

# FRIEDRICH BRUNO ANDRIEU, Entrepreneur and founder of Ironworks in Štore

***Important persons and their role in a certain period of history can be often evaluated only after a certain time, which shows the actual contribution of an individual in art, culture, science, economy development and industry...***

***Respecting their accomplishments achieved in different circumstances, means respecting their work and creativity, and so the cultural and technical heritage, which heirs are we all today.***



This time we are introducing an entrepreneur and founder of Štore Ironworks Friedrich Bruno Andrieu, who had an important influence on manufacturing and business processes in the 19th century, which refer to iron manufacturing in various places in Slovenia as well as Austria.

Friedrich Bruno Andrieu was born in Trieste to Augustu

Andrieu and Anna Maria born Toso on 4 September 1812. His father's family came from Provence, to where they came from Lyon. In the time of the French Revolution, the family left France by boarding an English ship. The English disembarked them in Trieste, i.e. Austria, which was a city, where refugees resorted. Among others, also refugees fleeing the Turks from Greece. It was in Trieste, where on 11 June 1807 their father married Anna Maria, who was a Greek refugee. It was a very happy and fruitful marriage. Ten children were born in the family. The first four were born in Trieste. The rest six in Toulon, where the family returned after the kingdom restoration. The fourth, in Trieste born child, was Friedrich Bruno, born on 17 September 1812. He returned with his parents to Toulon in 1814. In 1827, at the age of 14, he returned to Trieste, where his grandmother's family took care of his education.

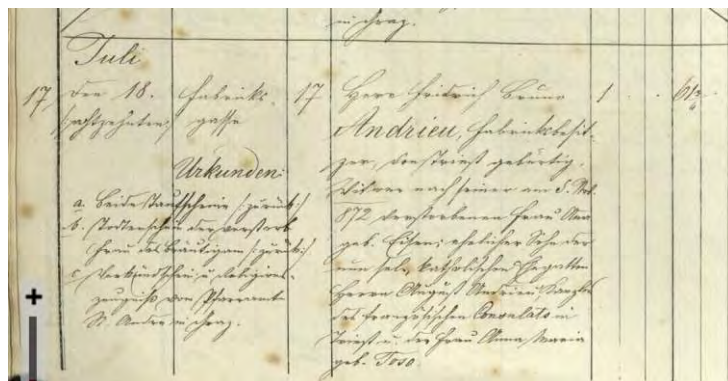
He mastered three foreign languages in his youth and did his apprenticeship in an iron hardware shop. He soon got several good jobs due to his education and knowledge of foreign languages. However, these jobs were interestingly not in the trade but in larger and smaller ironworks in Styria. Friedrich Bruno managed around 1840 a company of Friedau family in Leoben, which was an important post. It was during his job in Leoben that he met his wife Anna Victoria, who came from an old and respectful Eisen family, which was connected with iron manufacturing in Austria. He married Anna Victoria on 4 October 1841 and they started moving across the Austro-Hungarian Empire with their children as their jobs dictated.

F.B. Andrieu's next known job was at the ironworks in Dvor ob Krki. He was employed there in the time, when a well-known expert Ignatz Vitus Engelbert von Pantz introduced various inventions and innovations in the ironworks there. The most important was heating up the air to be blown into the blast furnace to 365°C in the years 1836-1837. Andrieu got familiar with innovations in the world iron manufacturing, when he was employed at Dvor Ironworks.

Fig 1: Friedrich Bruno Andrieu (1812 -1884): private collection/owner Dr. Johannes Andrieu, Landhausgasse 7, 8010 Graz

After leaving Dvor, probably 1837-38, he got a post as controller at Friedau ironworks in Vordernberg in Austria. He had probably been considering becoming an entrepreneur until leaving Dvor and manufacturing iron in a then modern way – puddling. So he can be found in 1850 in Štore. It was here that his youngest of four sons in his marriage to Anna Victoria was born in 1852. There were rumours on building an industrial complex for locomotive and carriage repair in Štore since 1846, in the time the Southern Railway (Vienna-Trieste) was being built. Later a railway connection Tirol – Budapest was built and Maribor became an important railway crossing and consequently central railway maintenance workshops were built. According to certain interpretations, F.B. Andrieu didn't plan to build ironworks. However, due to a good location at the Southern Railway and the fact that he purchased the whole coalmining estate from Ignacij Novak on 23 January 1850 it is reasonable to assume that it was his goal to build a factory with puddling furnaces and a rolling mill. In this case, it was iron processing and not iron manufacturing in blast furnaces. Puddling was then a modern way of processing iron that was very profitable.

In the year he bought the land and the mine he asked the mining board in Leoben for a concession to build puddling ironworks and a rolling mill in Štore, which was granted on 17 November 1850. An important advantage of this location was a good position at the



Southern Railway and an independent source of energy – coal from their coalmine. In those days, a concession for puddling ironworks was given only if the factory had its own source of energy because numerous forests were cut down in the previous centuries. The iron for the processing in the puddling furnace was delivered from nearby ironworks under Bohor and in Mislinja. Correspondence found between Anton Bonazzo in Mislinja and F.B. Andrieu from the period 1848-1851 proves that. It can be also seen from the letters that F.B. Andrieu was interested in slag samples from Mislinja ironworks already in 1851. He was probably interested in iron content of the slag. Other authors (Lang-Frey) patented in 1860 a procedure of puddling slag reduction and named it Lang-Frey method.

