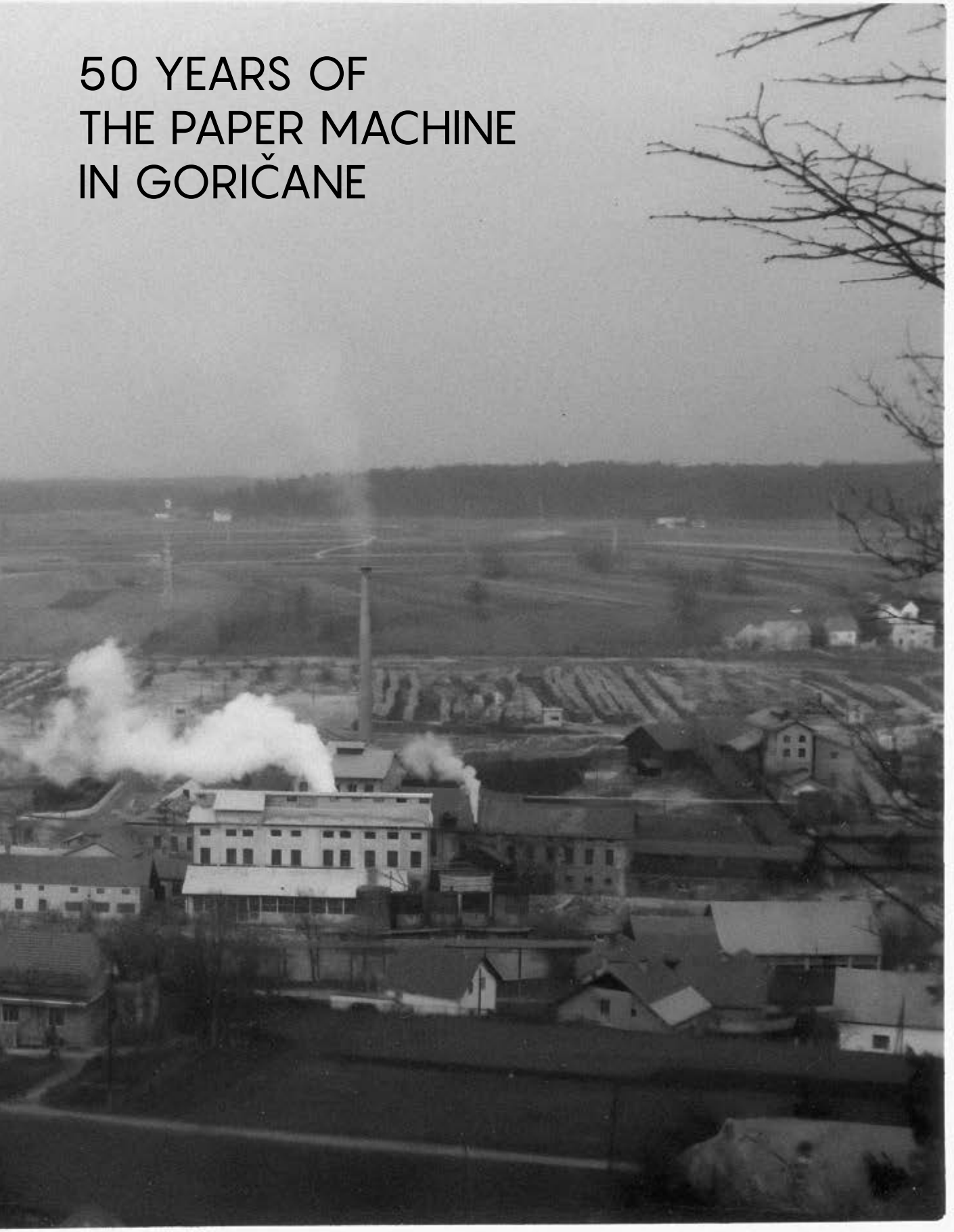

PAPER MACHINE 1 · 50 YEARS ·
PM1
50Y
· PAPIRNI STROJ 1 · 50 LET
GORIČANE

GORIČANE, 2026

View of the factory, Goričane in the 1960s.

50 YEARS OF THE PAPER MACHINE IN GORIČANE



PM1 50Y

50 Years of the Paper Machine in Goričane

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Additional materials:
Archive Goričane, Darko Cafuta

Proofreading:
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Translation:
Ela Novak, Nataša Pregl

Publisher:
Kofein dizajn

Print:
Tiskarna Grafos

Copies:
500

Ljubljana, April 2026

CIP - Kataložni zapis o publikaciji
Narodna in univerzitetna knjižnica, Ljubljana

676(497.4Goričane)(091)

GORIČANE tovarna papirja (Medvode)

PM1 50Y : [50 years of the paper machine in Goričane] / [authors Darko Cafuta ... [et al.] ; editors Kofein dizajn, Tea Rezelj ; translation Ela Novak ; pictures Darko Cafuta's archive, Goričane archive, Jaka Babnik]. - Ljubljana : Kofein dizajn, 2026

ISBN 978-961-93613-9-9
COBISS.SI-ID 271531011

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INTRODUCTION

I have always been acutely aware that paper shapes people's destinies. Even before it was invented, various cultures used different materials to convey written information. Over time, the role of the medium was taken on by stone, clay, wood, metal, papyrus, parchment, cloth, bark, and "paper" made from shredded rice stalks. Around 180 B.C., during the Han Dynasty in China, paper was being produced from plant fibres (reed, bamboo, and cereal straw). For the next 500 years, Chinese manufacturers carefully guarded the secret of paper-making. By 610 AD, this information had reached Korea and then Japan, where the manufacturing process was further simplified. Around the year 751, the manufacturing process was introduced to the Arab world. When the Arabs conquered parts of Spain, the method of papermaking was introduced to Europe. At that time, it became a cheaper alternative to parchment.

Paper facilitated the dissemination of manuscripts, the development of universities, and greater mobility of knowledge. In the 15th century, paper was combined with printing technology, enabling large-scale printing of books, religious treatises, and scientific works, which accelerated the Reformation and the Scientific Revolution. And so, for the second time, it turned humanity upside down.

However, the greatest leap occurred in the 19th century with the industrial production of paper using machines, the predecessors of our machine. Paper began to be produced in continuous rolls, which lowered its price and led to an explosion in the number of newspapers, media outlets, and books; in other words, knowledge for everyone. For humanity, paper was like the internet before internet existed.

Now, returning to the present and looking at the impact paper has had on our town and its residents, the impact we all remember, I can only say that we, too, have noticed it everywhere. We have saved the Sora River from the polluting waste of the pulp mill and transformed into a paper mill that operates in accordance with the strictest environmental standards.

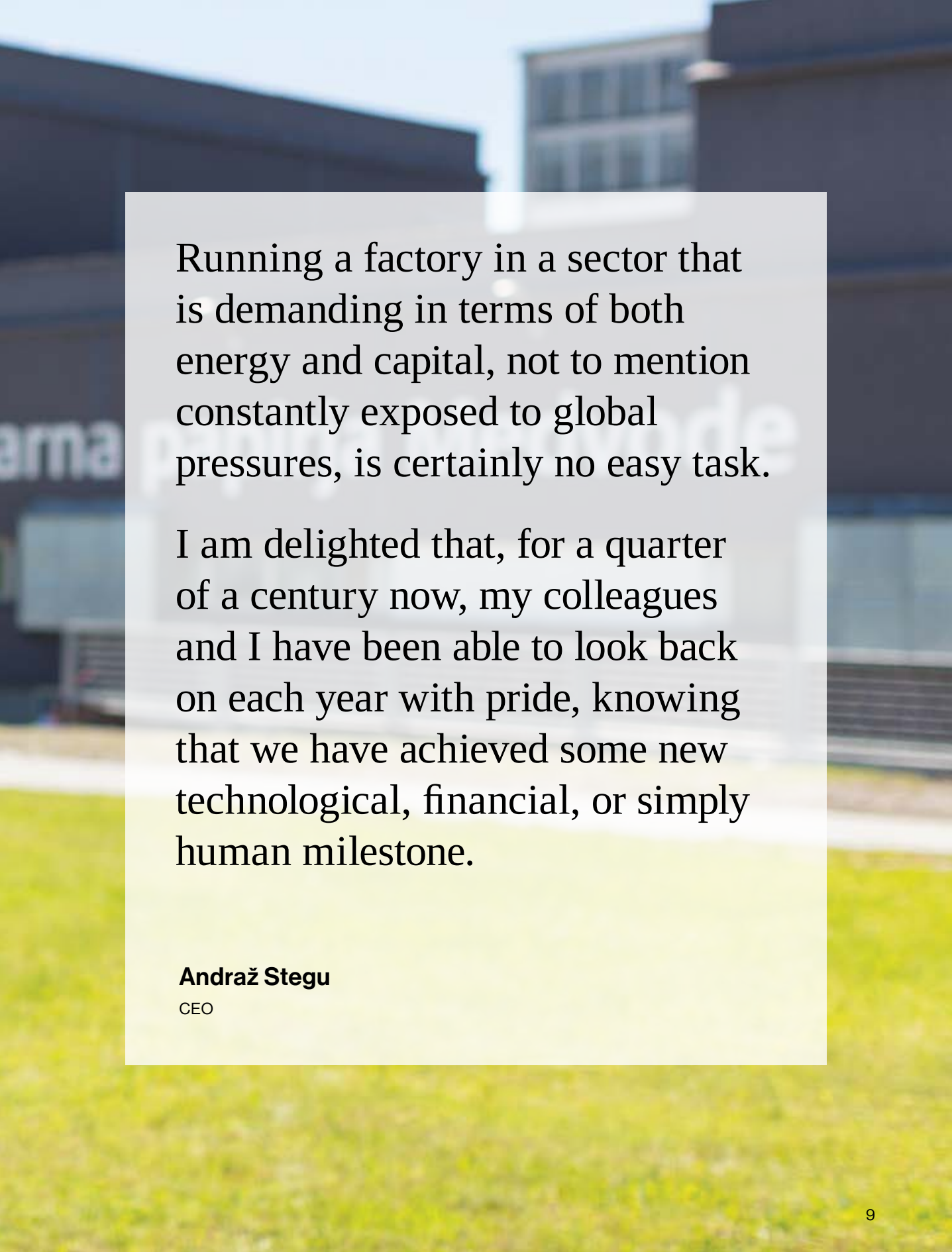
We have optimized our energy consumption and adapted it to the volatile supply of energy sources. We have weathered the economic fluctuations that have brought down many other European paper mills. Through continuous investment in technology and expertise, we have succeeded in becoming a reliable and flexible supplier to our business partners. Year after year, we have been able to adapt to the market by introducing newly developed products. Last year, we also achieved favorable refinancing of the company's liabilities and completed ownership restructuring.

The book you hold in your hands covers the last half-century in the life of our paper mill, and as I read it, it unfolds as a thriller about the great machine. For it to roar into life and endure for half a century, it first required the drive, ambition, and vision of the decision-makers who committed to this major investment. Ever since the 1990s, we desperately needed perseverance and leadership vision to overcome the many pitfalls of changing social circumstances. Above all, the reels would not be winding continuously without the selfless ingenuity of engineers, foremen, maintenance workers, and numerous other employees.

It is therefore a great pleasure for me to realize that we provide secure employment to more than 200 employees and that we can boast of a loyal and dedicated team. This will continue to be our greatest value. I therefore dedicate the book 50 Years of the Paper Machine in Goričane to the protagonists of the story of Goričane, the people behind the paper machine 1. Enjoy the read.

Andraž Stegu,
CEO of the Goričane Paper Mill


GORIČANE



Running a factory in a sector that is demanding in terms of both energy and capital, not to mention constantly exposed to global pressures, is certainly no easy task.

I am delighted that, for a quarter of a century now, my colleagues and I have been able to look back on each year with pride, knowing that we have achieved some new technological, financial, or simply human milestone.

Andraž Stegu
CEO

An excerpt from a military plan showing the lands of Inner Austria (1785–1787).

History of Goričane Paper Mill up to 1976

On the territory of the present Slovenia, the paper crafts developed simultaneously with Europe and also in a very dynamic way.

The history of Slovenian paper mills with manual production

Only the Goričane paper mill and the Radeče paper mill, as two of the previously eight paper mills with manual production in Slovenia, have withstood the test of time. Some of those who went bankrupt had only operated for a short period of time. The oldest paper mill in Slovenia, the Fužine papermill from Zgornja Hrušica pod Ljubljano, only operated for 16 years (1580-1596). In the second half of the 17th century, the paper mill from Hubelj nad Ajdovščino (from the Vipava Valley) also operated for a couple of decades. The paper mill in Žužemberk operated from 1701 until 1870 after having eventually gone bankrupt due to the competition of the industrial papermaking which became prevalent at that time. The Radeče paper mill from Njivice pri Radečah began its activity around 1725 and it became an industrial paper mill in 1854.(1)

LOKA'S PAPER MILL IN A VILLAGE PAPIRNICA PRI ŠKOFJI LOKI

The Goričane Paper Mill has its origins in Loka's paper mill which was founded in 1740 in present-day Papirnica pri Škofji Loki. The paper mill was built near the source of the creek that used to be called Mrzli potok.(2) It operated at that location until 1785. The stream, however, could propel only one water wheel which was insufficient if the papermaker wanted to increase his production. In 1785 Johann Schwerer, the owner of the paper mill, therefore decided to build a bigger paper mill.

GORIČANE PAPER MILL IN THE VILLAGE OF LADJA

The papermaker Schwerer found a new location in Sora pod Goričanami where there was already a dam and a gristmill.(3) He had been building until 1787 when he ran out of the necessary money for the constructing and equipping the paper mill with the required papermaking devices. He met a prominent merchant from Ljubljana, Anton Domian, who was inclined to invest money in the Goričane Paper Mill. In 1788, the production took up and Schwerer was able to refund his debt to Domian due to the successful paper supply.

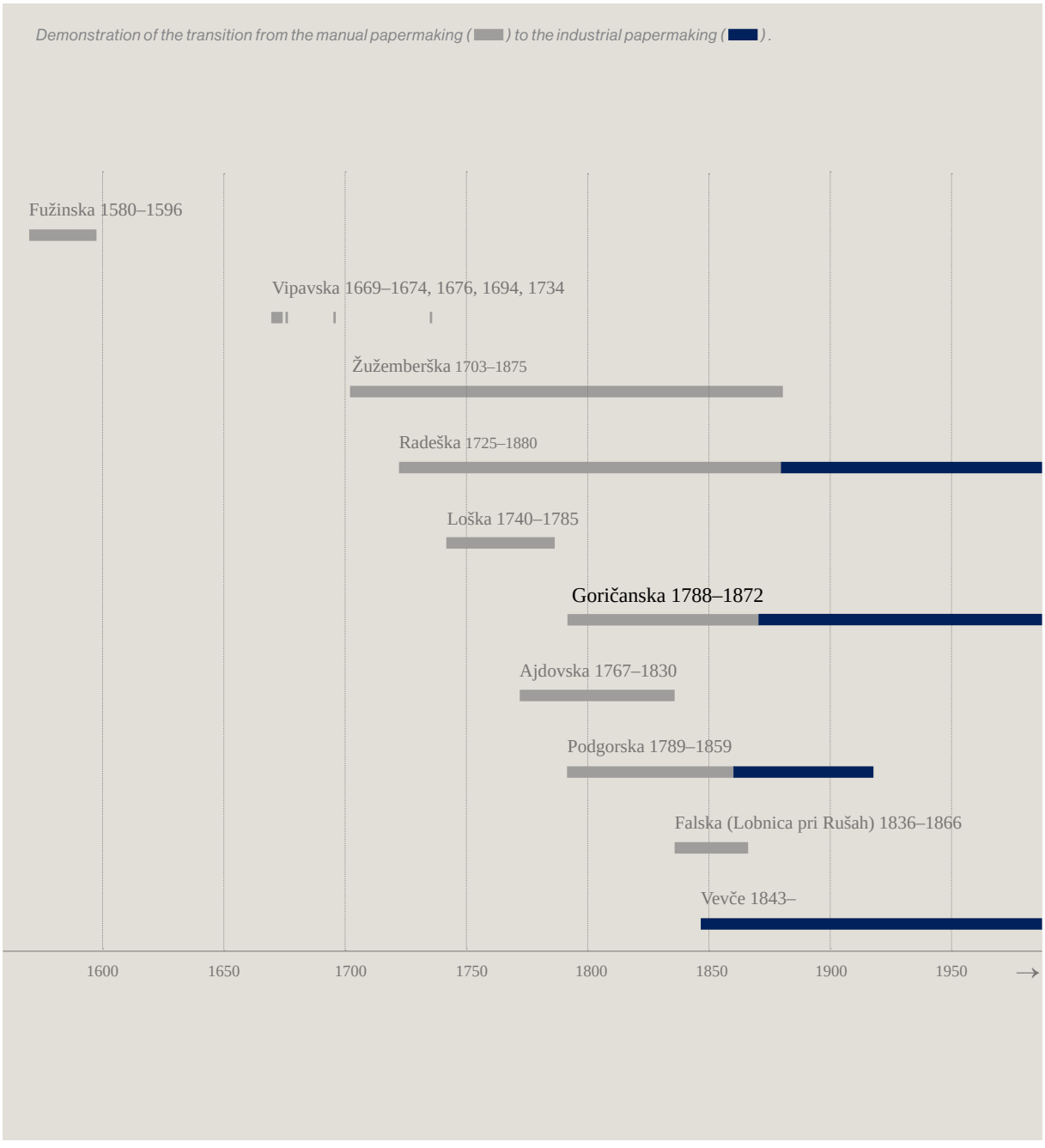
THE HISTORY OF OTHER SLOVENIAN PAPER MILLS WITH MANUAL PRODUCTION

During that time, there was another paper mill operating in Slovenia. In the Goriška region, Tomaž Kumar set a true manufacture in 1767 in the town of Ajdovščina. It was so successful that by 1769 it had already produced 12 different types of paper. It soon became one of the best paper mills in Inner Austria. The main marketplace of the Goričane Paper Mill was the Carniola region. Additionally, it also exported some products to Styria.

Roughly at the same time when the Goričane Paper Mill started to operate, there was another paper mill which started with its production. That one was located in Podgora pri Gorici by the Soča river. Although presently not located in Slovenia, that paper mill used to be part of the Slovenian ethnic space and nowadays we can still find a Slovenian minority there.

The last paper mill with manual production, which started to operate when paper machines had already been installed in Austrian lands, was the Fala paper mill in Lobnica pri Rušah. It was founded in 1836 by Dr. Hartnagel, a lawyer from Maribor. After he passed away in 1838, the paper mill went bankrupt after three decades of struggling because it could not cope with the increasing competition of the industrial papermaking factories.

Demonstration of the transition from the manual papermaking ( ) to the industrial papermaking ( ).



History of Goričane Paper Mill on maps

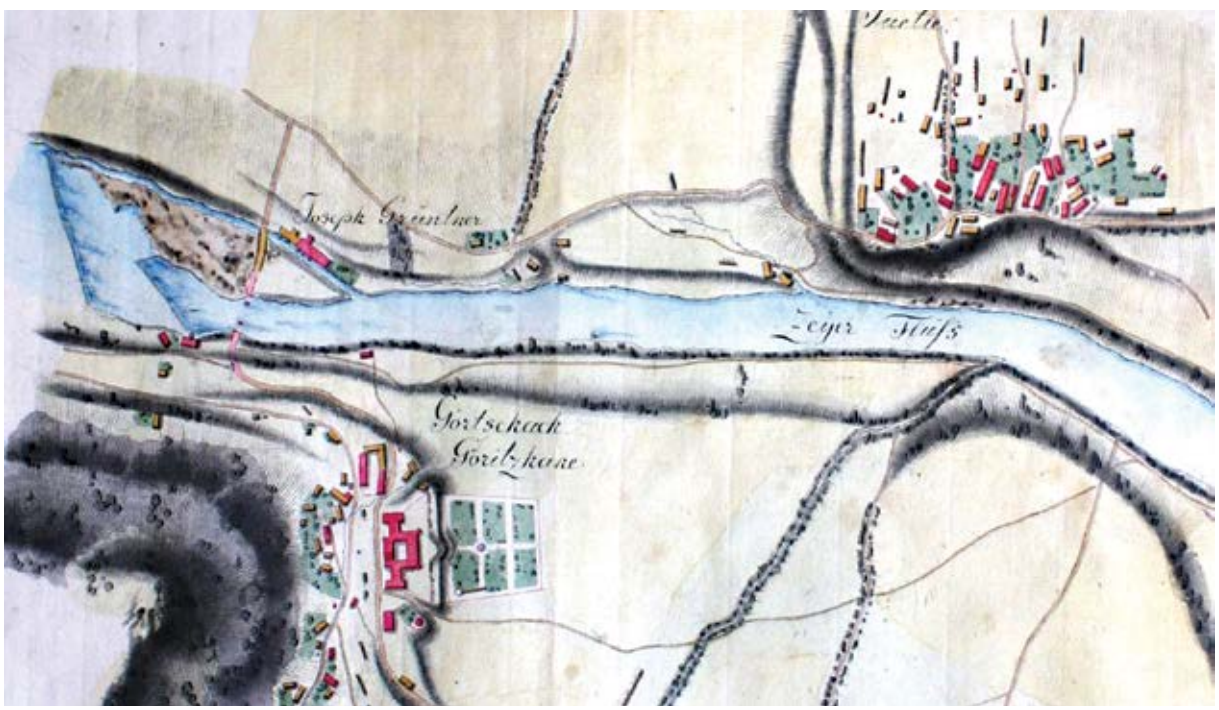
THE OLDEST MAP WHERE WE CAN SEE THE GORIČANE PAPER MILL

The paper mill (Papier Mühle) is situated on the left bank of the Sora river located below the village of Ladja. By 1787 the actual paper mill building had already been constructed. However, it did not have the devices and tools to produce paper yet. Military cartographers did not leave any documents that would reveal if the paper mill was already entirely completed and whether it was already in operation. They only wrote that the gristmill on the right bank of the Sora and the paper mill on the left bank were built facilities at the time.

60 YEARS OF THE PAPER FAMILY GRUNDNER

In 1800 the Grunder family took over the Goričane Paper Mill and remained its owner until 1863. Until 1829 Jožef Grunder had managed the paper mill and from then on it was Werner Grunder who was in charge of it. In 1844 the paper mill was already a modern manufacture with advanced equipment that employed 27 workers.

A map of the Sora river basin has been preserved dating back to 1809 where we can see Grundner's paper mill.

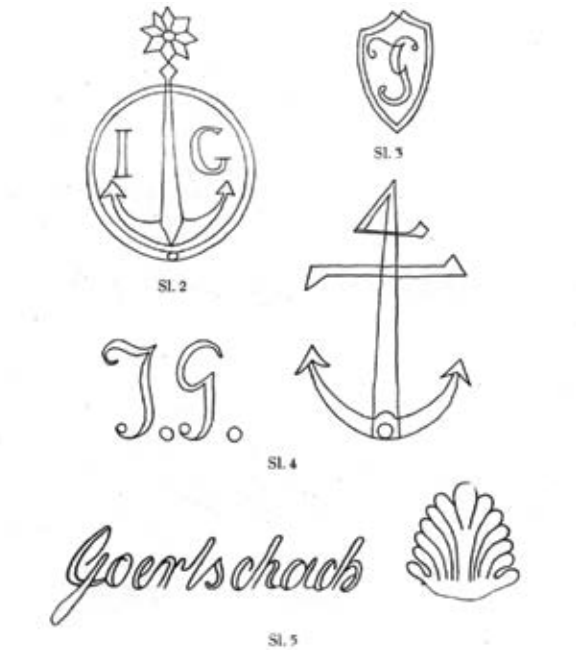


The Sava river basin (including parts of the Sora river basin): Scherouitz/Žerovic 1807: with the inscription at the paper mill saying: Joseph Gruntner; Goričane Castle (Görtschach, Goritzhane); the Sora River (Zeijer Fluss).

Watermarks of Goričane Paper Mill

The oldest published watermark of the Goričane Paper Mill was by Georg Eineder in the book entitled: The Ancient Paper-Mills of Former Austro-Hungarian Empire and Their Watermarks. The book was published in Hilversum, Netherlands in 1960.

