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Autor: Staub, Hans O.
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Jacob Schmidheiny II
1875–1955



Jacob Schmidheiny II (1875-1955)

Brickmaking, optics and mechanical engineering

Born on 21 June 1875, Jacob Schmidheiny II was repeatedly teased throughout his life that he had come into the world on the longest day of the year. His 70th birthday was no exception. At a ceremony on that day, when the Federal Institute of Technology (ETH) conferred an honorary doctorate on him, the rector of the day, Professor Franz Tank, lauded Jacob Schmidheiny as «a sunny child of Fortune» who had journeyed through life «under the sign ... of prolonged daylight and extended working hours».

Good luck and work, a fortunate family background, combined with diligence and ability, with entrepreneurial daring and personal tenacity, with a thirst for action but also a sense of social responsibility – these were to be the qualities that would mark Jacob Schmidheiny's activities for eighty years. This is why the fine words «sunny child of Fortune» do not tell the whole story, as he himself wrote in a memoir of 1948: «In this way I came to like work, and this pleasure in work and in taking a certain risk remained with me all my life. And seeing that I not only enjoyed work myself, but also realized that there were many others who did likewise, I tried all ways to create work and hence opportunities for earning a living. That is about all that I have to say about my work, although I cannot deny that good fortune never completely left me in the lurch, which is not to say that I did not lose my way from time to time.»

Good fortune: for Jacob and his older brother Ernst it consisted ini-

tially of the inheritance passed down from their father – a piece of luck which for the moment, of course, they were hardly in a position to fully enjoy. After primary school in Balgach and secondary school in Berneck Jacob Schmidheiny attended the St. Gallen cantonal school. But he had to leave after two years because the construction and brickmaking industry was currently going through a serious crisis, and the young highschool student's help was needed in his father's business. On foot and by bicycle he went round builders and authorities instructed to see if he could not inject new life into abandoned construction projects – as he himself put it, an excellent way «to cut one's teeth». Only then was he in a position to continue his formal education: one and a half years of commercial college in Neuchâtel to brush up his French, an apprenticeship in Bührer's brickworks office in Constance, followed by another spell at the cantonal school in St. Gallen, where in 1895 he passed his high school leaving examination. Finally, he spent four years studying engineering science at the ETH in Zurich, graduating in 1899 as a qualified civil engineer. «The rest of that year», as he himself noted, «was spent catching up on the military service I had missed out and staying in Florence to learn some Italian.» In the end all this added up to a complete education – no small achievement, considering the financial woes that plagued father Jacob at that time. Meanwhile on the domestic front at Heerbrugg a «strict but kind mother» saw to it that son

Jacob «remained in harness and did not slack in his efforts».

With 1 HP from St. Gallen to Heerbrugg

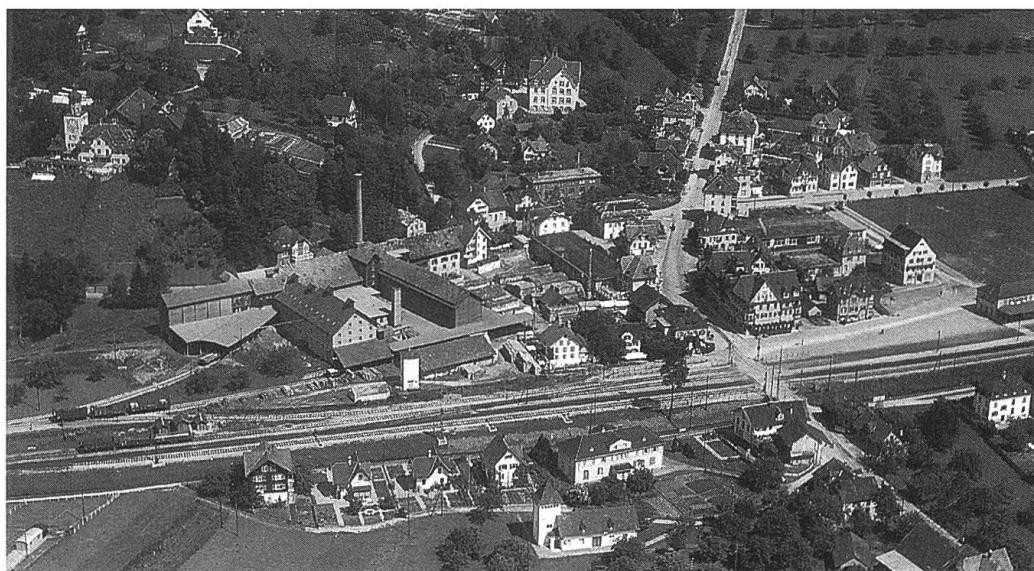
Jacob Schmidheiny could really have joined his father's brick and tile-making business in 1900. But for the time being he preferred to do something practical. He was taken on by the Geneva-based firm of Chappuis as general foreman in charge of the weir and canal at Lausanne's *Forces Motrices du Rhône* in Evionnaz. In the summer of 1901 he was promoted there to site supervisor. Shortly afterwards the *Société Franco-Suisse pour l'Industrie Electrique* in Geneva engaged him to work at the *Derivazione del Tirino* in Bussi (Abruzzi Mountains), where he independently supervised on behalf of the VOLTA *Società Meridionale di Elettricità* the construction of a power station from the cutting of the first turf to the moment the station came on stream. During building operations he had under him a workforce of 1500 Italians, with whom, it seems, he enjoyed a relationship of the utmost mutual trust – he already knew the Italians from his father's brickworks, finding them a congenial people.

