important.

3. Protectionist measures with raw materials: In the year 1728, the legislation established the ban on the export of cloth and the total freedom to import this product, so the raw material was insured at reasonable prices. To supply cloths a legal representative or "attorney" was appointed by means of "power" to proceed with the purchase. An example is given by Josep Romaní in 1743 to a neighbor of Barcelona, who resided in Palma de Mallorca, with the power to buy any type of cloth.104 There was a network of correspondents, especially in coastal cities. For example, in one of 1774, during the cold period of the cloth, an Igualada trader was authorized by Jacint Calsina to carry out a purchasing policy "in maritime ports of (...) Cádiz, Sevilla, Málaga, Cartagena and others" . The reason for the establishment of these circuits is evidenced in the response of the Capillarian paperers to a questionnaire from 1779, in which they affirm that: "Some manufacturers have in Madrid, Valencia, Alicante and other co-owners, with whom they make adjustments of Pay the wagons, and freight at prices indicated in the respective indicated places, which then make them come from your account, with whose disposition they sometimes achieve, Factories these first subjects to eight to ten percent less than they cost them, bought in this capital "(with reference to Barcelona) of second or third hand." Consequently we can say that, except for protectionist legislation, the shortage of raw material would have been a serious problem for the sector, although from the last quarter of a century the shortage began to become present.

4. The other essential product as raw material was carnassa.105 With this one product they produced the glue that satinated the surface of the paper. Proximity from Molí with the tannery production area of Igualada, from where it was obtained with low skin quality, it assured a certain supply to the paper sector of the basin of Mediona and although many of them came to La Anoia from La Coruña and Seville, according to the Board of Commerce in 1817.106

104. "La manufactura papelera catalana en la segunda mitad del siglo XVIII: Una introducción". Miquel Gutierrez i Poch. 1988 Pedralbes, Magazine of Modern History. Page 354-

105. The beans were the remains of the skeletons and the skins of the bodies of the shotgun animals whose satin was obtained the surface of the writing paper.

106. "Catalan paper manufacture in the second half of the XVIII century: An introduction. Miquel Gutieerez i Poch. 1988 Pedralbes. Magazine h'Historia Moderna. Page 355.

1. It was also decided to restrict the importation of foreign paper, which stopped the strong competition from Genoa or France .107

2. Establishment of a monopoly: In 1788 the Government of the State granted the monopoly of the American colonial market to the Catalan paperers, which promoted the final growth of this sector.

3. Geographical situation: The situation of Molí del Marquès in the Municipality of Sant Pere Riudebitlles had a privileged situation, very close to the communication route to Barcelona, where the majority of the paperwork was sent to the mill.

1782 and 1783 were years with water conflicts that affected the mill. The number of mills increased and water, as a scarce resource, was a cause for dispute between farmers and paperers. The peasants radicalized their positions. A letter dated in 1782 is the response of the abbot of Montserrat, Ildefonso Escudero to the repeated complaints of Marquès de Llió, Domingo Feliu de Móra and Areny, for the damages suffered by the mills of Sant Pere de Riudebitlles and Terrassola for the lack of water. These stopped coming to the mills because of some "careless or malicious". In the summer of 1783 the problem of water reached unsustainable limits by the paperwork of Sant Pere. Two paper-makers, Joseph Llorens and Francisco Farreras and Lluçià, who also had to act on behalf of others, left us in a letter dated July 24, a very graphic portrait of the crisp weather of the moment, after the greetings of rigor expose :

"com avem determinat de anar a Montserrat ã trobar lo Sr. Abat perquè de posía arreglo en la ayguas perquè apar que aquesta gent de Riu de Vitlles no tíngan quíls governía ní tínguían superioe, que ja han arribat ã dir, que frares ni Monjos, que no ya altres supeíors que ells, y estimarem ã Vs que per lo correu vinent escriguía al Sr. Abat, y que luego que Vs agía escrit ã Montserrat que nos avísía ã nosaltres que ja tenim determinat de anari est Dilluns bínent, u aíxis desitjaríem, que la carta de Vs y fos primer que nosaltres perquè nos atendran millor, y Vs lí podrà formar algunes queíxas..... Y lí podrà dír al Sr. Abat, que vegía de posar arreglo en la aiguas y que cada hu deguía regar per allí ahont lí correspon, y que despues de haver regat deguían tornar la aygua ã son destino..."[108]

The Bitlles River is a small Mediterranean river with permanent cabal but often suffers from summer drought and streams109

107. "Catalan littermaking in the second half of the eighteenth century: an introduction". Miquel Gutierrez i Poch. 1988 Pedralbes, Magazine of Modern History. Page 354.

108. Àngels Torrents i Rosés (1999). "La Lluita por el Agua: Pagesos y Papelers en el siglo XVIII" Page 1229. "La industrialización y the economic development of spain ". Volume II. Department of Geography and Center for Demographic Studies. Autonomous University of Barcelona

109. http://elcamidelriu.blogspot.com.es/2013/07/el-domini-de-laigua.html

Just as the problem of water shortages was often the subject of disputes, the opposite was also affecting mills. The streams that once in a while affected the river sometimes could affect the mills that were located on the same bank. In no case will they affect our mill, a few meters above the riverbed. In the second half of the eighteenth century, in 1788 there was a great stream that took away the reins of the communal council of Sant Pere.110

The mill of the Marquis or mill of the Villa built in 1751

Returning to the activity of the paper mill, the owner is the second Marquis de Llió, Domingo Félix de Móra and Areny, born in 1731 in Barcelona. Married in first marriage with Isabel Areny and in second with Maria Caetana de Peguera. The mill produces writing paper, called bearded paper, with the water mark of the shield of the Marquis de Llió, which can still be seen on the main door of the same mill and which is still preserved at the moment.

Watermarks of the paper used in the eighteenth century and in the middle the coat of arms of the Marquis of Llió where they were inspired

The paper produced sells almost everything in Barcelona to attend the local market and transported in mule-drawn cars that make the way in two or three days, following the road of the river of Bitlles, then the road of the river Anoia, until reaching Martorell , and finally the Llobregat river road to the city of Barcelona.

110. http://elcamidelriu.blogspot.com.es/2013/07/el-domini-de-laigua.html

The Marquesos de Llió owned several paper mills that were leased to a person, for a specified period of time, usually between 3 and 5 years. During this period, the person renting the mill committed to pay the owner an amount of money every year. All under contract written and notarized with a memory of property of the mill and also with rules of use.

I mention what I consider to be the first contract for the lease of the Marquis mill, where Joseph de Móra and Catà leased on April 30, 1751, for a period of two years to Alexandre Soler, watchmaker of Barcelona "*totam illam chartariam moletrinam cum novem pilis*" from the parish of Sant Pere de Riudebitlles. 111

Next one of the pacts established in the contract is mentioned, which says:

"Que en cas que per falta de aygua o altre accident de romprerse alguna cosa de las coses que té obligació de reparar lo amo del molí, cessàs sis dies sens poder anar a lo molí paperer, que en tal cas, cessia lo present arrendament des del seté dia fins que sia acomodat."

The price of the lease will be set at 520 pounds of Barcelona112 at the rate of 260 per year. 113

After the first contract signed by Alexandre Soler, on July 21, 1753, the Marquess of Llió leased the mill for three years to Josep Modolell, master of houses of Capellades and Antoni Tarafa, glazier of Vallbona, the paper mill with the following inventory of goods:

"Dos rodas de nou pilas, dorments, lo mall, prempsa y tina, ab tots sos guarniments, un parol de aram per fer la cola, tres casses de aram, tot nou. Y en lo mirador guarnit de tesas y cordes noves, ab sa prempsa, tres banchs y tres espits, tot nou, ab las finestres corresponents ab ventanals, y lo esquinsador guarnit, una cum domo dicte moletrine dempto quodam cubiculo et coquina que mihi reservo pro meo usu, et domo principali dicte moletrina contigua, que cum presenti arrendamento minime comprehensa venit."

Also, as an example, the most important pacts of the aforementioned contract are shown:

"Primo, que dits arrendataris se pugan valer de tots les arrens sobre expressats, havent de mantenir a sos gestos lo molí de masses, taleras, solatges, llevas, los guarniments de la tina y las cordes del mirador, però serà de la obligació del dit senyor Marquès mantenir a sos gestos las rodes, arbres, entremigs, piles, dorments, mall, prempsa, tina y las canals per las quals va la aygua al molí, las canals emperò pendents aniran a gestos de dits arrendataris Ítem, que finit lo present arrendament, serà de la obligació de dits arrendataris deixar dit molí adobat de nou, a coneguda de dos persones elegidoras per una y altra de dites parts, dexant també las cordes del miradorbonas y rebedores, y per la disminució del ferro del dit molí, deuran pagar dits arrendataris una arroba de ferro a dit senyor Marquès.
Ítem, en cas se espatllàs alguna cosa de las sobre notades que té obligació de mantenirlas dit Senyor Marquès, si passats sis dies no estarà adobada, dega córrer falla del present arrendament. Y en cas se espatllàs lo pont per ahont passa la cèquia de la aygua, faltant aquesta al cap de sis dies, dega córrer falla. Y sia de la obligació del dit Senyor Marquès, en cas de espatllarse la reclosa, de pagar aquella part contingent respecte la talla farà lo Comú de la Vila.

111. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history". Second volume Barcelona. Salvador Vives Casajuana Foundation

112. The Barcelona pound was a monetary unit that was used during the Middle Ages and the modern age in Catalonia. Was the official currency of the Catalan Republic in 1641.
Source: Wikipedia: https://ca.wikipedia.org/wiki/Lliura_barcelonina

113. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history". Second volume Barcelona. Salvador Vives Casajuana Foundation

Ítem, que dits arrendataris, a més del preu avall escrit, degan donar a dit senyor Marquès en cada un dels dits tres anys, tres raymes de paper, és a saber, una de floret i dos per escriurer.
Ítem, que dit Senyor Marquès tinga obligació de mantenir los rechs o sèquia per la qual va la aygua des dels Molins den Rovira al dit molí y fins al Molí den Moray. Y en cas se rompés dita cèquia passats los sis dias corria falla.
Ítem, que dits arrendataris durant lo present arrendament, a més del preu avall escrit, degan pagar los censos, Catastre y talls fassan dit molí y terras, de manera que lo preu avall escrit quedia franch a dit Marquès." [114]

The rental price for the three years was set at 900 pounds of Barcelona, at the rate of 300 pounds per year per mill.

Domingo Félix de Móra i d'Areny also rented the mill several times. On July 5, 1764, he granted the lease to Josep Soteres Roca, paperwork of Capellades with all his devices and arrangements for making paper. Included in the agreement, the landlord should"*tenir cura de la conservació de les canals , arbres, rodes, claus i premsa, mentre que l'arrendatari li haurà d'abonar dues arroves de ferro per a fer reparacions al molí*". The rental price was 1020 pounds for the whole period of contract duration. 115

A few years later, on October 9, 1775, the Marquis de Llió rented the mill "for a period of four years" from the day of that month until September 30, 1779, "to Alexandre Soler. According to the contract, the price was set at 960 pounds for the duration of the contract. 116

In the following lease, the Marquis de Llió leased three paper mills:"*el Molí del Mig destinat a fabricar paper floret,* [117] *el Molí de Baix i un altre molí unit a la casa de l'arrendador*" [118]

The paper mill called at that time the mill of the Marquis or the Mill of the Villa, was described in a lease agreement for five years and was signed in 1779 as follows:

The mill has *"dos rodes de nou piles, turments, mall, premsa y tina ab tots guarniments, un parol de aram per fer la cola,* [119] *tres casa de aram, lo mirador guarnit de tesas y de cordes, absa premsa, tres banchs y tres espits, ab las finestres corresponents als ventanals y lo esquinsador guarnir"* [120]

The mill was located in the center of the village and joined with the Palacio de los Marquesos de Llió, its residence, by a corridor that communicated them, on the current arcade at the entrance to the Quirri Voltes.

114. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history" page 841. Second volume Barcelona. Salvador Vives Casajuana Foundation

115. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history" page 847. Second volume Barcelona. Salvador Vives Casajuana Foundation

116. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history" page 853. Second volume Barcelona. Salvador Vives Casajuana Foundation

117. Floret paper is a quality writing paper, the most white and fine.

118. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history" page 853. Second volume Barcelona. Salvador Vives Casajuana Foundation

119. "... an aramo speech to make glue ..." This would once again show that the mill, from its beginnings produced writing paper

120. Josep Maria Madurell i Marimón. "The role in Catalan lands: Contribution to its history" page 855. Second volume Barcelona. Salvador Vives Casajuana Foundation

Mr. Domingo Félix de Móra i d'Areny, second Marquis de Llió, died in 1792. For a few years will be his second wife, who will take care of the family's properties, as well as our mill.
Thus we find that Maria Gaietana Peguera and Vilalba, as widow and legitimate solicitor of Doménec Félix de Móra i d'Areny, on 10 September 1792 and for the term of five years she rents three paper mills to Francesc Farreres and Llucià, including the mill of the Marquis, who will say colloquially the mill of the Marquesa for a few years.

Once again we find the Marquesa, the widow of Llió, exercising her power to rent the same mill, on November 7, 1797 and for a period of four years Francesc Parladé, paper maker of Sant Pere Riudebitlles, for a price of 1,700 pounds Barcelonians at the rate of 425 per year.121

121. Josep Maria Madurell i Marimón. "El paper a les terres catalanes: Contribució a la seva història" page 858 . Second volume. Barcelona. Fundació Salvador Vives Casajuana

2 Historical facts

2.2 Century XIX

The nineteenth century has not left us with much information about the activity of the mill, it seems that a good part of the documentation could be found in the city of Barcelona, in the file of the Marquesat de Llió, to which I have not had access, of in the same way that the file, not yet interpreted, by Josep Torrents i Alegre. That is why I have tried to do a deduction exercise that I have not been able to prove with written documents.

It seems that the consumption of writing paper, at the beginning of the nineteenth century, had a tendency to a strong increase and the mill of the Marquesa continued to produce white paper of first quality for the internal market, basically. Maria Gaietana Peguera and Vilalba, widow of the second Marquis de Llió, continued to act as the owner of the called "mill of the Marquesa" and was involved in the management of their mills.

We have proof of the meeting of the Board of manufacturers of Sant Pere de Riudebitlles and its neighborhood, held on July 13, 1801 in a living room of the house and mill of the Marquesa, which at that time inhabited Miquel Carner, paper maker , with the assistance of Pere Miquel del Solà Batlle de la Vila, Antoni Boloix, Josep Antoni Ferreres, Miquel Carner, Joan Vaquès, Pere Costa and Francesc Parladé, all of them paper makers of the town; in addition to Joan Riba, Feliu Aloy and Josep Via, paper makers from Sant Quintí de Mediona; and finally Pau Parellada, Josep Sellarès and Baldiri Alegre, manufacturers of the neighboring town of Lavit.

The object of the meeting was that of *"otorgar poders generals a Antoni Boloix i Pere Costas per entrega de qualsevol partida o partides de paper pròpies dels atorgants en Companyia o de qualsevol de ells en particular, amb la facultat de cobrar-les del Tresorer General*"[122]

The objective of the meeting was to form a coalition of mills capable of producing enough white writing paper to provide a very important command of the royal intendant which would currently be a supply from Spain. Meetings of this type occurred on several occasions in the first years of the nineteenth century with the intention of having the option to supply orders that a single paper mill would be incapable of doing so.

We also have proof of the resolution of the lawsuit of the town of Sant Pere Riudebitlles against the family Oliver de Sant Quintí de Mediona, owners of the Oliver mill, of the Marquesa Gaetana was to actively participate. The cause of the conflict was the location of the floodgate, which was destroyed by the great stream of July 1788. Without the lock that diverted water to the town of San Pedro, agriculture and paper mills had serious losses .

The lawsuit was first brought before the "Military and Political Governor of Vilafranca del Penedès, Don Pascal de Gayangos" and later in front of the "Court of the Royal Intendance of Catalonia." Finally, he resolved in favor of the town of Sant Pere in 1808.

At the end of his life, Maria Gaietana Peguera and Vilalba, wrote and published the second "Regulation of the Acequia de San Pedro" in 1831. This regulation is considered a very complete document and served as to model for subsequent regulations.

122. Josep Maria Madurell i Marimón. "El papel en las tierras catalanas: Contribución a su historia", pages 858 y 859. Second volume

Barcelona. Salvador Vives Casajuana Foundation

123. www.santpereriudebitlles.cat

The Gaietana marquise died in Barcelona in 1833.

His son, first-born and third Marquess of Llió, Domènec de Mòra and Peguera, lived flatly in Barcelona, in the palace that the Marquis of Llió had in the city of Barcelona, where he was in charge of councilor dean. The dedication to his position made him visit on rare occasions the mill, leased by paper mills in the region in the period of 3 to 5 years, as explained in the previous chapter. For this reason, it was his mother who led the management of the possessions of the Marquis in the Penedès.

View of the Palacio de los Marquesos de Llió located on the Montcada street of the city of Barcelona124

Towards the decade of the 1930s, political instability began in the Penedès,
coinciding with the first Carlist war or seven years. The war front failed to be stable in Catalonia and the Carlists practiced a guerrilla war with squads that disturbed the lives of the inhabitants of the region. In order to raise money, it was common for the Carlist side to commit assaults and robberies to merchants, travelers and owners of mills and other businesses. This made increase the number of assailants and brigands, which also made the transfer of freight by car unsafe.125

After finishing the first Carlist war, after the signing of the Bergara Convention126 the litter industry of the Anoia basin and the River Bitlles faces a first modernization that began around 1843 at the most important mills from the area of Capellades. This is the replacement of the traditional system of immersion tubes for machines called "*picardo*" .127

124. The palace of the Marquis of Llió was built in the second half of the 13th century. It is located in the street of Montcada, in the district of La Ribera It was bought by Josep de Móra i Cirera, father of Joseph Francesc de Móra i Catà, in 1705.
https://en.wikipedia.org/wiki/Palacio_del_Marques_de_Lio

125. Teresa Alegre, Rosa Mª Esteve, Joan B. Morgades, Anna Llobet "San Pedro and the Carlist wars". Historic Research Group. July 1996

126. The agreement of Bergara is the name of the agreement agreed by Espartero and Maroto, respective leaders of the Christian and Carlist forces, in Oñati on 31 of August of 1839, giving by finalized the first carlina war.
Great Catalan Encyclopaedia
http://www.enciclopedia.cat/EC-GEC-0223010.xml

127. Picardo type paper machine was invented in the early nineteenth century in Italy. It was a machine that he made mechanically the production of sheet paper to sheet.
https://ca.wikipedia.org/wiki/Ramon_Roman%C3%AD_i_Puigdengolas

The paper pulp was refined in Dutch batteries and passed to the continuous machine still moved by the force of the wheel of the mill driven by water. This machine formed the paper and pressed it, leaving it ready to go to the "lookout point" 128 and start with the drying process. In our mill, the first "picardo" machine will not be installed until 1876.

In 1855, the third Marquis of Llió Domenec de Móra i Peguera died. He succeeds his son and eldest son Joaquim de Elola and Móra, born in 1836 in Barcelona. We do not have much information about it, but we know that he lived in Barcelona and that he did not directly manage the mills of his property. The mills continued to be exploited under a lease for a period of 5 to 10 years, longer than leases from the 18th century. From his side, the Second Carlist War129 manifests itself in a significant way in the Penedès, with the presence of General Pavia himself, where we find him on July 13, 1847, where he was greeted with joy and where he left a troupe of garrison: 30 rifles, 30 canans, 50 pedrenyeres and 900 cartridges.130 The repression against the relatives of volunteers on the Carlist side was also very strong, with arrests to relatives and high fines.

Needless to say, the consequences of this confrontation was not good either for people, or for economic activities such as paper mills, due to the large number of assaults of soldiers, squads, bandits and the incidents they were causing.

In 1865 the train arrived in Alt Penedès with the inauguration of the Vilafranca railway line in Barcelona, which favored all the productive sectors, including the paper sector. A few years later, the paper shoots would travel by car to the station of Sant Sadurní and by train to Barcelona, with a significant reduction in the cost of transport and also of the time. This would make the river basin of the River Bitlles even more strategic due to its location, close to the city of Barcelona and on the verge of a communication channel of the highest order.

View of the station of Sant Sadurní D'Anoia at the end of the nineteenth century.131

128. Viewpoint: top of the window-filled mill where the sheets of paper were dried one by one into the stretchers.

129. The Second Carlist War, also called the Matiners War (1846 - 1849)

130. Teresa Alegre, Rosa Mª Esteve, Joan B. Morgades, Anna Llobet "San Pedro and the Carlist wars". Historic Research Group. July 1996

131. Private collection

One of the longest leases we know about the Mill of the Villa was what Pau Marquès Julià, "Pau Quirri", was born in Sant Pere Riudebitlles in 1836, ex-officer paper. He become widowed the year 1880 and seven years later he married Rosa Amat Mulet de Granada.

The "Pau Quirri" leased the mill in 1868 to Joaquim de Elola and Móra, IV Marquess de Llió, where he lived and made paper towels. In 1891 he signed a new lease contract, but this time the new owner of the mill, Josep Albet Quintana132, on that time, "balaire" in Can Guarro in Gelida.133

Current view of the Mirador del Molí de la Vila134

It seems therefore, according to a source, that the mill, in the last years of the nineteenth century, could have produced a estrassa paper135 paper although we can not confirm it for not having this information for this period of time. It seems that each papermaker that was renting the mill could be specialist in a type of paper and it seems that Pau Quirri was the role of the estrassa paper.136

132. The fact that Pau Marquès Julià rented the mill in 1891 makes us speculate about the year that the Can Guarro bullet in Gelida, Josep Albet Quintana bought the mill and the properties of the Marquis de Llió before 1891. It seems certain that Albet Quintana goes buy the Villa mill and all the properties of the Marquis de Llió while it was Can Guarro's bulletproof.

133. http://www.santperederiudebitlles.cat/web/documents/PAU_MARQUES_JULIA1.pdf

134. Photography Helena Mesquida

135. Paper made with low quality, thick and very absorbent cloth, and that is not useful for writing; is generally used for wrap.

136. The manufacture of estrassa paper from the terrace in the mill of the town during the last years of the 19th century is not entirely clear. A possibility would be the alternation in production with the writing paper and even with filter paper productions even before the arrival by Josep Albet Quintana to the mill. In fact they have found molds with watermarks in the water that could be the end of this century

Towards the 70s of the 19th century and after many years of wars an important economic recovery took place, which will take its peak in the years 1876 to 1886, which in itself led to the end of the third Carlist War.

Coinciding with this economic recovery and with a line of railroad close by, in 1876, the mill of the Villa, as it was called at that time, installed the first machine of production of paper of the type "picardo" and installed on the ground floor of the paper mill for the workshop Jaume Valls de Gelida, with an approximate width of 150 cm and a length of about 10 meters. This machine, driven by pulleys with the strength of the water, picked up the pulp of refined paper by the two Dutch batteries that at that time existed in the mill and was able to form the leaves and press them. Finally, the workers, usually two, picked up the sheets one by one and they were driven to dry in the mill gazebo, two floors above.

Front view of the first paper machine137

The first consequence was an increase in the production of sheets of paper and the quality of the training. Now with this improvement the mill could face an increase in market demand, although the bottleneck of the factory remained the viewpoint, where on rainy days or with a high humidity, the production process was stopped.

Metallic mold with the manufacturer's signature machine138

137. Photography Helena Mesquida

138. Photography Helena Mesquida

Side view of the first paper machine with the main drum and four axes of transmission of the wet leaf

We are in the year 1880. The mill has been leased by Pau Marquès Vila "Pau Quirri", who is partially or totally dedicated to the manufacture of paper towels. The picardo machine is in full operation and paper demand is increasing. There are certain problems with the supply of the raw material, the cloths. The 4th Marquess of Llió is a person 45 years of age and has no direct descendants, lives in Barcelona, just like his father and grandfather did. The Lliçó Palau is in poor condition and there are masovers that inhabit it. To allow agricultural products to enter the building, the same masovers have made the window holes bigger. The Marquis de Llió goes into a certain decline with the fact that the fourth Marquess of Llió will not have a continuation of the trash activity, nor of the rest of the family's properties.