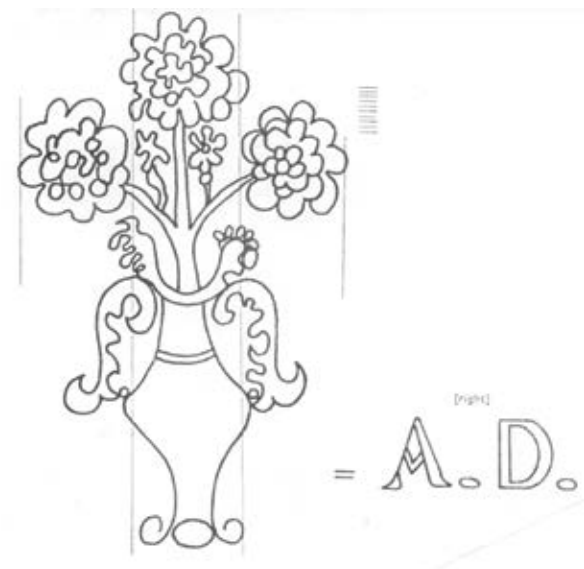
The document with this watermark from 1799, produced on the paper by the Goričane Paper Mill, was sent from Goričane to Vienna and is preserved in the archives of the Vienna Court Chamber. There are the A.D. initials on the right side of the watermark of "a rose in a vase" and these are the initials of Anton Domian, the prominent merchant from Ljubljana who invested money in the purchase of the papermaking equipment.



Sl. 2. Vodni znak Jožefa Grundnerja. Prvič sem ga opazil v spisu z datumom 5. novembra 1806, drugič v spisu z datumom 7. novembra 1817. Prikazuje varianto sidra (simbol upanja) z začetnicama I. G. ali J. G. točno v sredini pole. Prav prvi datum mi je za sedaj terminus ante quem za Jožefovo lastništvo mlina in za lastništvo Grundnerjev sploh. Primer, kako nam prav datum dokumenta in vodni znak pomagata »odkriti« kak mlin za papir! (Podoben primer se mi je pojavil pri Pankracovem ali protestantskem mlinu za papir. Tudi takrat sem z istima pomagaloma — datumom in vodnim znakom — ugotovil kot začetek proizvodnje leto 1579.) — Sl. 3. Vodni znak Jožefa Grundnerja iz leta 1825. V sredini pole sta na ščitu začetnici J. G. — Sl. 4. Vodni znak Jožefa Grundnerja iz leta 1827. Na levi polovici pole v sredini varianta sidra, na desni polovici pole v sredini začetnici J. G. — Sl. 5. Vodni znak goričanskega mlina za papir iz leta 1838. V sredini leve polovice pole ime Goričan, v sredini desne polovice pole školjka. Ker ni začetnic imena in priimka, ne vem, če pripadata vodni znak in mlin še Jožefu ali že Wernerju Grundnerju

These watermarks of the Goričane Paper Mill were collected by Dr. Jože Šorn who subsequently published them in Zgodovinsko časopisje 1958–1959.

Watermarks date from the era of a papermaking master Jožef Grunder who owned the paper mill between 1800 and 1829. The only exception is the watermark on the photo 5 (Goertschach = Goričane) which was made at the time of a papermaking master Werner Grundner (1829–1863).



Oldest published watermark.

Industrial papermaking, mechanical wood pulp and pulp production

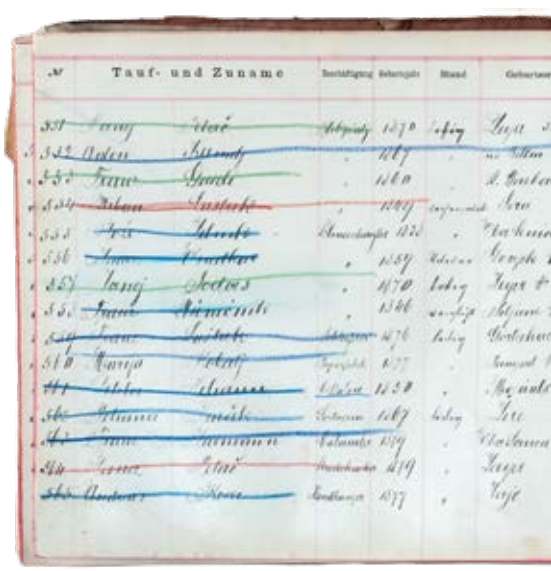
In 1843, the paper machine at a newly established paper mill in Vevče produced the first paper. All of a sudden, the paper mills relying on manual papermaking had to face the following dilemma: they had to either equip themselves with a paper machine or they were bound to go bankrupt.

In 1854, the Radeče paper mill succeeded in constructing a simple paper machine without a drying section. However, this was only a partial solution.

In Goričane, Stanislav Grundner took over thePaper Mill but its debts continued to increase. In 1863, the Goričane Paper Mill was financially ruined and consequently had to be put up for auction. Fidelis Terpinc, representing the owners of the paper mill from Vevče, was the eventual buyer. It continued to operate under new ownership.

It was very important for the future that a pulp factory was founded in Goričane in 1890 which produced pulp using the Ritter-Kellner procedure. This is an important piece of information not only due to the technological innovation but also because the production was based on this technology up until 1922 when the factory stopped producing pulp. Therefore, we can speak about 102 years of continuous operation.

The Rittner-Kellner procedure was invented by a baron Ritter von Zahony and a chemist Karl Kellner representing the Podgora paper mill which had been owned by Baron Ritter since 1859. This industrial paper mill became famous worldwide for this innovation. The innovation is based on the pulp coating procedure in accordance with the sulphite procedure which uses a direct steam heating system. In 1883, as a result of the extremely successful procedure, the inventors received a "privilege" (the word used for a patent at the time) for the production of sulfite pulp. The paper mill in Podgora continued to operate until the First World War when it was eventually destroyed.

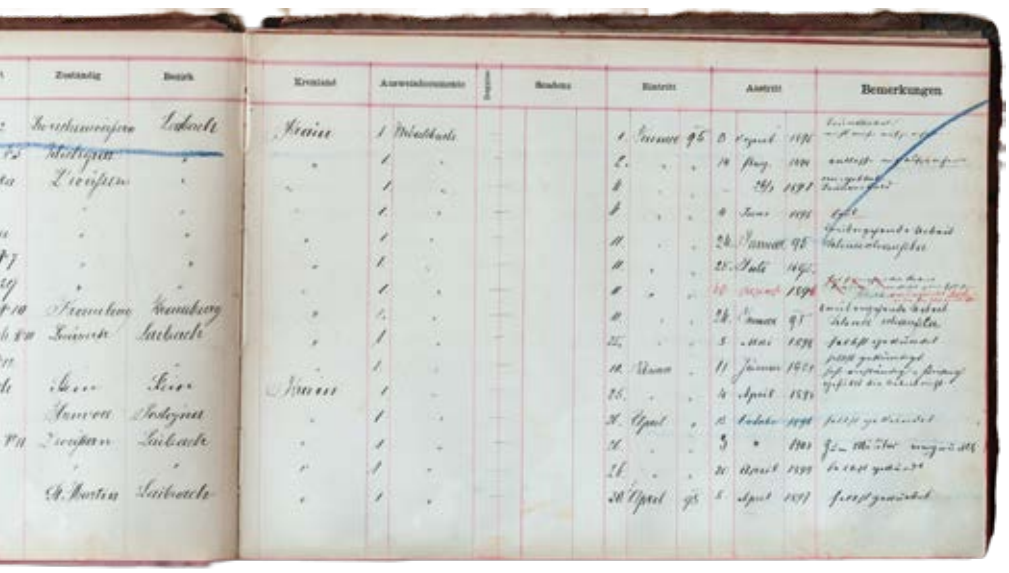


Goričane Paper Mill as a plant of the Vevče paper mill

After the Goričane Paper Mill had been taken over by the Vevče paper mill, Stanislav Grundner continued to manage the Goričane manual paper making plant which eventually burned down in 1865. However, since the paper mill was insured they were able to start with the construction of a new factory already in the same year. The first data proving that the Vevče paper mill was producing mechanical wood pulp in its plant in Goričane date back to 1870.

Fidelis Terpinc bought water rights on the Sava river in Medvode and Verje already in 1858. By 1866, wood grinder had already been constructed in Medvode and in 1868 they started to construct a wood grinder in Verje. In 1870 mechanical wood pulp was therefore produced in three plants: in Goričane, Medvode and Verje.

After purchasing the Goričane Paper Mill, Terpinc wanted to connect his factories by establishing a joint stock company. However, he gave up his idea because he had neither the successors nor the suitable cooperators or investors.



Employee Register, Goričane Paper Mill, 1884–1890.

The era of the Leykam paper industry

After the purchase, the stock company was named "Leykam-Josefsthal A.G. für Papier und Druckindustrie, Wien".

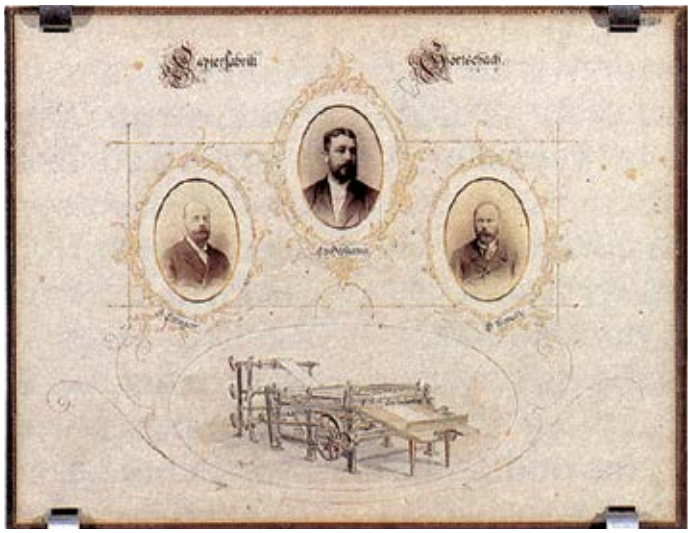
Josefsthal was a German name for the Vevče paper mill. The story tells that Terpinc named the paper mill after his wife Jožefina. The Slovenian name was Jožefov dol.

The stock company Leykam, which had 2 million guldens in capital at the time of the purchase, bought the Vevče paper mill and the plants in Medvode, Verje and Goričane for 1,300,000 guldens. Half of the purchase price was paid in cash and the other half in stocks.

On the first shares, issued by a new stock company, we can see the company's factories. Among the enumerated, these are the Slovenian ones:

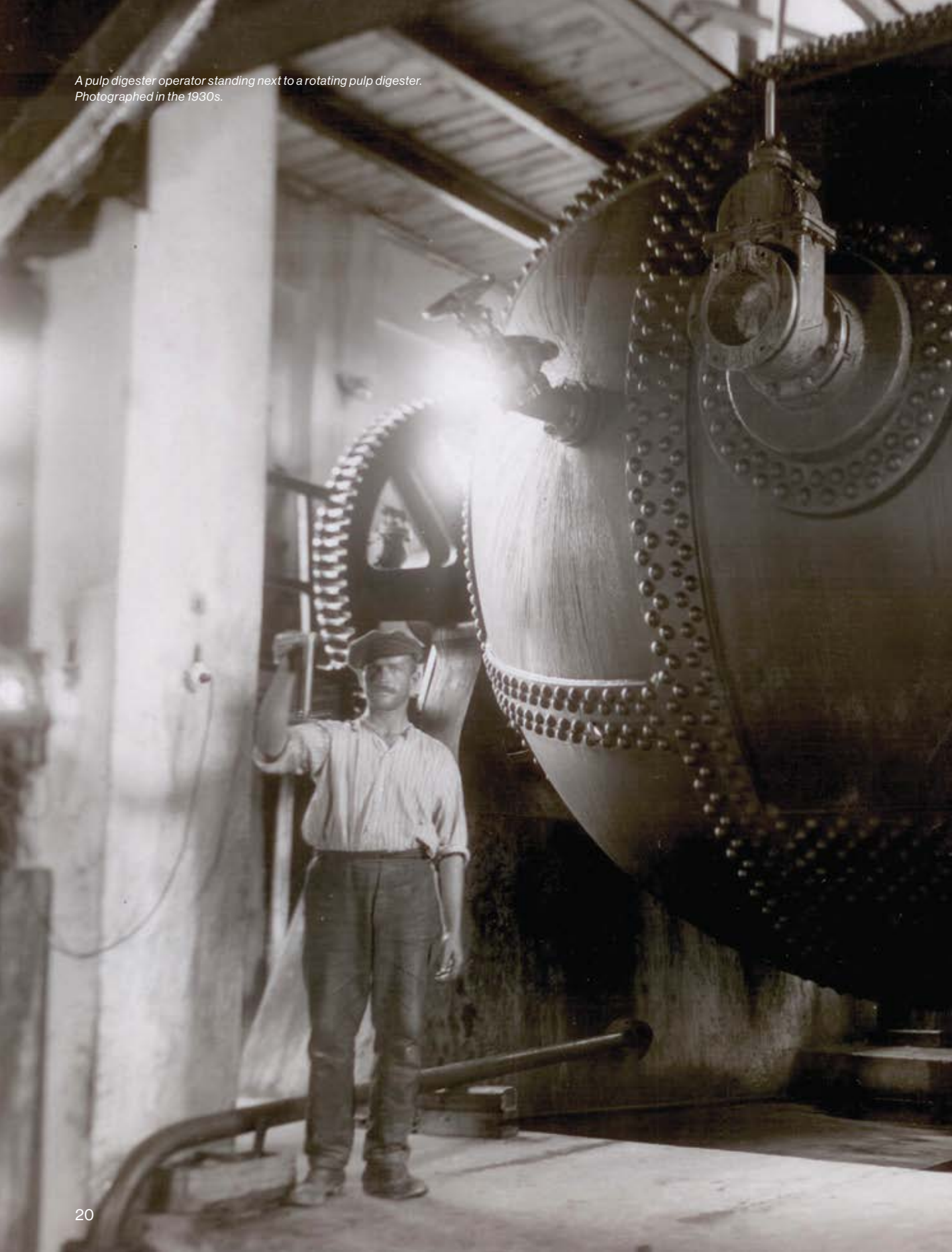
- Zwischenwässern = Medvode
- Janezia = Janezija, the paper mill on the left bank of the Ljubljanica River in Vevče
- Virje = Verje pri Medvodah
- Görtschach = Goričane
- Josefsthal = the first Vevče paper mill on the right bank of the Ljubljanica River

Of the Styria factories, two of them are mentioned: Graz and Gratwein.



In 1895, the names of the clerks working in Goričane were also already known. Taken from Leykam's archive.

A share of "Leykam-Josefsthal A.G. für Papier und Druckindustrie, Wien" stock company, worth 200 guldens.



A pulp digester operator standing next to a rotating pulp digester. Photographed in the 1930s.

The first paper machine in Goričane (1872—1931)

The first references about paper production and the paper machine in Goričane occur no earlier than 1879 despite the information that the paper machine had already been built in 1872.

Mechanical wood pulp was used as a raw material both in Vevče and Goričane and some of it was also used in Verje where they set up their paper machine in 1889. This paper machine was permanently shut down after a wood grinder and a paper mill in Verje had burned down in 1910. They were sending the rest of the mechanical wood pulp to Leykam's paper mills in either Graz, Austria or to Podgora pri Gorici.

In 1890, the wood grinder and the paper mill in Verje employed 70 workers, 79 workers were employed in Medvode and the Goričane Paper Mill and wood grinder employed 163 workers.

TECHNICAL DATA ABOUT THE FIRST PAPER MACHINE

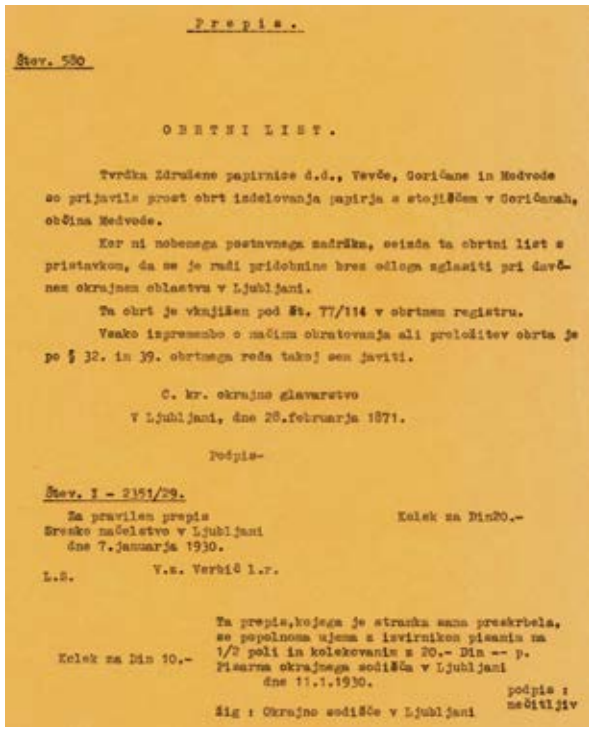
Already in 1871, Leykam-Josefsthal asked the local district board in Ljubljana to issue a permit for the purposes of running the wood grinder and paper production in the plants of Medvode and Goričane. The permit was received on February 28th 1871.

From the report of the Chamber of Commerce and Craft from 1870 we can learn only about the water power in Goričane: two water wheels, each with 80 hp, that propelled two wood grinders. In order to start-up the paper machine, a new steam boiler had to be built and the machine had to be propelled by a steam engine.

The first data about the paper machine are only available from 1905. That is when they were already using a new water turbine with 320 hp to propel the machine. This turbine was installed in 1889 when they decided that they would rather use the turbine instead of water wheels. The turbine was made by Ganz & Co. from Budapest. They also added a dynamo machine with the voltage of 100 V and 160 A which was made by Siemens-Halske from Vienna.

The paper machine was a product of the machine factory from Leobersdorf in Lower Austria and the operating width of the machine with bottom wire amounted to 142 cm. In the factory, there was also a machine for cardboard production with the operating width of 80 x 100 cm. Also, there were already 3 wood grinders in Goričane at that time.

In 1886 they built a satining facility and also constructed a paper hall to the adjacent paper machine building. Additionally, they also installed new steam boilers because they needed additional drive for the new machines in the finishing department. In order to achieve more power, they used new steam engines. In 1888, they constructed the first calender, made in the machine factory from Leobersdorf.



P r e p i s .

Štev. 530

O B R T N I L I S T .

Tvrdka Združene papirnice d.d., Vevče, Goričane in Medvode so prijavile prost obrt izdelovanja papirja s stojiščem v Goričanah, občina Medvode.

Ker ni nobenega postavnega zadržka, izdaja ta obrtni list s pristavkom, da se je radi pridobnine brez odloga oglasiti pri davčnem okrajnem oblastvu v Ljubljani.

Ta obrt je vknjižen pod št. 77/114 v obrtnem registru.

Vsako izpremembo o načinu obratovanja ali prolo&itev obrta je po § 32. in 39. obrtnega reda takoj sem javiti.

C. kr. okrajno glavarstvo
V Ljubljani, dne 28.februarja 1871.

Podpis.

Štev. I - 2151/29.

Za pravilen prepis
Srezko načelstvo v Ljubljani
dne 7.januarja 1930.

Kolek za Din20.-

L.S. V.s. Verbič l.r.

Kolek za Din 10.-

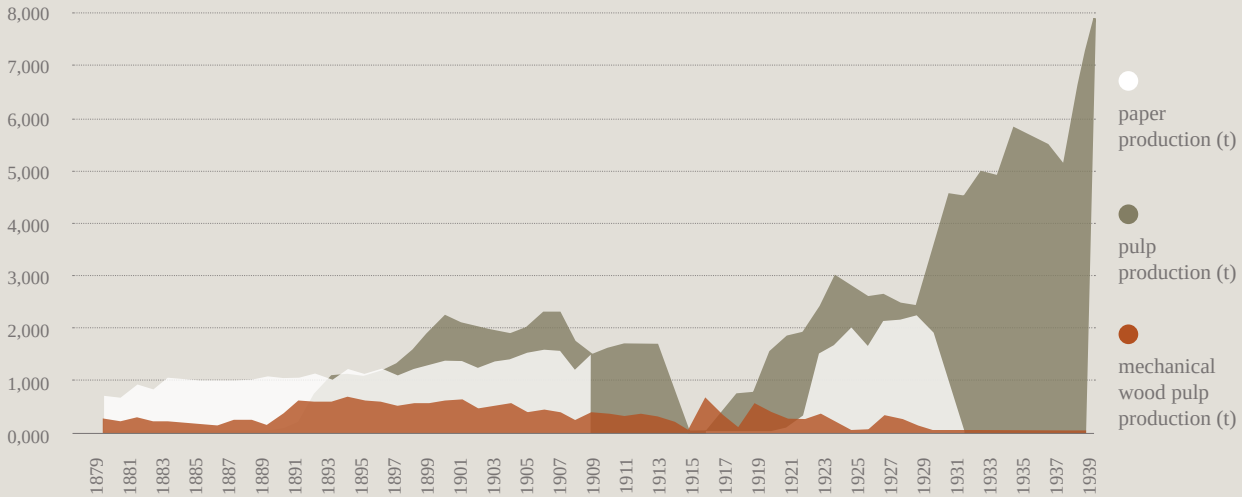
Ta prepis,kojega je stranka sama preskrbela, se popolnoma ujema z izvirnikom pisanim na 1/2 poli in koleksvanim z 20.- Din -- p. Pisarna okrajnega sodišča v Ljubljani dne 11.1.1930.

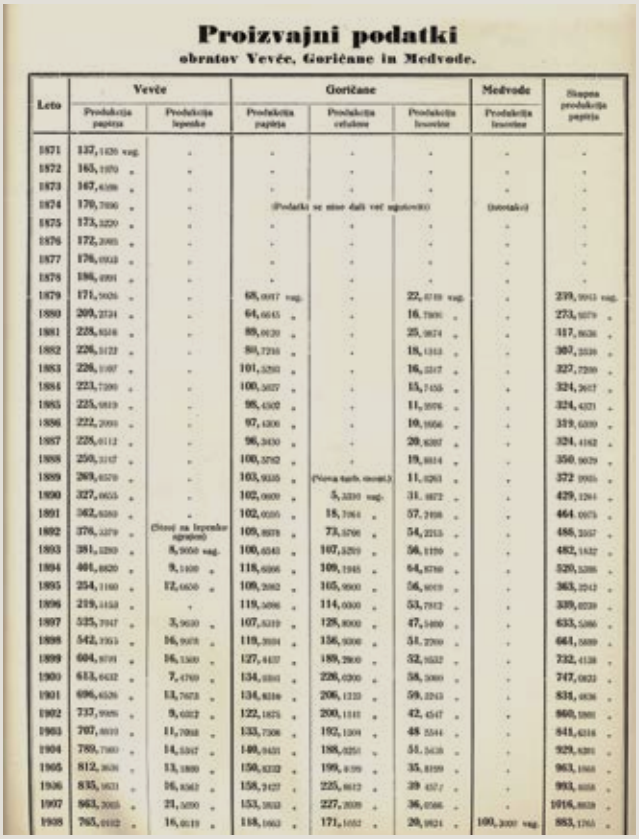
podpis : nečitljiv

Žig : Okrajno sodišče v Ljubljani

A copy of the permit for the industrial papermaking in Goričane plant.

In 1905, they produced 4,000 kg of printing and kraft paper, 2,000 kg of mechanical wood pulp and cardboard and 7,000 kg of pulp. The data on paper production in Goričane Paper Mill are available for the period between 1879 until the shutdown of the paper machine in 1931 (see the table and the chart).





Proizvajni podatki

obratov Vevče, Goričane in Medvode.