In 1902 Jacob Schmidheiny returned home to the Rhine Valley but



Fanny Schmidheiny-Alder 1881–1967

did not sever his links with St. Gallen, as he later noted. For he found there his «devoted companion through life», Fanny Alder from Speicher, whom he apparently visited coming from Heerbrugg on more than one occasion. «The train connection from the cantonal capital to *our neck of the woods* was just as bad then as it is now», he noted in a memoir of 1948, «and so I journeyed backwards and forwards with my 1 HP vehicle, a horse, or sometimes by bicycle, or even on foot, travelling through the night from St. Gallen back to Heerbrugg to be at work again at dawn.» In April 1904 he married Fanny. Their first daughter, Helen, was born in



Heerbrugg 1933



The first firm's name-plate of «J. Schmidheiny & Co.», after Jacob Schmidheiny II had become sole partner with unlimited liability of the company in 1907

1905, a son, Peter, followed three years later, and in 1911 and 1917 they had two more daughters, Marianne and Ursula.

Meanwhile, in Heerbrugg, Jacob and his father, together with Jacob's brother Ernst, had established the company of *Jacob Schmidheiny und Söhne*, which in 1905, after the death of Jacob senior was transformed into *Jacob Schmidheinys Söhne*. Now the whole responsibility for the family concern fell to these two representatives of the younger generation, moreover at a time when the construction industry as a whole was in poor shape. There were a number of factories they had to oversee: Heerbrugg, Bruggwald by St. Gallen, Istighofen and Oberriet, and everywhere the problems were the same. The quality of the products needed improving, production costs had to be driven down, and there was room for improvement in what we today call «marketing». This meant increasing manufacturing efficiency, designing new products, improving existing ones, and bringing sales,

which was often totally chaotic, into line with a streamlined manufacturing process.

Managing director of Zürcher Ziegeleien

For a while the two brothers set about the daunting task together. Although by 1907 Jacob Schmidheiny had become sole «partner» with unlimited liability in the Heerbrugg firm (meanwhile renamed *Jacob Schmidheiny & Co.*), Ernst Schmidheiny nevertheless continued to be involved with the brickmaking industry. Both were convinced that it would only be possible to create a new – and badly needed – commercial organization and to modernize manufacturing facilities by pooling resources, by merging a number of major factories, or even by some actual cartellization. Since 1906 both brothers had sat together on the board of directors of the steam brickworks *Dampfziegelei Heurieth*, which amalgamated a year later with the *Albishof* factory to form the *Albishof-Heurieth* brickworks. This in turn

Protokoll

der Verwaltungsrat der Zürcher Ziegeleien

Präsidium

Freitag 14. Juni 1912

Protokollbuch 4/4/12

Protokolldaten:

Wahlordnung des Verwaltungsrates
Bestimmung des Präsidenten und der Vizepräsidenten
Organisation des Verwaltungsrates (Aufteilung der Kompetenzen etc.)

Präsident: Herrn Prof. Escher, Schmidheiny, Baur, Dr. Schmid & Süstrunk. Herr Dr. Schmidheiny ist von Ressig mit aufgefordert.
Der Vizepräsident ist Herr Prof. Escher. Der Vizepräsident ist Mitglied des Verwaltungsrates und auf den Präsidenten will beschränkt.

Der offizielle Brief wird auf die Ratsmitte von 3 Jahren gesetzt.
Zum Präsidenten: Herr Prof. Paul Escher

"Vizepräsident: Herr Nationalrat Schmidheiny

"Vizepräsident des Verwaltungsrates: Herr Nationalrat Schmidheiny
& dies auf vier Jahre:

Zum Protokollpräsidenten: Herr Hans Süstrunk

Der Präsident wird von Ressig bestimmt und die Ratsmitte
wurden mit folgenden Resolutionen bestimmt und aufgenommen:

Auf 3 Jahre bestimmt wird durch "seminarisch" aufgeteilt.

1. 8 Jahre 2. das Amt Präsident wird durch "Protokollpräsident" aufgeteilt.

13 bestimmt wird: die amtliche Generalversammlung öffnet Monat
März abgehalten. Der Verwaltungsrat bestimmt den Tagabend, die
die Zusammensetzung, die Führer & seine Rechte über die Verwaltung
des Zusammensetzung gebildet werden. Die gebildete Verwaltung wird den
Ministern Mindestens 14 Tage vorher gegen Ressig zum Aufzähler
gegeben. Die Generalversammlung aufgefordert etc., einschließlich.

Auf 19 Jahre 2: Wo wird über die Verpflichtungen & Rechte des
Verwaltungsrates ein Protokoll gegeben & wann aufzugeben & wann
Protokollpräsident bestimmt wird.

The minutes of the first board meeting of Zürcher Ziegeleien on 14 June 1912, following the merger of the two brickworks Mechanische Backsteinfabrik Zürich and Albishof-Heurieth. «Present: Prof. Escher, Mr Schmidheiny, Mr Baur, Dr Schmid & Mr Süstrunk... Prof. Escher is in the chair.»

merged in 1912 with the brickmaking factory *Mechanische Backsteinfabrik Zürich*, which had been in production since 1861, and which in those days with its two plants in Binz and Tiergarten was regarded as the most productive brickworks in Switzerland.

The new company adopted the name of *Zürcher Ziegeleien (ZZ)*.

For a time Ernst Schmidheiny, the former manager of *Albishof-Heurieth*, played a leading part in the new company. He was appointed deputy chairman and managing director. When he



Transporting Zürcher Ziegeleien clay around 1930

stepped down in 1925, his brother, «Colonel Jacob Schmidheiny, likewise major shareholder», was nominated as his successor on the board, a move which caused some consternation during a plenary session of the general meeting. The minutes record that the then chairman, Hermann Keller-Malzacher, evidently put on the defensive, was compelled to point out that «Colonel Jacob Schmidheiny (...) is admittedly (...) one of our greatest competitors», but that «a very cordial relationship exists between *Zürcher Ziegeleien* and the Schmidheiny company». Also «Colonel Schmidheiny has a profound knowledge of syndicates, which could prove highly advantageous in future negotiations». However, the chairman evidently did not manage completely to win round the general meeting, for in a secret ballot Jacob Schmidheiny managed to obtain only 2420 votes out of a total of 3015.