Lineage of the Marquis of Llió:

Joseph Francesc de Móra i Catà de Salelles	I Marquess de Llió (1694 - 1762)
Domingo Félix de Móra i d'Areny	II Marquess de Llió (1731 - 1792)
Joaquim Domènec de Móra i Peguera	III Marquess de Llió (? - 1855)
Joaquim de Elola and Móra	IV Marquès de Llió (1835 - 1908)

But to understand the facts of the next years we have to move to the mill of Can Guarro where Josep Albet i Quintana was the bale packer139. It began in 1870. It was a political affiliation carlina and was a member of the City Council of Gelida. It will be the protagonist of an important evolution of the mill of the Villa and its transformation in the 20th century. He had no offspring and will be his nephew who will adopt as an adopted son and continuing his uncle's activity at the Sant Pere mill.

139. Person hired by the owner who was in charge of manufacturing the mill. It was called thus because the master paid one quantity for each bale made of paper. He was also responsible for the manufacture and gave accommodation and food to all staff The bulletins system was valid until the first years of the 20th century, when the owners of the mills realized of the abuses that were committed
Josep M. Vinyes, Enric Carafí and Ramón Rovira. "Guarro Cassa. 300 Years of History. 1698 - 1998 "Gelida 1998

View of Sant Pere Riudebitlles from the Altra Banda neighborhood on the stream at the end of the 19th century. In the foreground the Mill of the Source and on the left end the mill of the Villa

In the 80's of the nineteenth century, Josep Albet i Quintana was the bale packer of Can Guarro, and it was probably when he bought Joaquim de Eloa and Móra, IV Marquess de Llió, the paper mill of the Villa and the properties of the Marquis , flour Mill of Dalt, Cal Moliner or Molí Vell, Mill of Mig or of Cal Jan (that made flower paper), and the mill of Baix, including the palace of the Marquess of Llió.140 At that time, He mentioned, the mill was rented by Pau Marquès Julià. A second lease agreement was signed from 1891 until the year 1896, when Josep Albet Quintana began industrial activity in the mill of Sant Pere Riudebitlles, in parallel to his work of bale packer in Gelida.

Engraving of the portrait of Josep Albet Quintana from the end of the nineteenth century141

There is a document dated January 1, 1876 that according to which Baudili Artigas, Jaume Salvadó and Josep Albet Quintana constitute a society for transporting products and effects from Barcelona to the factory of Can Guarro in Gelida, In reverse, with car drawn by three or more mules, according to other sources that speak of five or six cavalries. This contract was stored in the Albet tower, owned by Josep Albet Quintana and located in the Gelida station district.142

140. https://www.flickr.com/photos/11299883@N08/20790385441

141. Engraving from the Albet family. Date of the end of the 19th century

142. Josep M. Vinyes, Enric Carafí and Ramón Rovira. "Guarro Cassa. 300 Years of History "page 49. 1698 - 1998" Gelida 1998

So, in 1896, once the last lease agreement for the Sant Pere Riudebitlles mill had been completed, Josep Albet Quintana began to prepare it technically to produce a totally new type of paper: the paper filter for industrial use. At the end of the 19th century, Catalonia was already the most industrialized area in Spain, with the presence of many chemical factories, textiles and other sectors that would need filters for their filtration processes.

In 1897 we already have the mill ready to start the first manufacturing. Even watermarks in filters.

Three years later, he finished his bale packer stage at Gelida and he replaced his nephew Rómulo Torrents Albet. Josep Albet Quintana walks to Sant Pere Riudebitlles and begins the second stage of what will later be Filtros Anoia.

Watermarks with the brand "JOSEPH ALBET" made in the late nineteenth century or early twentieth century 143

143. Paper molds with watermark found at Molí de Cal Ròmul to produce filters of 32 centimeters diameter

2 Historical facts

2.3 Century XX

Coinciding with the turn of the century, the mill stops producing writing paper, fleshy paper and even paper towels and begins to manufacture filter paper. The raw material is cotton cloths. The manufacturing process is the same and the driving force during the first years of the century is still water, although a few years later the electricity will arrive.

In 1900, Sant Pere Riudebitlles is a town with 1614 inhabitants144 with a significant presence of paper mills, but the mill of the Villa will be the only one, not only in Sant Pere, also in the Penedès that will produce filter paper. This differentiation with the rest of mills will be the one that will allow our mill to survive in the future to crisis and world wars thanks to its special product.

Viewpoint of an unidentified paper mill in Sant Pere Riudebitlles in 1900

Josep Albet Quintana has been producing filter paper for three years and in 1900 he moved to the intermediate floor of the mill after 30 years of "balaire" in Cal Guarro. The experience he took from the Gelida mill, which besides producing papers for art, smoking paper, drying paper and sporadically producing paper filter, helped him during the first years. The products that make the mill are: industrial filter paper for the textile and chemical sector, especially drying paper for writing with pen, coffee filters, papers for filtering olive oil and dense liquids such as syrups and essences. We know that there were papers between 75 and 200 g / m2 approximately.145

The area of sale of this new product will be Catalonia and some important city of Spain like Madrid, Bilbao, Valencia or Seville.

144. https://ca.wikipedia.org/wiki/Sant_Pere_de_Riudebitlles

145. Conclusions extracted for the analysis of several samples dated from the first decade of the 20th century.

Everything was planned, also at commercial level, and the "El Sol" brand was created around the year 1900, with the corresponding moldings discovered on the ground floor of the old mill recently.

Mold with the brand name of the "El Sol" brand in the water
146

One of the first designs of the commercial brand "El Sol"

Josep Albet Quintana has no children, but his nephew Rómulo Torrents Albet is his adopted son and will also be his successor when his uncle dies in 1904. Romulus Torrents leaves his job of bale packer at Cal Guarro and returns to Sant Pere and settles in the mill to take charge of it, which from then on will be called popularly and to this day Cal Romulus.

The origin of Rómulo Torrents Albet is curious: "I came from a farmhouse in Sant Julià de Vilatorta, in the middle of the Guilleries. His wife, Beatriu Esteve and Sunyé, came from Aja, to Cerdanya. They met and got married when he, fleeing the forced enlistment to go to war, went amager to a Pyrenean valley "147

At this same moment, electricity arrives at Sant Pere. In 1898 he arrived at Sant Sadurní D'Anoia, the first population of Alt Penedès, and in 1900 he did it in Vilafranca, doing it three years later in Sant Pere.148 The change that it supposes will be very important for the growth of the mill, because up to now the driving force was limited by the flow of a river of Mediterranean regime and underwent great variations depending on the rainfall and the use by paper, farmers and population, with the conflicts that this supposed. Water was still essential for the paper making process, but it will no longer be possible to move the wheel that gives energy to the mill.

146. Photo Helena Mesquida

147. Josep Torrents i Alegre. "The Casal-mill of the Marquess of Llió" Group of Historical Research. Sant Pere Riudebitlles 1996

148. Joan Carles Alabo Manubens. "The process of electrification of Catalonia, Natural Resources and Business Actions. 1896 - 1936 ". Polytechnic University of Catalonia. Barcelona

The change did not mean any million dollar investment. Only the installation of an engine was necessary and connected to the transmission tapes that moved all the machines. From now on the mill will never again depend on the river.

Wheels and transmission mechanisms on the ground floor of the mill149

Electrical table of the old machine 150

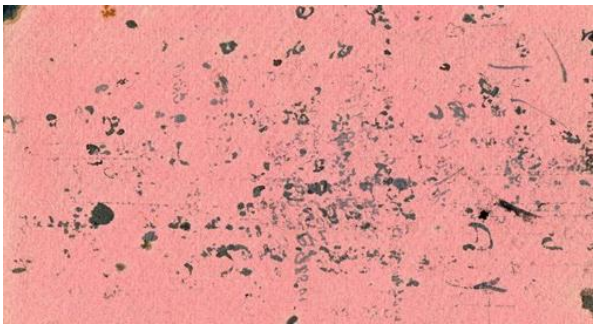
The demand for filter papers went up every day and the variety of products also. Thus, in the first decade of the 20th century, the catalog of industrial filters was expanding and in addition to the filtration of dyes for the textile industry and chemicals, liquors, mineral oils, wines were also filtered , the cosmetics and a good number of products that produced the factories and the industries in constant expansion.

Sales are channeled through distributors spread throughout the State and the promotion of the brand is also a cause for economic effort with the printing of cards and displays talking about the benefits of "filter paper" ALBET "El Sol brand"

149. Photo Helena Mesquida

150. Photo Helena Mesquida

Exhibition of drying paper from the 10th and 20th of the twentieth century151



Drying paper in full use152

Another use of the papers produced in the mill was for the coffee machines of the time. It seems that the use of these filters improved the aroma and amount of coffee cream, when it washed out solid particles. They are still used today by traditional Italian coffee makers.

The increase in sales between 1910 and 1920 means that Rómulo Torrents Albet decides to open an office in Diputación 216 street in the city of Barcelona, where a part of the commercial department is transferred, while being used as a security warehouse of all the products produced by the mill. We have to think that the area of Barcelona is the first market in importance. A few years later, the office would move to Carrer Muntaner, also in Barcelona.

By 1910, the first laboratory filter papers began to be manufactured, which will represent a very important commercial expansion route.

151. Drying paper was commonly used to absorb the excess ink of feathers and writing instruments until the arrival of Modern utensils, such as the pen, the current feathers and the markers.

152. Show provided by Josep Torrents i Alegre

In the 10th of the 20th century, one of the most curious characters in the house of the Marquis of Llió, now owned by Rómulo Torrents Albet, appears on stage. This is the financial and American philanthropist Charles Deering (1852 - 1927), founder of the Maricel Museum in Sitges.153

Charles Deering

Deering wants to buy the Gothic facade of the Palacio de Llió. It is not known whether to take the stone to the United States (like many other Catalan buildings bought and rebuilt on the other side of the Atlantic), or to take shields and windows in the reconstruction of the Sitges museum, driven by Santiago Rusiñol.

Rómulo Torrents Albet did not refuse to sell it, but it places a very high price for the time: 20,000 hard for each of the five shields of the façade and 40,000 pesetas for each of the eight windows. Also, a term of only 24 hours to accept the offer. Deering was amazed at the price, but even more for the short time he has to reason the purchase. At that time communications with the United States are difficult and it is impossible for him to achieve his goal.154

As is evident, there was no interest in selling, just to test the bold and rich buyer.