Leto	Vevče		Goričane			Medvode	Skupna produkcija papirja
	Produkcija papirja	Produkcija lepenke	Produkcija papirja	Produkcija celuloze	Produkcija lesovine	Produkcija lesovine	
1871	137, 1420 vag.	-	-	-	-	-	-
1872	165, 1970 „	-	-	-	-	-	-
1873	167, 4500 „	-	-	-	-	-	-
1874	170, 7000 „	-	(Podatki se niso dali več ugotoviti)			(ustavljeni)	-
1875	173, 3220 „	-	-	-	-	-	-
1876	172, 2005 „	-	-	-	-	-	-
1877	176, 0018 „	-	-	-	-	-	-
1878	186, 4001 „	-	-	-	-	-	-
1879	171, 5026 „	-	68, 0017 vag.	-	22, 6719 vag.	-	239, 9913 vag.
1880	209, 2724 „	-	64, 0645 „	-	16, 7309 „	-	273, 9379 „
1881	228, 8248 „	-	89, 0120 „	-	25, 9874 „	-	317, 8638 „
1882	226, 5122 „	-	80, 7216 „	-	18, 1313 „	-	307, 3538 „
1883	226, 1407 „	-	101, 3293 „	-	16, 5317 „	-	327, 7200 „
1884	223, 7200 „	-	100, 3027 „	-	15, 7455 „	-	324, 3657 „
1885	225, 9819 „	-	98, 4502 „	-	11, 3976 „	-	324, 4321 „
1886	222, 2000 „	-	97, 4306 „	-	10, 1656 „	-	319, 6306 „
1887	228, 0112 „	-	96, 3430 „	-	20, 8287 „	-	324, 4182 „
1888	250, 3147 „	-	100, 3762 „	-	19, 8814 „	-	350, 9079 „
1889	269, 4570 „	-	103, 9335 „	(Nova turb. stroj.)	11, 0261 „	-	372 9905 „
1890	327, 0655 „	-	102, 0809 „	5, 3390 vag.	31, 4872 „	-	429, 1294 „
1891	362, 8260 „	-	102, 0205 „	18, 7064 „	57, 2408 „	-	464, 0675 „
1892	376, 3279 „	(Stroj za lepenko sprejem)	109, 8979 „	73, 5706 „	54, 2215 „	-	488, 2357 „
1893	381, 1280 „	8, 9050 vag.	100, 6543 „	107, 5291 „	56, 1199 „	-	482, 1432 „
1894	401, 4820 „	9, 1400 „	118, 6306 „	109, 1945 „	64, 8780 „	-	520, 3286 „
1895	254, 1160 „	12, 4650 „	109, 2062 „	165, 9000 „	56, 0019 „	-	363, 2242 „
1896	219, 1453 „	-	119, 5096 „	114, 0000 „	53, 7912 „	-	339, 0239 „
1897	525, 7947 „	3, 9630 „	107, 5319 „	128, 8000 „	47, 5460 „	-	633, 5086 „
1898	542, 7355 „	16, 9078 „	119, 3934 „	156, 9300 „	51, 2200 „	-	661, 5889 „
1899	604, 8791 „	16, 1300 „	127, 4437 „	189, 2900 „	52, 1532 „	-	732, 4138 „
1900	653, 6432 „	7, 4769 „	134, 0301 „	226, 6200 „	58, 5000 „	-	747, 0832 „
1901	696, 4526 „	13, 7673 „	134, 8216 „	206, 1233 „	59, 2243 „	-	831, 6836 „
1902	737, 9985 „	9, 6312 „	122, 1875 „	200, 1141 „	42, 4547 „	-	860, 1901 „
1903	797, 8019 „	11, 7008 „	133, 7308 „	192, 1309 „	48 3544 „	-	841, 6216 „
1904	789, 7360 „	14, 5247 „	140, 0431 „	188, 6251 „	51, 3438 „	-	929, 4291 „
1905	812, 3638 „	13, 1800 „	150, 8332 „	199, 0199 „	35, 8199 „	-	963, 1968 „
1906	835, 1631 „	16, 8562 „	158, 2427 „	225, 8612 „	39 4577 „	-	993, 8058 „
1907	863, 2005 „	21, 5090 „	153, 3832 „	227, 3008 „	36, 0586 „	-	1016, 8639 „
1908	765, 0102 „	16, 0019 „	118, 1063 „	171, 1051 „	20, 9824 „	100, 3000 vag.	883, 1765 „

The production of paper, mechanical wood pulp and pulp from 1878 to 1940.

Leto	Vevče		Goričane			Medvode	Skupna produkcija papirja
	Produkcija papirja	Produkcija lepenke	Produkcija papirja	Produkcija celuloze	Produkcija lesovine	Produkcija lesovine	
1909	974, 7824 vag.	16, 5243 vag.	147, 4787 vag.	180, 4400 vag.	35, 9385 vag.	122, 6521 vag.	1122, 2611 vag.
1910	891, 4307 „	16, 5870 „	160, 0362 „	213, 7907 „	32, 9450 „	143, 3414 „	1051, 6669 „
1911	1049, 7715 „	12, 4347 „	168, 0185 „	182, 5779 „	27, 2946 „	139, 5301 „	1237, 7900 „
1912	814, 9064 „	9, 7191 „	166, 8127 „	182, 4830 „	33, 4324 „	142, 9368 „	981, 8101 „
1913	853, 2945 „	5, 3761 „	168, 2194 „	192, 3826 „	27, 3836 „	130, 7221 „	1021, 8030 „
1914	487, 3240 „	6, 1725 „	78, 2214 „	102, 5932 „	18, 6568 „	87, 6282 „	565, 5604 „
1915	184, 7252 „	1, 0418 „	-	-	9985 „	-	184, 7231 „
1916	278, 0949 „	-	-	-	61, 1965 „	83, 0865 „	278, 0949 „
1917	174, 1045 „	-	-	31, 7064 „	28, 9317 „	48, 4179 „	174, 1045 „
1918	259, 9209 „	-	-	71, 5481 „	4 8629 „	36, 3150 „	219, 9209 „
1919	398, 1895 „	-	-	75, 1899 „	53, 3402 „	44, 7720 „	398, 1895 „
1920	556, 8112 „	-	-	154, 2405 „	34, 3572 „	50, 4272 „	556, 8112 „
1921	445, 5725 „	(Nova velebrzalil-nica sprejema)	8, 6928 „	181, 6515 „	23, 2584 „	99 8250 „	454, 2551 „
1922	617, 1056 „		28, 8336 „	189, 0809 „	21, 7569 „	98, 8030 „	646, 0202 „
1923	762, 2256 „	lesovine:	149, 7907 „	238, 4921 „	31, 8722 „	138, 1394 „	951, 4263 „
1924	778, 2963 „	164, 9209 vag.	164, 3905 „	295, 7139 „	17, 9230 „	149 4260 „	942, 8798 „
1925	865, 9474 „	319, 3261 „	199, 1136 „	278, 1696 „	0, 2160 „	138, 6237 „	1060, 8380 „
1926	923, 4737 „	311, 6471 „	161, 8330 „	257, 3540 „	1, 6438 „	129, 3884 „	1085, 3247 „
1927	1076, 0765 „	231, 7967 „	212, 0794 „	261, 8707 „	28, 9217 „	112, 9467 „	1289, 0460 „
1928	1126, 6764 „	249, 0569 „	215, 5425 „	243 9434 „	23, 2280 „	133, 8272 „	1342, 2134 „
1929	1121, 3534 „	232, 6079 „	222, 0646 „	240, 4360 „	9, 7300 „	131 6548 „	1344, 0180 „
1930	1144, 6045 „	268, 0938 „	189, 9813 „	247, 2580 „	—	124, 2139 „	1334, 8958 „
1931	982, 4180 „	205, 7471 „	92, 7950 „	454, 3915 „	—	118, 3330 „	1075, 2096 „
1932	752, 1230 „	155, 1081 „	—	449, 2424 „	—	89,0153 „	752, 1230 „
1933	812, 4760 „	158, 9078 „	—	497, 4000 „	—	81, 3964 „	812, 4760 „
1934	912, 3425 „	195, 3905 „	—	489, 7000 „	—	84, 3294 „	912, 3425 „
1935	899, 7358 „	148, 4100 „	—	582, 5859 „	—	94, 5988 „	899, 7358 „
1936	858, 6830 „	154, 7296 „	—	566, 3063 „	—	46, 0000 „	858, 6830 „
1937	902, 9230 „	193, 0813 „	—	549, 8000 „	—	—	902, 9230 „
1938	756, 5459 „	154, 7428 „	—	510, 1500 „	—	—	756, 5459 „
1939	1014, 7419 „	229, 1951 „	—	659, 7000 „	—	—	1014, 7419 „
1940	1238, 4355 „	379, 4100 „	—	791, 4000 „	—	—	1238, 4355 „

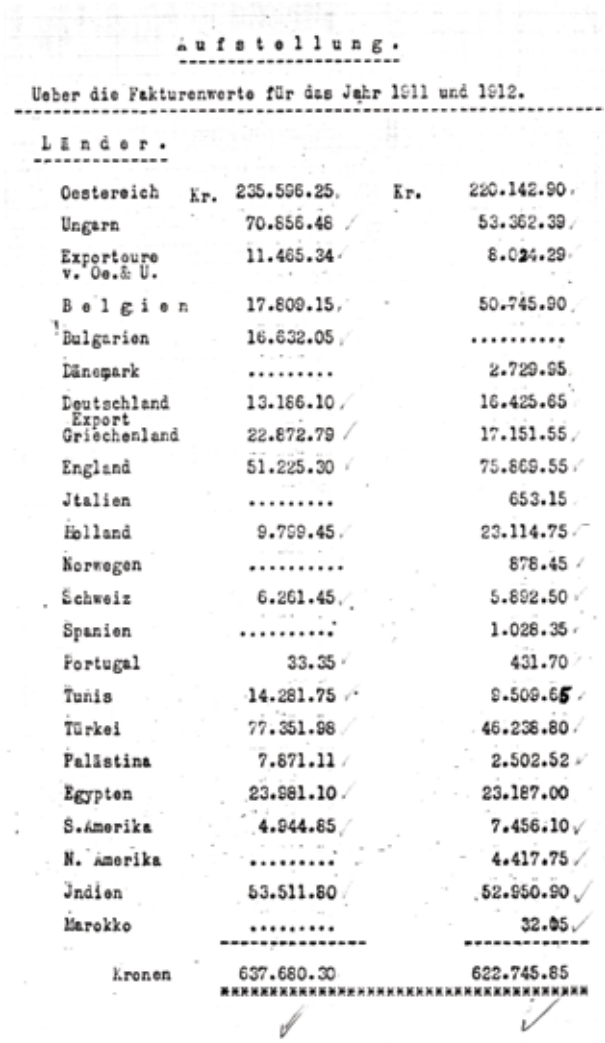
The number of employees is also known for the year 1889. There were 61 men and 61 women employed in paper production and 20 men and 2 women worked on the wood grinder. Another 8 women and one man worked in garment maintenance and additional 3 men and 31 women worked in a paper hall. Therefore, altogether 142 workers were employed.

During World War I, already in 1914, the pulp mill Goričane stopped its production until 1921, along with the two wood grinders in Medvode and Verje. Afterwards, the wood grinders operated at a lower capacity.

However, there is a very detailed report from the Chamber of Commerce and Craft from Ljubljana about Goričane for the period between 1912 and 1914. The paper production data are extremely accurate and identical to those represented in the upper tables. Additionally, we also get the information about the value of the produced paper in 1905, 1911 and 1912. The report also tells us about the types of paper that were produced. We even know the quantities of paper that were exported to European countries and to Africa, North and South America and also to India, Turkey and Palestine. The results of the questionnaire show us that during these years they produced writing and press papers of all sorts and also raster paper for notebooks.

In order to produce the aforementioned annual quantities of paper, they needed about 300 tons of bleached and around 300 tons of non-bleached pulp along with 1,000 tons of mechanical wood pulp and about 750 cubic meters of wastepaper. We can see that they used approximately one third of the available pulp for the production of paper in Goričane and the rest was shipped to Vevče. All the mechanical wood pulp they had produced in Goričane was then used for the paper production in Goričane and the rest was brought from the wood grinder in Medvode.

Due to the beginning of the First World War, the paper machine stopped in the Goričane Paper Mill on August 3rd 1914. The factory ran out of the raw materials needed for production and workers went to war.



Aufstellung.

Ueber die Fakturenwerte für das Jahr 1911 und 1912.

Länder.				
Oestereich	Kr.	235.596.25	Kr.	220.142.90
Ungarn		70.856.48		53.362.39
Exportzoure v. Oe.& U.		11.465.34		8.024.29
Belgien		17.809.15		50.745.90
Bulgarien		16.632.05		.....
Dänemark		.....		2.729.95
Deutschland Export		13.186.10		16.425.65
Griechenland		22.872.79		17.151.55
England		51.225.30		75.869.55
Italien		.....		653.15
Holland		9.799.45		23.114.75
Norwegen		.....		878.45
Schweiz		6.261.45		5.892.50
Spanien		.....		1.028.35
Portugal		33.35		431.70
Tunis		14.281.75		9.509.65
Türkei		77.351.98		46.238.80
Palästina		7.871.11		2.502.52
Egypten		23.981.10		23.187.00
S.Amerika		4.944.85		7.456.10
N. Amerika		.....		4.417.75
Indien		53.511.80		52.950.90
Marokko		.....		32.85
Kronen		637.680.30		622.745.85

Exporting the Goričane paper abroad in 1911 and 1912.

FOUNDATION OF A NEW SLOVENIAN STOCK COMPANY "ASSOCIATED PAPER MILLS OF VEVČE, GORIČANE AND MEDVODE (JSC)" AFTER WORLD WAR ONE

After the end of the WWI and the beginning of the Kingdom of Serbs, Croats and Slovenians (SHS), there had been a new state supervision of the Slovenian plants of the company "Leykam Josefsthal A.G." that was eventually forced into selling all Slovenian plants to the newly-founded company. The Ministry of Commerce and Industry in Belgrade issued a concession on February 18th for the foundation of a new company "Associated Paper Mills of Vevče, Goričane and Medvode (JSC)" with its headquarters in Ljubljana.

All the plants from the company Leykam Josefsthal A.G. had been bought out by December 31st for a total amount of 20 million crowns (12 million were paid in cash in 8 million by the ventures of the new company). By this purchase the company ended up being in a majority ownership of the domestic capital.

The paper machine had not operated during the war and until December 1st 1921 when the machine production of paper started again. The management succeded in employing a domestic expert Anton Lapajne who was the previous director of the pulp factory in Rebrca na Koroškem. On November 1st 1921, he took up his new job and immediately conducted all the preparatory works so that the factory in just one month recommenced with its production. However, due to the lack of orders, they had to stop the paper machine already on March 22nd 1922. On March 21st 1922 the factory in Goričane was linked to an industrial rail that was then called "dovlačilnica".

On March 28th 1922 in order for the paper machine in Goričane to continue with operation, the management decided to improve the paper machine in a way that it would be able to produce the "superior" or the one-side smooth paper.

The adaptation of the paper machine began in the end of 1922. From February 12th 1923 to March 7th 1923 they worked on the installation of the new cylinder that had been supplied by the company Gebrüder Hemmer from Ladenburg at Manheim and its role was to improve the production of the smooth papers. On March 8th 1923, a one-side smooth paper was produced in the paper mill for the first time and since then the paper machine operated at a maximum capacity, thus reaching in 1929 a maximum productivity of 2,227 tons of paper which meant more than a 30% increased paper production in a comparison with the period before the adaptation of the paper machine.

In March 1924, the deceased director of plants in Goričane and Medvode was succeeded by Erik Liebherr who had previously been the director of a pulp factory in Rebrce. A direct technical supervision of production in Goričane and Medvode plants was entrusted to the manager of the plants who had been previously employed in a pulp factory in Hinterberg in Austria.

In 1931, a global economic crisis emerged and during this year the production of the paper machine in Goričane was merely 928 tons of paper. In September the paper machine in Goričane came to a permanent shutdown due to the immense impact of the foreign goods on our market. "The Associated Paper Mills of Vevče, Goričane and Medvode" (JSC) decided to assign their paper production to Vevče, while assigning the pulp production to Goričane. The Goričane paper machine was one of the 4 machines in the "Associated Paper Mills" and was called the "G" machine (Goričane). The quantities of the Goričane paper were shipped to the "B" machine in Vevče. The paper machines in Vevče only operated for three days a week.

TECHNICAL DATA OF THE "G" PAPER MACHINE IN GORIČANE AFTER SEVERAL ADAPTATIONS

It was constructed by Maschinenfabrik Leobersdorf, a factory from Lower Austria in 1872. The daily production was estimated at about 8,000 kg of paper, the speed of the machine was about 75 m/min and the operating width was 142 cm. Two stationary mixing box were also constructed next to the paper machine.

The paper machine consisted of:

- the wire section that was 12.90 meters long and 15.90 meters wide;
- a rolling press and
- a lying and standing wet press.

The drying section with cylinders that were 1600 mm wide consisted of:

- three lower dryers of felting;
- the first line of paper dryers, consisting of four cylinders with a width of 920 mm;
- the second line of paper dryers, consisting of three cylinders with a diameter of 1,222 mm wide, one with a 920 mm diameter and another with a 2,500 mm diameter;
- two upper dryers of felting and
- a rolling and cutting device.

The basic rails were set up in a 2,000 mm spacing intervals. The machine was equipped with the wire shaker and all the auxiliary machines and devices.

Operating of the machine was made possible by the transmission triggered by a water turbine. The entire machine weighed about 90 tons.

The paper machine was installed in a paper machine hall, located on the ground floor of the paper factory. Next to the paper machine there was the satining department. The paper hall was located on the first floor, above the paper machine. The facility utilized for the paper machine was 35 meters long and 10 meters wide.

The paper machine underwent adaptation processes multiple times. In 1891, it was equipped with the web glazing that was set up between the 7th and 8th drying cylinder. The press was supplied by a company Nebrich from Golzern in Germany. The cylinder was 1.55 meter long and of a 300 mm diameter. The original plan from August 6th 1891 has been preserved.

In 1893 they enlarged the drying section. They installed additional drying cylinders and the plan of this adaptation has also been preserved.

The last time the paper machine was upgraded was in 1923. The reason lay in the intention to produce smooth papers. The first paper, produced by the upgraded paper machine, was made on March 8th 1923.

Because of the global economic crisis, the paper machine in Goričane was permanently shut down in September 1931. However, the paper machine was not sold off and consequently it remained intact until the Second World War. It survived the Second World War but after the war had finished, they used its parts (the drying section) for the construction of a paper machine that was built in Vevče in order to aid the paper factory from Belgrade. That was simply the decree of the General Directorate for the Paper Industry in Ljubljana.

The wood grinder in the Goričane Paper Mill was shut down in 1929 and the other one from Medvode was shut down in 1936 since all the needs were met by a bigger wood grinder in Vevče that had been built in 1929.[4]

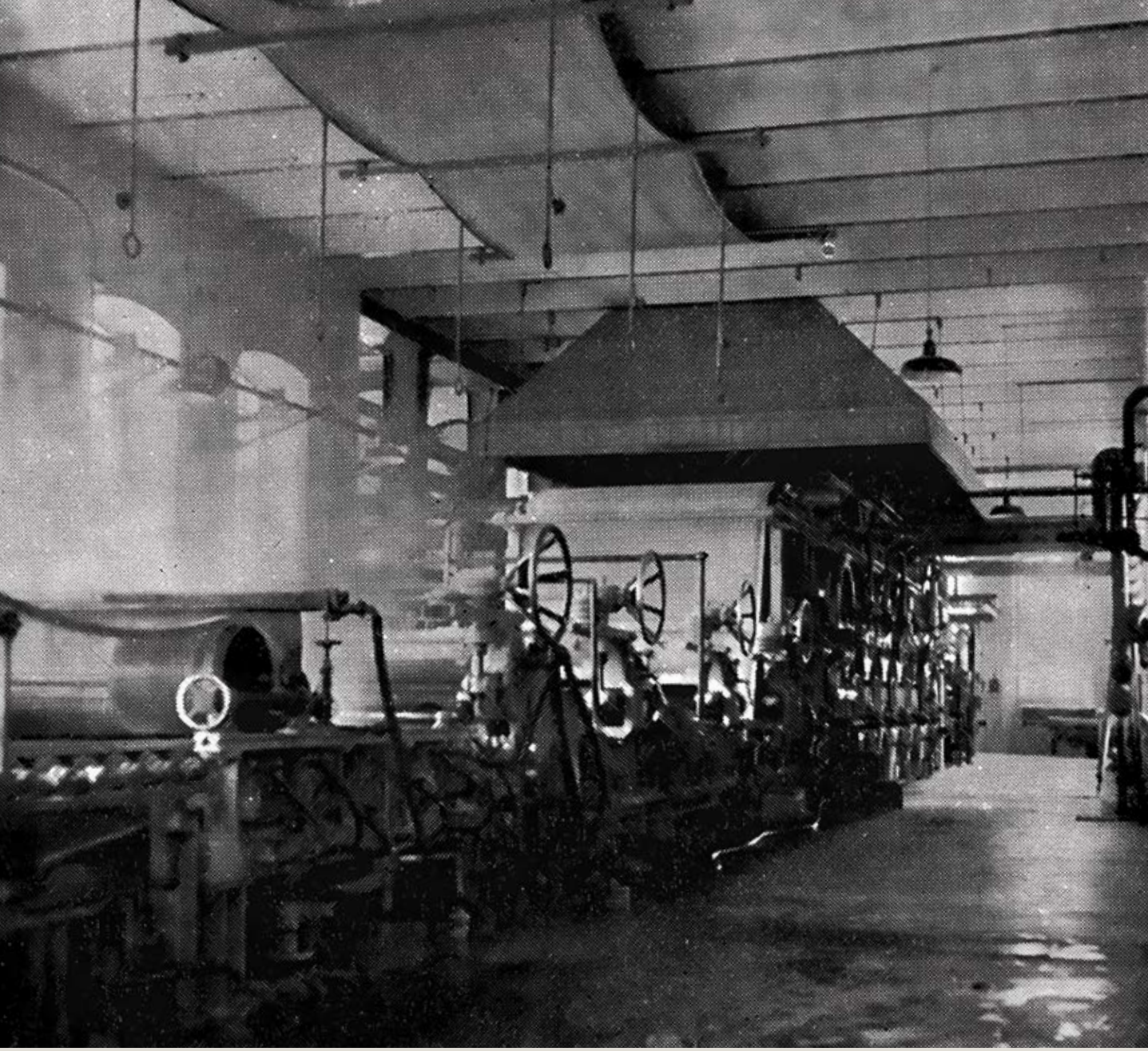
WELL-TIMED SPECIALIZATION IN PULP PRODUCTION BY GORIČANE

Since 1890 when the pulp production had begun in Goričane, there was only one pulp digester with the size of about 30 cubic meters. At the time, there were already three pulp digesters in Podgora ob Soči, each of them with the size of 120 cubic meters. Nevertheless, Goričane Paper Mill was proud of its paper, pulp and mechanical wood pulp production. The photos of that small pulp factory were even found on postcards.

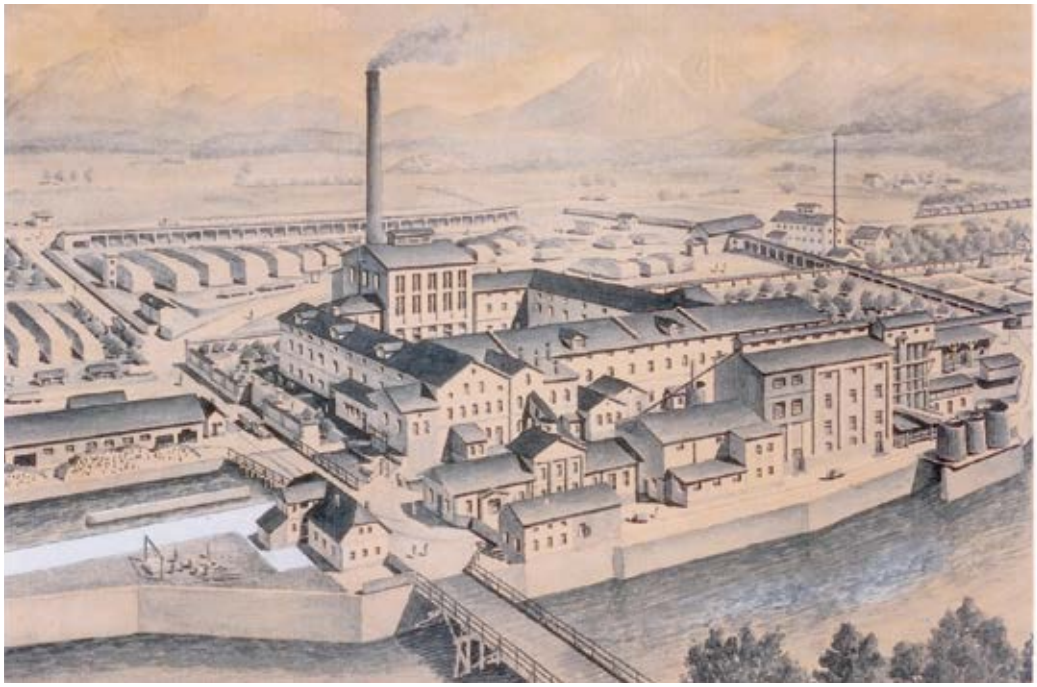
The postcard was made in 1927 when the total monthly paper production in Vevče and Goričane amounted to 1,000,000 kg (of any paper type).

Next, it was time for a modernization of the pulp production in Goričane along with huge investments. Before the Second World War three new pulp digesters had been constructed with a volume of about 65 cubic meters.

The first pulp digester (this one is preserved as a landmark) was constructed in 1929 and installed in 1930, the second one was built in 1934 and in 1938 they installed the third one. The Second World War ruined the plans for the construction of the fourth one even though everything had already been set for its installation.



No photo of the original "G" paper machine from Goričane has been preserved. To get a better idea about the apperance of the first paper machine, we have to help ourselves with the photo of the "J" machine from Vevče.



The Goričane Pulp Mill and Lignosulfonates Factory in 1933 (J. Karlovšek).

A photograph from 1923 showing pulp production on the "island" between the Sora River and the turbine canal.

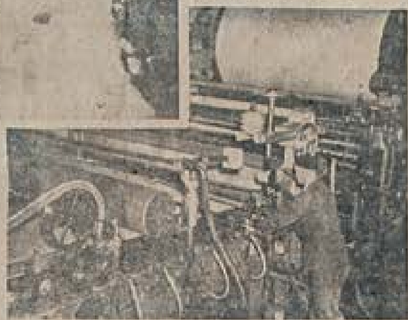
Photograph of workers in the paper finishing department taken between 1904 and 1910. Courtesy of Darko Cafuta.