But in any case he had now been

elected to the board. A year later Jacob Schmidheiny, following the death of the incumbent chairman and managing director, Hermann Keller-Malzacher, himself became the new managing director. As a result the reins of *Zürcher Ziegeleien* fell into his hands, and he remained on the board of directors from 1933 until his death in 1955, also serving as chairman. Between 1932 and 1941 he incorporated into the Zurich group his eastern Swiss brickworks *Ostschweizerische Ziegeleien*, which included the Istighofen, Bruggwald (near St. Gallen), Oberriet and Heerbrugg plants. The corporate structure of the first three factories was broken up, although Istighofen in the canton of Thurgau remained until the present day the premier production site. Always a traditional firm, *J. Schmidheiny & Co.* continued to bear the old name, serving as a sales company for eastern Switzerland. In a curriculum vitae penned in 1941 Jacob Schmidheiny recorded with evident

satisfaction: «Gradually I managed to assume control of (...) the entire group of 10 brickmaking factories. I had arrived at the goal which I had set my sights on from the very beginning.»

The brickmakers' main worries

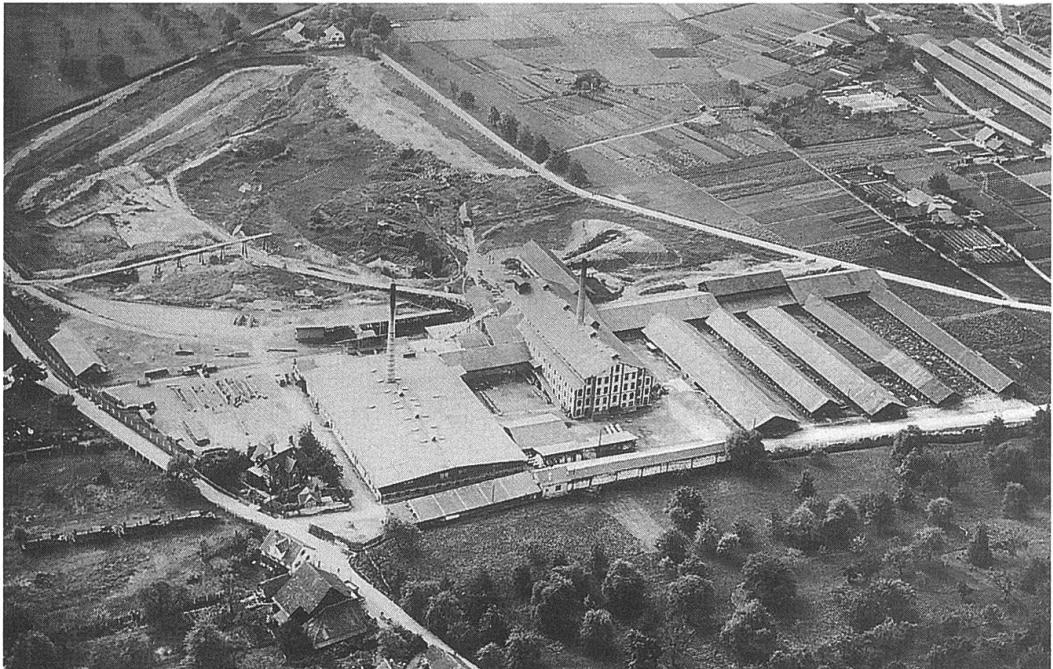
Under Jacob Schmidheiny's leadership *Zürcher Ziegeleien* burgeoned into Switzerland's largest brick and tilemaking concern – despite all the adversities of the time, which in some years frustrated any pick-up in this sector. In the late twenties and early thirties the so-called «new way of building» caused problems for the brickmakers. In the field of structural engineering concrete was being used more and more, and houses were being increasingly built with flat roofs. Both factors threatened the sale of bricks and tiles, all the more so when the cement producers for their part in the so-called «cement war» sought to flood the market with cheaper products, in the process making competition much more ruthlessly.