Shield and window of the palace of Llió

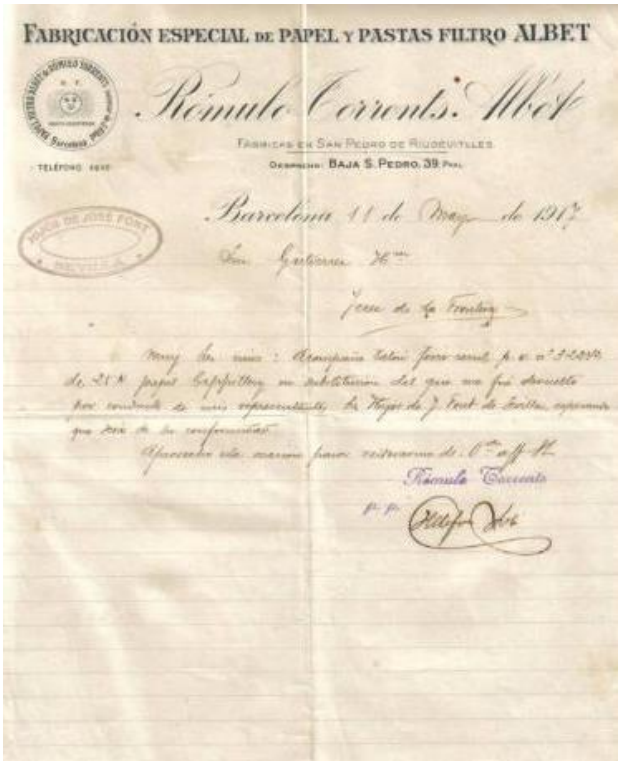
153. https://ca.wikipedia.org/wiki/Charles_Deering

154. Josep Torrents i Alegre. "The Casal - mill of the Marquess of Llió" Group of Historical Research. 1996 Sant Pere Riudebitlles

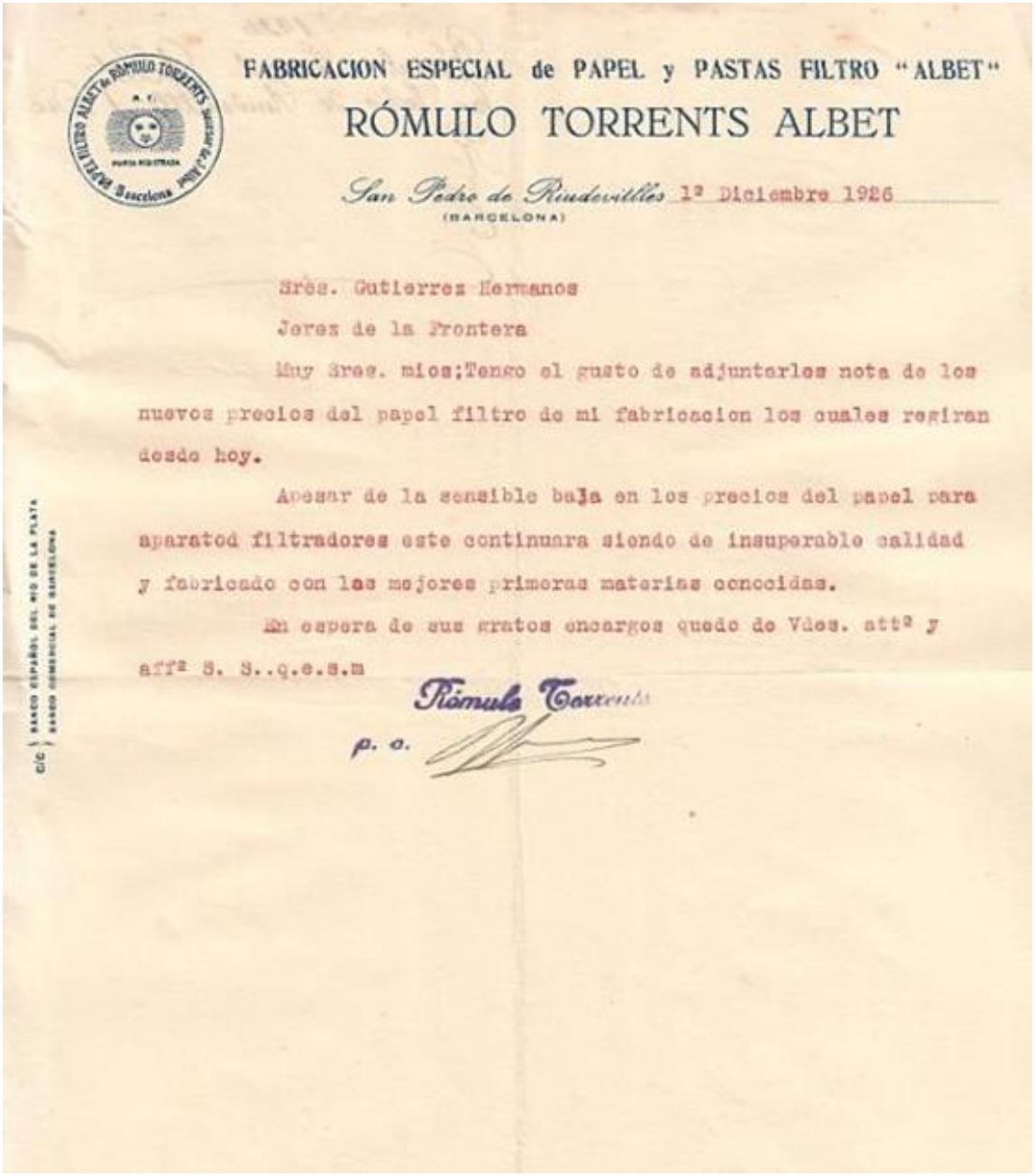
Business card of the years of Rómulo Torrents Albet 1920

Returning to the mill, and to the production of paper filter by laboratory, the papers for qualitative analysis manufactured will be the reference 320, for filtration of dense samples, reference 300, standard quality paper for any type of clarification and reference 305, a polyvalent filter paper for many applications. A few years later, they will also be able to produce the first filter papers for quantitative or gravimetric analysis, according to the technical language of the time. An ash-free filter paper and widely used by a multitude of laboratory analyzes, the legendary references 238, 240 and 242 of the "ALBET" brand. All of them are cut into different diameters adapted to the filtration funnels of the laboratories.

Commercial expansion is becoming increasingly strong and stable distributors are achieved in all cities and industrial zones of the state. As an example we have a couple of letters dated in 1917 with reference to the sending of price lists and other commercial issues.



Another example of product promotion and extension of the sales network is this letter already printed with a typewriter, dated December 1, 1926 and addressed to a distributor of Jerez de la Frontera. We can see the marked commercial character of the letter, which defends the high quality of the filters manufactured in Cal Ròmul.



FABRICACION ESPECIAL de PAPEL y PASTAS FILTRO "ALBET"

RÓMULO TORRENTS ALBET

San Pedro de Riudevitlles 1º Diciembre 1926
(BARCELONA)

Srés. Gutierrez Hermanos

Jerez de la Frontera

Muy Sres. mios;Tengo el gusto de adjuntarles nota de los nuevos precios del papel filtro de mi fabricacion los cuales regiran desde hoy.

Apesar de la sensible baja en los precios del papel para aparatod filtradores este continuara siendo de insuperable calidad y fabricado con las mejores primeras materias conocidas.

En espera de sus gratos encargos quedo de Vdes. attª y affª S. S..q.e.s.m

Rómulo Torrents

p. o.

155

155. Letter corresponding to the file of Josep Torrents i Alegre. Photography Helena Mesquida

FABRICACIÓN ESPECIAL DE PAPEL Y PASTAS FILTRO ALBET

PAPEL FILTRO ALBET de RÓMULO TORRENTS Sucesor de Albet · MARCA REGISTRADA · Barcelona

Rómulo Torrents Albet

FÁBRICAS EN SAN PEDRO DE RIUDEVITLLES

TELÉFONO 4249 A

DESPACHO: BAJA S. PEDRO, 39, PRAL.

Sr. D. .....

Muy señor mio:

Ruégole se sirva tomar buena nota de las siguientes modificaciones que a partir del día de hoy sufrirán los precios de mis papeles y pastas filtro.

Los papeles especiales para aparatos sufrirán un aumento de 0'20 pesetas en kilógramo, corriendo los embalajes siempre a cargo del comprador.

En todas las demás clases (o sean las consignadas en catálogo), el aumento será del 15 %.

Por mucho tiempo he venido resistiéndome a tomar esta resolución (aún con grave riesgo para mis intereses) en la creencia de que estas anormales circunstancias tendrían un rápido desenlace, más debido a la persistencia en la enorme alza de precios que han experimentado las primeras materias, me he visto en la apremiante necesidad de implantar con carácter transitorio los antedichos aumentos, en la seguridad de que tan pronto como las circunstancias lo permitan, será mi mayor satisfacción devolver los precios a su estado anterior.

Lo que le comunico para los efectos consiguientes, aprovechando al mismo tiempo esta ocasión para reiterarme de usted afmo. S. S.

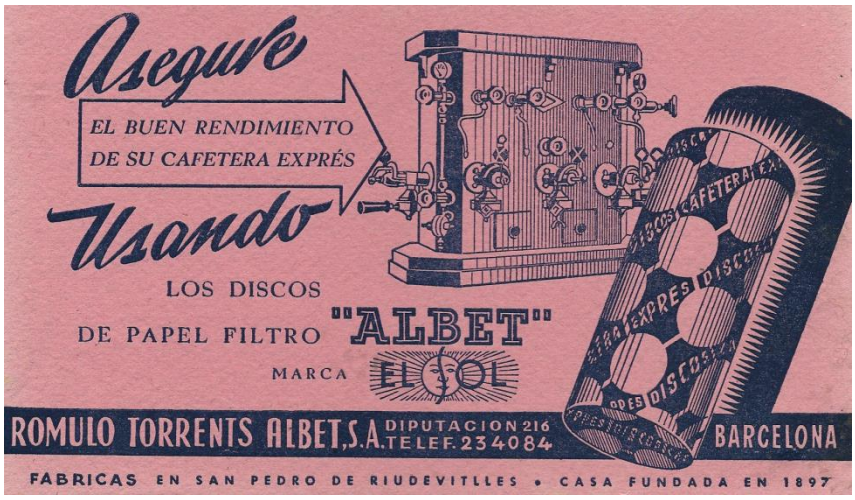
Rómulo Torrents

Barcelona 30 Abril de 1917.

In the heat of World War I, the cost of raw materials rose significantly, which had to be communicated to customers by letter

The quality and the good promotion of the products produced in the mill, make the prestige of the products of the "El Sol" brand increasingly more recognizable. We should also take into account that imports of foreign filters were not too remarkable at this time and hence the expansion without almost competition.

This sustained increase in sales causes the old mill to become small and that the mills Cal Ton del Pere and El Molinet or Molí de Moray, both on the other side of the Baix Road and owned by Rómulo Torrents Albet, manufactured Cellulose pulp for Cal Ròmul until 1986. The Molinet also used its viewpoint to dry the sheets of paper until 1968 when the current Voith machine was built.



Advertising paper filter coffee by Rómulo Torrents Albet. 1930s

Towards the year 1930 the mill of Cal Ròmul employs more than seventy workers and becomes one of the companies that most staff occupy of Sant Pere Riudebitlles.

With the beginning of the Civil War and in 1937, the collectivization law required the establishment of a Labor Control Committee, with a representation of all the workers of the different levels of the company and with a proportion of the unions. Thus, the mill of Cal Ròmul passed, where the 68 employees of the factory and the offices of Barcelona had to choose the eight representatives, who were the following:

Josep Saba	Machinist	CNT
Francisco Piñol Creixell	Machinist	CNT
Josep Rigol Esteve	Pilater	CNT
Josep Martí i Tiana	Machinist	CNT
Paquita Llopart German	Accountant	
Florentina Jové Fabra	Accountant	
Miquel Granados Martinez	Store Worker	UGT
Antoni Plaza Insert	Counter	UGT

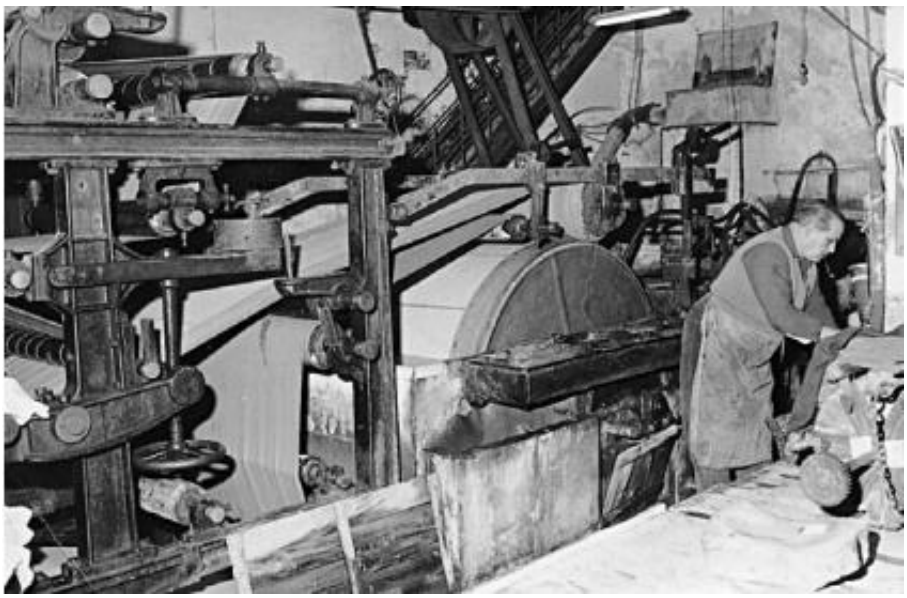
This committee delegated three of its members, Josep Sabater Bassas, Francisco Piñol Creixell and Miquel Granados Martinez, because together with the owner of the factory, Rómulo Torrents, signed the bank's and commercial documents of the company. 156

156. Fina Carol Masana, Rosa M. Esteve Nadal. "The Voices of Memory". Penedesencs Institute of Studies, Sant Pere Town Hall Generalitat de Catalunya. Sant Pere Riudebitlles. 2009

Thanks to these documents we can know the salaries they received during these years:

Manager	1.000 pessetes/month
Accountant	504,50 pessetes/month
Warehouse worker	89,90 pessetes/month
Machinist	48,30 pessetes/month
Pilater	48,30 pessetes/month
Counter (women)	26,45 pessetes/month

The same year 1937 a new machine of paper, also of picardo type settles, with the difference that the paper does not leave machine full to leaf, it leaves in roll, reason why the speed of production is much more high that the old machine Once the paper had it in coil mother it had to be cut into sheets and take the viewpoint to dry. The paper pulp is continued refining in the Dutch batteries.



