The First Samurai Who Learned Glass Technology at Bohemia 1873-1874

Ritsuo Yoshioka is Manager of Japan Uranium Glass Collectors Club (JUGCC)
http://uranglass.gooside.com/english.htm

1. The First Samurai Who Learned Glass Technology at Bohemia 1873-1874

Dear Siegmar Geiselberger,

Thank you for the study on my uranium glass vases, which I acquired at Budapest. When I saw your study article [Ref. 1] where you mentioned the Vienna World Exposition in 1873, I recalled my previous question on a certain old glass factory in Bohemia, which had a relation with Japan more than a century ago.

[Ref. 1] Vases of Uranium Glass: Islamic Design & Gilded Worm Line Decoration, found in Hungary 2016

When the Edo government collapsed and a new Meiji government started in 1868 as the “Meiji Restoration” (a kind of revolution), the government needed to establish various industries for a modern country. One of them was glass industry. At Edo period [Tokugawa period 1603-1868], glasses were made one by one at a handcraft level. So they wanted to introduce modern glass manufacturing technology from Europe to Japan.

Abb. 2016-2/42-02
Vienna World Exposition in 1873
At that time the **Vienna World Exposition** was held in 1873, and the Meiji government sent a **big mission** with various Japanese top-level crafts to the Expo. They were very much welcomed by European people as the **origin of Japanism**. After the Vienna Exposition, its ground became the famous **Wiener Prater Garden**.

After Vienna Exposition ending the **mission decided to dispatch some of the members** to the places, where they could **learn European technologies** in various areas. **Dr. Gottfried Wagener** [Ref. 2], who was a German chemist especially in ceramics and an advisor of the mission, helped to dispatch them, and glass manufacturing was one of the important areas.

**Tanehiro Fujiyama** was assigned for this objective. Fujiyama was a **samurai** at Edo period and he had once visited **Paris Exposition in 1867** and other European countries. He was at a position of **governmental officer** since 1871. Based on his career, he was supposed to have some knowledge on glass manufacturing.

Fujiyama became a head of the **Printing Bureau** of the Meiji government in 1875, and in 1877 became a **chief of factory operation** of the Shinagawa Glass Factory (SGF). SGF was the **first westernized glass factory in Japan**, located at the south end of Tokyo. SGF was started in 1873 and operated until 1892, mostly based on **four British glass engineers and technology** [Ref. 3]. SGF was in operation only 20 years in Meiji-era, but it was almost a kind of **Big Bang** on the glass industry in Japan. That is, the **people who were trained at SGF were spread all over Japan** to start many glass companies, such as sheet glass production, beer bottle manufacturing, incandescent lamp, various glassware, **Edo-kiriko** production, and the **first production of uranium glass** in Japan.

After SGF was closed buildings of SGF were used by the Sankyo Pharmaceutical Company. But all of them were demolished in 1960s and only one building was used as the **Meiji-mura Museum**.

**Tanehiro Fujiyama** is shown at the top-left of the photo below. This photo was taken at a certain famous studio in Nagasaki city, when they were leaving to **Paris Exposition 1867**. The center front samurai is **Tsunetami Sano**, who was a **leader** of this mission and he later became a chairman of the Senate.

Below is the photo of the **Shinagawa Glass Factory (SGF)**, taken in 1910. The **first railway** (Tokaido-line) is running at the side of SGF. The author has been commuting his office using this line for several decades, but he recognized its location only 2 years ago by on e-mail from **Sally Haden**, who is a descendant of the above **British glass engineers** in SGF.

Nowadays, only a **memorial stone** is left at SGF ground, which says that this is the **birthplace of modern glass industry in Japan**.

In 2015, the Sankyo Pharmaceutical Company sold this ground to the Central Japan Railway Company, which plans to use this ground for the electric power supply station for the coming linear motor car express line.

**Fujiyama left a report on glass manufacturing technology at Bohemia**, where he stayed and learned several months in the beginning of 1874. I was searching for this factory. He only left a pronunciation of the factory owner and the village name as Mr. “**Storzfes**” in “**Suchentar**” village (Correct spelling is not recorded.). That factory manufactured various glass products besides window glass. Since samurai **Tsunetami Sano** left an official report that **all factories for Japanese trainees were arranged by Wagener**, the above factory might be a **big or famous factory** at that time. I tried to search through the Internet, but I could not find it. If you can find this missing factory, we can add a new fact to the Japanese glass history.
Shinagawa Glass Factory in 1910. In the lower right corner one can see the tracks of the Tokaido-Line railway.
Courtesy of Meiji-mura Museum.