A new facility intended for these three pulp digesters can be seen on the drawing by J. Karlovšek from 1933.

During the war, Goričane was governed by Germans and Vevče was controlled by Italians.

They prepared an assessment of the pulp factory. The inventory also includes the paper machine made by the machine factory Leobersdorfer Maschinenfabrik from Leobersdorf in Lower Austria but this paper machine was not in operation. Along with its auxiliary devices, its value was estimated at 15,000 Reichsmarks (RM) and the entire pulp factory was assessed as being worth 403,100 RM. The Lignosulfonates factory was sold to a private company from Germany. Of course, they first had to take it away from its owners who were originally from Sisak.

TOVARNA CELULOZE GORIČANE IN PINOTANA



PULP AND LIGNOSULFONATES FACTORIES BOTH BECOME STATE-OWNED ENTITIES

After the end of the World War Two, the factory became a property of the state. As an independent company, the pulp factory in Goričane operated until 1947. Afterwards according to the order by the Federal Government in Belgrade, the Goričane pulp factory and the Vevče paper mill merged to form "Vevče-Goričane Paper Mill and Pulp Factory" with its headquartes in Vevče. In 1950 the company came under jurisdiction of the government of the People's Republic of Slovenia along with its new subsidiary company "Tanin" Medvode which had been built in 1925[5] in order to recycle the waste of the pulp factory. The merged company soon split into two companies. "Pulp and Lignosulfonates factory Goričane" was established in Goričane that was later in 1955 renamed into a company "Pulp" Medvode.

Journal article on the Pulp and Lignosulfonates factory Goričane.

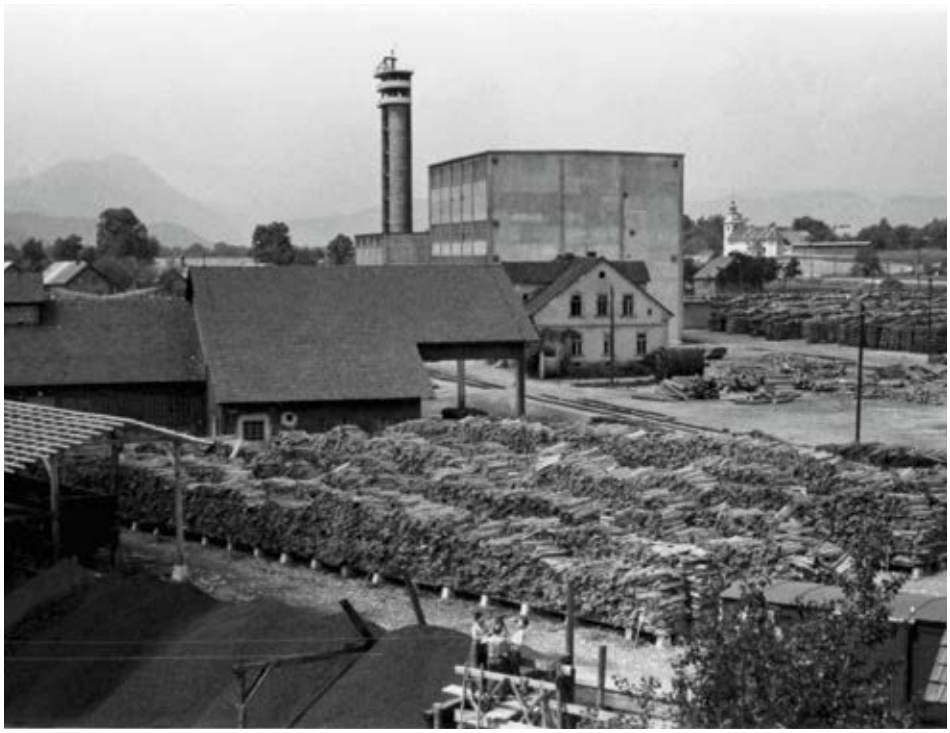
“PULP” Medvode en route to a renewed production of paper (1959—1976)

It all began with the modernization of the factory. In 1956 they constructed a modern, stationary pulp digester. In 1959 the factory prepared an investment program of reconstruction and the plan for the increase of pulp production. They also planned the installment of the paper machine that had been approved by the republic authorities. The approved funds, however, were only sufficient for the performance of the first phase of the introductory stage which meant that they could activate the preparation of acid, along with the processes of sorting and bleaching. In 1962 the factory, wishing to carry out the intended investments, joined once again with the Vevče paper mill. Eventually they decided to build a pulp factory in Goričane whose annual capacity would be 75,000 tons but because they were unable to provide the funding, the pulp factory itself initiated a process of searching for other partners, willing to invest in the pulp factory with the annual capacity of 100,000 tons. In 1970 the pulp factory Medvode separates from the Associated Paper Mills of Ljubljana.[6]

THE MEDVODE PULP FACTORY IS AGAIN AN INDEPENDENT COMPANY

For the purposes of the medium term program of the development of Slovenian paper industry (1970–1975), Pulp and paper factory Krško submitted a competitive program for the construction of a new factory of magnefite pulp. The program had also been supported by the paper industry of Slovenia. The Medvode pulp factory first had to improve all the critical points in the production of pulp and simultaneously it started to search for a partner that would help it install a paper machine. The AERO company, representing chemical and graphical industry of Celje, showed interest in constructing the paper machine because they needed paper for their own plants.

A view of the new acid towers and the sorting area with the bleaching plant.



A view of the old section of the pulp mill on an island in the Sora River in 1964.

Merger with the company "AERO" Celje

The talks regarding the joint venture were chaired by Slavko Zule, the managing director of the Medvode Pulp, and his counterpart Miran Mejak, representing Aero Celje who took office at Aero in January 1972. On New Year's Day in 1975, his post was taken by Milan Zupančič.

On April 17th 1973 both workers' councils validated the merging of the companies and on July 1st 1973 the statutory agreement came into effect which initiated the joint venture between the two companies.

The construction of the paper machine along with installing proper power supply was achieved in record time. The grand opening and the paper machine launch took place on April 23rd 1976. The paper machine was made by a company Andritz from Graz, Austria under licence of the German company Escher Wyss. The machine was constructed in a way that it could reach the operating speed of 350 meters per minute and had the wire width of 4,100 mm. Operating with a paper line which was 375 cm wide, the annual capacity of the machine was 20,000 tons of paper. The new power supply was installed for the purposes of producing 40 tons of steam per hour and it was equipped with a steam turbine that propelled a 6,4 MW generator. The steam boiler was made by a company Waagner Biro from Graz, Austria. The steam turbine and the electric generator were made by Siemens company from Germany.

Lignosulfonates production re-established in 1968.

The "Paper", a newspaper representing Slovenian paper industry, acknowledged the report of the grand opening of the new plants in Goričane by choosing an exciting title:

AGAIN AFTER 45 YEARS - PAPER PRODUCTION IN MEDVODE

The report from the grand opening of the new facilities includes an interesting address by eng. Janez Barborič, the representative of the trade union

Many of you who have gathered today in order to solemnly welcome a new heating plant and a paper mill surely remember the times when there was an old factory on this bank of the Sora river and where its activities resembled a decay rather than a lively rythm of economic development. We don't have to search for the memories of a distant past. But perhaps only 10 years ago.

Futurelessness and despondency prevailed back then during your working days. Many people were leaving but even more decided to stay determined that sooner or later this despondency would be overcome and they remained confident that brighter days were ahead. You were joined by others and together with the new colleagues you began to forge your own path. The onset of this long-expected time has finally come true for all of you.

The Medvode pulp factory is now indisputably one of the important industrial plants not only in Slovenia but also in the entire country. Your future is not uncertain anymore and you have secured work and stability for yourselves – actually not only just for you but also for the many new colleagues of yours.

However, I know that by completing a new heating plant and other facilities that were included in your investment program you still have not totally satisfied your desires for creativity.

In Novi tednik, a newspaper from Celje, there was the following short article published on April 12th 1973:

AERO WILL BECOME BIGGER

After the unsuccessful talks about the possible consolidation with the Radeče paper mill, the representatives of Aero from Celje began to discuss the possible ways of cooperation with the Medvode pulp factory. Both companies soon found a common ground and a few days ago the workers' council of the Medvode pulp factory passed an agreement about the call for referendum on the merger with Aero.

The consolidation is about merging the basic and processing industries. In order to smoothly operate production activities, Aero with its high level of development needs to have larger quantities of paper on annual basis and each year the supply of the basic papers becomes more difficult. Precisely because of these needs the program of a joint venture includes investment in a paper machine with which they will start regular paper production in Medvode by autumn 1975. In Medvode, they will also conduct the first phase of the sootless copying paper refinement that will soon be produced by Aero in cooperation with Japanese partners. Apart from paper, they will also improve the recycling of waste water that results from the pulp production and so far this asset has not been properly taken advantage of. For this, they will only use minimal investments in Medvode. Among the most important products of this factory will still remain the pulp which is known to be of the best quality on the domestic market. The interests of the two companies overlap almost ideally and therefore nobody doubts in the successful outcome of the referendum on the joint venture. The Medvode pulp factory will consequently become an equal partner (TOZD) of Aero and will continue to conduct business as an independent entity.

In a brochure, published for the grand opening of the paper factory and its installation of power supply, we can read the following

By installing a new plant for paper production in Medvode, we have fulfilled the wishes of everybody taking part in a joint venture. We have been aware for a long time that we need to ensure our own raw materials for the production. The most important of these materials is paper. Having our own production has become an imperative, i.e. it has become a necessity for the survival and the continuation of the joint venture. The basis for the connection was justified by the fact that the "Pulp" company represents a partner that possesses raw materials for the production of paper, i.e. the pulp. It was acknowledged that it had access to wood from the heart of the Gorenjska forests.

Construction of the production hall, 1970.


PM1


50Y

Entrance to the factory in the 1970s.

50 Years of the Paper Machine in Goričane

In 2026, the Goričane Paper Mill will celebrate half a century of the paper machine, the heart of production at the mill. However, the fifty-year history of the machine has several years of prehistory.

1973

The first condition for acquiring a paper machine was met in 1973, when the Medvode Pulp Mill merged with Aero Celje, as Aero was looking for a manufacturing partner to help meet the demand for various types of speciality papers. Based on the existing pulp raw material in Medvode, the two companies merged as one of the first examples of TOZD (BOAL – Basic Organization of Associated Labor) in Slovenia.

Shortly after the merger, in late fall 1973, an international tender was announced to collect bids for equipment in cooperation with experts from Industrijski biro (Industrial bureau) and Elektroprojekt in Ljubljana. The consortium of companies Andritz–Waagner Biro–Siemens was selected in the tender.

1974

The beginning of 1974 was marked by the preparation of documentation and the collection of numerous consents. Elektroprojekt and Industrijski biro prepared construction projects, led the process of obtaining construction permits, and selected contractors. In July 1974, extensive construction work began, which continued unhindered during the winter months thanks to favorable weather conditions. Work began in December on the fuel oil supply system, followed by the heating plant and the technological part of the investment.

1975

The preliminary contract was followed in March 1975 by the main contract for the supply of equipment from Austria and West Germany with the Celje-based importer Kovinotehna. The Graz-based company Andritz supplied the technological equipment for paper production, including equipment for stock preparation (pulpers, refiners, vats and cleaners), equipment for preparing additives, and the paper machine itself. This was followed by equipment for finishing raw reels: a slitter, a cross-cutter, a rewinding machine, a packing machine, scales, and other equipment.

The paper mill also commissioned Waagner Biro, a company based in Graz, to supply a steam boiler with a capacity of 40 tons of steam per hour and a smaller auxiliary boiler delivering 15 tons of steam, including appropriate chemical treatment of the boiler water. This was necessary because the production of paper – and especially pulp – requires large amounts of thermal and electrical energy. To ensure the most economical supply of steam and electricity, a steam turbine (60 bar, 500 °C) with a 6.4 MW generator from the German company Siemens Erlangen was purchased, along with other electrical equipment.

OVERCOMING INFLATION

As the large investment was made in the second half of the 1970s, the business plans of the merged companies were soon disrupted by inflation. It was therefore crucial for the success of the project that the fixed price of the paper machine was guaranteed by the time of the preliminary contract. The decision to select a consortium of foreign companies to supply the equipment also proved to be a good move, as it reduced the investment costs.

The paper mill prepared the financial documentation on the basis of the preliminary contract signed on February 27th 1973. A loan of 111,693,000 Yugoslav dinars was subsequently taken out at Jugobanka at an interest rate of 11% with a seven-year repayment term. A million dinars also had to be paid to Jugobanka for the founding share and a contract had to be signed for the provision of 45 million dinars over a period of 10 years. All of the necessary guarantees were then arranged: dinar guarantees amounting to 52,922,000 dinars, a dinar guarantee for 25 million dinars of working capital, and 27,223,000 dinars of fixed assets, along with appropriate guarantees for foreign currency loans.

Despite the significant investment cost, it became apparent during construction that these funds would not be sufficient to complete the investment due to high inflation and fluctuating exchange rates. The original preferential customs rate (5%) was also suspended, as the paper industry was removed from the list of priority industries shortly before the investment in 1975, resulting in a significant increase (to 30%) in customs duties, which now had to be paid immediately and in full. The last major factor contributing to the price increase was the decision to add a coating device to the paper machine that would reduce the need for subsequent paper finishing with a double coating system in Celje. Once the contract for the paper machine had been signed, it was determined that the cheapest way to produce carbonless copy paper would be to use their own coating machine for the first coating. The company invested 15 million dinars in the coating device.

Resolving all financial issues was challenging, as it took place at a time when investment conditions had become significantly rigid and tighter. However, this did not stop the investment. The company therefore had to take out a new loan from Jugobanka to cover the increased investment value, and at the same time an agreement had to be reached regarding additional contracts for foreign currency loans. The investment, originally planned at 330 million dinars, ultimately increased by approximately 120 million dinars, reaching a total of approximately 450 million dinars.

I started browsing through the factory archives as early as 1984. The paper mill then gave me the opportunity to visit archives abroad and study under the leading experts in the history of papermaking. These days, I have no trouble tackling any problem in the field of economic history.

Darko Cafuta

retired employee of the Goričane Paper Mill

1976—1984

START-UP AND SUCCESSFUL OPERATION OF THE ANDRITZ PAPER MACHINE

The paper machine had a state-of-the-art design with a paper web width of 3.75 m, operating at a production speed of up to 350 m/min and a construction speed of 400 m/min. It featured a 4100 mm wire width and a 375 cm wide paper web.

Alongside, the machine enabled the production of approximately 20,000 tons of top-quality wood- free paper, such as heliographic paper, AC paper, and paper for continuous forms. At that time, it boasted a very wide range of production options, as it enabled paper production from 40 g/m² up to 110 g/m². This enabled the company to focus on producing more profitable and commercially appealing types of paper. It was also concluded that the quality of AC paper should be consistent, which requires the paper to always be made from pulp of the same quality. This would enable uniform production with standardized technical features, which is the basis for stable production and a stable economic position for a company.

The paper machine began operating in 1976 and already reached an operating speed of 250 m/min. The machine's projected annual capacity of 20,000 tons was achieved by 1979. An article in the paper trade journal Wochenblatt für Papierfabrikation from October 1978 attests to the successful start-up of the machine. In it, the paper machine manufacturer published an advertisement informing European papermakers that their new, modern paper machine had been installed in Medvode. In the same issue, B.Sc. Eng. Mlakar from the Medvode Paper Mill published an article based on his presentation at the annual conference of Austrian papermakers (APV) in Graz on the "fine" paper mill in Medvode. He informed the professional public about the experiences gained during one year of operation of the new paper machine.

The "self-copying" paper with CB coating was initially sent from the paper mill to England for finishing, as the coating machine in Celje was not scheduled to start operating until February 1978. Nevertheless, in Goričane, 110% capacity was already achieved in the first year for "self-copying" paper with a coating and "self-copying" paper with starch coating on one side and CF coating on the other side of the paper web. All other papers reached 120% of capacity in 1977, as predicted during the design phase.

The paper machine operated successfully, and by 1982, operating speeds of 375 m/min were already being achieved for certain grammages. The 60-gram AOP paper stood out in particular. The company aimed to achieve a speed of 400 m/min for the production of paper with a grammage of less than 60 g/m². They succeeded in doing so in 1984 after minor modifications to the wire and dryer sections. This increased annual production to 25,000 tons.

Advertisement by the machine manufacturer in the trade journal Wochenblatt für Papierfabrikation

ANDRITZ DOCUMENTED THE ORDER, MANUFACTURE AND START-UP OF PAPER MACHINE 1 IN A 30-MINUTE FILM

Design, installation, start-up and successful operation of the paper machine, documented on film.

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02 ›

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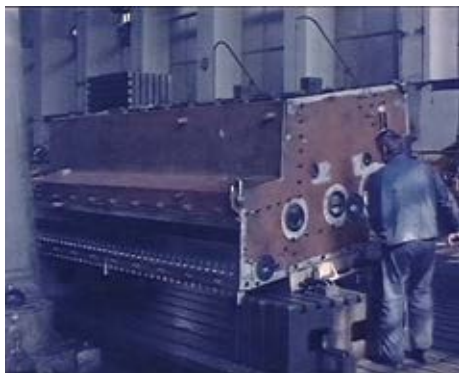
08 ›



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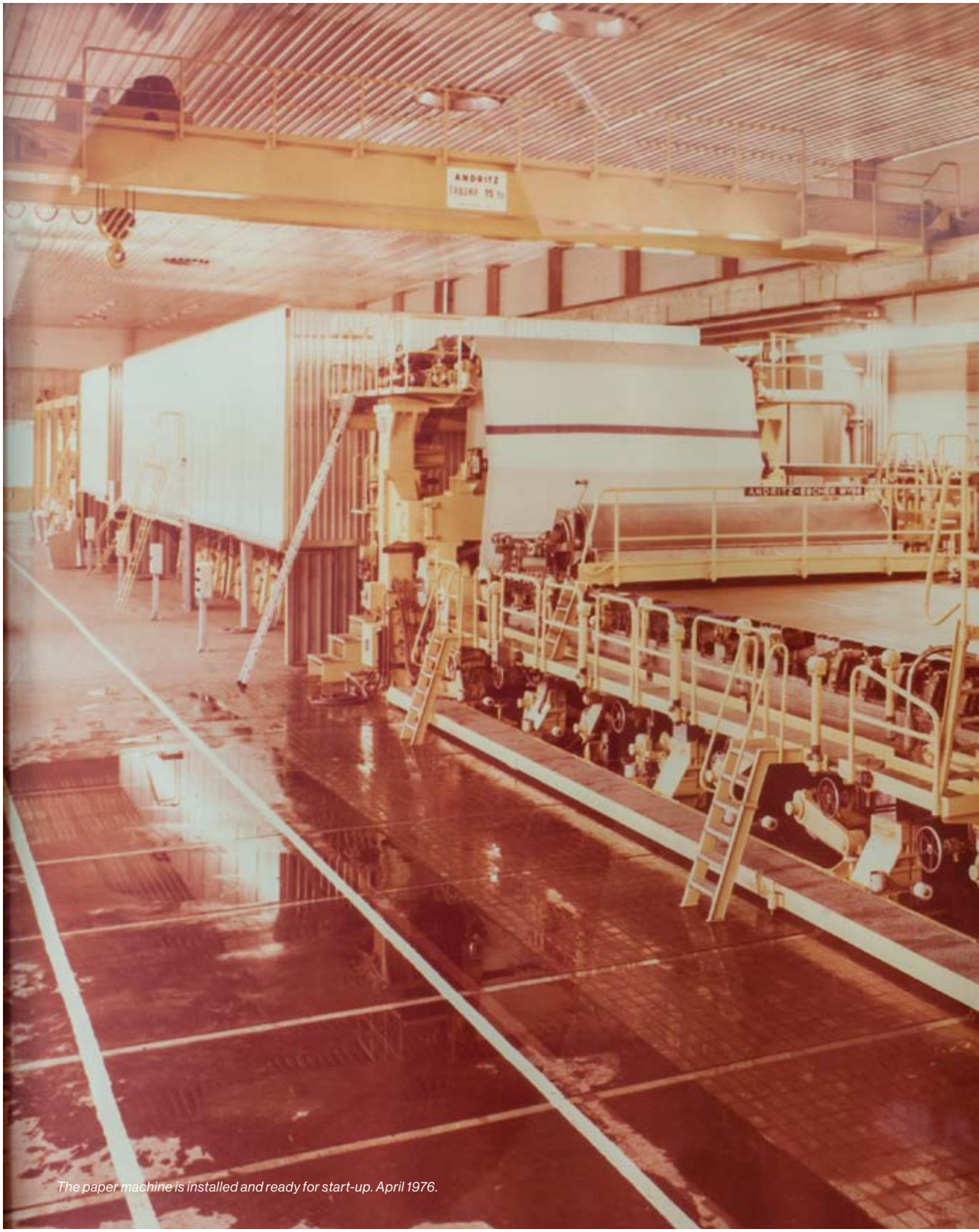
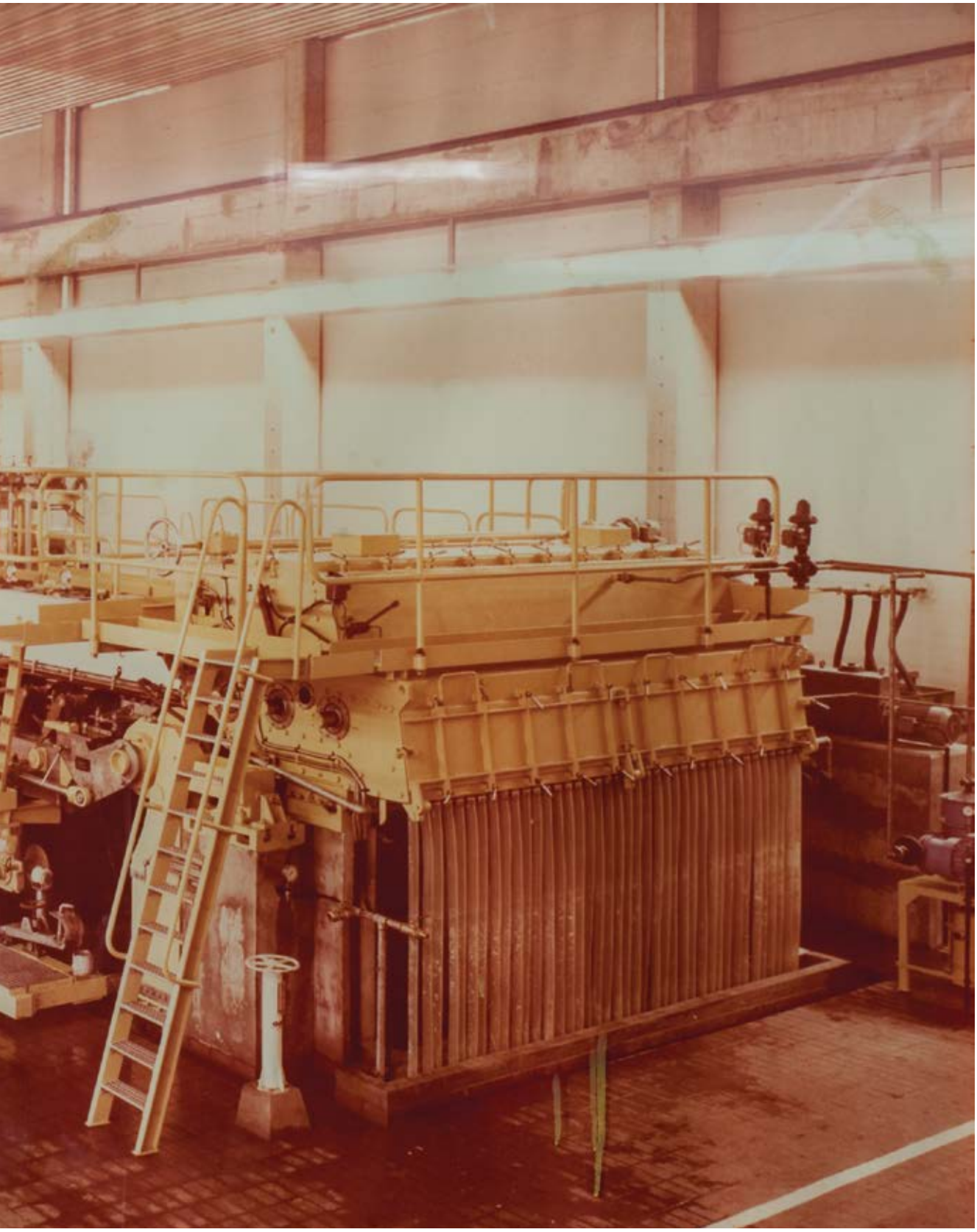
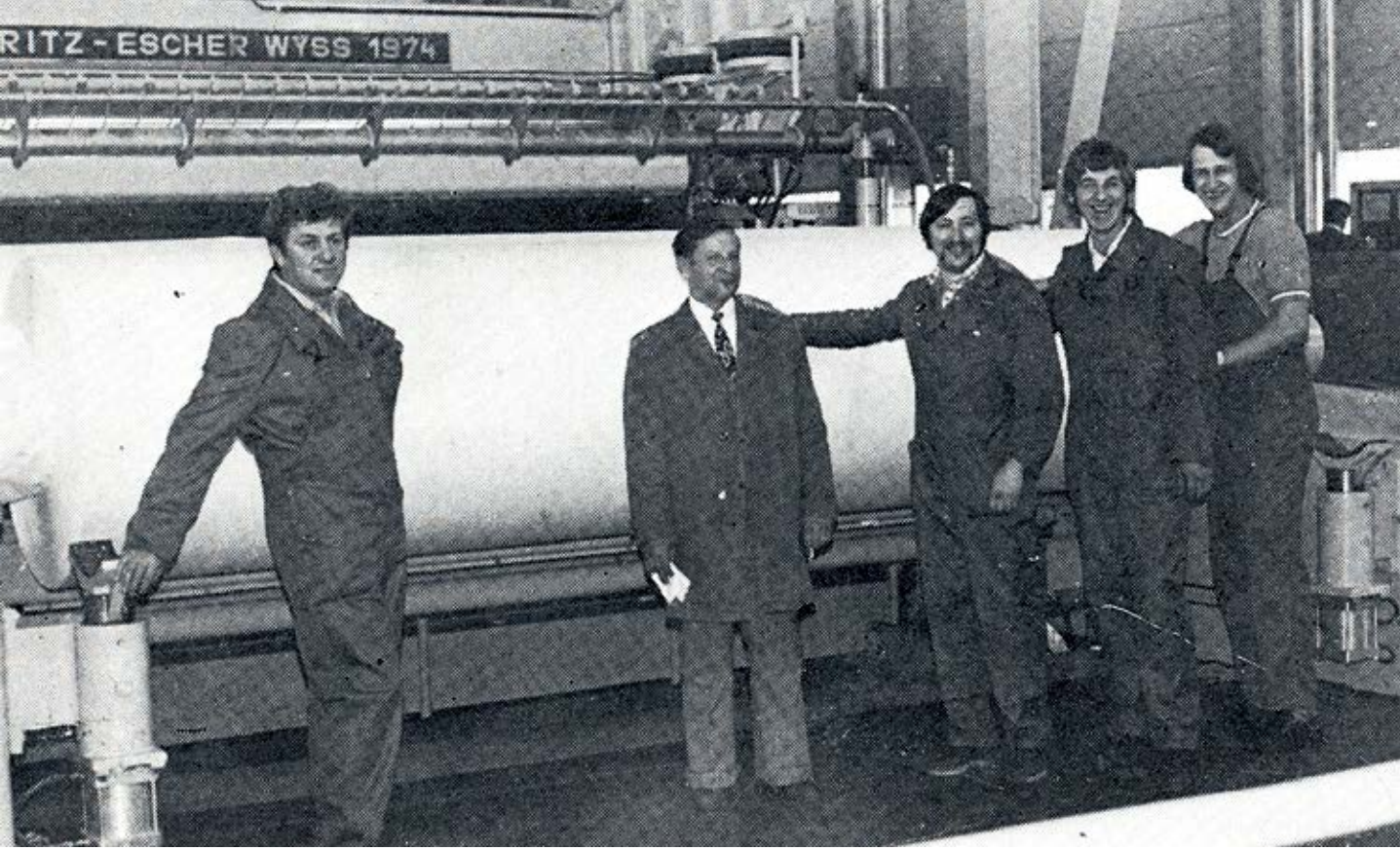