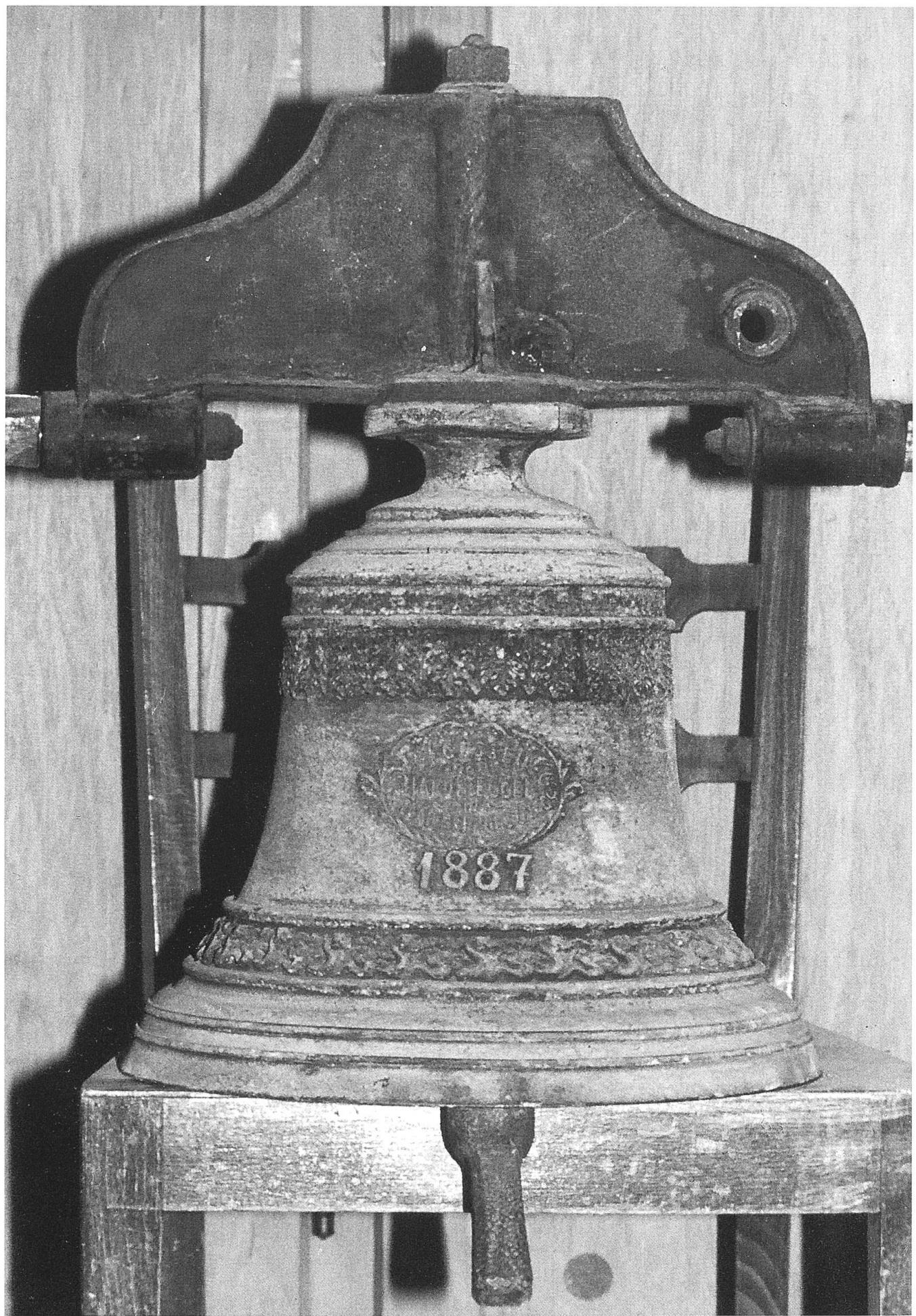
In those days *Zürcher Ziegeleien* were by no means content merely to take defensive action. Under Schmidheiny's chairmanship individual firms were merged, leading to an even more rigorous rationalization of all operations and enabling some plants to specialize in certain products. The strategy also made it easier to reconcile the discrepancies in sales between the urban and rural markets, as well as between the different regional markets.

As a civil engineer, Jacob Schmidheiny saw that new and improved products had to be produced both to do



The Zürcher Ziegeleien Tiergarten site in the 1930s (small picture top right) and before its closure in 1974. Triemli Hospital in the background.





Workers at the Zürcher Ziegeleien plant knew it was time for their four o'clock break when they heard the bell (cast in 1887).

justice to the changing construction methods of the modern age and to be able to function more economically. But this could not come about without modernizing the plant at the brick-works and without improving transportation.

With these objectives in mind the Heerbrugg industrialist risked innovations which would require a very bold hand on his part if they were ever to come about. But he went on to oversee the development of products which today have become common features in the brick and tilemaking industry.

As early as 1913 the firm of *J. Schmidheiny & Co.* in Heerbrugg owned the contractual rights for the manufacture and sale of the Pfeifer hollow ceiling block. In the estimation of engineer Schmidheiny, statically perfect reinforced concrete hollow block ceilings were suitable for replacing the conventional type of ceiling construction used hitherto – an insight with far-reaching implications. It enabled brickmakers to gain a foothold in the reinforced concrete method of building. Nowadays in the German-speaking parts of Switzerland hollow block ceilings are hardly made any more, but in other countries (such as France or Italy) they are still in use.