Second picardo type paper machine. Year 1937

This machine is installed next to the old machine and in parallel, taking advantage of the energy of the pulleys of transmission of the nineteenth century. This invention still did not incorporate any drying system, just pressed the paper.157

But in 1937 it will still give us more important facts. In the midst of the Civil War conflict, the mill of Cal Ròmul was declared a war industry with the production of s filters for anti-gas masks by the soldiers defending the Republic. The mill is a threatened company, located in the middle of the village, which makes it a danger to the population of San Pedro, who could be at risk of being bombed by fascist aviation. 158

Finally, on January 10, 1939 San Pedro lived the only bombing of the war. It seems that a group of Franco's planes approached the next Sabanell aerodrome, but the visibility was null, so they then headed towards San Pedro. The goal was

157. Albert Tubau Garcia. "Tradition and Development, Crafts and Industry in Contemporary Penedes". Institute of Studies Penedesencs. Vilafranca del Penedès.

158. Fine Carol Masana, Rosa M. Esteve Nadal. "The Voices of Memory". Penedesencs Institute of Studies, Sant Pere Town Hall Generalitat de Catalunya. Sant Pere Riudebitlles. 2009

bombing the village war industries, the factory of Pere Valls, who produced the fabric for the tents and the mill of Cal Ròmul. The bombs fell from the neighborhood of the other band in the direction of Canaletes. Some did not explode, but six or seven did so and destroyed the social premises of Canaletes and some houses around. Years later the bombs that did not explode were deactivated by the Civil Guard.159

The other event related to the war happened in January of 1939, when the column of republican soldiers in retirement entered San Pedro Riudebitlles with the order to fly all the military industry of the town. The hunger of the soldiers saved the mill of Cal Ròmul from a sad end. Rómulo Torrents Albet, with the help of the women of the house, offered the soldiers a succulent meal accompanied by an excellent wine, all in quantity. It seems that it was very difficult to get food, but the drunken and drunken soldier forgot the purpose of his mission and continued the road to Gelida, where they did not arrive because their vehicle was stirred up the road .160

Once the Civil War is over, there is a period of severe repression and restrictions that will also affect factories and paper mills. The defeat of the basic infrastructures during the military confrontations: roads, railway lines, factories, vehicles, energy supply, etc., must be added to a period of autarky that lasted well for two decades: the of the 40s and 50s. With a shortage of raw materials, difficulty in financing and with very limited market demand. In any case, the machines of the mill of Cal Ròmul did not stop at any time.

Politicians and entrepreneurs of Sant Pere in the 1940s. From left to right and from top to bottom: Pere Nadal Solé, Josep Martí Soler, Jordi Carol Marquès, Pere Olivella Olivella, Pere Valls Julià, Manuel Herrando Compte, **Josep Torrents Esteve**, Ramon Olivé Calvet, Sebastià Tost Seròs, Josep Sabaté Massana, Josep Alegre Estalella, Ramon Olivé Miquel, Enric Alegre Estalella, Josep Maria Canut Gràcia, Jaume Fabra Boloix and Joan Alegre Estalella.[161]

We are in the midst of the postwar period and at the beginning of the Second World War, as we have said before, the mill does not stop, but the difficulties are important, especially in the supply of raw materials, which in the case of Cal Ròmul are the Various types of cloth: dirty cloths, clear list (white clothes with color) and blue (blue clothes).

159. Fina Carol Masana, Rosa M. Esteve Nadal. "The Voices of Memory" page 91. Penedesencs Institute of Studies, City Hall Sant Pere Riudebitlles, Generalitat de Catalunya. Sant Pere Riudebitlles. 2009

160. Josep Torrents i Alegre. "The Casal - mill of the Marquess of Llió" Group of Historical Research. 1996 Sant Pere Riudebitlles

161. Fina Carol Masana, Rosa M. Esteve Nadal. "The Voices of Memory" page 120. Penedesencs Institute of Studies, City Hall Sant Pere Riudebitlles, Generalitat de Catalunya. Sant Pere Riudebitlles. 2009

Although the town's first energy source was electricity, moreover, a turbine located in a waterfall that produced electric power worked in Sant Pere. Until the late 1950s, during drought summers, electricity was cut off during the day. If the water flow down the river was insufficient, Cal Ròmul mill had to stop. These stoppages ended with the installation of diesel Matane diesel engines connected to a current generator. That is why we can make sure that the mill made the filter paper with its own energy.162

In 1944, Josep Torrents i Albet died, his first-born son Josep Torrents and Esteve relieved his father's position as director, who had taken over the mill in 1904. His son, Salvador Torrents i Esteve, is will take over from the commercial standpoint and move to the offices and warehouse of Barcelona.163 Towards the end of the 40's, when the young director initiates the improvement of the quality of the filter paper, the production processes, the machines, etc.

In those years Cal Ròmul was formed by several work centers:

Molí de Cal Ròmul: Production of pasta, machines 1 and 2 and lookout St. Pere Riudebitlles
Molí de Cal Ton del Pere: Production of pasta St. Pere Riudebitlles
El Molinet o Molí de Moray: Production of pasta and lookout St. Pere Riudebitlles
Molí Vinyals: Production of pasta, handmade paper and lookout Torrelavit

Molí de Cal Ton del Pere

Molí de Cal Ròmul

Molí Vinyals

El Molinet o Molí de Cal Moray

162. Fina Carol i Masana, Rosa M. Esteve y Nadal, Anna Lloret i Calvo, Joan Baptista Morgades i Llobet, Josep Torrents i Alegre, Àngels Torrents i Rosés. "Sant Pere Riudebitlles 1949 - 1999" page 33. Historical Research Group. Sant Pere Riudebitlles. 1999

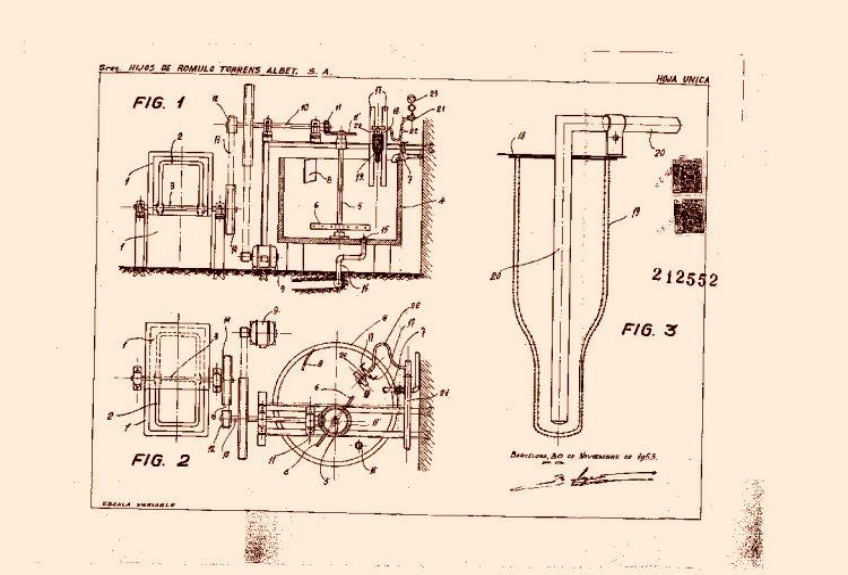
163. Conversation with Josep Torrents i Alegre

Little by little, the material difficulties derived from the Civil War were solved. The consumption of filter paper is recovered and the 50s will be a successful decade. On the one hand, product games are diversified with the development of new filter paper for industrial use and also by laboratory. The number of products is expanded.

All compositions of the products are reviewed thanks to one of the most important changes in the raw material. In the 1950s there was a replacement of the traditional raw material, the cotton cloth, for the cellulose pulp that a number of companies began to produce in an industrial way, such as ENCE, the National Cellulosic Company, which was inaugurated in 1957,. This change will definitely outweigh the difficulties of supplying cotton cloth, so scarce, and not save the preparation and processing of cotton cloth in paper pulp. Cal Ròmul will request the first orders of long fiber paste (pi) and short fiber (eucalyptus) in the late 50's.

Balls of cellulose

The production processes and the machines are also reviewed. At this time we found some patents registered by Rómulo Torrentes Albet, as one for the production of cellulose extraction cartridges.



Patent dated February 1, 1954: "A device for the manufacture of cellulose sleeves, by means of the vacuum". Cladification B29.164

164. https://patentados.com/inventos/1954/febrero

Drawing of the production centers of the mill of Cal Ròmul of the year 1957

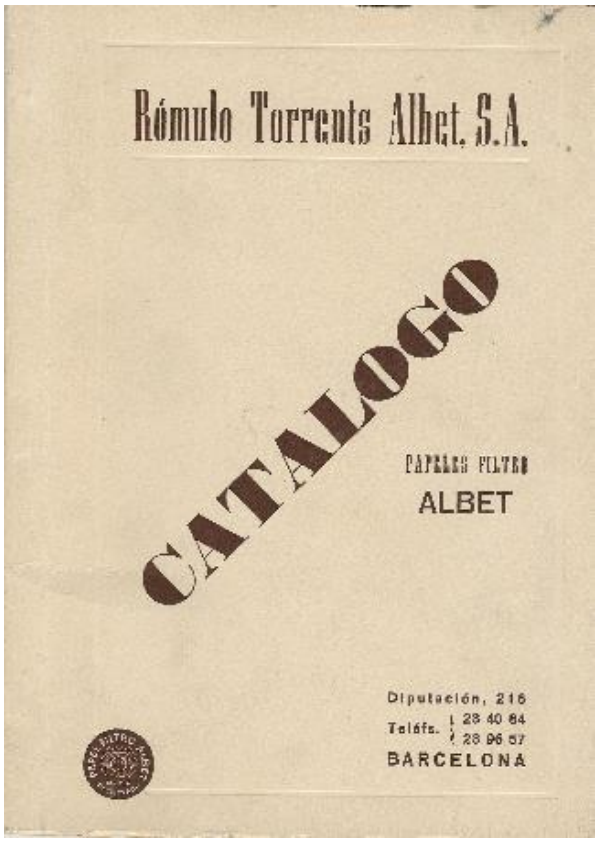
The catalogs and commercial publications are increasingly professional, with technical data, applications and tips for use, unthinkable long time ago and the logical consequence of the accumulation of experience. For the first time, Rómulo Torrents and Esteve go abroad in search of suppliers, technicians and companies of the competition who could give a good idea, a suggestion or sell a good machine for the mill. Towards the end of the 1950s, the possibility of a project for the installation of a new machine and the construction of a new industrial warehouse was raised. The mill has been left without space and in the factories of Capellades and other places, the first machines with drying are already being installed. This would allow production to increase significantly, lower the cost of the product and produce already dry rolls of paper. It will be a reality a few years later.
Fifties are the following promotion forms: samples, catalogs and samples

Printed sample of the ref. 502 años 1950165

Printed sample of the ref. 502 años 1950166

Promotion sheet of filter papers for gravimetric analysis167

165, 166, 167. Documentary collection of Anoia Filters



ALBET general catalogue January 1953168

General catalogue ALBET January 195169

The sixties will be the definitive push to update the paper mill. With increasing prestige and increasing business thanks to the end of the Autarky era, the installation of a rear-end machine will only be lacking. In 1965, land movements began to build the civil works of what will be the new industrial warehouse where a 182-cm flat Voith table machine will be installed with a built-in steam drying system. Industrial filter papers and analytical laboratory use may be manufactured with a weight between 45 and 500 gr / m2.