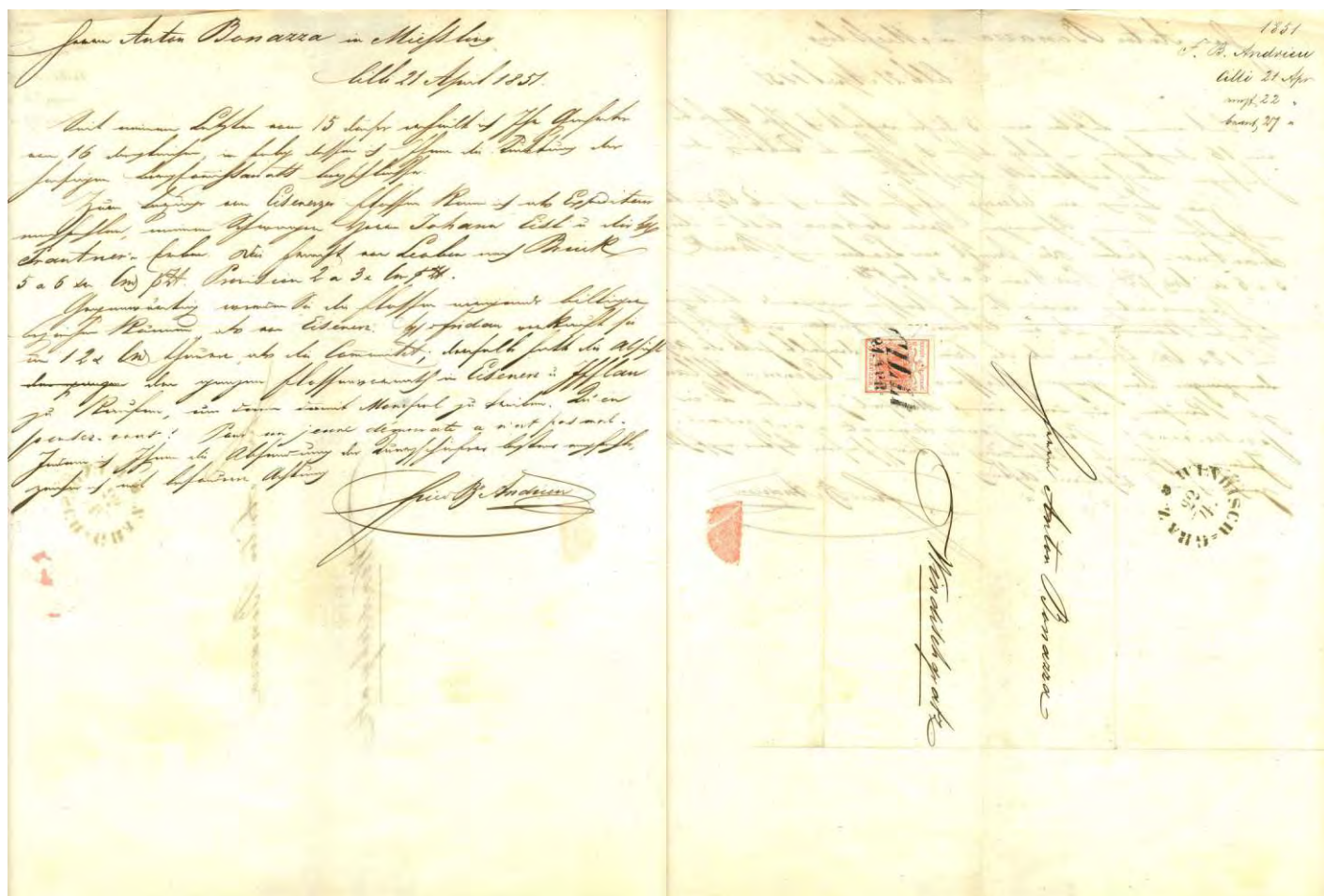
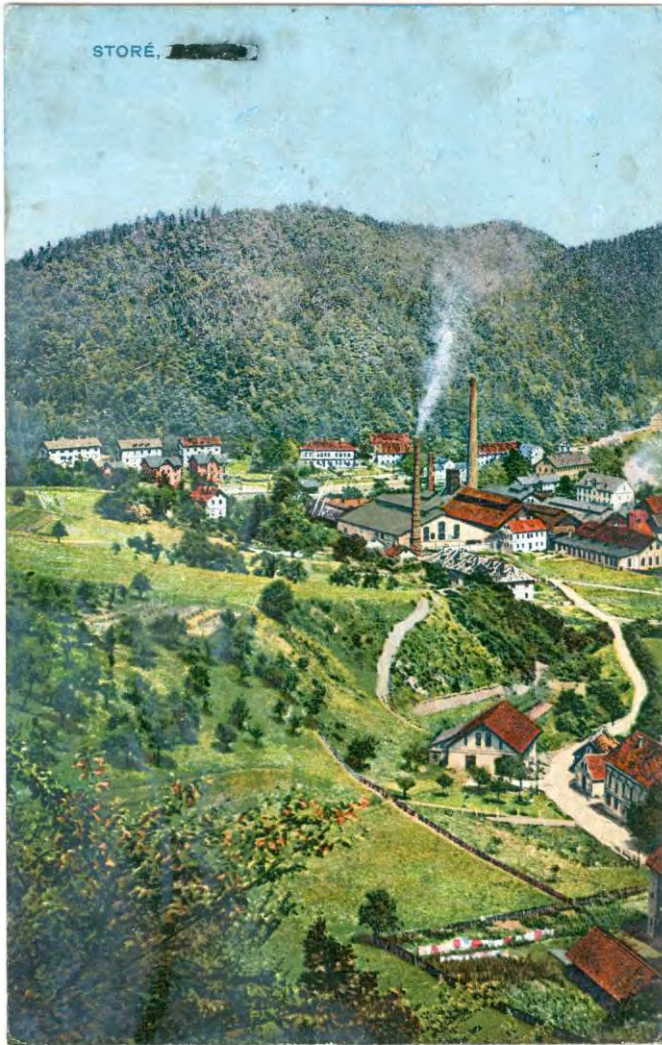