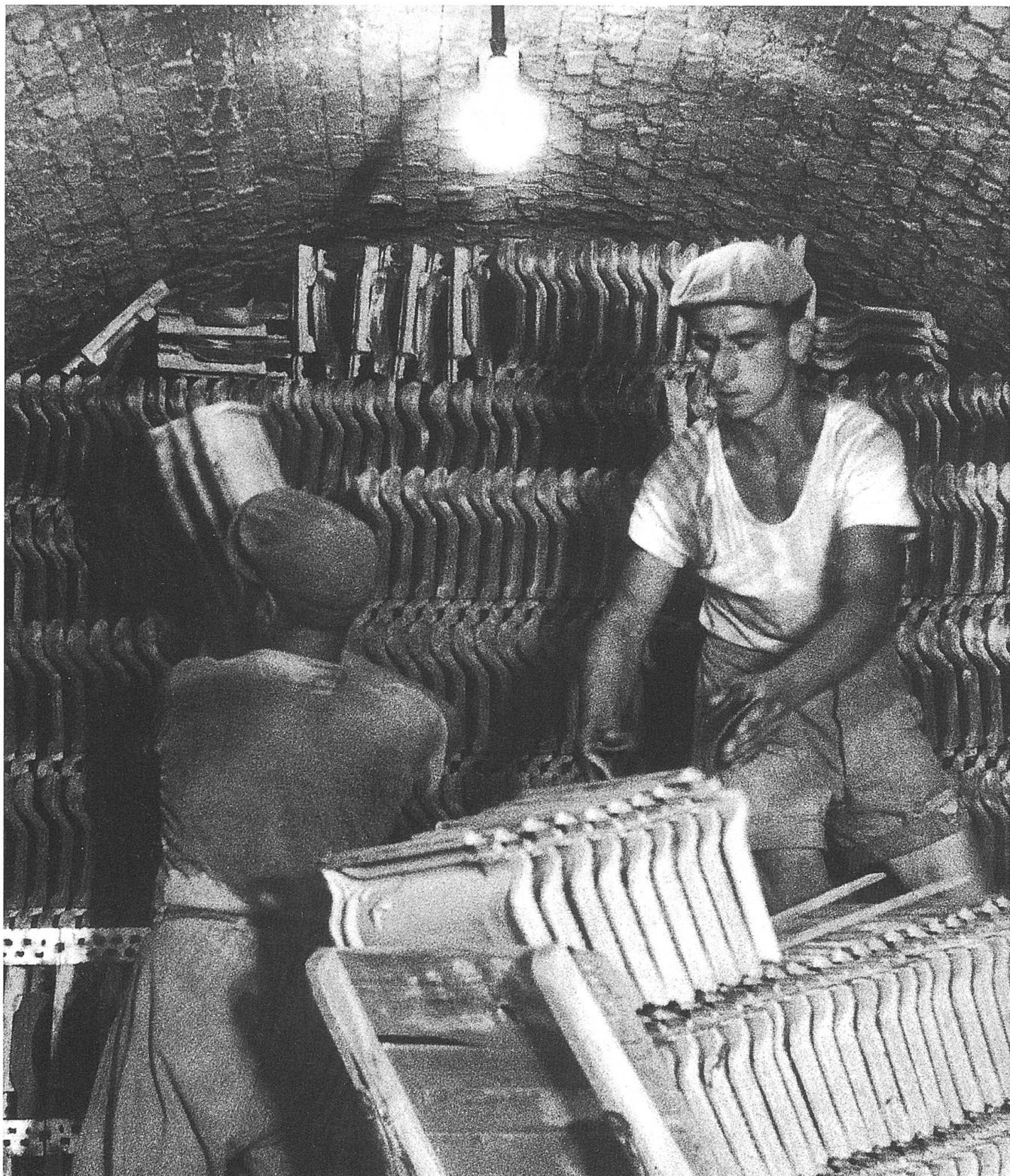
Of greater significance for the future – and also for *Zürcher Ziegeleien* – was another innovation deriving from the firm of *J. Schmidheiny & Co.* On 1 October 1925 the company filed at the Federal Patent Office an application for a patent for a large-size brick made of fired clay, which, though of simple design, offered particular advantages over the conventional brick in terms of its dimensions, its insulating property and the quite special arrangement of its hollow spaces. Patented on 1 September 1926, the product became known as the «Schmidheiny brick» or «insulating

brick». The principle of the utmost importance behind it was to prove it, thus remaining in use up to this day.

Other innovations followed. Thus, for example, in the thirties *Zürcher Ziegeleien* and *J. Schmidheiny & Co.* launched on the market a porous cellular earthenware block which was capable of being sawn and nailed – not, strictly speaking, an «invention», but rather a product deriving from the practical technical application of facts already known. As an addition to the product range, it more than proved its worth, being taken up by numerous Swiss brickworks.

«The finest clay pit in Switzerland»

Besides rationalizing the means of production, Jacob Schmidheiny, as the man in charge of a large number of brickmaking concerns, had to address the problem of obtaining the necessary raw materials, that is to say, productive clay pits. In 1930 he arranged for the purchase of a large area in Schinznach, which – so the minutes of the general meeting for that year run – «both in the chairman's own estimation and in the expert opinion of the geologists represents the finest workable clay pit in Switzerland still available». In doing so Jacob Schmidheiny secured for *Zürcher Ziegeleien* a major clay deposit, which, «virtually inexhaustible», has fulfilled its promise right up to the present. In those days it was all the more important to acquire new sources of raw materials because a number of the pits crucial to *Zürcher Ziegeleien* lay in city territory, that is to say, in areas in which quarrying threatened to run into ever increasing difficulties. It was imperative to look, plan and act for the future in order to safeguard the combined brickmaking plants and hence the jobs of the workers and staff.



The task was not always easy. *Zürcher Ziegeleien* naturally got into a particularly precarious situation during the economic slump of the thirties. In order not to exacerbate the severe unemployment, an attempt was made to keep the business going for as long as possible, although this could not be done without a drastic cutback in production with its inevitable knock-on

effect on jobs. The devaluation of the franc in 1936 saw the start of a recovery in the building market, which, however, only three years later with the outbreak of the Second World War once again ground to a halt. All over again *Zürcher Ziegeleien* and with them their boss had to contend with an almost hopeless crisis situation. The mobilizations robbed some of the fac-

Stacking tiles in the kiln in sweltering heat (Tiergarten tile and brick-works, Zurich)

tories of their workforces, while rationing had a severe impact on fuel supplies. However, as soon as the war was over, building activity recovered remarkably quickly, only to find the various companies having to adapt themselves anew to altered conditions on the construction market. Modern building methods made ever increasing demands of materials, necessitating the use of new construction materials. This is why *Zürcher Ziegeleien* progressively moved into neighbouring areas of building materials production – the prelude to a diversification which was to become more pronounced under Jacob Schmidheiny's successors, his son Peter and his grandson Jacob III.