168, 169. Documentary sources of Filtros Anoia

Meanwhile, the generational relief is manifested in the middle of the sixties with the retirement of Rómulo Torrents and Esteve. They will be their three children who are becoming part of the company: Francesc Torrents i Rosès in the area of quality, Rómulo Torrents i Rosès as technical and chemical director of training and finally Josep M. Torrents i Rosés, engineer training industrial and general director of Cal Ròmul.

The land chosen is in a garden area behind the Moli de Morey and the mill of Can Ton del Pere and right on the mill of La Font, on a plot of 11,000 m2. There will be two wells, with a wastewater treatment plant, a zone for two pyroelectric boilers, pulper area, cellulose pulp refiners, production control laboratory, truck loading area, car park, electric transformer, manipulator workshop , warehouse of reels and warehouse of expeditions.

Aerial photo of the new factory with the distribution of the departments and the machinery

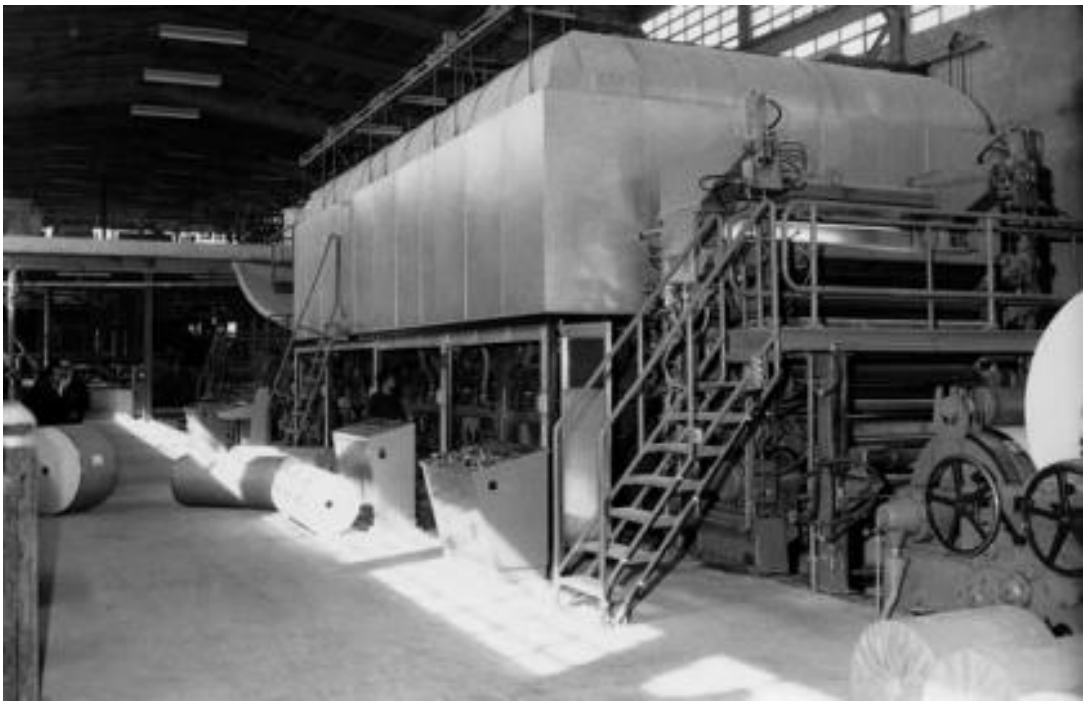
The installation of the new machine was an event in the paperwork world of Sant Pere Riudebitlles and the river basin of the Bitlles River, ran from the German multinational Voith in Toulouse (Guipúzcoa) and the necessary participation of more than 20 workers, without taking into account the team that built the civil work. It was probably one of the largest machines, at that time for the production of paper filter around the world. Its approximate cost, at that time, counting the surface of the ground, the civil work, the auxiliary equipment (pulpers, refiners, rewinder, filters), electrical installation with the transformer and the same machine, was about 1,000 million pesetas, largely funded by a bank. 170

170. Conversations with Engràcia Sabaté

While the Voith machine produced filter paper for the corresponding tests of quality and adjustment of all parts of the invention, Cal Ròmul continued to manufacture filter paper in all its work centers for an increasingly important and understandable market.

In 1968, the Voith machine manufactured the first reels of filter paper and "the quality leap that was observed in comparison with the 1925" picardo "machine was extraordinary," according to Engràcia Sabaté, analyst at laboratory at that moment.

A year later the tests of the first crepe filter papers begins. This type of paper was achieved by a difference in speed between the valley area, the dry out area and with the help of a leaf in contact with the wet filter paper.



First reels produced with the flat table machine Voith. Year 1968.171

Coinciding with the installation of the Voith172 machine, a new general catalogue is published.

In the 1970s a rather curious fact took place. The production capacity was quite important with the Voith machine and the "picardo" machine of the old mill, so part of the production time of the Voith machine was devoted to making a significant amount of painted paper173 on mother reels. An average production of 22 tons is estimated each day. In the seventies, it was fashionable to lining the walls of houses, flats and apartments with a kind of paper that was sticking with glue and that could have different colors, textures, reliefs and styles, etc ...

171. Private photo of Filtros Anoia.

172. Voith corporate group is currently a German multinational company dedicated to the mechanical engineering sector and with a division that still today designs and installs paper machines. Its headquarters are Heidenheim an der Brenz, Germany. It was founded in 1867.

173. Wallpaper is a type of paper that is used as a cover in the interior decoration and is placed on the walls of a room covering them totally.
https://ca.wikipedia.org/wiki/Paper_pintat

General catalogue edited in January 1967

Commercial triptych of the year 1978

The consumption in those years was shot. It seems that Rómulo Torrents and Esteve got the necessary contacts to make this type of paper. And for some years, our machine produced hundreds of tons. The fact is that the orders were so important, that many days there was a tail of trucks waiting for the exit of the coils to load them and take them quickly to the factory where they painted and calandrate174 to give the appropriate volume and relief .175 These orders were maintained between the years 1970 to 1976.

During the seventies, the new machine was the protagonist of Cal Ròmul. The production rate was very intense and the economic cycle helped keep it. The first oil crisis in 1993 was almost unnoticed in the mill It seems that the amortization of bank credit for the construction of the new factory was done in the half time period expected. The products that manufactured in those years the mill were:

Laboratory filter papers
Absorbent paper
Industrial filter papers
Base for painted papers
Papers by impregnation

At the end of the seventies, coinciding with the second oil crisis176 and already entering the 80's of the twentieth century, the mill of Cal Ròmul will know one of the most important economic undercurrents that are known and will not be finally overcome until a few years later. In the early eighties the economic cycle went down, the competition in the sector of the filter papers in Spain and in Europe is hardening, the cost of raw materials and energy are rising.

In the middle of the decade the economic situation becomes unsustainable and the propietary family decides to look for a buyer who can save the company. The new owner will be the Valencian company Papelera Alcoyana, who bought the mill (at that time, Hijos de Rómulo Torrents Albet, S.A. HIRTASA) in 1986, for the symbolic price of 1 peseta. The management at that time decides to opt for the production of paper qualities with little margin, such as stretchers papers, paper towels, paper impregnation and other special papers, although traditional filter papers are still produced by the laboratory and for industrial use. It will also close the old mill, finishing 238 years after the first paper production. Finally, definitely close Cal Ton's mill. The only work center that will remain open will be the new factory.

The change in direction of the mill will fail after three years and thus, in 1989, the Catalan businessman Josep Corominola and Dalmau bought the mill, also for the price of a peseta, and will try to save it. The Director General of that project is Melcior Centellas, technical director Josep Bartrolí and commercial director Victoria Estrada i Salinas.

Josep Corominola will try to find new markets of filter papers, both industrial and laboratory, but the project enters a spiral against the clock due to lack of resources and in 1993 and coinciding with the global crisis of 1992 - 1993,177 mill look for a new buyer. Finally, due to lack of a buyer, the company is forced to stop production for two months.

174. Calandrat: Calandrate is a process of forming that consists of passing a solid material (cloth, paper, plastic sheet, etc.) under pressure between metal rollers to give volume or a certain type of texture.

175. Conversation with Engràcia Sabaté (Technical Director 1994 - 2017) and Enric Pérez Brignardelli (General Director 1994 - 2017)

176. The second oil crisis of 1979 refers to occurred under the conjugated effects of the Iranian revolution and war Iran-Iraq The price of oil multiplied by 2.7 from Media from 1978 to 1981. https://en.wikipedia.org/wiki/Crisis_del_petr%C3%B3leo_de_1979

177. The Spanish economy happened in 1993 or the most difficult times of the last decades. The recession was installed in Spain and its translation was a growth of unemployment from 16% to 24%. https://en.wikipedia.org/wiki/Crisis_econ%C3%B3mica_de_1993_en_Espa%C3%B1a

Filter paper for quantitative analysis produced at Cal Ròmul's mill in the 1980s 178

Then, in August 1994, economist Marc Sala i Escardó bought the mill from Cal Rómul and quickly started the paper machine, supplying the pending orders with the support of 17 workers. The general director of the new project will be Enric Pérez and Brignardelli with the help of Engàcia Sabaté i Piñol, the technical director. The company will be called Albet Filtro, S.A.

On the other side and in parallel, the previous owner sells the brand "ALBET" to the Girona company Torras Domenech, 179 who will start a new project in the field of laboratory filtration.

After great difficulties due to the precarious economic situation and the pressure of the competition, the mill is slowly returning to the volcano focusing only on the manufacture of filter papers for laboratory and industrial use in the markets of Spain, France and Germany. The crisis of its maximum competitor La Papelera del Besòs 180 will help.

In 1997 and coinciding with the demand for the fight with Torras Domenech for the brand "ALBET", Albet Filtro, S.A. The social reason changes and it is called Filtros Anoia, S.A., its current name.

At this time, the business volume of the mill, after 15 years of crisis and several changes in ownership, was € 1.7 million, but in the coming years it will mark an upward trend and mill, thanks to the stability in the direction, to the bet by the papers of quality and to the commercial search of clients, will enter again in line of benefits. The benefits, at this time, are reinvested and the demand for quality increases.

In 1997 the mill obtained, for the first time, the ISO 9001 quality certificate and two years later the ISO 14001 environmental quality. New investments in the machine and the paper handling workshop.

The mill is updated and optimism returns.

178. Historical background of Filtros Anoia

179. Torras Domenech was a paper mill located in Flaçà (Girona). Founded in 1901 and closed in 2009. Made paper Stuccoed and bought the Cal Ròmul paper filter paper in 1993.

180. La Papelera del Besòs goes to a company with factories in Capellades and in Sant Adrià del Besòs. Founded in the forties and closed in 2001. It produced filter papers and filter plates.

Quality certifications obtained with ENAC: ISO 9001 and ISO 14001.

2.4 XXI Century

The 21st century provides the mill with a period of stability and prosperity. The technical improvements continue, with the installation of a reverse osmosis filter for ultrapure water production. Improvements to the sewage treatment plant. Installation of flat panel die-cutter with plotter, shrink wrap, cutting robots and other investments throughout the first years of the century.

In 2002 and with the incorporation of a commercial director, a new brand called "FILTER-LAB" was created to promote the image. the mill will attend for the first time at international fairs in countries such as the UAE, Brazil, the USA, etc. Thanks to these actions, the export market begins a very important growth.

The range of products, a part manufactured by other companies, is rapidly expanded, with more technical catalogs and filters for special applications. Marketing reaches the mill.