The paper machine is installed and ready for start-up. April 1976.



Photograph from the inauguration of the paper machine on April 23rd 1976 – ribbon cutting. The ribbon was cut by the operator of the old paper machine, Anton Turk, and held by the operator of the new paper machine, Ivan Kramarič.

Ceremonial presentation of plaques and awards to contractors and equipment suppliers. Hotel Lev, May 23rd 1976



Workers at the winder of the paper machine during start-up.

Viewing of the paper machine at the opening on April 23rd 1976

Viewing of the paper machine at the opening, April 23rd 1976

THE FIRST PAPER ON THE NEW MACHINE WAS PRODUCED ON APRIL 12TH 1976*

* BYPASSING THE INSTRUCTIONS FOR TESTING THE PAPER MACHINE

Author: Darko Cafuta

There are no longer any shift supervisors' logbooks from the time when the machine was being tested in sections before the paper machine was started up in April 1976 in the factory archives. There is no record of when the first reel of paper was produced on the paper machine.

However, what we do know is that paper was being produced during the ceremonial opening of the paper machine on April 23rd 1976, as we have footage of the paper web being wound that day in a film made by the machine manufacturer – the company ANDRITZ.

The paper sample was torn from the reel by the head of human resources, Jože Lejko, who then kept it until March 17th 1988. At that time, he gave it to Darko Cafuta with the words: ***"You will keep this paper safe, otherwise it will get lost."***

And indeed, this sample of the first paper produced on the paper machine has been preserved to this day.

Of course, this paper had not yet met the quality standards that were expected after the machine had been tested.

HOW DID THE SHIFT ON APRIL 12TH 1976 END UP MAKING THIS PAPER?

In April, the paper machine was tested in sections without stock under the supervision of the start-up engineer from the machine manufacturer Andritz. This was followed by testing the paper machine with paper stock on the wire section and probably also with the paper web running through the presses. The dryer section had already been operating and being heated with steam. Slowly, day by day, the testing of the paper machine parts was coming to an end. We know that the Bill-Blade coating aggregate was not ready for use at the beginning of April, but it was possible to run the paper web from the first dryer section to the second dryer section without applying a coating.

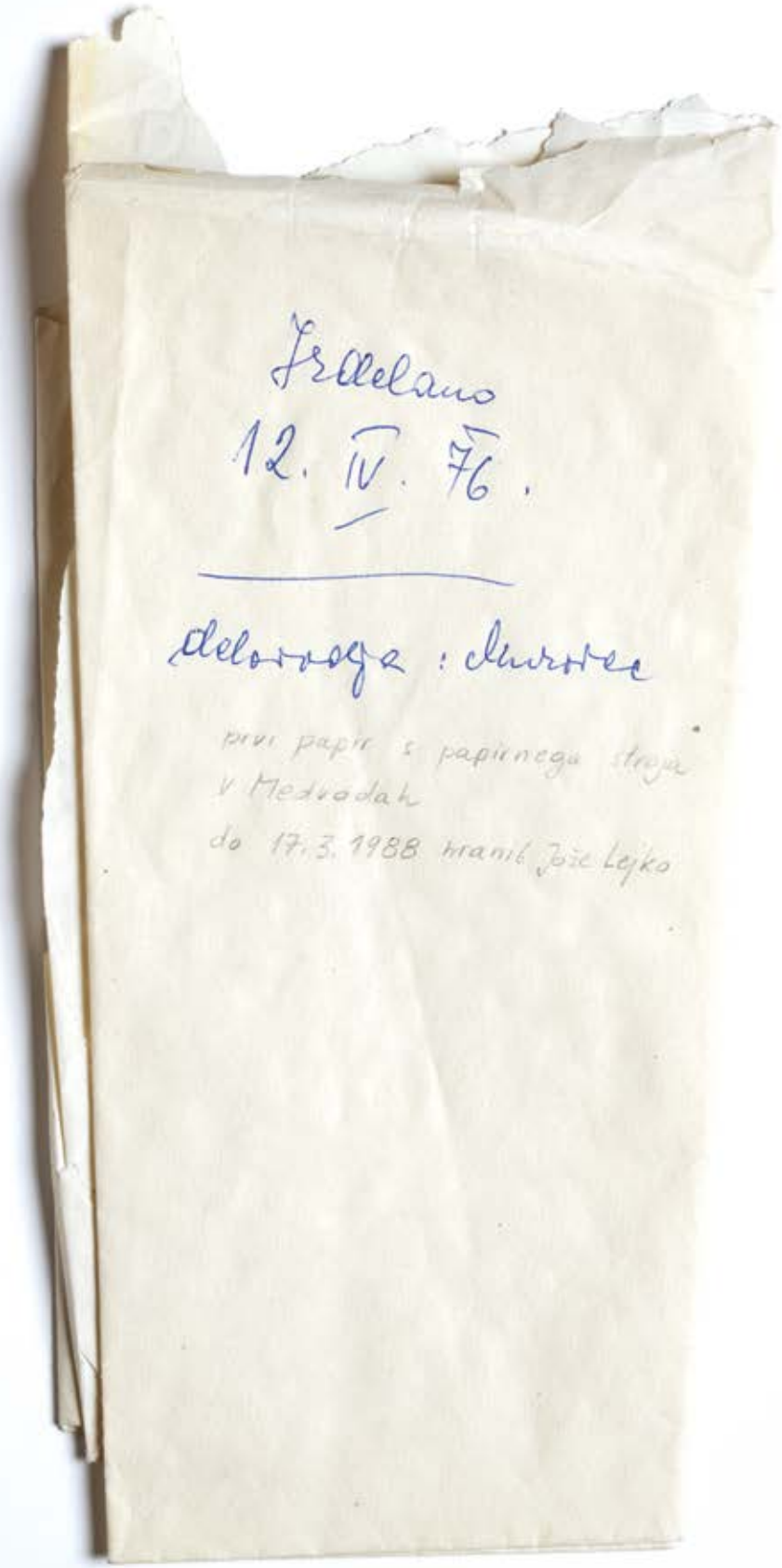
It is not known exactly which components of the paper machine Murovec's shift was to test on April 12th 1976. The tests were probably completed quickly, and then Murovec persuaded the machine manufacturer's start-up engineer to try running the paper web all the way to the winder.

They tried and succeeded!

Contrary to the instructions of the factory management, the shift led by foreman Dušan Murovec was the first to run the paper web from the wire to the winder, producing the first paper on the new machine and securing its place in the history of the paper mill. As the first paper was produced as early as 11 days before the ceremonial opening (April 23rd 1976), all shifts were able to practice the procedure in time, ensuring that it ran smoothly during the opening. Meanwhile, Murovec narrowly avoided disciplinary action...

A sheet of paper produced on April 12th 1976. Kept by Darko Cafuta

The paper sample reads:
Produced on April 12th 1976
Foreman: Dušan Murovec



ANALYSIS OF THE PAPER SAMPLE IN COMPARISON WITH SORA PRESS 70

Property	**First paper (1976)**	**Sora Press 70 (2025)**
Grammage	*72 g/m²*	*70 g/m²*
Specific volume	*1,4 cm³/g*	*1,14 cm³/g*
Bendtsen smoothness	*750–1500 mL/min*	*120 mL/min*
Opacity	*80%*	*90%*
Formation (L.T.)	*160*	*60*

As accounting and controlling manager, I look with great admiration on the journey the company has taken from its early days to the stable and successful business we are building today. Financial stability, responsible management, and a long-term perspective have been the foundation upon which we have been able to develop new ideas, expand our operations, and create added value in recent years.

Tadeja Pfajfar

accounting and controlling manager

1984

A little less than a decade after the successful installation of the paper machine and new equipment, the paper mill was ready for its next major investment. A decision was made to renovate the pulp cooking section and purchase two new pulp digesters from a closed pulp factory in Zagreb. The fourth digester was upgraded and moved to a new location. In order to maintain an adequate level of safety in production, the investment, completed in 1984, was imperative.

Energy systems in the 1980s


SME VOZITI V BLOKOVNEM
PROSTORNEM RAZMIKU NA PROGAH
Z APB IN TELEKOMANDO
1291

It all started with Mojzes, one of the first shunting locomotives in Slovenia, which paved the way for our logistics. This legendary machine can still haul loaded railcars to the unloading ramps, but today, from the cabin of its more powerful successor, I ensure that the full railcars immediately head out for another round of unloading.

Jernej Čarman

locomotive engineer on the industrial rail line

1986—1987

A new major upgrade soon followed. In 1986, the electric motor drives were replaced on the entire paper machine. This enabled speeds of up to 600 m/min and an increase in annual paper production to approximately 40,000 tons. The annual capacity of the machine was thus increased by 50%. Production increased further in the following years when papers with a higher average grammage were produced; at that time, annual production reached around 55,000 tons of paper.

This was soon followed by upgrades to other departments in pulp production.

The paper machine in the 1980s. Annual production of up to 55,000 tons of paper.

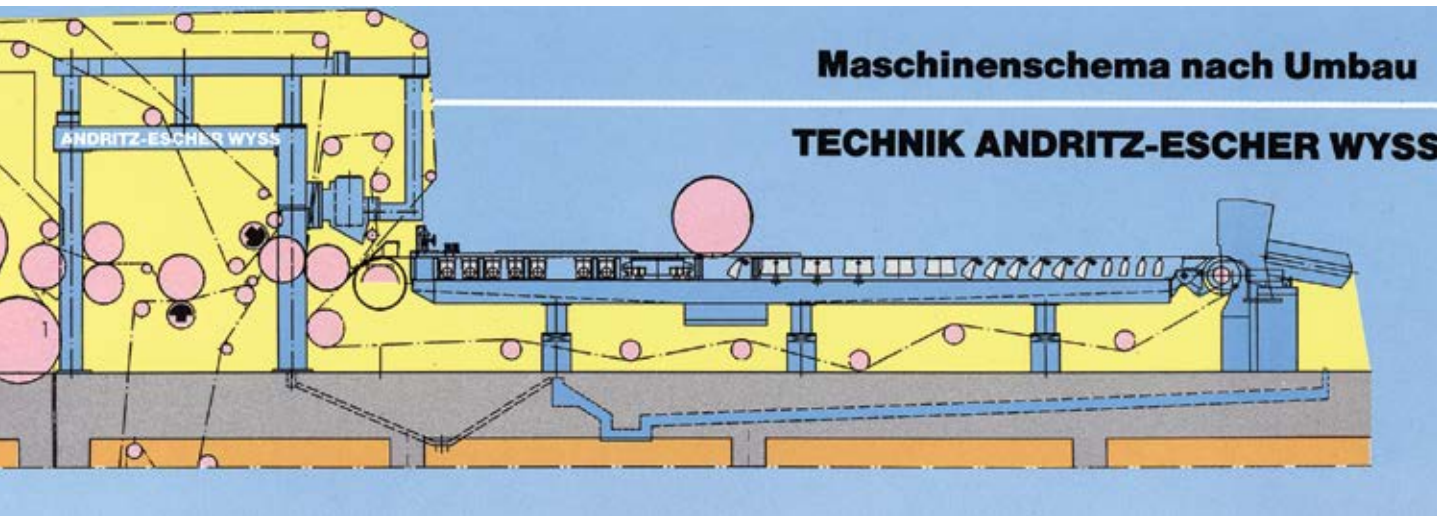
CLOSER LOOK AT THE RECONSTRUCTION OF THE PAPER MACHINE

As part of a major reconstruction of the paper machine in the late 1980s, entire assemblies were replaced in order to maintain the factory's competitiveness. The equipment for the reconstruction of the machine was supplied by Andritz, a manufacturer of machinery and equipment for the pulp and paper industry: the Graz-based company that also designed and manufactured the paper machine in its original form. Upon successful completion of the investment, Andritz printed a leaflet boasting about the successful transformation of paper production in Goričane.

A modern diffuser headbox was installed on the first part of the machine, from the headbox to the dryer section. Parts of the wire section were also replaced, and a new dandy roll, a gas heater, and a completely new system of wet presses with rollers using modern NIPCO technology were acquired. This technology allows controlled deflection of the roll, which corrects the thickness profile of the paper web. The drying section was also enlarged and partially modernized, the steam and condensate system was redesigned, and a process control computer was installed on the paper machine.

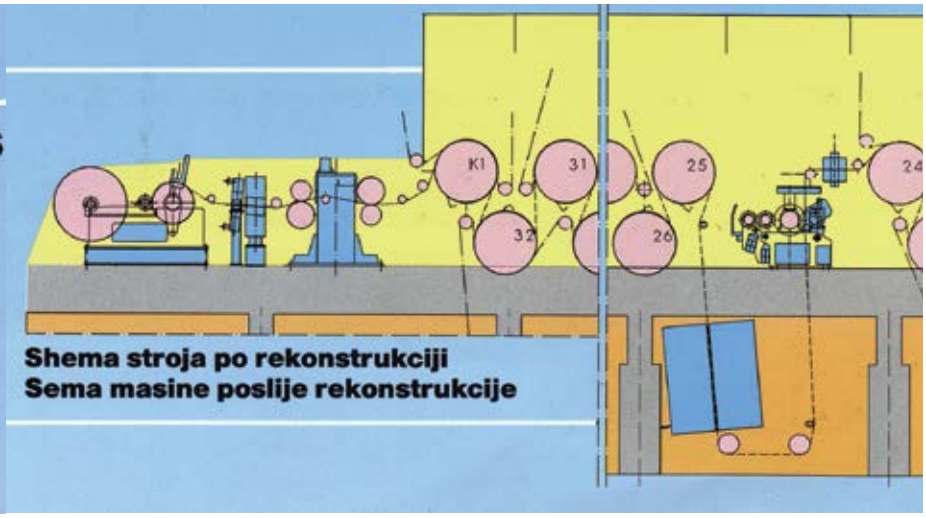
Further along the machine, the Bill-Blade coating aggregate was modernized and a new paper web dryer was installed behind it. The old calender was replaced with a modern back-to-back soft calender from the English company Hunt & Moscrop. A new measuring frame with modern paper quality measurements was installed behind the soft calender. Due to requirements for occupational health and safety, the winder was also raised.

Apart from the machine itself, the stock preparation system, as well as the chemical and coating-preparation systems, was also modernized as part of the reconstruction. Additionally, the ecological efficiency was increased by installing a disc filter in the wastewater. As a result, large quantities of fibers that previously polluted the environment are now filtered out.

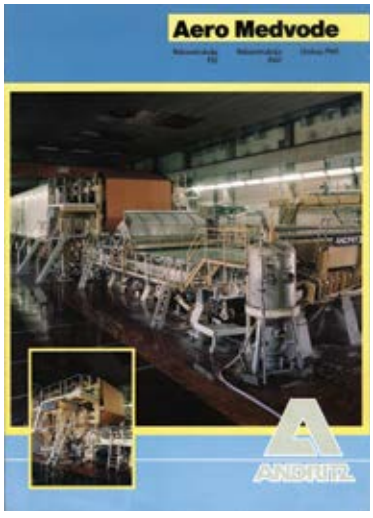


First section of the machine: headbox, forming wire and presses. The paper web runs from right to left.

Construction works, June 1987 – expansion of finishing and paper storage



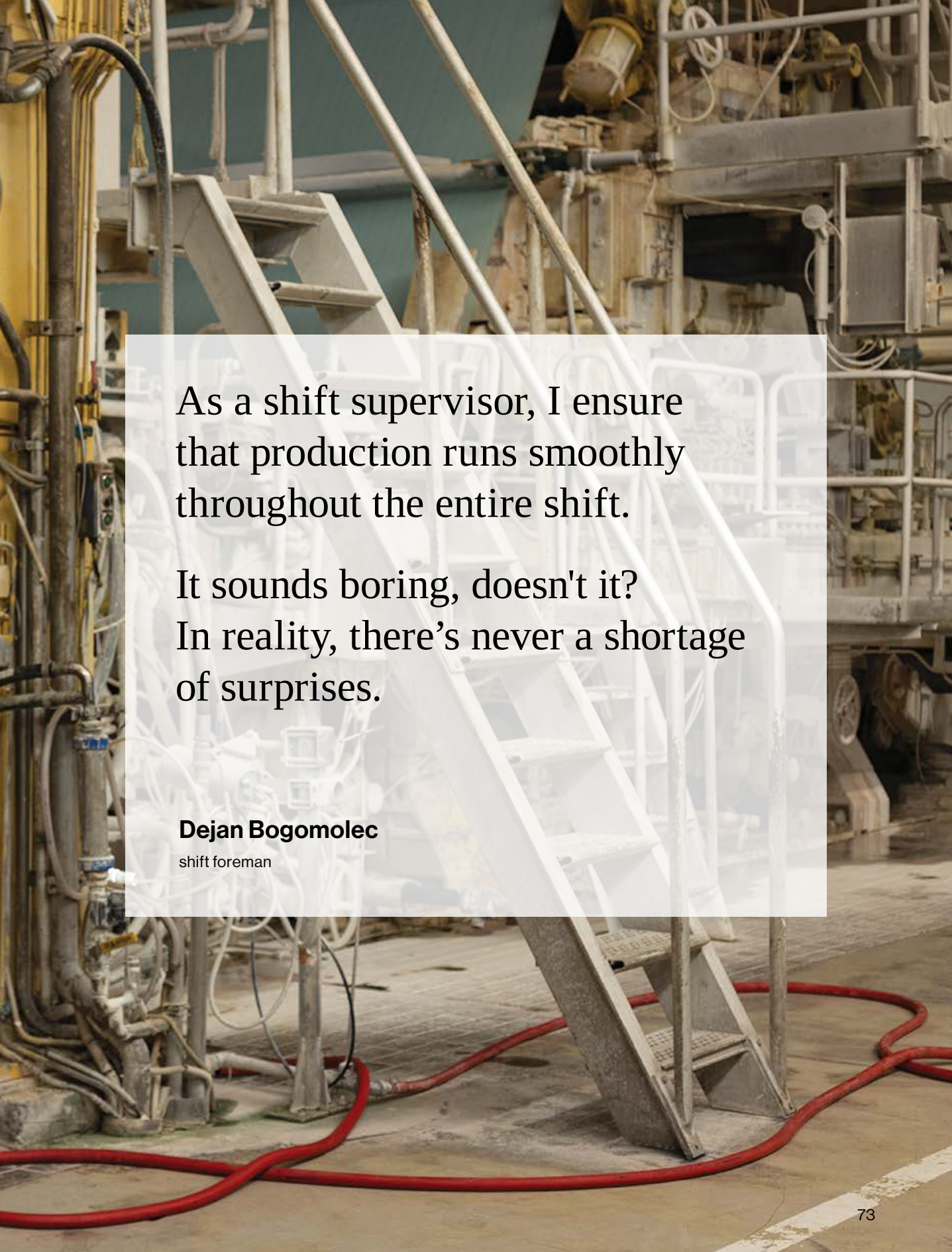
Final section of the paper machine: coating unit, post-dryer section, calender, measuring frame for paper quality control, and winder



Promotional leaflet by the machine manufacturer on the reconstruction of the paper machine in Goričane

Paper machine after the 1986/1987 reconstruction – new headbox.


ANDRITZ-ESCHER WYSS



As a shift supervisor, I ensure that production runs smoothly throughout the entire shift.

It sounds boring, doesn't it?
In reality, there’s never a shortage of surprises.

Dejan Bogomolec
shift foreman

1989

When Yugoslavia introduced a new legislation on companies, which allowed for restructuring of companies, the Complex Organization of Associated Labor (COAL) Aero was split into four independent companies. The Medvode Pulp and Paper Mill thus separated from Aero and was registered as a social company at the Ljubljana District Court on December 4th 1989. In practice, the change was not particularly significant, as the Aero Pulp and Paper Mill had already been operating completely independently at the organizational level within the joint venture.

Shortly thereafter, on August 14th 1990, the joint stock company "Goričane, Tovarna celuloze in papirja Medvode, d. d." ("Goričane, Pulp and Paper Mill Medvode, JSC") was established. The paper mill signed an agreement with Frantschach AG to invest capital in the factory with the aim of transforming Goričane into a joint stock company. The Andritz company from Graz, Austria, which played a key role in the creation of the Goričane paper machine, was also invited to participate in its establishment. In addition, two companies from the former joint venture were also included: CETIS Celje and AERO, Chemical, Graphic and Paper Industry Celje. The joint stock company was entered in the court register on October 25th 1991.

Although it produced a record 43,447 tons of paper in 1991, the factory operated at a loss in 1990 and 1991. After the breakup of Yugoslavia, the factory lost the Yugoslav market and was plagued by illiquidity. These problems were soon compounded by a major campaign by the Green Party, which fought to halt production.

View of the paper mill from the tower, March 1988

1992

WASTEWATER ISSUES IN MANUFACTURING

A partial environmental remediation was carried out at the factory back in 1984, when a new pulp cooking section was built. When ecological pulp bleaching with hydrogen peroxide commenced in 1992, the wastewater drainage system was connected to the Medvode-Brod-Zalog sewage collector. Despite obtaining a water management permit, after all the measures had been implemented, it became apparent that the state had prescribed the wrong solution to the problem of wastewater in pulp production. Although this was not the fault of the factory, the state did not allow a postponement of environmental remediation.