2. Looking for the Factory

Based on my previous memo, Mr. Siegmar Geiselberger, who is editor of German glass journal of Pressglas-Korrespondenz, provided me the following comment:

I attach a study about glass works in Bohemia as PDF [Ref. 4] for “Suchenthal” of “Stölzle”, the Czech name was “Suchdol”. About 1873, it was one of the most important glass works. Stölzle and Suchenthal are the names which come most closely to the names you cited.

I now all glass manufacturers in Bohemia at the time of Vienna World Exhibition 1873.

There is no other name of a person or a location with the exact names you cited. But I think that one of the next addresses - nearest to Vienna - would have been the very important glass manufacturer Carl Stölzle with some glass works which he at this time had leased from the very famous “Counts of Buquoy” near their residence at Nové Hrady / Gratzen. Later Stölzle bought them all and some more from another well-known glass manufacturer Zich and from the Count of Pallfy in this region. The whole region at the northeastern outskirts of Bohemian Woods was the most important region of glass production in Bohemia about 1873.

All other important glass manufacturers who were present in Vienna 1873 were far more northern of Stölzle at the Southern outskirts of the Giant Mountains in Northern Bohemia and in Northern Moravia (Josef Schreiber, Samuel Reich).

3. Stölzle’s Glass Factory at Suchenthal, where Fujiyama Stayed after Vienna Exposition 1873

3.1. Location of Suchenthal

Based on Geiselburger’s explanation, it is confident that Fujiyama stayed at the Stölzle’s glass factory in Suchenthal. As he suggests, Stölzle’s factory in Suchenthal was the closest glass factory to Vienna, because it was located in the most southern region of Bohemia and convenient for Fujiyama to reach.

Especially, in 1871, the Kaiser Franz Josephs-Bahn (Emperor Franz Joseph’s Railway) connected Vienna and Prague, and Suchenthal (“Suchdol nad Lužnicí”, in Czech) became one station of this railway [Ref. 5].

There are more villages having the name of “Suchdol” in Bohemia, but there was a big glass factory owned by Carl Stölzle at “Suchdol nad Lužnicí”. Since this was the closest to Vienna and one of the big glass factories in Bohemia, it was most suitable for Fujiyama to learn glass technology.

As is seen in the following map, Suchenthal is in the middle from Vienna to Prague. The current railway map does not show this station, but it is 17 km north of České Velenice, which is the south end of Czech.

The following map shows more details of the location of Suchdol nad Lužnicí, České Velenice is near the south frontier of Bohemia and Nové Hrady was the residence of the Counts of Buquoy.

Abb. 2016-2/42-09
Map near Suchenthal (Suchdol nad Lužnicí): Google Maps

3.2. Stölzle’s glass factory

Stölzle’s Glass was one of the biggest glass companies in Bohemia. Sometimes it was called Stölzle’s Glass Empire. Carl Anton Stölzle (first) started his glass business in 1830s and it was expanded to own many more factories in Bohemia.

Suchenthal factory was the biggest one among his glass factories at the end of 19th century, based on Geiselberger’s study. It was originally owned by the Counts of Pallfy and was bought by Carl Stölzle in 1849. The following illustration shows this factory [Ref. 4]. Its age is unclear, but it is sometime before 1898, when the source document was issued. Since the steam locomotive is running behind this factory, it was drawn at least after 1871.

Based on Geiselberger’s investigation the Stölzle’s glass factory in Suchenthal was closed in the 1930s after the Great World Economic Crisis. He was there some years ago and did not find old buildings of it.

Abb. 2004-1/201

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When Fujiyama stayed at Stölzle’s glass factory in Suchenthal, it was owned by Carl Stölzle (second), who was a son of Carl Anton Stölzle [Ref. 6].

Abb. 2016-2/42-11
Carl Anton Stölzle (first)
Founder of Stölzle’s Glass Empire
born in 1802, deceased in 1865

Abb. 2016-2/42-12
Carl Stölzle (second)
Son of Carl Anton Stölzle (first)
born in 1830, deceased in 1896

[Ref.6] “Family History of Stölzle Since 1759” (in German), Pressglas-Korrespondenz 2010-4

As a conclusion it is confident that Tanehiro Fujiyama stayed and learned glass technology at the Stölzle’s glass factory in Suchenthal (“Suchdol nad Lužnicí”, in Czech), after Vienna World Exposition 1873.