General catalogs of the year 2003 (left) and of the year 2017 (right) 181

Funny marketing: Comic with the adventures of the characters Filtrín and Filtron. Year 2003 182

181. Historical background of Filtros Anoia

182. Historical background of Filters Anoia.

New corporate image of the FILTER-LAB183 products

At the end of 2008 there is one of the most important crises that are remembered. Despite the difficulties such as the drop in sales, the strength of the euro that hinders exports, some defaults or the tough competition, the paper mill continues to grow.

At the beginning of 2017, Enric Pérez, director since 1993, decides to retire, together with Engàcia Sabaté, technical director, giving way to Marc Sala and Escardó as executive president. The staff is made up of 35 people.

At this point, the mill fulfills 269 years of life.

Current view of the northern part of the current factory.

183. General catalog FILTER-LAB 2003. Historical background of Filters Anoia

List of owners of the mill of Cal Ròmul

1. Joseph Francesc de Móra i Catà (1694-1762)
2. Domingo Felix de Móra i Areny (1731-1792)
3. Domènech de Móra i Peguera (? -1875)
4. Joaquim de Elola i Martín (1835-1908)
5. Josep Albet i Quintana (? - 1904)
6. Ròmul Torrents i Albet
7. Ròmul Torrents i Esteve
8. Josep M. Torrents i Rosés
9. La papelera Alcoyana
10. Josep Corominola i Dalmau
11. Marc Sala i Escardó (1948-)

Popular names of the mill

1. Molí del Marquès. Segle XVIII
2. Molí de la Marquesa. Segle XIX
3. Molí de la Vila. Segle XIX
4. Cal Ròmul. Segle XX

Conclusions

After working on this research I have come to some conclusions that I did not expect was so difficult to extract information from historical events, since in the nineteenth century I did not find enough information that I expected to find .

1. It has been amazing to discover how a small river, has been so well-used by the various paper mills that have been around the river Bitlles. A river that has not only been harnessed by the litter industry, but has also had an important use for the peasantry. The struggle between the paper and the peasantry was present throughout history.

2. Paper manufacture was the first industry, chronologically speaking, before the Industrial Revolution, and that during the 18th century it was, along with the textile, the most important in Catalonia.

3. The results of the work show that the founding date of the mill origin of Filtros Anoia was in 1748, prior to that which was given as valid (see chips and samples from the 30's, 40's and 50's of the century XX) and that was used until now. Many owners have, through history, exploited the paper mill, but has managed to keep up the thread from its foundation to the present day.

4. A very remarkable fact has been that the paper mill, despite having suffered wars (Carlist wars, Civil War), epidemics, famines, weather problems (colds, streams, droughts), crisis, problems of water supply river, etc. But at no time stopped production of the mill. The innovations, the investments, the improvements and the progress have arrived and the survival of the mill has secured paper

I think I did well to decide this topic because I was attracted to its history and to the little information that it had from the mill. He encouraged me to continue with this search at all times.

In the near future, I would like to continue to research on the various paper mill industries that appeared in Catalonia during the 18th century, and in this way study progress both at the machinery level and at the level of production processes.

4.1 Photos

Marquès de Llió palace

View of the facade of the Marquès de Llió palace.

Facade of the Marqués de Llió palace.

Coat of arms of the Marquis de Llió.

Cal Ròmul's mill

Paper liner.

Filing cabinet of the twentieth century.

Invoice of the year 1943.

Invoice of a mechanical carpenter.

Old Picardo Machine (1876).

First Picardo side view.

Picardo paper machine (1937).

Wheels that transmit the energy of water to the machines.

Table where the paper was cut according to its size.

Multiple pulley to remove the coils from the machine.

Picardo Machine (1876).

Brand of the machine manufacturer picardo (1876).

Recorder of paper to make the mark in the water.

Paper press

Paper poder.

Dutch pile.

Dutch pile.

Dutch pile

Chemical deposit.

Switchboard.

Switchboard.

4.2 Current factory of Filtros Anoia

View of the factory in the northeast direction.

Longitudinal image of the main nave with raw material.

Pallet store.

East view of the work warehouse.

Wastewater

Puryfing plant. Treated water

Paper winder for small coils

Cutter of large sheets.

Warehouse of coils

Guillotine

Paper machine

Paper machine

Cutter for small sheets.

Voith drum machine.

Command of the Voith machine.

Pulper command.

Control screen.

Paper pulp

Tines full of pasta.

Tines full of pasta.

Pallet with filter paper.

Cutting plotter

Automatic die cutting machine.

Pallet with industrial filter paper.

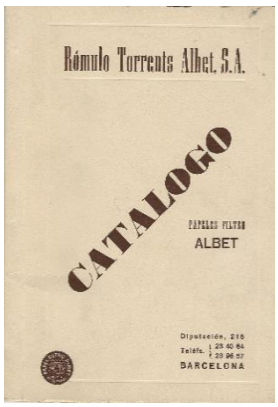
Shrink wrap

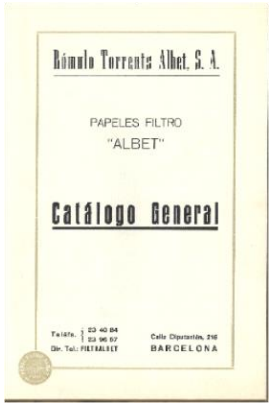
Paper machine. Moist part

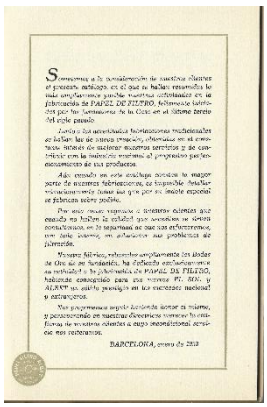
View of the main nave.

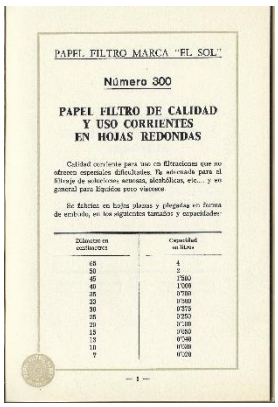
4.3 Catalogs

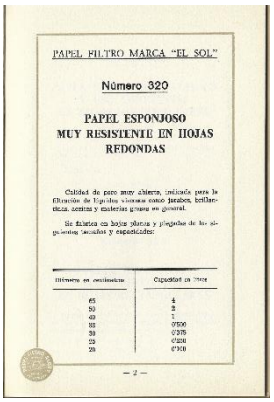
Catalog of January of 1953

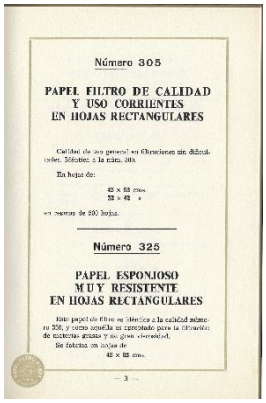


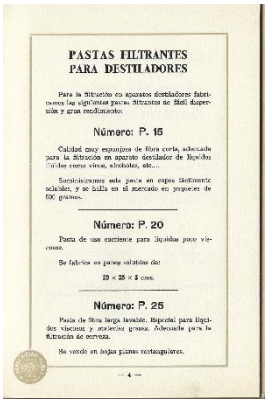


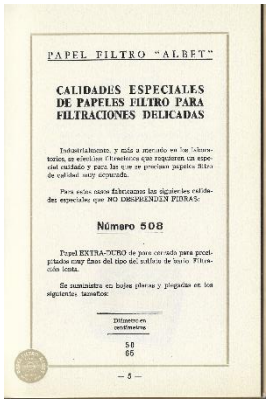


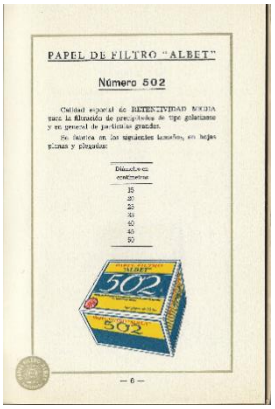


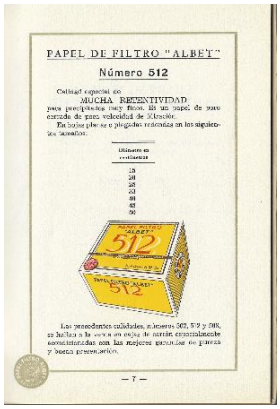


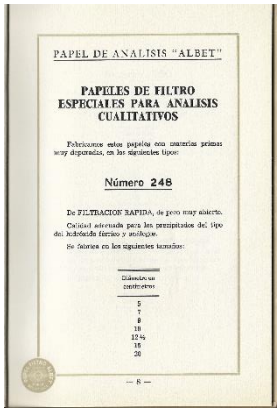


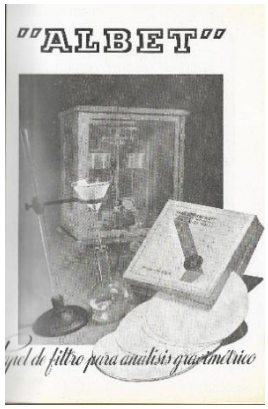


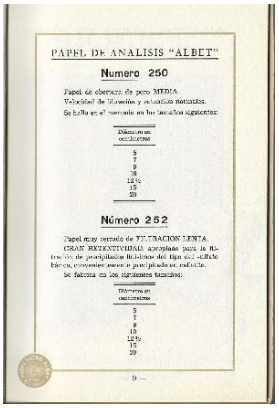


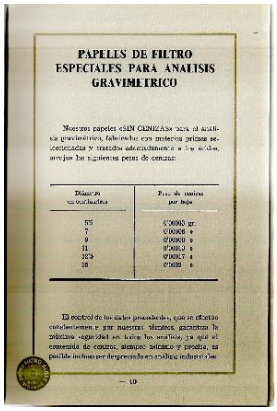


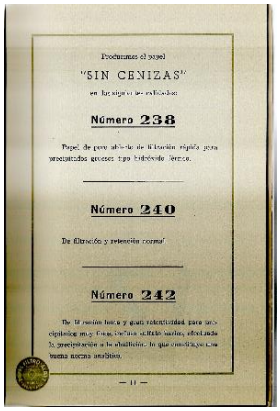


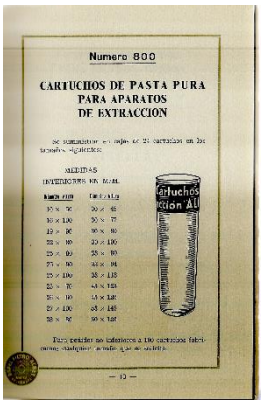






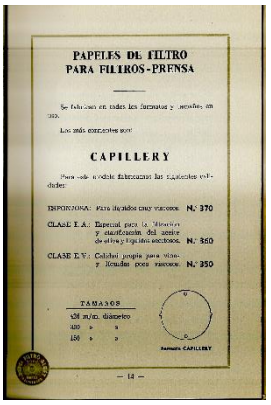






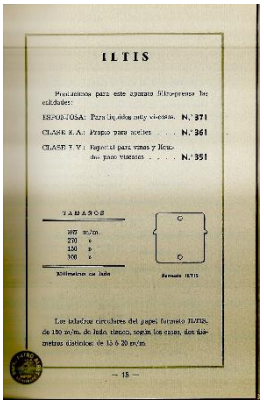
Numero 800

CARTUCHOS DE PASTA PURA PARA APARATOS DE EXTRACCION



PAPELES DE FILTRO PARA FILTROS-PRENSA

CAPILLERY



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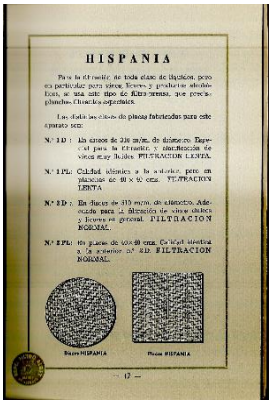
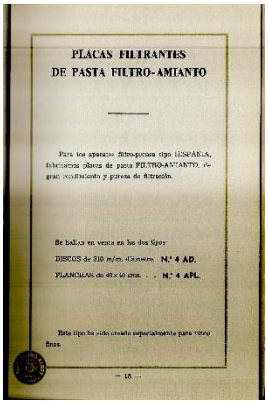
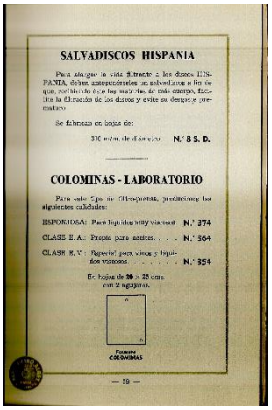


