Artículo breve/Short note

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THE IRON TRAIL IN AUSTRIA

Fathi Habashi

Department of Mining, Metallurgical, and Materials Engineering, Laval University, Quebec City, Canada
Fathi.Habashi@arul.ulaval.ca

RESUMEN

La industria actual del hierro en Austria tiene sus inicios en la época romana, concretamente en la provincia de Noricum, ahora conocida como Styria [Steiermark en alemán]. Hoy en día, esta actividad está bien documentada en el llamado Eisenstrasse, es decir, el rastro del hierro. Restos de los hornos, fraguas, ciudades que fueron creadas alrededor de la industria, etc., se han preservado en condiciones óptimas como bienes del Patrimonio Nacional.

PALABRAS CLAVE: Hornos, fraguas, Patrimonio Nacional, Styria, Noricum.

ABSTRACT

The iron industry in present day Austria dates from Roman times in the Province of Noricum, roughly today Styria [Steiermark in German] is well documented in the so-called Eisenstrasse, i.e., the Iron Trail. Remains of blast furnaces, forges, towns that were created around the industry, etc., are well preserved as a national heritage.

KEY WORDS: Blast furnaces, Forges, National heritage, Styria, Noricum.

The Iron Trail in Austria is an open air museum that starts in the Leoben region in Styria and ends at Steyr in Upper Austria (Figures 1 and 2). It is dedicated to preserving, revitalizing, and publicizing the technical monuments of the region which are connected with the mining and smelting of iron ore. It is marked by the logo shown in Figure 3.

One of the dominant features of the region, both geographically and economically, is the Erzberg — the "ore mountain" near Leoben (Figure 4). Here the Styrian iron industry began as early as the eighth century AD (Figure 5). This spectacular mountain, carved into a series of giant steps by centuries of mining, is the largest open-pit mine in Central Europe. At its foot lies

Figure 1. The Iron Trail in Austria is between Graz and Linz.

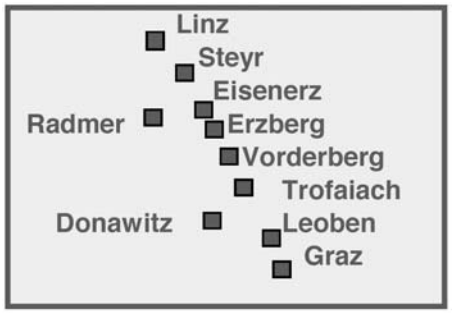

Figure 2. Iron Trail in detail.

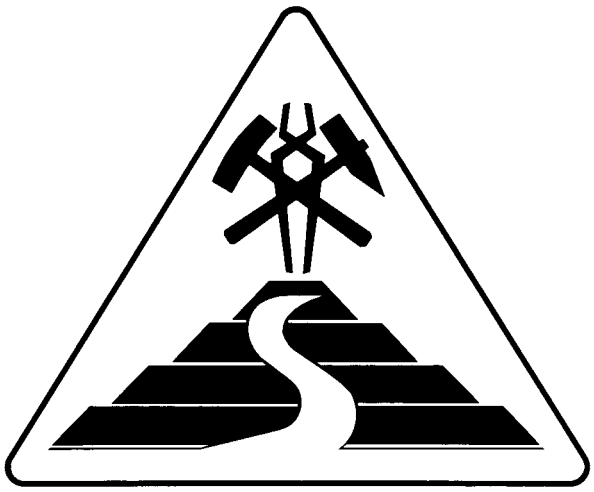

Figure 3. Logo of the Iron Trail in Austria.

Figure 4. Erzberg open-pit mine for iron ore near Leoben in Austria.

the town of Eisenerz. During the Roman Empire iron was produced from this region that was known at that time as Roman Province of Noricum. During its heyday, it was the center of iron smelting but since 1945 the ore has been shipped out for smelting elsewhere. The town centre has been restored, including the old town hall and a large barn where grain was stored. This was necessary because there was no possibility of growing grain in the vicinity, whereas thousands of people had to be fed. Thus, food, as well as charcoal for the furnaces, was transported to Eisenerz from afar. The highest mine official had the responsibility of providing food. His house, the "Kammerhof," is still in existence. A hunting lodge formerly used by Emperor Franz Joseph I is now a museum.

In the thirteenth century, however, important technical changes began to take place starting with the use of water power to work the bellows which provided air for the furnaces. As a consequence of the need for water, the furnaces and forges gradually moved down the valley and nineteen water wheels were constructed. Gradually, the scale of operations increased. By the middle of the sixteenth century about 100 large forges were in operation in the region.

Figure 5. Primitive iron production in the forest. Note charcoal production in the kiln on the right and a worker operating a bellow.

Production of raw iron reached about 12 000 tons per year, then fell during the seventeenth century due to a shortage of wood for charcoal, as well as problems of transportation. However, production increased later due to the introduction of the steam engine reaching 21 000 tons of raw iron in 1820 and 82 000 tons in 1860. Transportation problems were eased by the construction of a railway. Blast furnaces began to replace the older shaft furnaces in the eighteenth century, and the modern era arrived with the first Bessemer converter in 1863 and the first open hearth furnace in 1868.

The next stop of interest is the town of Trofaiach, a centre of the iron trade since the fourteenth century. Here is found the remains of the largest charcoal blast furnace in Europe; this was in operation until 1910. To the west of the town is the seventeenth-century castle of Stibichhofen, which today houses a museum with a section illustrating the history of mining.