The reasons why this factory was selected might be as follows.

1) The Stölzle’s Glass Empire was one of the biggest companies in Bohemia, and Suchenthal factory was biggest one among Stölzle’s factories.

2) They exhibited their glass products at Vienna World Exposition 1873 and Gottfried Wagener, who has arranged to dispatch Fujiyama, could know their importance.

3) The Stölzle’s glass factory in Suchenthal located at the most southern part of Bohemia and closest to Vienna. Especially in 1871, a new railway connected Vienna to Suchenthal, and it was convenient for Fujiyama to reach here.

Note SG:

Wikipedia DE: Gottfried Wagener (born 1831 in Hanover; died 1892) was a scientist and technician who had a major role in Japan in the development of local engineering studies.

Wagener studied in Göttingen mathematics, physics, chemistry and mechanics, making 1851 the headteacher exams. The topic of the “Representation of the different methods to determine the acceleration of gravity” led him to problems that are important for Seismology.

From 1852 to 1860 he lived in Paris and from 1860 to 1864 he worked as a teacher at a technical educational institution in Switzerland. In 1868 he went in the service of the American trading firm Russell & Co. to Nagasaki. The brother of the company owner, John G. Walsh, had Wagener induced to accompany him to Japan to set up a soap factory. The company was a failure and so he built by order of the governor of Hizen Arita the first furnaces arranged for hard coal for the resident Manufactory of Porcelain.

At the end of 1870 he received a job as a teacher at Kaiseijo in Tokyo where he was teaching German besides mathematics and natural sciences. After changing teaching activities he was appointed in 1882 as a lecturer at the Imperial University which emerged from the Kaiseijo. In 1884 he joined the Arts and Crafts School of Tokyo as the main conductor of the ceramic and glass engineering department. There he could unfold his abilities best until his death.

Wagener’s work has been invaluable for Japan. By word and deed he worked for the conversion of traditional industries for the European market. He had outstanding achievements in the participation of Japan in the World Expo 1873 in Vienna. The unexpected success there encouraged Japan to participate in the World Expo 1876 in Philadelphia, where Wagener was again sent to as representative of the Japanese government. [...]
Abb. 2016-1/30-05; C. Stölzle’s Söhne, K. k. landesbefugte Glas-Fabrikanten in Böhmen & Österreich, Wien, Freihaus III. Hof Stand auf der Weltpausstellung Wien 1873 (linke Hälfte); offizielle Fotografie Michael Frankenstein & Comp. 1873 Sammlung Historisches Museum der Stadt Wien, Inv.Nr. HMW 078080 00393
Abb. 2016-1/30-06; **C. Stölzle’s Söhne**, K. k. landesbefugte Glas-Fabrikanten in Böhmen & Österreich, Wien, Freihaus III. Hof
Stand auf der **Weltausstellung Wien 1873** (rechte Hälfte); offizielle Fotografie Michael Frankenstein & Comp. 1873
Sammlung Historisches Museum der Stadt Wien, Inv.Nr. HMW 078080 00393
Siehe unter anderem auch:
WEB PK - in allen Web-Artikeln gibt es umfangreiche Hinweise auf weitere Artikel zum Thema:
suchen auf www.pressglas-korrespondenz.de mit GOOGLE Lokal ➔

www.pressglas-korrespondenz.de/aktuelles/pdf/riedel-uranglas.pdf
(Set of 8 Russian Enamelled Vaseline Uranium Glass Goblets, ca. 1850)
(SG: Die Pressglas-Korrespondenz ist endlich auch in Japan angekommen!!!)

http://uranglass.gooside.com/UG8jamboree/jamboree2016.htm ..................................................... (Bilder)
www.youtube.com/watch?v=roHm9gh4JH8&feature=youtu.be ........................................................... (Video)
https://youtu.be/roHm9gh4JH8 ............................................................................................................ (Video)
http://uranglass.gooside.com/english.htm ............................................................................................ (Literaturangaben)
www.vaselineglass.org ................................................................. (Vaseline Glass Collectors, Inc., VGCI)
www.glassassociation.org.uk/sites/default/files/Uranium_Glass_sample_article.pdf
www.glass.co.nz/Davidson.htm
http://1st-glass.1st-things.com/vaselineglass.html

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Weltausstellung Wien 1873, Glasindustrie …

www.pressglas-korrespondenz.de/archiv/pdf/pk-2010-3w-schmitz-bemerkungen-bayern-glasindustrie-1834.pdf
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(... Bayern)
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