HISPANIA

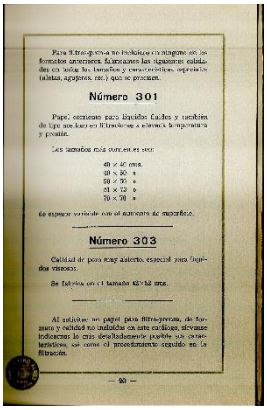


PLACAS FILTRANTES DE PASTA FILTRO-AMIANTO



SALVADISCOS HISPANIA

COLOMINAS - LABORATORIO



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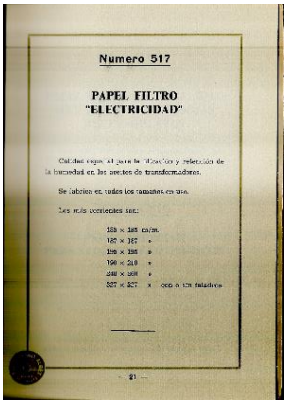
Número 303



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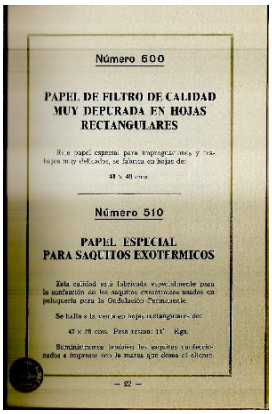
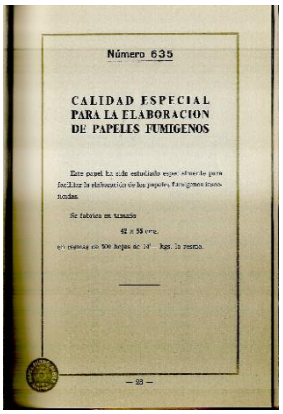


Número 500

PAPEL DE FILTRO DE CALIDAD MUY DEPURADA EN HOJAS RECTANGULARES

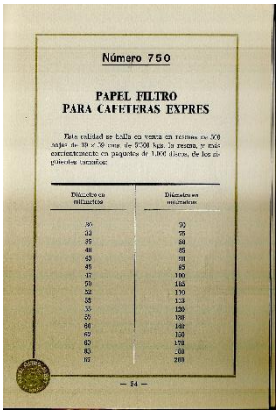
Número 510

PAPEL ESPECIAL PARA SAQUITOS EXOTERMICOS



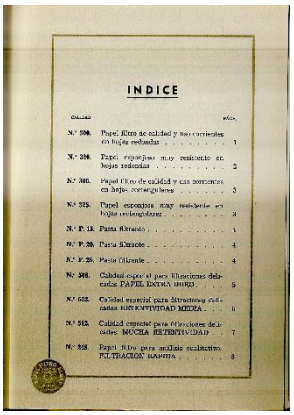
Número 635

CALIDAD ESPECIAL PARA LA ELABORACION DE PAPELES FUMIGENOS

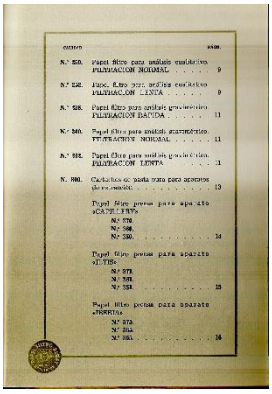


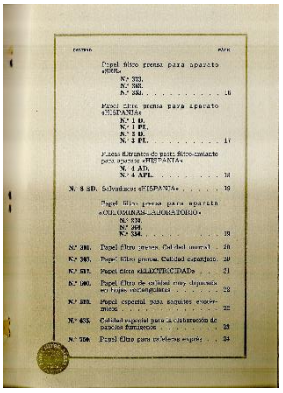
Número 750

PAPEL FILTRO PARA CAFETERAS EXPRES



INDICE

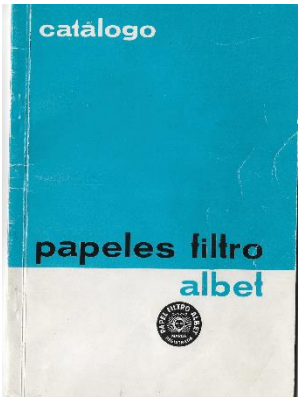




MUESTRARIO de Papeles filtro "ALBET"

Rómulo Torrents Albet, S. A.

DIPUTACION, 216
TELEFONOS 234084 / 239657
BARCELONA



Cover of 1967.

Albet Paper Filter
Paper Cover.

Cover of the catalog
of the year 1996.

Photography from the air of the company
Filtros Anoia S.A.

4.4 Annexes: Interview with Engràcia Sabaté

- How much did you start working on this company?
In this company I went to work in 1970, but two years before there was already testing on the machine that was playing.

- What was your role?
I mainly went into the laboratory, and my role was to analyze the paper.

- How many years have you started?
When we started testing I was fourteen years old, but when I entered the office, I was 16 years old.

- How many workers did they work at that time? Where were they from
There were about sixty people. All the workers were from Sant Pere, that is, from here to the town.

- Was the paper handmade?
Yes, then every 5 leaves we were stirring them and we took them out.

- What paper was manufactured? And what was it for?
It was filter paper and it was used to filter oil, and later on we started with the crumpled paper.

- Who was the director?
How much I went to work the director was Josep Maria Torrents.

- Who founded the company? In what year?
The Albert Quintana. In 1897.

- Exports to other countries?
No, everything was national, we thought that a few years ago there was no transport that is currently in place, we had it for Tarragona, Girona, Lleida.

- How much did you start exporting to other countries?
Between the years 1985 and 1990.

- Were many bins in their environment?
Yes, Querol, Fabra, manipulated coca, Pere Valls.

- And they manufactured the same type of paper?
And they did the absorbent paper, they were making dyed papers.

- Was there competition?
For the environment there was not much competition, the only competition of filter paper was in Capellades, the Besos litter was the direct competition in Albet.

- How much Spain entered the EU meant a change?
Yes, we could export to France and Germany.

- Where did the water used to make the paper come from?
The water of the holy place of The Saints of San Quinti, and they were supplied to all the rubbish bins of the river.

4.4 Annexes: Interview with Engràcia Sabaté

- Where was the raw material bought?
We always bought it to make bleached filter paper that was in Granada, Spain. Everything was done in Spain. We also bought some time in Pontevedra.

- Affected some crisis for the production of company products?
There was the 1973 crisis, and the oil crisis in 1978. But when manufacturing various qualities it did not affect us much, since the fact of having several qualities allows us to sell to other places.
- Finally, the company ended up manufacturing especially filter paper?
Yes, we realized that we were the only paper filter manufacturer in Spain and that the production of paper filter would be profitable.
- Was paper made without ashes? What happened to this paper?
Yes, we got to make it up. But the director decided to stop manufacturing because it was harmful to workers and the environment.
- How did the company begin to use computers?
About the decade of the 90s.
- What was the brand before?
The brand in which we manufactured the products was "Albet".

4.5 Chronology

January 2, 1748: Joseph Francesc de Móra i Catà calls for an establishment in the Monastery of Montserrat to build a paper mill in Sant Pere de Riudebitlles and the right to use water from the drain.

1748: The Monastery of Montserrat grants the Marquis de Llió the permission to build a paper mill in Sant Pere Riudebitlles. A company is created between the Marquis de Llió and Anton Joan Rovira. Construction of the Mill of the City, first precedent of Filtros Anoia.

1762: Francesch de Móra i Catà dies, Marquess de Llió, who calls the successor and owner of the mills and lands of his father, his son Domingo Félix de Móra i Catà.

Between 1771 and 1773: Anton Ferrer and Francesc Guarro signed 3 contracts that totaled 325,000 annual rays for 5 years.

1782 and 1783: New conflicts arise from the water. The number of mills increased and water was the subject of a dispute over paper and farmers.

1788: A streak destroys the enclosure of the communal ruler of San Pedro.

1790: Domingo Félix de Mora i Catà dies. Her widow, Marquesa Caetana, continues with the activities of the mills.

1792: The second Marquis de Lli dies, as his successor he leaves his wife Caetana. He rented it to Francesc Farreres and for years he was called the Marquesa Mill.

1833: Marquesa Caetana died, widow of the second Marquess de Llió in Barcelona.

1855: The third Marquess of Llius died, Domènech de Móra i Peguera. His son succeeds Joaquim de Elola and Mora.

1868: Pau Quirri leased the mill

1870: Josep Albet Quintana is named Can Guarro bollard in Gelida.

1876: Installation of the first Picardo type machine.

1890: Installation of the first round machine at the Molí del Marquès.

1891: Sign a lease agreement, Josep Albert Quintana

1896: Josep Albet Quintana buys all the properties at the fourth Marquès de Llió.

1897: Filter paper manufacture is begun at the Molí de la Marquesa (Cal Ròmul). Data considered erroneously as the foundation of Filtros Anoia Ròmul Torrents Albet replaces Josep Albet Quintana as a balancer from Can Guarro to Gelida.

1900: The brand "the sun" is created.

1904: Josep Albet Quintana dies, who calls his nephew, Rómulo Torrentes Albet as heir of Cal Ròmul, who ceases to be a bullfighter of Cal Guarro.

1905: Creation of the filter paper ALBET

1910 and 1920: Due to the increase in sales Rómulo Torrents Albet decides to open an office in Barcelona.

1937: In the heat of the civil war, the production of masks for the republican army begins. A new "Picardo" type paper machine is installed.

1939: Bombing of the factory by the fascist army. The bombs fall into a nearby vineyard. Do not burst

1944: Josep Albet Quintana dies, and in the inheritance he leaves his successor Josep Torrents i Esteve.

1967: The installation of a new Voith machine of 1820 mm wide flat board begins.

1968: First tests with the Voith machine.

1969: Manufacture of the first filter paper crespats.

1978: New general catalog ALBET.

July 1992: The prestigious Albet brand is sold to the Torras Domènec coated paper production company.

August 1992: The crisis forces the direction of Ròmulo Torrent Albet to close the plant. Economist Marc Sala buys Anoia Filters. New Director, Enric Pèrez Brignardelli.

September 1992: The paper machine is started again. The new "Albet Filter" brand is created.

1993: New CEO, Enric Pérez Brignardelli.

September 1997: ISO 9001 certification is achieved.

September 1999: The company obtains the ISO 14001 certification.

2003: Creation of the FILTER-LAB brand. New general catalog.

2005: Sartorius and Filtros Anoia bring to an agreement for the distribution of Sartorius products throughout the world. Construction of a filter to obtain ultra-pure water for reverse osmosis.

2008: There is a big crisis that is noticeable with the drop in sales

2013: Extension of the FILTER-LAB product range. Microfiltration

2014: New general catalog in two languages.

2017: Enric Pérez, general director (since 1993), decides to retire, together with Engràcia Sabaté, technical director, giving way to Dr. Marc Sala i Escardó

4.6 Handmade paper

I went to the Molí Papeler de Capellades Museum where I was able to take a guided tour of the mill and thus be able to get to know the beginning of the writing better. Also, I took the opportunity to do the practice of work, so I attended a workshop in which paperwork was done.

First of all, we take the "shape", dip into the tub with cellulose paste that is mixed with water, this paste has a quantity of glue because when it is dried, the paper has a greater resistance.

Then, remove the relief of the water with the paste that will have been relieved, and in this way we will have the matter of what will be the sheet of paper to which it is manufactured, and the water is spilled.



After these steps, it is time to separate the role of the form. Before doing so, first of all we will have to remove the frame, pour the shape on the surface where we want to place the sheet of paper and at the same time to press in such a way that the mark is marked on the water.


Finally and with a lot of delicacy, it is necessary to dry the sheet of paper and for that reason it must be an aerated place and in low humidity, in order to better condition the drying of the paper that has been made.

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- **Instituto de Estudios Penedés.**