Fig 2: Statement from the Graz-Karlau vital records dated 18 July 1874, when F.B.Andrieu got married for the second time. His date and place of birth are stated in these vital records. Fig 3: The correspondence between A. Bonazzo in Mislinja and F.B. Andrieu in period 1848-1851 (Source: Koroški pokrajinski muzej, Muzej Ravne na Koroškem, Fund Mislińska železarna, Box 1).





blast furnace and elsewhere. Concession claim for the rolling mill proves that his purpose was to roll rails, for which there was great demand on the market in that period. Rails were already rolled in Prevalje and it seems he counted on their cooperation and help. When he was given concession for the building of the factory, F.B. Andrieu was left without means to purchase the machines and equipment. That is why he accepted on 13 June 1851 Pavel von Putzerja from Bolzano for a co-owner. This co-ownership was not very successful and they parted the following year, when Andrieu sold his concession for the puddling ironworks and the rolling mill, all the estate and the coalmine to Pavel von Putzer on 22 January 1852. Pavel von Putzer became so the sole owner of the factory. Unfortunately, there are no data and plans on the Štore ironworks building. We don't know the builders nor planners or consultants for the purchase of machines. It is obvious that they were well informed about the novelties in the world ironmaking since the ironworks was modern and technologically well organised for those times. Machine and equipment data are evident from the lawsuit procedure, which was filed in the Celje court for the ownership of concessions and land in Štore. It is evident from the preserved court records how the equipment was purchased. The new factory

was actually puddling ironworks with standard puddling furnaces as were then built all over Europe. The waste heat from the furnaces, which originally went out through the chimneys, was used to heat boiler water and to produce steam to drive the steam engines. The factory didn't use water power to drive the machines but had to use steam to drive all the machines, which was top technology in those days. The Štore factory was from the beginning designed as a classical industrial object with modern equipment as was the case in Central Europe and America. The ironworks can be presented as a state-of-the-art design and energy independent factory from the mid-19th century with its own transport capabilities.

F.B. Andrieu used the capital he got for the Štore Ironworks to buy an abandoned dish factory in Graz in 1852, which he adapted for wire drawing and wire nails manufacturing. This factory developed nicely in the next few years. In 1867, Friedrich Bruno Andrieu bought a factory on the river Mürz in a town Bruck an der Mur. He expanded the factory by providing material for his wire drawing machines.

Friedrich Bruno Andrieu had a great influence at building business processes and factories in the 19th century in the towns he lived in. In Štore, where he became the first owner and founder of a modern factory for those times, which later developed into successful ironworks that changed the town. These changes are results of industry. The place turned into a typical industrial settlement and industry was the main activity, which accelerated creation and development of other activities.

It was very similar in Austria, where successful managing of the factory in the town Bruck an der Mur on the river Mürz led to development and industrialisation of the town. F.B. Andrieu was actually the pioneer of a today still very successful wire industry in the town.

The story of life and work of F.B. Andrieu speaks of importance of entrepreneurial spirit for realisation of technical and technological achievements in production and business processes. These achievements were later foundation for the development of potentials in all areas in the towns, where companies developed: be it in art, culture, education, health system, science...and after all generated new entrepreneurial ideas.

### Slavica Glavan, Director, Štore Ironworks Museum

#### Sources:

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- Slovenske železarne Železarna Štore, Collection, 1975, Pages 5-12.
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Fig 4 View of the factory at the end of 19th century, Slavica Glavan: Štore na starih razglednicah, 2017