Not bricks and tiles, but oil and fat

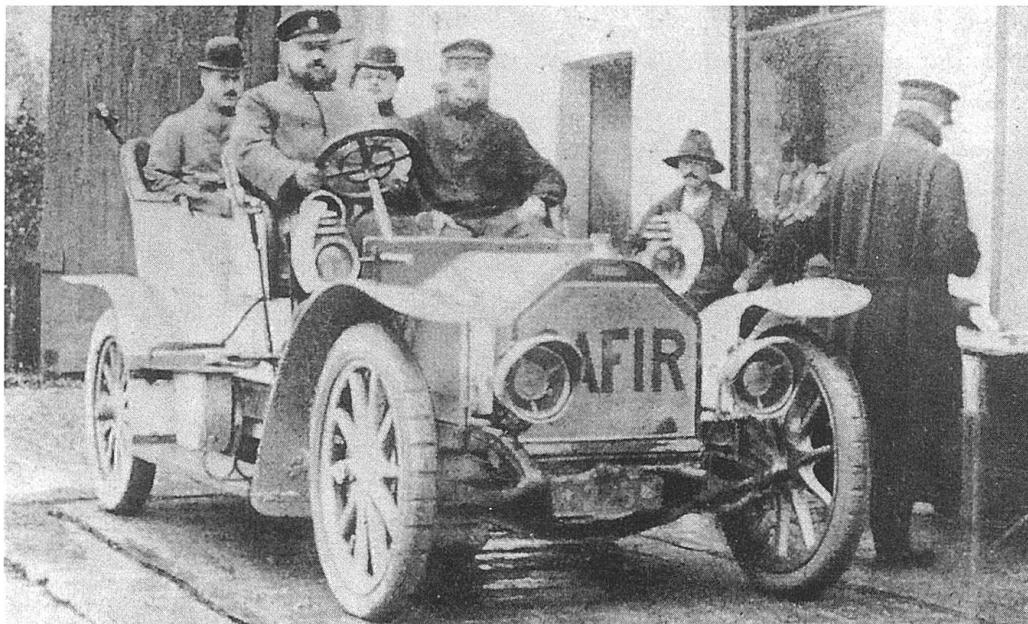
Like his brother Ernst, Jacob Schmidheiny never ceased to be concerned about creating or safeguarding jobs – as the example of Horn on Lake Constance was to show. The clay deposits from which the Schmidheiny brickworks there obtained its supplies had already been exhausted before the First World War. It made no economic sense to procure the raw material from further afield, and so closure of the factory seemed inevitable.

To spare blue-collar and white collar-workers alike from redundancy, Schmidheiny searched for some alternative source of employment. He found it with the help of a number of enterprising foreign businessmen. In 1917 the *SAIS* oil and fat works was founded in Horn. *SAIS (Società Anonima Italo-Svizzera)* was for Switzerland a completely new industry, which not only provided jobs, but also became of paramount importance in the wartime economy. Before 1914 Switzerland had procured its fats, insofar as its requirements were not met by

home-produced butter or animal fats, from abroad. But the war spelled an end to overseas imports. However, it seemed that the country could be supplied with oleaginous fruit via Italy. The upshot was the association Schmidheiny entered into with industrialists from Switzerland's southerly neighbour. In those years Horn was considered a particularly suitable location for the works because it was assumed that sooner or later the Rhine would be made navigable as far as Lake Constance and fats could then be transported on Rhine barges directly from Rotterdam to Horn. Such future prospects were not to materialize. However, the fact that dreams of this nature were entertained shows just how firmly people believed, notwithstanding the war, in the economic future. For a time Schmidheiny was himself a managing director of *SAIS* and in 1928 chairman of the board.

The brief adventure with the Safir motorcar

Bold intentions and confidence in the future marked the beginning of another enterprise Jacob Schmidheiny engaged in – this time, however, with no great success. In November 1906, together with the Rheineck district councillor Anton Dufour, Adolf Saurer from Arbon, Alfred and Adolf Stoffel, likewise from Arbon, and Heinrich Spoerry-Jakob from Flums, he participated in the founding of the Rheineck *Schweizerische Automobil-fabrik*, shortened to *SAFIR Co. Ltd.* The object of the undertaking, according to the «company log» of the day, was «to operate a factory for the manufacture of motorcars and engines of all kinds, as well as to engage in general mechanical engineering and all activities associated with this corporate aim». The workshops were located in Zurich's Hardstrasse, where the



In 1906 Jacob Schmidheiny II helped found the Swiss Automobile Factory (SAFIR) in Rheineck. One model, produced in 1907, with Anton Dufour, a co-founder of the company, at the wheel, took part in a hill climb, but only managed to take 12th place. Motorcar production itself was a failure.

Maag gear-wheel factory subsequently became established. Company chairman was Dufour, with Jacob Schmidheiny as deputy chairman. The *Safir* car, an open, right-hand drive four-seater, seems to have been a technical success. The vehicle was widely acclaimed and won a hill climb against a car from the Saurer factory. By all accounts the Saurer chairman, one of the co-founders of *SAFIR*, was greatly displeased by the victory, and relations between the two rival firms turned rather sour. In 1907 a *Safir* car with Anton Dufour at the wheel came 12th in a race at the Faucille track near Geneva. In the same year a lorry with the *Safir* marque was exhibited at the Paris motorshow. Yet economic fortune did not smile on the concern, and in November 1910 the commercial register recorded the words «In liquidation», to be followed three years later by the laconic entry: «Company defunct».