The factory sought to introduce a four-year moratorium on environmental measures that would remedy a 102-year-old practice of wastewater disposal. However, this proved unsuccessful: instead, the collector had to be rapidly shut down, as the state prohibited the disposal of wastewater into the Sora River. Thus, on February 17th 1992, the company Vodovod-Kanalizacija shut off the discharge of wastewater from pulp production into the Medvode–Brod–Zalog collector, even though the construction of this collector had been co-financed by the Goričane Paper Mill in accordance with state instructions.

SHUTDOWN OF PULP AND LIGNOSULFONATES PRODUCTION

The year 1992 was the most critical for the factory's operations, as the newly established country finally halted pulp production in February. The shutdown caused the company to suffer a rapid financial collapse, as the price of pulp on the world market rose significantly at that very moment. The rise in raw material prices was not followed quickly enough by a rise in paper prices, and the factory had to continue paying salaries to 250 newly unemployed workers and cover the costs of closing the plant along with increased energy costs. With the cessation of pulp production, the production of lignosulfonate, a machine extract, also ceased, as the raw material for its production came from waste lye generated during pulp production.

After the closure of the pulp mill, the factory began exclusively producing paper, while the power supply facility continued to operate. Only 170 employees remained.

COLLAPSE AND THE DEVELOPMENT FUND OF THE REPUBLIC OF SLOVENIA

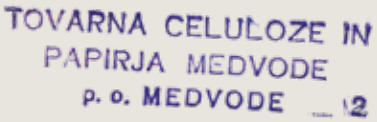
The factory sought compensation from the state for the damage incurred but was unsuccessful. In the wake of the collapse, the paper mill participated in a tender organized by the Republic of Slovenia to assist in the restructuring and rehabilitation of companies, based on an agreement by the workers' council. It thus became part of the Development Fund of the Republic of Slovenia, which included companies that had suffered financial collapse due to unprofitable operations and the collapse of the Yugoslav market. Under an agreement dated October 19th 1992, the Development Fund became the owner of 75% of the share capital in the joint stock company.

In December 1992, a parallel company GO-PA Goričane was founded, through which the restructuring of the factory began. The paper mill was renamed "Goričane, tovarna papirja Medvode, d. d." (Goričane, Paper Mill Medvode, JSC).

Company names and stamps through the years

Stamp Celuloza Medvode, 1950

Stamp Tovarna celuloze in papirja Medvode, p.o. Medvode 1989



Stamp Združene papirnice Ljubljana, sedež Vevče, p. Ljubljana-Polje, 1965

Stamp Goričane, tovarna celuloze in papirja Medvode, p.o., 1990

Stamp Združene papirnice Ljubljana, Tovarna celuloze Medvode, 1966

Stamp Goričane, tovarna papirja Medvode, d.d., 2013

Stamp Tovarna celuloze Medvode, 1970

Stamp Goričane, tovarna papirja Medvode, d.d., 2024

Stamp Aero Tovarna celuloze Medvode, 1973


GORIČANE

Production management is more than just a job – it’s a world where, through knowledge, collaboration, and dedication, we’ve been delivering results we’re proud of for many years.

Maja Mrgole
production manager

View of the northern façade

Company logo through the years

Tovarna celuloze in papirja
Vevče – Medvode
1965

GORIČANE, tovarna papirja in
celuloze Medvode, d. d.
1990

GORIČANE, tovarna papirja
Medvode, d. d.
2007

GORIČANE, tovarna papirja
Medvode, d. d.
2024

GORIČANE

During quality control, we verify that the paper meets all the required specifications. Every sample undergoes precise measurements and comparison with standards to ensure that every ton of product leaving the factory meets the quality standards our customers expect.

Nurija Đogić

quality control specialist


GORIČANE

1995

Several years after getting back on its feet, the company's giro account was finally unblocked in June 1995. The Fund provided the company with additional capital of 7.5 million German marks, effective January 1st 1995, which meant that its share in the company's ownership increased to 80.3%. The improved financial situation allowed for the first investments after a long period of uncertainty: a new pick-up cylinder was purchased, which slightly increased the speed of the paper machine to 610 m/min and a new cross-cutter worth 2 million German marks was acquired.

1996

More investments followed soon after. At the end of 1996, they installed a new winder, which resulted in a lesser process broke, improved reel winding and reduced downtime caused by machine breakdowns. With the new winder, it was possible to wind rolls twice as heavy as before, further reducing paper scrap. New polyurethane covers for NIPCO cylinders were also purchased, which made it possible to produce certain types of paper at higher speeds.

1997

In 1997, the factory obtained an ISO 9001 certificate, an international standard for quality management, demonstrating the organization's commitment to quality and customer satisfaction.

IQNET

Building trust together

Certificate

SIQ Ljubljana has issued an IQNET recognized certificate that the organization

GORIČANE tovarna papirja Medvode, d.d.
Ladja 10, 1215 Medvode, Slovenia

has implemented and maintains an
Quality management System

for the following scope:

Design, production and sales of speciality and printing papers

which fulfils the requirements of the following **standard**:

ISO 9001:2015

Issued on: **2024-05-14**
First issued on: **1997-10-22**
Expires on: **2027-05-31**

Registration Number: **SI - Q-097**

Alex Stoichitoiu
President of IQNET

Gregor Schoss
Managing director of SIQ Ljubljana

SIQ

1998

Austrian companies Frantschach AG and Andritz AG sold their shares of Goričane Paper Mill to the Development Corporation of Slovenia in 1998.

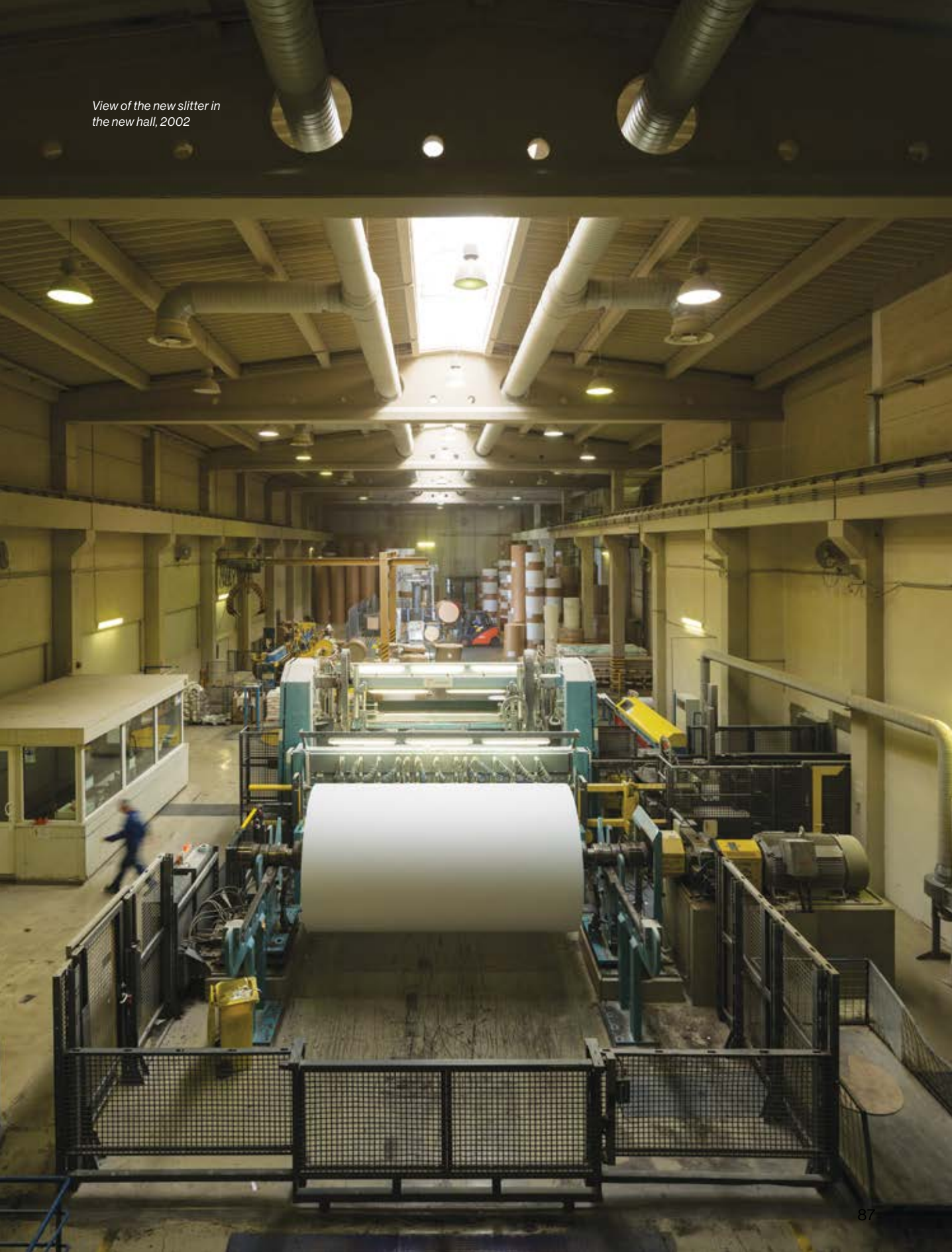
1999

At its meeting, the supervisory board appointed Mr. Andraž Stegu as the company's director, who thus began his first term of office.

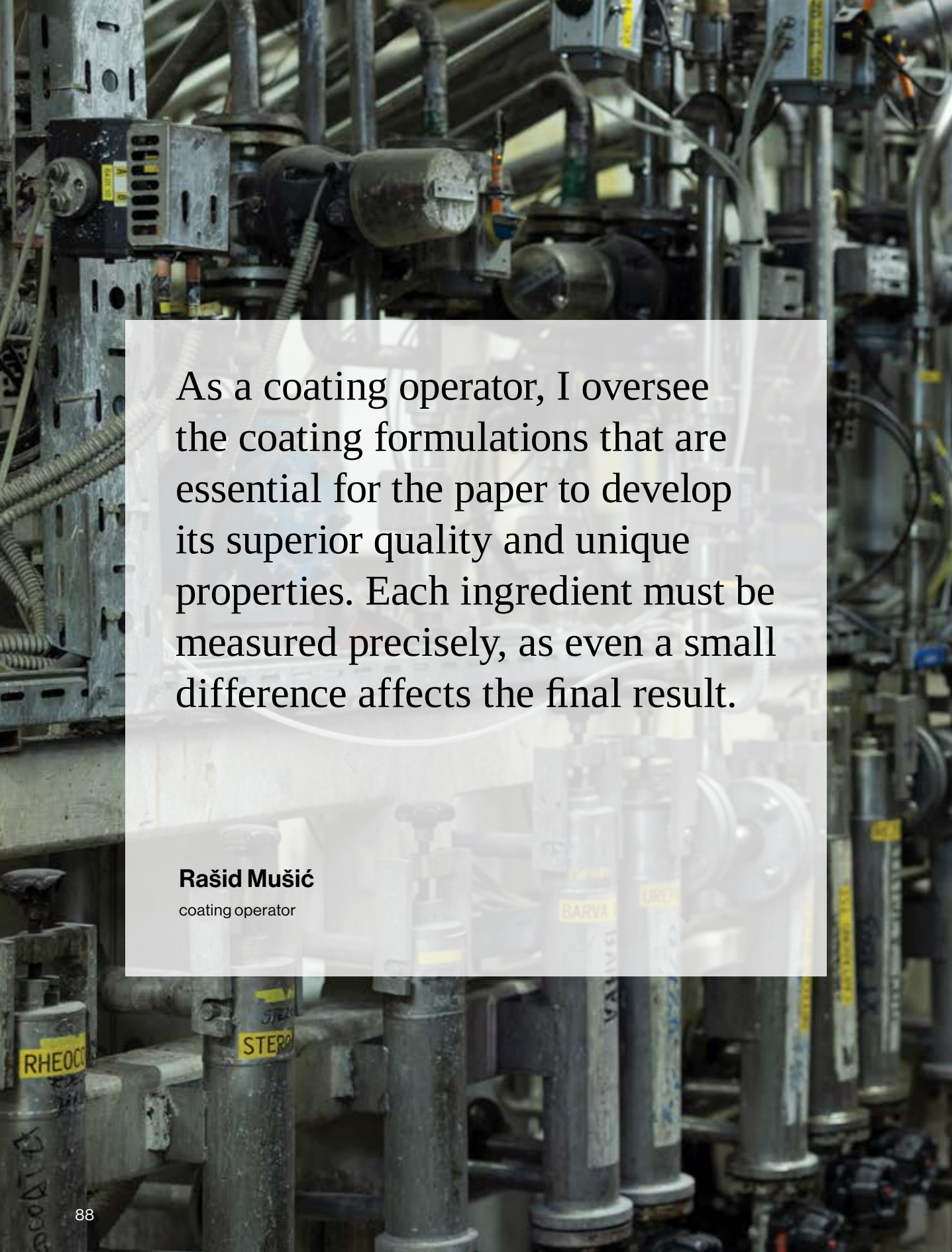
Soon, further investments were carried out in the factory, this time primarily in improving the paper coating technology. In an investment worth 13.5 million German marks, a new coating aggregate and a new coating kitchen were purchased and installed. In addition, some minor modifications were made to the paper machine.

2001

In 2001, the replacement of certain paper machine units enabled a speed of 800 m/min on the wire section, which was the first increase in speed after 15 years of operation. In a major investment worth 11 million German marks, the electric motor drives throughout the entire paper machine were replaced, along with other modifications. The new drives enabled paper production to increase to a maximum speed of 840 m/min on the winder and a volume of around 75,000 tons per year.



View of the new slitter in the new hall, 2002



As a coating operator, I oversee the coating formulations that are essential for the paper to develop its superior quality and unique properties. Each ingredient must be measured precisely, as even a small difference affects the final result.

Rašid Mušić
coating operator


PAPIRNI

2002

The year 2002 was a turning point in terms of both technology and ownership.

NEW SLITTER AND REEL WRAPPING LINE

The annual investment amount for the Goričane Paper Mill amounted to 7.5 million euros. The company built a new facility, a warehouse, in which a new slitter was installed. This made it possible to keep up with the increased paper production. Investments were also made in a new paper reel wrapping line.

SLOVENIAN DEVELOPMENT CORPORATION (SDC) SELLS ITS STAKE IN THE COMPANY

Following a protest rally and other efforts by employees to secure a suitable majority owner for the paper mill, the SDC sold its majority stake in Goričane to the sole bidder in its third tender. Papigor Holding, d. d. (JSC) thus acquired an 85.34% share in the company. The purchase agreement was signed on November 7th 2002 with Papigor, a company established by senior employees of the paper mill in cooperation with Krekova družba (Krek Company).

Reel wrapping line

Employee protest rally, 2002

2003—2005

By 2006, the factory had increased production, reduced specific energy consumption, and performed excellently. A system for environmental management based on the ISO standard was introduced in 2002. The ISO 14001 certificate, which prescribes how to identify, manage, and monitor the environmental aspects of an organization, was obtained in 2004.

Signing of the Papigor – SDC agreement, 2002

2006

Following the acquisition by Papigor Holding, JSC, Goričane sought to make further improvements and modernize the factory. A decision was made to undertake a major renovation of the factory in order to increase production, improve product quality, and introduce new, more specialized products.

Paper machine during renovation in 2006

Paper machine during renovation in 2006

MAJOR RENOVATION

A milestone was reached on June 1st 2006, when a renovation process began, with an investment of more than 15 million euros, the largest since the construction of the paper machine in 1975. During a 17-day production shutdown, new investment equipment was installed, which was upgraded in all respects with state-of-the-art production, control, computing, and process technology in all segments of paper production, from material preparation to the final product.

The most difficult days were the first few, when all the equipment scheduled for demolition – pipes, fittings, cables, and foundations – were dismantled. The demolition was carried out by the Slovenian company Spekter, while the dismantling was performed by the Austrian company Kremsmüller. The project was successfully managed by Slovakian PT Engineering. In the afternoon of June 18th 2006, the first reel of SORA Matt 80 g/m² commercial paper was produced, marking the end of a demanding installation period that had taken several months to prepare.

Prior to this, an extension to the paper machine building had been constructed, housing a new control room, data room, and office space for production management.

First reel of the paper SORA Matt, June 18th 2006

Paper machine after the 2006 upgrade – new headbox and new top wire

NEW FEATURES ON THE PAPER MACHINE

Instead of the hydraulically overloaded Escher Wyss headbox, a SymFlo AD headbox with dilution (IQDilution) from Metso Paper in Finland was installed on the paper machine. The dandy roll was replaced with the Duoformer D top wire from the German manufacturer Voith. The investment focused on the wire section in order to equip the paper machine appropriately for meeting modern challenges. One of the critical links that prevented an increase in the productivity of light-weight papers was eliminated, creating the potential for improving paper quality across the entire production program.

This also involved redesigning the paper machine's finishing section. The company purchased new guide and spreader rolls for speeds of up to 1000 m/min, multi-zone soft rolls for the calender, a paper web tensioning system, and devices for breaking the paper web before the calender. In addition to mechanical processing, the final section was also equipped with devices for monitoring and marking of the quality and condition of defects on the paper web.

A comprehensive overhaul of the paper machine's control system was also crucial for the thorough modernization of the paper machine. This was achieved by installing an upgraded DCS system, which enabled all machine components to be connected to a single control station.

The upgrade enabled the company to achieve paper production of up to approximately 80,000 tons per year, depending on the grammage. By July, Goričane had already succeeded in producing all types of paper and all grammages from their production program. The grand finale of the investment was celebrated in November 2006, when the project was also presented at the annual conference of the Pulp and Paper Engineers and Technicians Association of Slovenia (DITP) in Bled.

Paper manufacturing isn’t just a job; it’s a way of life that you embrace and live.

Janez Gale
technical director

2007

Following the successful major investment, the factory quickly earned praise for its record gross production and record average paper machine speed of 790 m/min. In 2007, a total of 13,200 net tons of paper were cut in the finishing department.

However, every major change also tends to bring unexpected shortcomings. Their detection and gradual elimination were reflected in fluctuations in overall efficiency, which amounted to 75.5 percent on an annual basis, the same as in the post-investment year 2002. The overall efficiency rate directly affected energy consumption, which had already begun to become one of the key cost factors due to rising energy prices. Good overall efficiency with minimal material losses and consistent quality is the basis for efficient production.

On February 13th 2007, the supervisory board of the company reappointed Andraž Stegu as CEO, who thus began his third term at the head of the paper mill.

High-quality warehousing facilities are essential for logistics employees to perform their work effectively. On June 22nd 2007 a contract was signed in Goričane for the construction of a new end product storage hall, and construction began in August of the same year. This warehouse consisted of three parts (N1, N2, N3), which were connected by a main transport route and enabled storage using the Skladko SVS information system.

Construction of a new warehouse

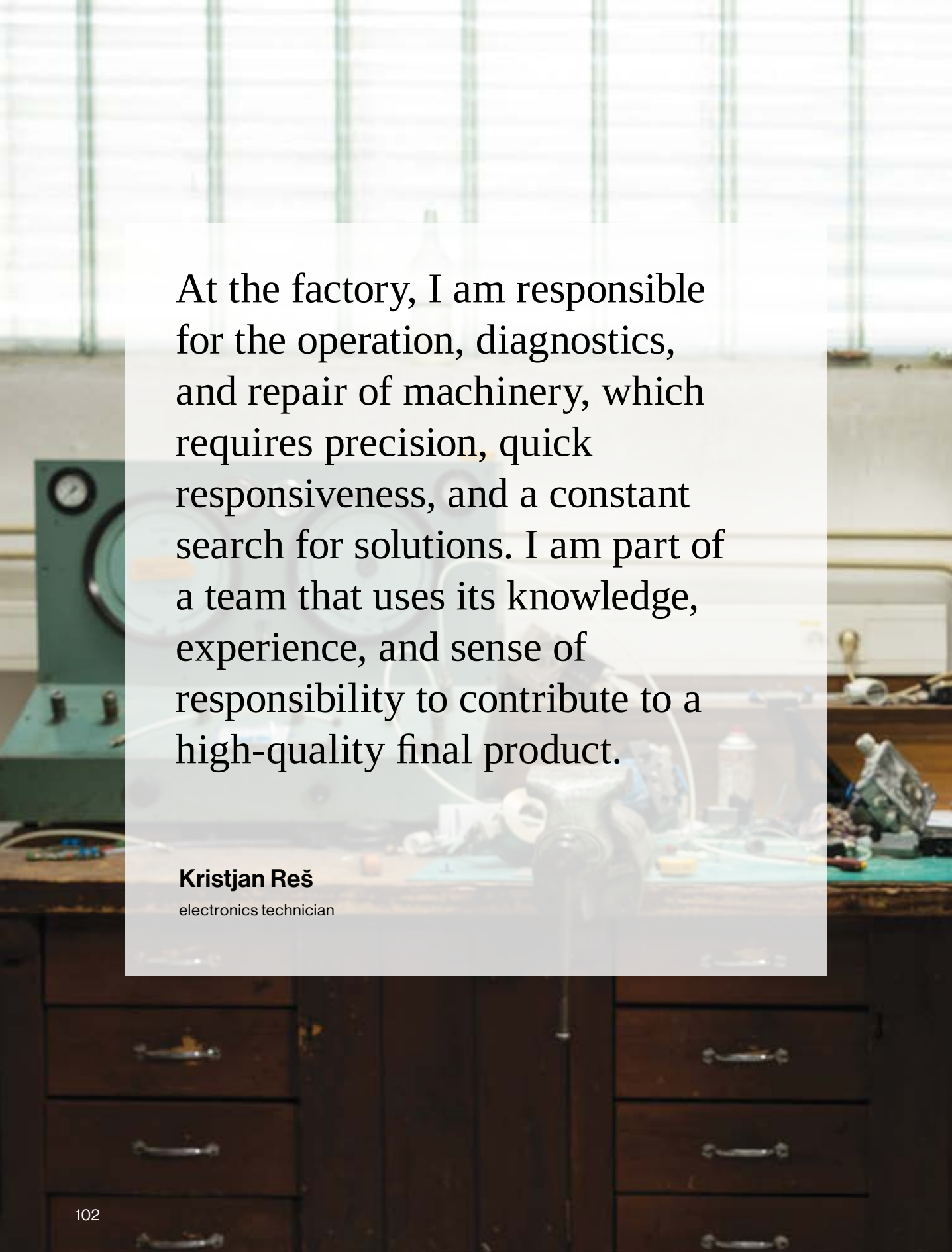

Linde

ENVIRONMENTAL PROTECTION

Environmental protection is also one of the paper mill's priorities. Goričane d. d. (JSC) was the first paper mill in Slovenia to receive an environmental permit in accordance with the IPPC Directive for a period of ten years. Through its environmental management system, the company implemented a policy of gradually reducing its negative impact on the environment and lowering costs due to irrational emissions. The permit issued to the paper mill in October 2007 by the Slovenian Environment Agency stipulated annual monitoring to demonstrate compliance with the prescribed emission limits and operation in accordance with the requirements of best available techniques and Slovenian environmental legislation.

On October 12th 2007, Goričane also hosted the traditional Environmental Day of the Pulp, Paper and Paper Converting Industry Association of the Slovenian Chamber of Commerce, where they reviewed environmental guidelines in Europe and exchanged experiences in the field of environmental investments.

Aerial view of the paper mill, 2006



At the factory, I am responsible for the operation, diagnostics, and repair of machinery, which requires precision, quick responsiveness, and a constant search for solutions. I am part of a team that uses its knowledge, experience, and sense of responsibility to contribute to a high-quality final product.

Kristjan Reš
electronics technician


GORIČAN

2008

"The paper industry has been in a difficult position for some time, and only our timely investments have enabled us to continue competing in this sector," wrote CEO Andraž Stegu in the company magazine at the end of 2008, when the global economic crisis hit. Despite the fact that many companies did not survive the challenging conditions at that time, the Goričane Paper Mill remained in business, even hiring 30 new employees and making several significant investments.

CUTTING CAPACITY DOUBLES

The total investment cost in 2008 amounted to more than three million euros, enabling the factory to acquire a new cross-cutter and a new packaging line for paper in sheets. As part of the installation of these two machines, the finishing areas were renovated and expanded, and some smaller finishing machines and equipment were relocated. This investment enabled a significantly larger quantity of paper to be cut into sheets that has considerably greater added value than paper in rolls.

In November 2007, a contract was signed for the purchase of a new fully equipped cross-cutter capable of cutting light-weight paper as well. Since the existing Jagenberg cross-cutter was not capable of this, market demands forced the company to seek external contractors for paper cutting. In order to be able to carry out the cutting at the factory, they decided to purchase a new Milltex machine from Italy with all the necessary equipment.