Some 15 kilometres west of Leoben is Donawitz. This centuries-old town of iron forging and steel production is the second centre of the United Austrian Iron and Steel Works [VÖEST, acronym for Vereinigte Österreichische Eisen- und Stahlwerke]. The first center is in Linz in the north. For several kilometres here the Iron Trail is built up with operating plants and furnaces, among the most modern in Europe. A few kilometres north of Donawitz is the church of St. Peter Freienstein and the nearby castle of Friedhofen, the estate of a seventeenth century forge owner. Further along is the former "Jandl'sche Blechhammer," a plant which was founded in 1817 and used after 1883 for the production of iron sheet. Although operations ceased in 1900, the various buildings, including a manor house, are preserved.

Approaching the town of Vordernberg, the centre of the Iron Trail, the visitor passes the "Friedau-Plant" where as late as 1880 the most important of the original "Radwerke," i.e., water wheels was in operation which powered the bellows for the iron-making furnaces. Close by, a few workshops remain. In the centre of Vordernberg is another iron forge with a water wheel. This was formerly a training centre School for Mining and Smelting (Figure 6), the forerunner of the present-day Mining University (Figure 7) now a museum.

The main square of Vordernberg, with its large cast-iron fountain, is lined with the houses of the "wheel-masters." One is now the town hall. The charcoal furnace operated by water wheel which was in production until 1911, has been restored and is now the most important museum of its kind in Central Europe. The buildings of the water wheel, the furnaces, and a hut for the steam engine, are museums today, and several houses of the owners, are being restored. On the outskirts of Vordernberg is a Gothic church named after St. Lawrence, the patron saint of foundry workers.

Following along the Iron Trail past Leopoldsteiner Lake, is the town of Radmer. Both copper and iron ore have been mined in this region, where the first blasting was carried out in 1627. The Iron Trail ends at Steyr, for centuries the centre for iron goods. These were transported via Regensburg to the Baltic Sea and to Russia.

Figure 6. Montanistische Lehranstalt, a school for mining and smelting at Vordernberg from 1840 to 1848, forerunner of the Mining University in Leoben, now a museum.

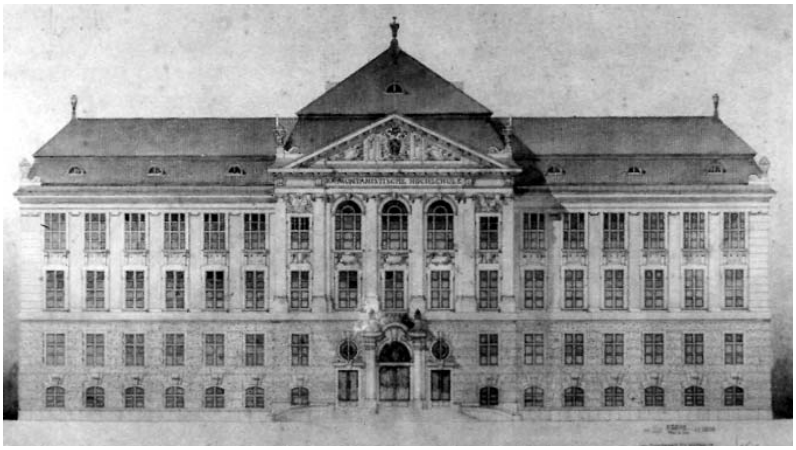

Figure 7. Mining University in Leoben from 1848.

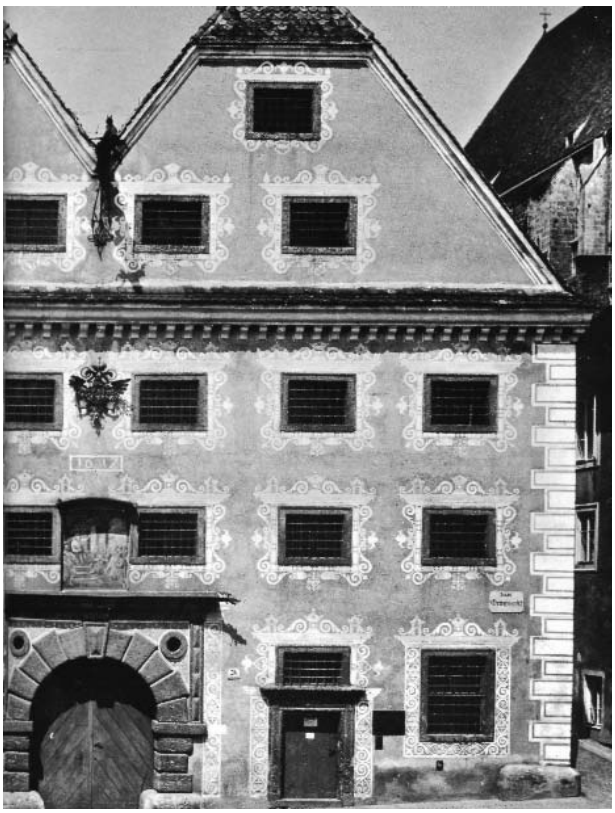

Figure 8. Iron museum housed in a building dated 1617 where the hammer-works for manufacturing scythes are preserved.

Thus Steyr was important for the iron trade with the countries to the north, just as Leoben, at the beginning of the Iron Trail, was important for trade to the south. Today there is an automobile factory in the town and an iron museum housed in a building dated 1617 where the hammer-works for manufacturing scythes are preserved (Figure 8).

Finally, at Linz on the Danube is the main steel works of VÖEST where the LD process was invented in 1955. Originally, LD was an abbreviation for Linzer Düsenverfaheren, i.e., the Linz lance technology, but realizing that this was difficult for non Germans to remember the abbreviation now refers to Linz - Donawitz process.

SUGGESTED READINGS

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