From the horse-drawn tram to the trolleybus

Both *SAFIR* and *SAIS* reflected the fact that Jacob Schmidheiny's entrepreneurial ambitions were not by a long chalk confined to the building materials industry. Since the begin-

ning of his professional activities he had, like his brother Ernst, expanded his range of interests. And like Ernst he understood that the key to all industrial prosperity in his home region, the St. Gallen Rhine Valley, lay in a sound energy industry and modern transport facilities. In 1897 Jacob Schmidheiny senior had set up the *Altstätten-Bernegg Electric Tramway* – an enterprise that was admittedly badly needed, but which caused its initiators more worry than joy. In 1905 the sons inherited this legacy, and Jacob II came to chair the tramway's board. Just what a burden he had taken on he knew very well from the start. As a student at the ETH, he had once made calculations for his father as to the viability of the tramway, estimating that if its running costs were to be covered, each carriage would have to transport at least two passengers. But precisely these two passengers, as Jacob Schmidheiny had to see for himself, by and large failed to materialize. «Hopes of assured operation proved false», he admitted fifty years later in a chairman's report.

For a while all attempts at lowering the deficit seemed doomed to failure. A small electricity generating station had been set up in Altstätten as early as 1896 with the intention of supply-

In 1936, under chairman Jacob Schmidheiny II, the tramway company *Rheintalische Strassenbahnen* (later called the *Rheintalische Verkehrsbetriebe*) decided to convert the core *Altstätten-Rathaus-Heerbrugg-Berneck* line to trackless trolleybus operation. The first trolleybuses began running in September 1940 (here in front of Berneck town hall). In 1977 they were replaced by conventional buses.

ing not only the small towns with sufficient domestic current for about 600 lights, but also the tramway. But even this complementary business could not cover the costs, and so the company stood on the brink of ruin. It looked as though the concern would have to be sold with a loss of 50 percent of the share capital. However, thanks to Jacob Schmidheiny it never came to that. At the suggestion of Jacob senior, the firm of *J. Schmidheiny & Söhne* in 1903 filed an application to be granted the concession to exploit three terraced falls on the Rhine Valley inland canal. Although the St. Gallen government did not comply with the request, after a protracted delay it declared itself willing to carry out the building itself – on one condition, that sales of the resulting energy must be guaranteed, that is to say, an annual income of 120,000 francs would have to be raised for interest and amortization. Jacob Schmidheiny himself worked flat out, as he later testified: «In the

towns and villages of the Rhine Valley I personally collected subscriptions, I signed the appropriate agreements in the name of *J. Schmidheiny & Co.*, and I saw to it that the company assigned the rights flowing to it from the subscription agreements to the *Altstätten-Berneck Electric Tramway.*»

In this way the tramway became the general lessee of the inland canal power plant. As such it had to set up the secondary networks in the Rhine Valley communities from Au to Oberriet. But just how the money needed for this would be raised remained an open question. The banks showed themselves to be distinctly lukewarm vis-à-vis the hard-pressed tramway. At Jacob Schmidheiny's instigation the tram company raised a bond loan of 500,000 francs, placing it with the future suppliers of the electric motors. In the end it turned out that the banks had been unjustified in their lack of enthusiasm. The Rhine Valley thereafter underwent an unexpected boom.



The demand for power grew rapidly, and the tramway was such a success that in 1907, for the first time in ten lean years, a dividend could be paid.

Three years later the recently founded *Elektrizitätswerke des Kantons St. Gallen* (St. Gallen Cantonal Electricity Works) came on stream, the forerunner of the future *St. Gallisch-Appenzellische Kraftwerke* (St. Gallen-Appenzell Electricity Works), on whose board committee Jacob Schmidheiny would himself one day sit. In 1910 the St. Gallen company requested the sale of the secondary networks in the Rhine Valley. In the absence of these and without the related energy sales the tramway would have been doomed. A deal was therefore put forward to the electricity works: for 1.8 million francs they could take over everything – the local grid plus the tramway. But the power company did not want to know anything about the high-risk tram. Instead they angled to acquire just the secondary networks, in the end paying for them the considerably higher price of 2.1 million francs...

In 1914 Jacob Schmidheiny considered extending the tramway. The idea was to supplement the existing Altstätten–Berneck line with a branch running from Heerbrugg via Widnau to Diepoldsau. In spite of the outbreak of the world war, the general meeting resolved in December of the same year to go ahead with the project. The clinching consideration behind this adventurous decision was an undertaking made by the board chairman, together with the company's general manager, to take on the construction at a fixed price – regardless of looming wartime inflation. It was an enormous risk, which Jacob Schmidheiny could only take because by way of precaution he had secured at his own peril supplies of track and sleeper materials.

Such foresight meant that it was possible to build the new line in record time. In 1915 the old Heerbrugg–Diepoldsau mailcoach was discontinued, to be replaced by the electric tramway. At the same time the company was renamed *Rheintalische Strassenbahnen* (Rhine Valley Tramways).

But that was not the end of the problems. The depression of the thirties left the business in such dire straits that liquidation was seriously contemplated. On top of that it transpired that the technical infrastructure of the core Altstätten–Berneck line needed overhauling. The search was on for some more modern, commercially viable system. The answer lay in turning to the trackless, electrically powered trolleybus. But the move was not without a snag of its own. The new scheme could not be got up and running without refurbishing the roads in question. Finally agreement was reached. The communities affected were induced on the basis of cantonal highways legislation to contribute towards the road improvements and to make voluntary annual payments towards the transport costs. In September 1940 – once again in wartime – the first country trolleybuses started running.

Later the Heerbrugg–Diepoldsau line was also converted to bus operation. Then two new lines were added: Diepoldsau–Hohenems in Austria and Au–Berneck–Walzenhausen. *The Rheintalische Verkehrsbetriebe* (Rhine Valley Passenger Transport Services), as the company came to be known, never developed into a profitable operation. But it played an invaluable role in the region's economy. Jacob Schmidheiny was its chairman until his death, after which the office passed to his nephew Max, who presided until 1970, in turn transferring the chairmanship to his cousin Peter Schmidheiny.