The CT 2000 Syncro Vector Speed cross-cutter was designed for a format width of 400 to 1600 mm and a maximum speed of 300 m/min. It consisted of unwinding unit, four longitudinal knives, and an automatic pallet change. The advantage of the longitudinal "synchro" knife is high cutting quality even under higher machine loads, e.g. 600 g/m². Four longitudinal knives enable the production of three pallets at the same time (the so-called "triples"). The palletomat operates automatically and is optimized to minimize sheet loss during automatic pallet exchange. Since its launch in May 2008, it has been able to produce up to 40 pallets per hour, or approximately 20 during normal production. Although the capacity depends on the paper type and ranges from 21,000 to 75,000 kg of paper per shift, in real terms it has increased from 14,000 tons to 30,000 tons per year.

The packaging line was supplied by the German company Reker. It consists of several standard conveyor belts with devices that pack the paper in heat-shrinkable film in individual steps.

New cross-cutter with complete equipment


TOYOTA
1

END PRODUCTS WAREHOUSE

As existing capacities became insufficient due to the expansion of finishing into storage areas, the paper mill also invested in a new warehouse for end products. In November 2008, the necessary construction work began to expand the storage space for storing rolls and paper in sheets. The new facility, measuring a good 4,400 m², alleviated the company's space constraints.

SUSTAINABLE FOREST MANAGEMENT

The Goričane Paper Mill sources pulp produced from wood originating from FSC-certified forests. The company can certify this with the FSC® (Forest Stewardship Council) certificate for ensuring sustainable forest management in the FSC COC (Chain of Custody) and CW (Controlled Wood) chains. The FSC is an independent non-profit organization that promotes responsible forest management on a global scale. The FSC certificate, which the paper mill obtained on October 31st 2008, is a transparent forest management control system that tracks the origin of wood from tree to end product, while protecting the rights of workers, locals, and biodiversity, regulates the origin of wood, and prohibits the use of genetically modified tree species.

We produce approximately 80,000 tons of finished products each year, but we transport at least twice that amount.

Muhamed Mehić
forklift operator


STILL
RX60-40

2009

IMPROVED AIR QUALITY AND BETTER ENERGY EFFICIENCY

As the drying hood was causing problems in the smooth production process due to wear and tear, the paper mill decided to modernize it. The project envisaged the processing and expansion of waste air recuperation from the drying hood.

In 2009, this was achieved in the pre-dryer section by replacing and adding basic parts to the recuperation system, and in the subsequent drying section by partially replacing and renovating its components. The company's management decided to accept the bid submitted by the company Metso Paper from Gorica in tandem with subcontractor Tip95. Since the work was entrusted to a single company, the activities were well coordinated, performed to a high standard, and without unnecessary delays. The system control and monitoring program and the visualization program were successfully developed in the in-house electronics department in Goričane.

The new layout consisted of three main sections: drying hood ventilation, ventilation and heating of the production hall, and heating of the finishing warehouse. The replacement of the equipment had several objectives: to reduce heat loss and electricity consumption, to improve operational and maintenance safety, to ensure appropriate climate conditions in the paper machine hall, and to limit paper web breaks in the drying section. It was also very important to increase the paper drying capacity and reduce moisture content. After the investment, moisture was significantly reduced, especially in the drying hood and in the hall, in the area between the presses and the coating aggregate. The modernization of the waste air recovery system reduced the consumption of fresh steam and contributed to better utilization of the energy invested, as more energy was obtained for fresh water heating and raising the dew point. The microclimatic conditions in the PM hall improved. The paper machine operated smoothly, at a speed of up to 950 m/min on the winder and without any problems with the recuperation system.

Modernization of the waste air recovery system

JAGENBERG UPGRADE ENABLED SHEET CUTTING

Moreover, in 2009, the old Jagenberg cross-cutter was also upgraded, further increasing sheet cutting capacity and enabling additional cutting of low grammages. Demand for the paper in sheets grew faster than anticipated in the development plan. As a result, the change represented a significant advantage in the market. This was evident at the end of the year, when the company reported a record profit of 4 million euros.

On November 14th 2009, more than a hundred family members of employees visited the company's production facilities and premises, as the paper mill organized an open house for families.

Our machine may write the stories, but it is our people who give them real meaning. Behind every successful production line and every innovation lies the expertise of our teams, who use their knowledge and dedication to operate state-of-the-art technology. Without their knowledge and experience, our machines would be nothing more than pieces of metal.

Petra Hunjadi

HR manager

Objects that stopped production, Janez Gale's collection

2010

Due to a significant rise in pulp prices, the paper mill was unable to achieve its ambitious targets and set new records in 2010. Nevertheless, Goričane responded quickly in the areas of procurement, production, and sales, e.g., by revising technological standards with an emphasis on cost rationalization, increasing the share of speciality papers, which have a more stable sales price, and increasing the inorganic components of existing products.

The final phase of the expansion of storage space and minor investments related to the operation of the paper machine, e.g., leading rolls, new roll covers, spreader rolls, and in-process storage tanks, were also completed. Control and monitoring systems, measuring instruments, and laboratory equipment were also modernized, investments were made in an appropriate working environment, and water pumping and consumption were monitored as part of environmental protection efforts.

All of this was carried out with the help of financial resources from the ZEROEF project under the EUREKA program. Due to the fact that every change in the production process also has a partial impact on the environment, development projects at the paper mill are closely linked to environmental projects. Through intensive implementation of the project, numerous laboratory tests were conducted on wastewater treatment and the use of waste materials in the production process. A major contribution to the project was a pilot wastewater filtration plant built by members of the in-house maintenance team.

2011

Increased amounts of paper in sheets led to a growing desire to cut it into other formats for greater flexibility, smaller orders, and lower inventories. As a result, the company invested in a new guillotine paper cutter. The new Polar 137 X high-speed cutter, equipped with an automatic lifting, shaking, and stacking device, improved the quality of paper in sheets. With this, the paper mill gained greater flexibility and responsiveness to market demand in 2011. As part of the purchase of the sheet cutting line, the company also acquired a pallet reverser with a blower, something they had wanted for many years.

As a pulping operator, I ensure that the fibers and waste are properly pulped and prepared for the next stage of the process. Fibers are the basic raw material for finished paper, so this first step is crucial to the quality of the final product.

Šefik Dacić

pulping operator

2012

The launch of the new, partially automated high-speed guillotine paper cutter took place in February 2012, when the machine was successfully installed by the in-house maintenance team. Due to increased demand for cutting paper in sheets, an additional shift for paper cutting was introduced, resulting in 140 tons of paper being cut in November 2012.

In September, they successfully completed the largest energy project in a decade: the overhaul of a steam turbine. Such maintenance is carried out every 10 to 15 years and in 2012 it was mainly focused on two inspections: the large boiler was included in a periodic internal inspection, while the steam turbine required a major overhaul and maintenance. Due to difficulties on the part of the contractor, the Croatian company Tvornica Turbina Karlovac, it was completed with a delay, but after the installation was completed, everything worked according to plan. During the factory shutdown, which lasted from August 20th to September 1st, several other renovation works were carried out in the energy sector, as well as urgent maintenance works elsewhere.

Undoubtedly, the most important investment in production was the replacement of the pulp line no. 1 that had been operating since 1975. The goal of the half-million-euro renovation was to acquire a state-of-the-art pulper with a fully automated cycle of hardwood and softwood pulping on the same line. Companies from Sweden, Slovenia, Austria, and Germany were involved in the project. The line start-up and the process automation were based exclusively on the know-how of domestic technologists and maintenance staff.

2013

Although 2013 was one of the most difficult years for the paper mill, the company continued to develop and invest in new technologies. Due to an additional increase in demand for paper in sheets, an investment was made to increase the capacity of the cross-cutter 1. Two additional unwinding units were added, and all feeding stations were equipped with new guide rolls, spreader rolls, and straightening rolls, as well as automatic roll positioning. The main goal was to increase the cutting capacity for light-weight papers, which are subject to an increasing demand on the market.

The company introduced PEFC certificate in the field of sustainable forest management. The aim was to raise awareness of environmentally friendly forest management among those involved in the supply chain of timber and wood products.

Pulping line

Papermaking has become a family tradition for us.

Primož and Andraž Babnik

father and son, energy administrator and energy technician


ENS
GORIČANE
GORIČA

2014

When a new paper production line was set up in Goričane in 1976, an energy facility was also built to meet the steam requirements for pulp and paper production. Three steam boilers were installed in the energy facility: the largest with a capacity of 40 tons of superheated steam per hour, the medium-sized one with a capacity of 13 tons, and the smallest, which was never used for production purposes.

The large WB40 boiler operated almost continuously from then until 2014, with the exception of occasional repairs, inspections, and tests, during which the medium-sized boiler was in operation. During these years, the factory developed and modernized, and despite the good state of the energy sector, there was need for greater efficiency. The medium boiler became too small for the needs of current production, while the large boiler, which had also been designed for pulp production, became too large. In order to reduce energy costs and greenhouse gas emissions, in 2014 a decision was made to invest in a new high-efficiency steam boiler with high dynamics of adaptation to the needs of paper production.

The purchase of a new steam boiler with a nominal capacity of 25 tons of saturated steam per hour, worth 1.2 million euros, resulted in at least a 25% saving in energy consumption. The investment paid off in less than two years through savings alone. The environmentally and economically oriented project included the purchase and installation of a modern, eco-friendly Bosch steam boiler. The preparatory work for its installation began in April 2014. Before installation, both smaller 38-year-old boilers were removed, while the large 40-ton WB40 boiler was retained as a cold reserve.

The boiler still operates at a very high efficiency of 97.5%. Due to additional ECO systems for utilizing waste heat from heat exchangers for the preheating of boiler feed water and combustion air, it theoretically even exceeds 100%. The boiler's operation is fully adapted to the steam production needs. Since the waste heat from the exhaust is maximally utilized, the exhaust gas temperature is lower than 80 °C, and the NOx and CO emissions are significantly lower than the legally acceptable limits.

BOSCH steam boiler with a nominal capacity of 25 tons of saturated steam per hour

CUT-OFF TRANSPORT AT THE FINISHING DEPARTMENT

Due to the increased amount of paper in sheets, the cut-offs transport line was also modernized this year. Since the capacity of the existing cut-off system on cross-cutters was insufficient, and the roll cutting of wider rolls would require an excessively low operating speed due to the risk of clogging the pipes, an investment was made in increasing the cut-off capacity with the help of a more powerful system.

The Italian company Fama was commissioned to upgrade the system. Among other things, they enlarged the separator on the cut-off press, installed a larger-diameter suction pipeline for excess air from the separators with additional dampers, and installed a separate fan for each cross-cutter, which enabled greater cutting capacity. The redesigned system enabled cutting with 2 × 10 cm wide cut-offs on both cross-cutters. This enabled flexible cutting of paper in the finishing department regardless of the paper grade.

NEW DISTRIBUTION LINE AND SWITCHGEAR UPGRADE

The monthly consumption of electricity at the Goričane Paper Mill exceeds 4 GWh, placing it among the largest electricity consumers. Before 2013, the paper mill's power supply was arranged through two medium-voltage (20 kV) distribution lines. On the edge of the mill premises, the factory is connected to the distribution line's T-pole between the towns of Medvode and Škofja Loka. This particular transmission line has been used for supplying power to Goričane's paper mill since the 1960s. The maximum power consumption of this line is 7.3 MW. The second distribution line runs entirely underground and connects Goričane to the public power distribution network via "Autofilter" (Sogefi). It was installed a good 10 years ago and has a receiving power supply that allows for the consumption of more than 4 MW of electrical power.

Since the paper mill decided to invest in a new steam boiler, it was necessary to prepare for correspondingly increased and stable power consumption from the public power network. The factory did this by installing an additional distribution line that allows for a receiving power supply of more than 8 MW. In addition, it acquired new equipment for the RTP space, which, together with the distribution line, enables a more stable and reliable supply of electricity to the Goričane Paper Mill. The new distribution line and new equipment in the RTP space enable a more stable and reliable supply of electricity to the Goričane Paper Mill, while the other two power lines are retained as a backup power supply in case of problems or failure of the new distribution line. A new high- voltage (HV) bay was constructed to connect the new supply line, while the other electrical equipment in the 20 kV switchgear was partially upgraded.

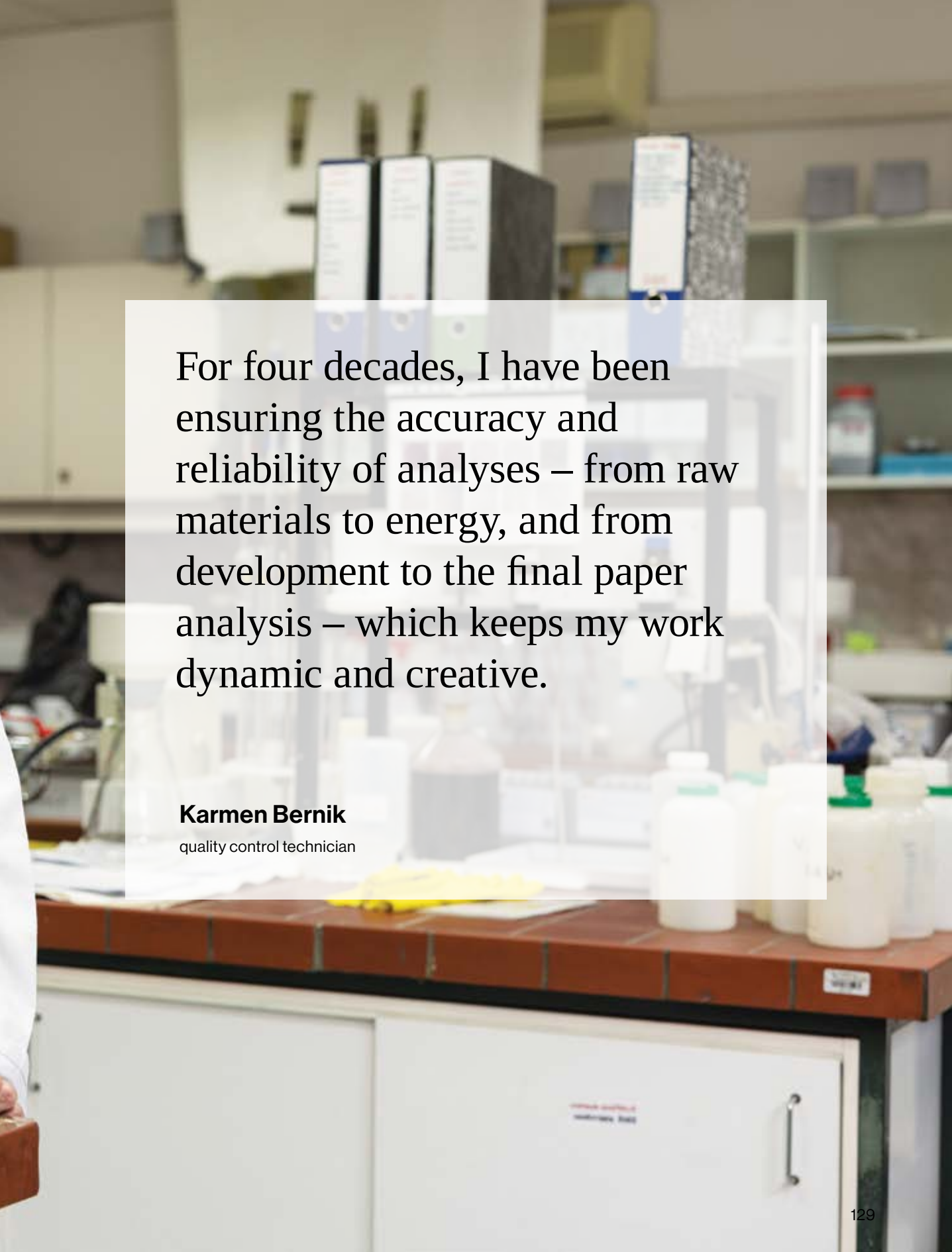
DIRECTIVES AND FINANCES

The Goričane Paper Mill operates in accordance with legislative requirements and directives. In the environmental field, the traceability of wood sources was adapted in 2014 in accordance with the EUTR directive. New requirements were established regarding wood traceability and the system of due diligence in the supply chain pursuant to FSC-DIR 40-004 and PEFC ST 2002:2013.

In August, an agreement was reached between Goričane and its financial creditors on a voluntary preventive financial restructuring of the company's liabilities for the 2014–2017 period. The approved plan was the result of lengthy negotiations with financial creditors, with the main objective of the management of Goričane, d. d. (JSC), being to secure an agreement that would be sustainable in the long term and would take into account the financial capabilities of the Papirus Group.


POZOR!
ne vključuj
delo
na napravi
POZOR!
Ne dotikajte se
električnih naprav
Življenjsko nevarno!


GORIČAVE



For four decades, I have been ensuring the accuracy and reliability of analyses – from raw materials to energy, and from development to the final paper analysis – which keeps my work dynamic and creative.

Karmen Bernik

quality control technician

2015

Due to increasingly demanding customer requirements and the possibility of performing incoming inspections of raw materials, the paper mill invested in the purchase of a new laboratory equipment. This ensures continuous control of incoming materials, better implementation of daily quality measurements of manufactured paper, and faster reaction to customer input regarding quality. In 2015, 65 industrial trials were conducted and 7 new raw materials were tested in 13 trials. New technologies for processing paper broke and its changes were also trialed. The new raw materials were tested primarily in additives for stock preparation, and to some extent also in additives for coatings.

On the paper machine, it became necessary to replace the drainage elements and upgrade the cleaning elements in the constant section. Both investments ensured better machine running, fewer breaks, and fewer impurities in the base paper. The line for processing I-fiber paper broke was also modernized and a new pulper was installed.

On October 14th 2015, Andraž Stegu was re-elected by the supervisory board as the company's CEO, thus beginning his fifth four-year term.

Following the commissioning of the new boiler, made possible by the preventive financial restructuring and the installation of an efficient steam boiler, a record output in tons was achieved in 2015.

2016

In 2016, the Goričane Paper Mill celebrated the 40th anniversary of its paper machine. The anniversary was commemorated with a celebration and the publication of a book titled The History of Goričane Paper Mill. The celebration was accompanied by an extensive renovation of the factory's exterior. The paper mill commenced with the renovation of the northern facade and the railway crossing and participated in the reconstruction of the road that runs past the factory. One of the factory's most recognizable symbols, the 43-meter factory chimney, has also been given a new look. In addition to the exterior appearance, there was also a functional change, as new signaling and measuring points for emission control were added.

In 2016, the company launched a project to change the running of drying wires in dryer sections. The change, which was intended to prevent the accumulation of impurities on the guide rolls, reduced the impurities in the final products. In the same year, the factory developed a new product in cooperation with its Croatian partner, Kaspar papir. This resulted in the creation of sublimation papers, i.e., papers for transferring color from paper to fabric, with a quality that ranks among the best in the world.

In 2016, one of the factory's historic symbols was also redesigned – the 43-meter factory chimney.


GORICANE

We have more than 7,000 different types of spare parts in stock.

Ambrož Kovač

warehouse worker

2017

BUILDING A CLEANER FUTURE: BIOLOGICAL WASTEWATER TREATMENT PLANT

In 2017, the paper mill acquired another facility that contributes to a greener and more sustainable future: a new water treatment plant. Due to complaints about occasional foaming and odors from technological wastewater at the outlet into the Sora River, a decision was made in 2016 to upgrade the facility. The investment plan was approved, and various technology trials had been conducted for several years. The million-euro project added a new biological component to the existing mechanical wastewater treatment plant, featuring Aquabiotec technology, which is used in numerous paper production facilities across Europe. Following testing, a biological filtration system was selected, which allows for maximum production flexibility and ensures that process water is discharged in accordance with all legal requirements.

In order to reduce the operating costs of the new facility, it was located in the immediate vicinity of the existing wastewater treatment plant, which required the demolition of two older buildings. Before construction began, the site was surveyed, but the construction proved to be quite challenging. Nevertheless, the construction proceeded according to schedule and budget, and was completed in the last week of November.

Wastewater treatment plant

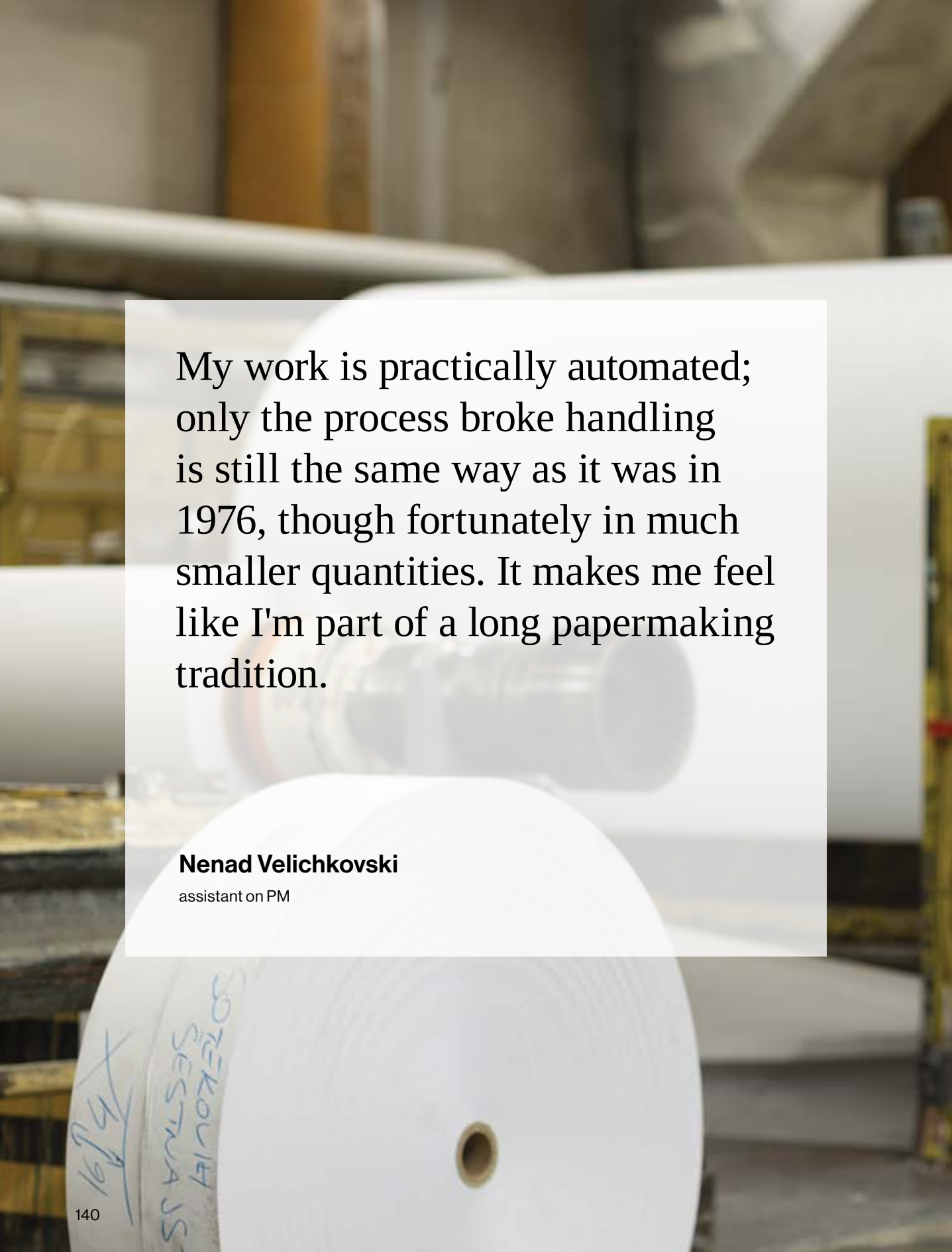
NEW CONTROL SYSTEMS

In the same year, the company installed two new control systems: the WIS system from Dr. Schenk for paper quality control and a camera-based monitoring system for analyzing the causes of paper breaks on the paper web WMS, manufactured by Papertech. These suppliers were selected based on their ability to adapt their technology to specific production requirements and available space on the paper machine, which was a rather demanding task.

FIRST GENERATION OF "PAPER SCHOOL" GRADUATED

Since no formal school program exists at any level for the education of papermakers, they themselves are responsible for training and educating their staff. The industry joined forces and sought out motivated employees who were willing to share their knowledge. They prepared the material and wrote a program comprising 86 hours and 11 modules covering the entire paper production process.

From September 2016 to February 2017, the first such professional training course, called "Paper School," took place in the afternoons. Four employees participated in the program. This program provides participants with basic knowledge of papermaking, an understanding of the entire production process, and specific knowledge for managing individual process phases.



My work is practically automated; only the process broke handling is still the same way as it was in 1976, though fortunately in much smaller quantities. It makes me feel like I'm part of a long papermaking tradition.

Nenad Velichkovski

assistant on PM


GORIČANE
GORIČANE

2018

European environmental legislation requires member states to take measures to limit the use of plastic, so Goričane seized the opportunity to develop new paper products that could best replace plastic ones. In 2018, the company developed Sora pack paper for carrier bags and began developing Sora barrier products, which are suitable for contact with food and are biodegradable.

The year was also marked by record productivity of the paper machine in the last fifty years and the acquisition of the AEO status for customs simplifications. In December 2018, the Ljubljana Customs Office ceremoniously awarded the paper mill a license confirming its status as an Authorized Economic Operator (AEO). The company has thus become globally recognized as a safe and reliable business partner with a lower risk level in the risk analysis system, with less frequent inspections and faster and simpler customs procedures.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2019

NEW CROSS-CUTTER CUTS UP TO 50 TONS OF PAPER PER DAY

The finishing department, equipped with two cross-cutters, did not have sufficient capacity to cut paper rolls into sheets, so Goričane decided to make an investment that was completed in just three months, from conception to launch. In September 2019, the company purchased and installed a new cross-cutter. Due to the short delivery time, high capacity, and reasonable price, the team opted for a machine from the Chinese manufacturer CHM. The machine was assembled in five days by in-house maintenance technicians with the help of Tark d. o. o. (Ltd.).

It is a single knife cross-cutting machine (PRS 3), which can operate at speeds of up to 300 m/min and cut up to 50 tons of paper per day. The CHM machine enables dual running and cutting of up to six rolls simultaneously. This solved the bottleneck in cutting paper in sheets, shortened delivery times, and significantly reduced the costs of external cutting services.

OTHER TECHNOLOGICAL ACHIEVEMENTS

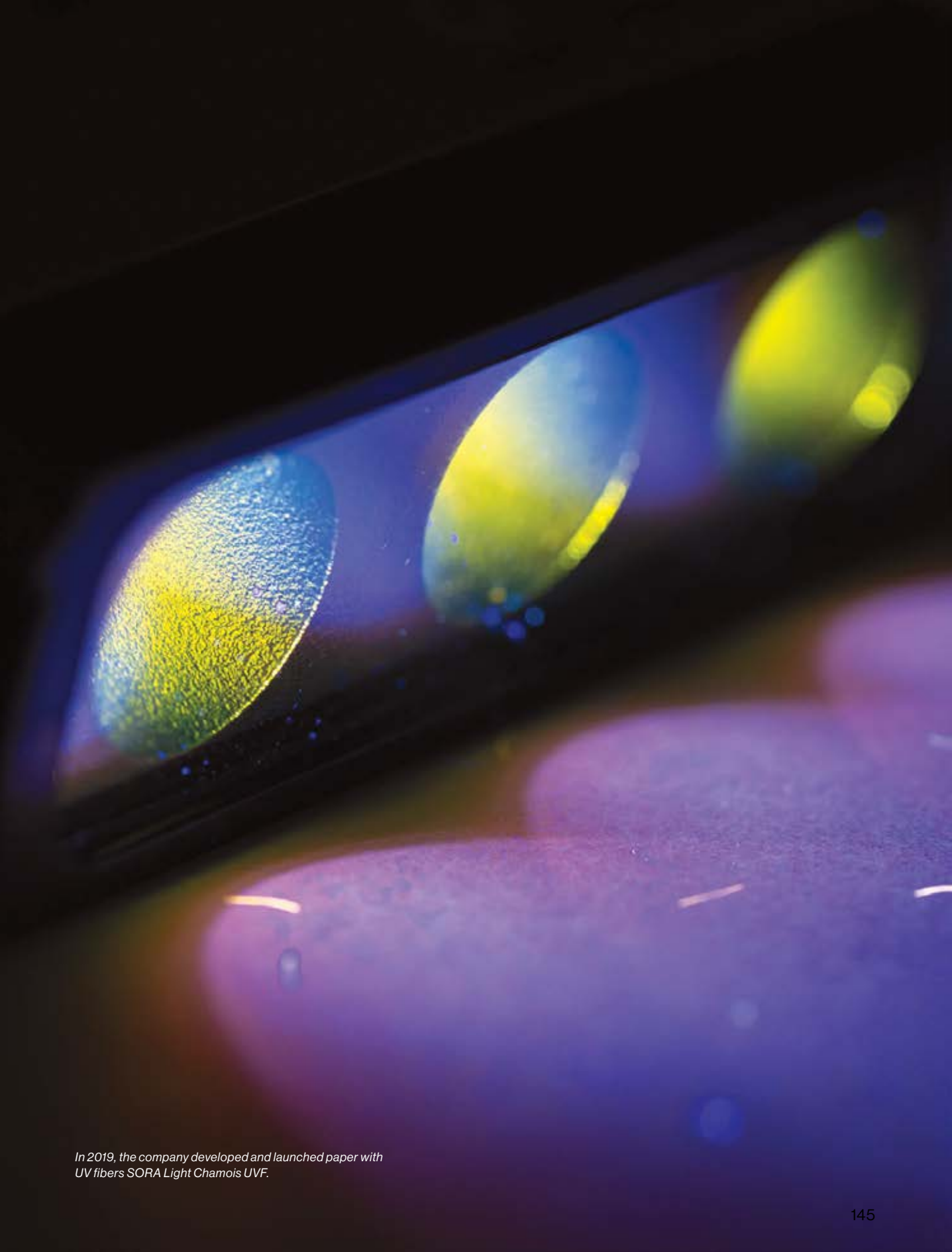
As part of this investment, Goričane also acquired a new loading platform in the end products warehouse, which reduces the volume of internal transport of end products and speeds up truck loading.

In 2019, they also installed a medium voltage compensation device of reactive energy, which reduced reactive energy consumption by more than 95% and resulted in significant savings in network costs. The investment ranks among the fastest-paying investments, as it was recouped in the same year.

NEW PRODUCTS, NEW MARKETS

In terms of innovation, the year was marked by the development and launch of a paper with UV fibers called Sora light chamois UVF. The paper is refined with invisible security fibers that act as a protective element in identifying the authenticity of the paper. It can be used as paper for banknotes, identification documents, checks, tickets, or various vouchers (shares, bonds).

In addition, the paper mill expanded its packaging line with Sora barrier products, which are grease- and oil-resistant. The project was very intensive and demanding, as environmental legislation imposed restrictions on the use of certain barrier chemicals and it was necessary to find biodegradable and recyclable alternatives.



In 2019, the company developed and launched paper with UV fibers SORA Light Chamois UVF.

We have transitioned from sourcing a single product to managing an extremely diverse range of raw materials, which today enable the full spectrum of our specialized production.

This requires us to carefully plan our inventory, strictly control the quality of our raw materials, and work closely with numerous specialized suppliers.

Jure Zor

purchasing manager

2020

The paper mill also successfully cooperates internationally: together with Helios and Kaspar papir, they have developed a new range of paper coatings. The so-called "Domemul PA" line is an advanced and innovative solution in the field of printing on polyester textiles. It is based on water-based functional polymers and is safe for both people and the environment. It enables higher print quality as a result of high-quality transfer of dye from paper to fabric. As part of their partnership, this innovation was successfully transferred to the industrial level in a short period of time, earning them a bronze award from the Chamber of Commerce for the Central Slovenia region.

However, new paper products brought new challenges in the intermediate stages of production and in broke management. In 2020, the company therefore began installing a new line for wet-strength broke pulping and acquired an HD pulper.

2021

In 2021, the paper mill redesigned its logo and the SORA brand logo, in which the letter O hides a symbol of a rotating paper machine roll and, at the same time, the final appearance of a reel of paper.

At the Goričane Paper Mill, staying on top of technology remains a constant priority. In 2021, an investment was made in a ream wrapping machine (Bielomatik FSW500/56B). The new equipment increased the quantity of manually wound reams several times over and enabled the paper mill to enter markets where paper is sold exclusively in reams.

In addition, two new FAN separators for dewatering enabled more efficient dewatering of waste paper sludge. In doing so, the formation of anaerobic microorganisms in the wastewater was prevented, and the high dryness of the final sludge significantly reduced waste management costs. After a failure of the main transformer, which halted production for three days, the old transformer station was dismantled, a new one installed, and the server and workstations of the QCS system, which is a prerequisite for replacing the measuring frame, were replaced.

Ream wrapping machine

The SORA brand logo incorporates a symbol of a paper reel within the letter O.

Our range of papers has evolved, expanded, and adapted to market needs over the decades. We started with just one product, but today the SORA brand offers more than 100 different types of products, providing our customers with solutions for every specific need.

Andrej Gradišek
sales manager

2022

The paper mill soon received a new measuring frame (QCS) for monitoring the final quality of the paper web in 2022. At the same time, the factory also upgraded its cross-cutter, installing a new suction chamber. Due to Russia's attack on Ukraine, Europe was suddenly faced with a major energy crisis, requiring a quick and effective search for alternative energy sources. For Goričane Paper Mill, the solution was to invest in a Loos backup steam boiler, which could be switched on more quickly and could replace cogeneration if necessary.

In addition to upgrading its hardware, the company also redesigned and relaunched its website (www.goricane.si). The fiscal year ended with a record sales revenue of more than 110 million euros.

Loos steam boiler

2023

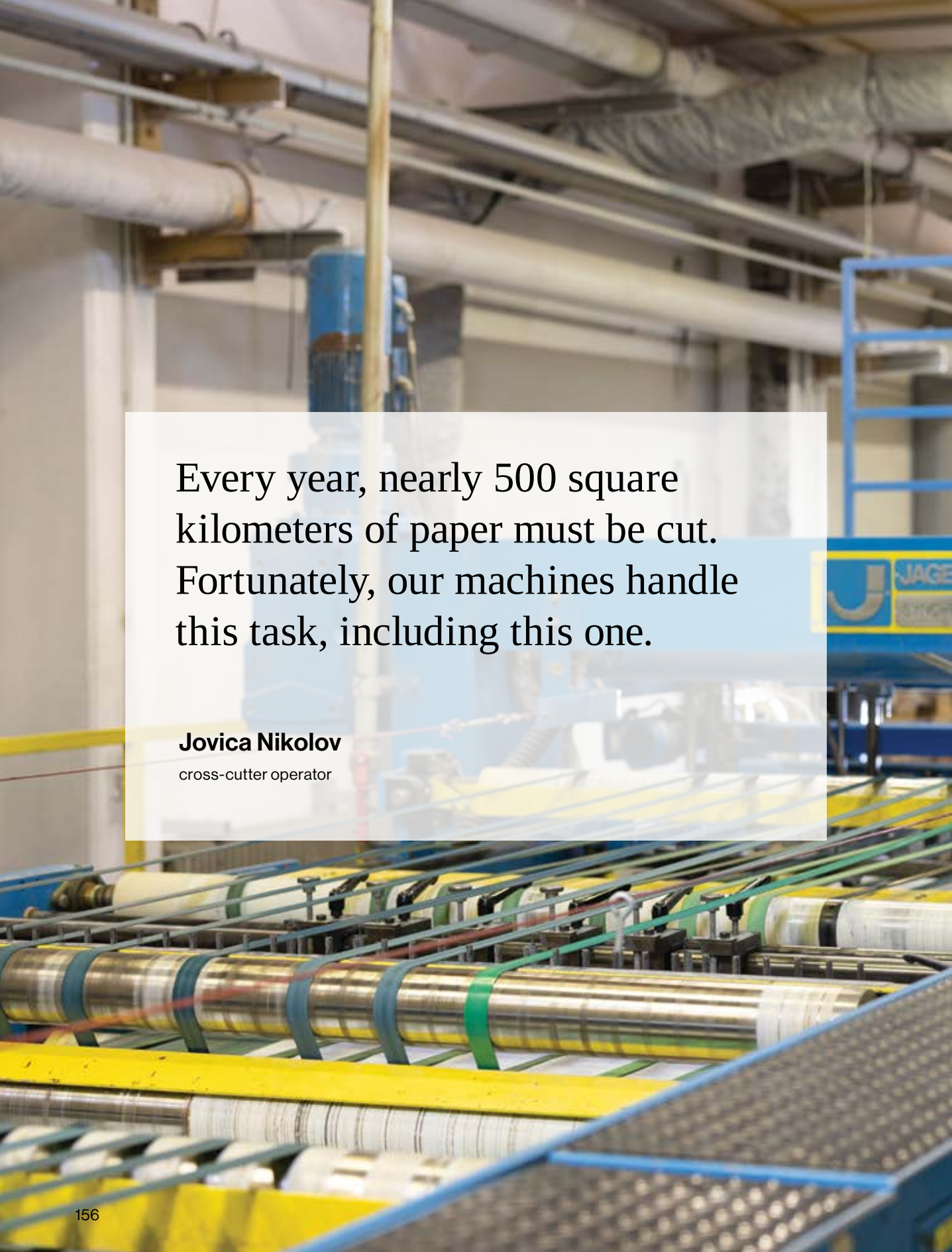
The year 2023 will be remembered by many for the extensive August floods that caused a great deal of damage and destruction in Slovenia. At that time, the Sora River also flooded near the Goričane Paper Mill and destroyed the Goričane carpentry workshop. The factory responded proactively by constructing a new protective wall and renovating the storage area for lignosulfonates above the compressor station to prevent similar scenarios. A new workshop was set up there, enabling the preparation of pallets and protective chipboard covers for paper pallets.

Investments in machinery continued in 2023. The paper mill installed a new breast roll with hydrodynamic lubrication, thus completing the pre-dryer section conversion project. It also optimized the steam condensation system in the post-dryer section and installed a new high-speed guillotine paper cutter Polar 115XT that enables both cardboard protection cutting and commercial cutting. In addition, a new ventilation system was installed in the finishing department, which enables both heating and cooling and contributes to better air quality in the production areas.

The year was also marked by the acquisition of the ISO 22000 standard for food safety management systems in the context of paper products for packaging in the food industry, while the company's CEO, Andraž Stegu, began his seventh four-year term. He has thus been at the helm of Goričane since 1999.

Column marking flood levels. August 4th 2023 – highest level.

Sora River, August 4th 2023 – view from the bridge over Sora



Every year, nearly 500 square kilometers of paper must be cut. Fortunately, our machines handle this task, including this one.

Jovica Nikolov

cross-cutter operator


GORIČANE

2024

WAREHOUSE UPGRADE

The new carpentry workshop was soon accompanied by a new warehouse for wooden packaging in the former lignosulfonates storage area.

In the finishing department, worn and damaged walls were renovated, where moisture had caused the plaster to crumble, posing a potential risk of contamination to the paper waiting on pallets to be packaged. Raised bumpers were installed on the floor to prevent pallets from coming into direct contact with the walls of the building and to facilitate cleaning. Moreover, in areas with reusable materials, i.e., cardboard packaging covers, steel plates were installed to further prevent possible damage to the walls. A new underground gas pipeline was also built between the gas metering reduction station and the power plant.

NEW DEVELOPMENTS IN ENERGY

The paper mill is a major consumer of electricity, so an adequate electricity supply is of key importance. The year 2024 was crucial for Goričane in terms of energy: a 20/6.3 kV 2 × 8 MW transformer was installed and the final assembly works on the Loos boiler were completed.

Electricity from the external 20 kV grid is supplied to the factory via two main supply lines: one via overhead power lines and the other via underground distribution lines. Until 2021, the factory used a 20 kV to 6.3 kV transformation with two 4 MW transformers, which used to operate alternately. At the time when cogeneration was still operating in conjunction with a 40-ton steam boiler, it provided approximately half of the required electrical energy. When a new 25-ton steam boiler unit was brought into operation in 2015, cogeneration was stopped and electricity was supplied exclusively from the external grid. In such operation, both 4 MW 20/6.3 kV transformers were required to operate continuously.

When one of the two transformers malfunctioned, an investment was made in 2021 to upgrade the transformation with two equivalent 8 MW 20/6.3 kV transformers. The upgrade was carried out in two stages, simultaneously with the project for a double 20 kV distribution line between Goričane and RTP Medvode. Thanks to the new equipment, in 2024 the paper mill began receiving electricity via two supply lines and two equivalent transformers, which can operate individually or in parallel. This ensures greater flexibility, security, reliability, and sufficient capacity with regard to electricity supply.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In 2024, the installation of a 30-ton Loos steam boiler was successfully completed, replacing the WB40 steam boiler. An external contractor carried out the installation of the cable route from the switchboard to the control stations in the boiler room. For optimal boiler operation, it was also necessary to install a control system, which was efficiently arranged by employees in the in-house electronics and electrical maintenance workshops. The new steam boiler with combined burners enables the company to use at least three different energy sources and offers greater flexibility and reliability of operation. In addition to lower levels of emissions, the boiler capacity is sufficient for the further development of the factory.

A SUSTAINABLE FUTURE FOR THE GORIČANE PAPER MILL

The year was also marked by the launch of a sustainable project entitled "The Green Transformation of the Business Operations of Company Goričane, d. d." The starting point for the project was the obligation to produce a sustainability report containing information on sustainability goals, risk assessment, and opportunities for the green transition.

According to European standards, a company operates sustainably when it meets several conditions, including: understanding and managing climate and environmental risks, exploiting the opportunities of the green transition, measuring its carbon footprint, and having a clearly defined sustainability strategy to which it adapts its processes, products, and stakeholders. One of the project's objectives is to measure and achieve ESG (environmental, social, governance) goals that aim to increase environmental awareness, improve social practices, and ensure good corporate governance. In 2024, an analysis of the current situation was conducted, a double materiality matrix was prepared, the carbon footprint was calculated, and a strategy for a greener future for the company was developed.

SUCCESSFUL BUSINESS CONTINUES

The paper mill also developed in the field of innovation: the first paper for tax stamps was created, specifically developed for the market of Hungary. Production jumped to 100 different types of paper that year, with sales expanding to various foreign markets, such as Georgia, Latvia, India, and Brazil. The paper mill now exports its products to more than 40 countries.

In our production, every new technological improvement represents a significant step forward in machine efficiency, operational reliability, and the quality of our products. I am glad to be part of such an interesting and dynamic production process, and I look forward to the new challenges that lie ahead.

Matej Eržen

technologist in paper production


GORIČANE

2025

VACUUM SYSTEM AND A NEW PRESS SECTION FRAME

The year 2025 again saw significant investments, primarily the replacement of part of the press frame and a new vacuum system with a turbo blower.

A new RunEco vacuum system from Runtech was installed in Goričane, which includes an EP600 turbo blower and EcoDrop and EcoSep water separators. Replacing the old vacuum system with a modern turbo blower was a milestone in both technological advancement and the company's environmental responsibility. A key part of the upgrade was the EcoFlow measurement system with four measurement points, which provides accurate data on dehumidification efficiency in real time. The 1.6 million euro investment enables the factory to better manage vacuum and halve its energy consumption. In addition, the new system does not require water to create a vacuum, has a positive impact on the environment, and supports the company's ESG objectives.

Work on the parts that required shutdown began at the end of August 2025, at the same time as the replacement of part of the frame in the press group. The 250,000 euro investment was essential for safety reasons and as a prerequisite for increasing the future speed of the paper machine. By carrying out both projects simultaneously, the planned downtime was used to maximum effect.

PROJECTS AND CERTIFICATES

In addition to the two major investments, the paper mill upgraded the process system of electric drives on the paper machine. A project was launched to build a 20 kV cable connection between the paper mill and the Medvode substation, and the first paper for lottery tickets was produced for a Colombian customer.

Goričane, d. d. (JSC), also obtained an AEO authorization for security and safety, thereby upgrading its 2018 authorization. This is an AEO-F certificate, which offers significant simplifications in the areas of customs, security, and protection across the entire supply chain. It enables faster material flow with fewer administrative barriers and means that the company operates as a key, reliable, and security-compliant partner in the international chain.

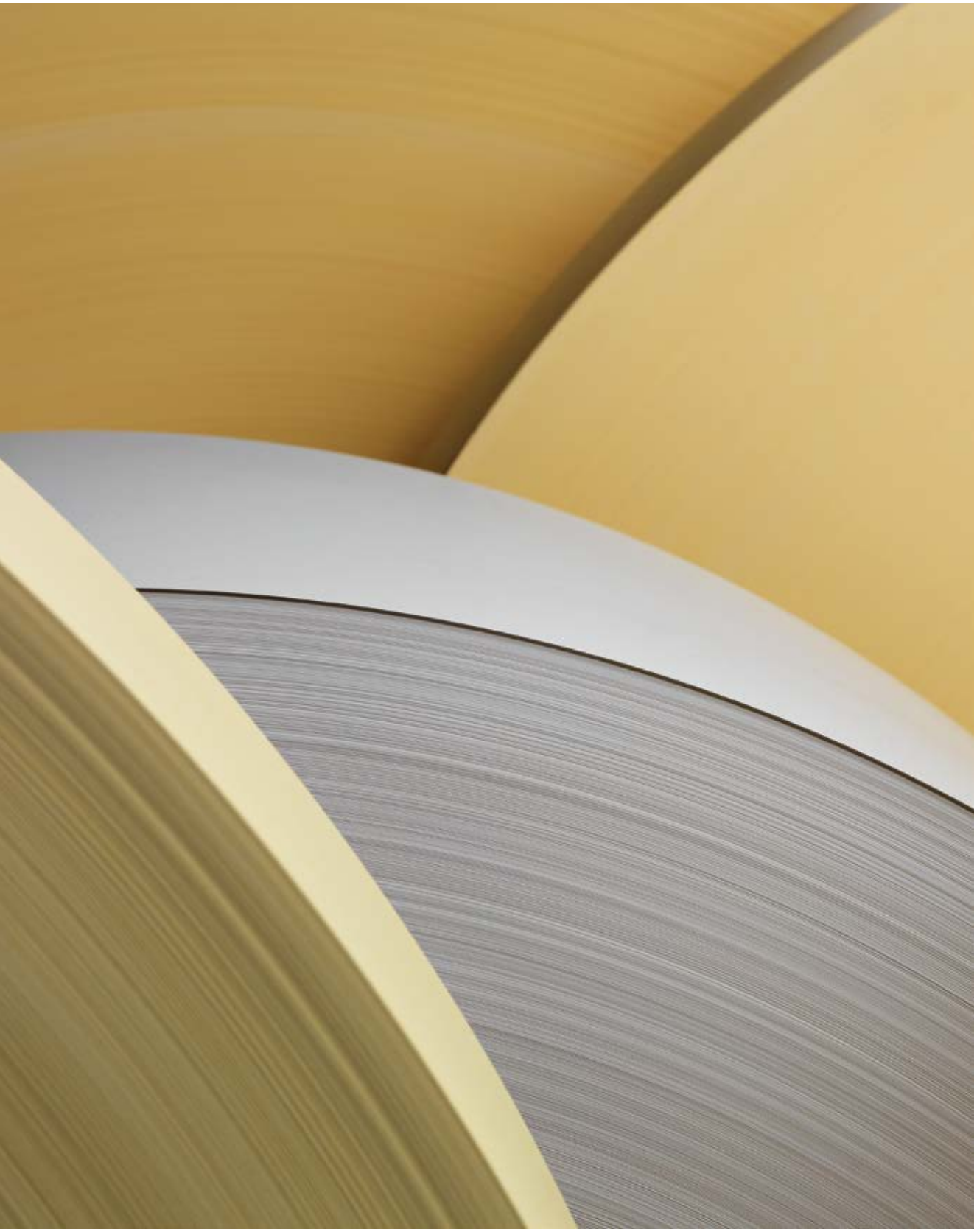
New RunEco vacuum system by Runtech, including EP600 turbo blower and EcoDrop and EcoSep water separators

OWNERSHIP AND FINANCIAL RESTRUCTURING

Refinancing is one of the options that helps companies improve their financial position. The company sought to replace its 2014 preventive financial restructuring agreement (MRA) with a long-term loan, which was provided by the commercial bank OTP in 2025. After ten months of intensive examination of the company, a contract was signed with OTP Bank, thus concluding several years of efforts for financial stability.

At the beginning of September 2025, there was also a key change in the ownership of Goričane, d. d. (JSC). On July 31st 2025, the company's annual general meeting was notified of the fact that the main shareholder of Goričane, d. d. (JSC), Papirus, d. o. o. (Ltd.), together with its subsidiary Papigor, d. o. o. (Ltd.), held a 99.59% stake in the company's share capital. The general meeting therefore adopted a resolution to exclude minority shareholders from the company.

Papirus d. o. o. (Ltd.), together with its subsidiary Papigor, d. o. o. (Ltd.), thus became the 100% owner of the company.



I am proud and pleased to have been a part of this company and team for 25 years.

Today, drawing on this valuable experience, I ensure the seamless organization and flow of information that underpins every business decision we make.

Tea Rezelj

head of business management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ÌCÀNE

SOURCES

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(2) Darko CAFUTA, Loška papirnica, Loški razgledi 32, 1985, p. 137–152

(3) Darko CAFUTA, Dodatek k zgodovini loške papirnice, Loški razgledi 33, p. 57–64

(4) Jože ŠORN, Razvoj papirnice Vevče, Ljubljana 1956, p. 9–137

(5) Archives of the Goričane Paper Mill.

(6) See (5)


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