The inventor and design engineer Heinrich Wild, chief engineer of the Geodesic Instruments Department of Zeiss in Jena, who in 1921, with co-founders Robert Helbling and Jacob Schmidheiny, established the precision engineering and optical workshop «Heinrich Wild, Werkstätte für Feinmechanik und Optik» in Heerbrugg. He quit the company in 1932.

A new beginning with Wild-Heerbrugg

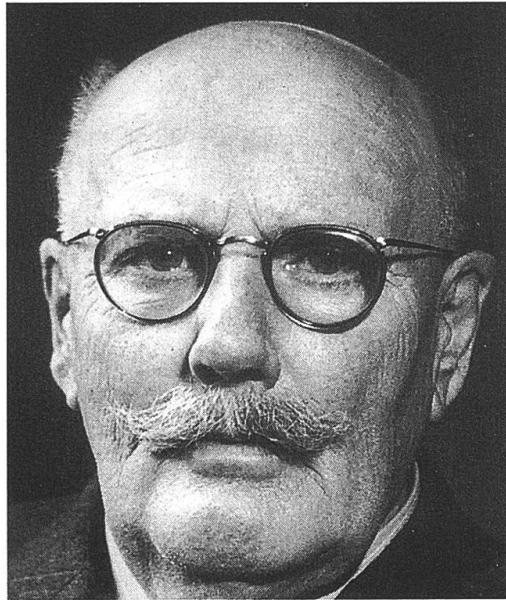
Just how much the interests of civil engineer Jacob Schmidheiny roved in fields outside his own building sector was now to be demonstrated in another development with even more far-reaching implications. In the early twenties the Swiss Heinrich Wild, in those days chief engineer in the Geodesic Department at Zeiss of Jena, contemplated transferring his sphere of activities. The brilliant inventor and design engineer no longer found the wrecked Germany of the post-war period a congenial environment. So he planned to move to Switzerland, to an area which seemed to have some knowledge of his specialism and

whose workforce was to some extent already trained for the manufacture of his revolutionary surveying equipment. What could have been more natural for him than to think of a watchmaking region?

In the event things turned out very differently. As a major in the artillery, Wild had got to know during a spell of military service on the Gotthard fortifications Dr. Robert Helbling, a specialist surveyor who had his own office in Flums. Linked through their common technical interests, the two remained in touch not just professionally but also socially. From his student days at the ETH, Helbling in turn knew Jacob Schmidheiny. The connection bore fruit. The new sphere of Wild's activities, so it seemed to the inventor, was thus already half predetermined. It would have to be a region in which there were entrepreneurs with financial clout and an appetite for risk who were seeking to promote the development of new industries. An area which recommended itself was the St. Gallen Rhine Valley, which at the time, too heavily dependent on embroidery, was severely depressed. Some 77 per cent of all its industrial workers were employed in the textile sector – at a time when embroidery exports had slumped from 400 million francs a year to 20 million. «During the war embroidery had made money», Max Schmidheiny later said, «but then came the great crash; the embroidery gentlemen were living beyond their means.» In 1971, in an anniversary speech, the same Max Schmidheiny put it somewhat more diplomatically, but no less to the point: «The catastrophic decline in the twenties of the once mighty embroidery industry put thousands out of work and consumed the modest prosperity of earlier times, transforming it into poverty and misery. This was the time



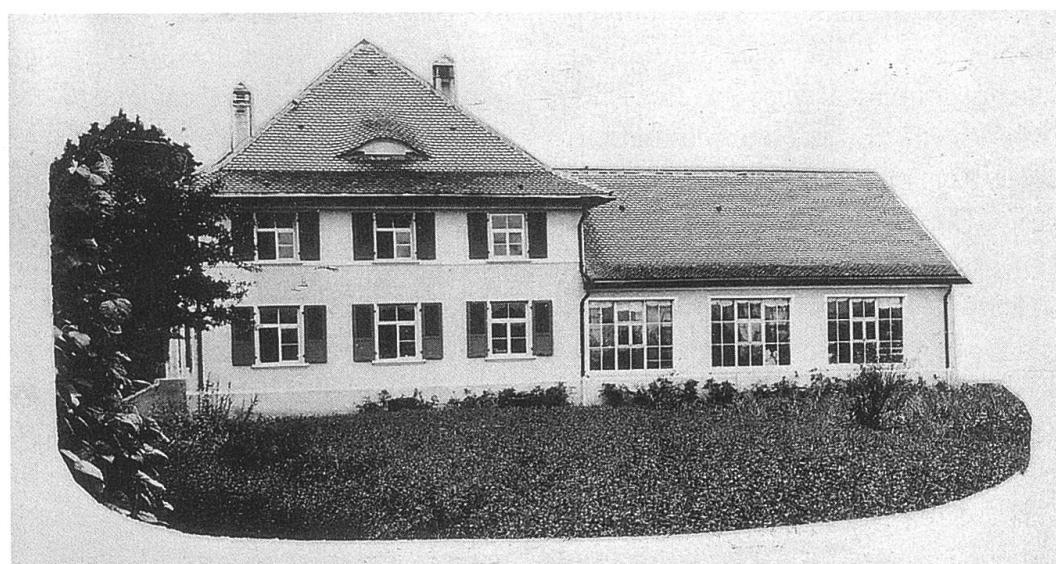
Robert Helbling, owner of a surveyor's office in Flums, was approached in 1920 by Heinrich Wild in connection with the construction of «autographic equipment». Helbling in turn contacted Jacob Schmidheiny to win him over for a new joint undertaking in the Rhine Valley.



Heinrich Wild

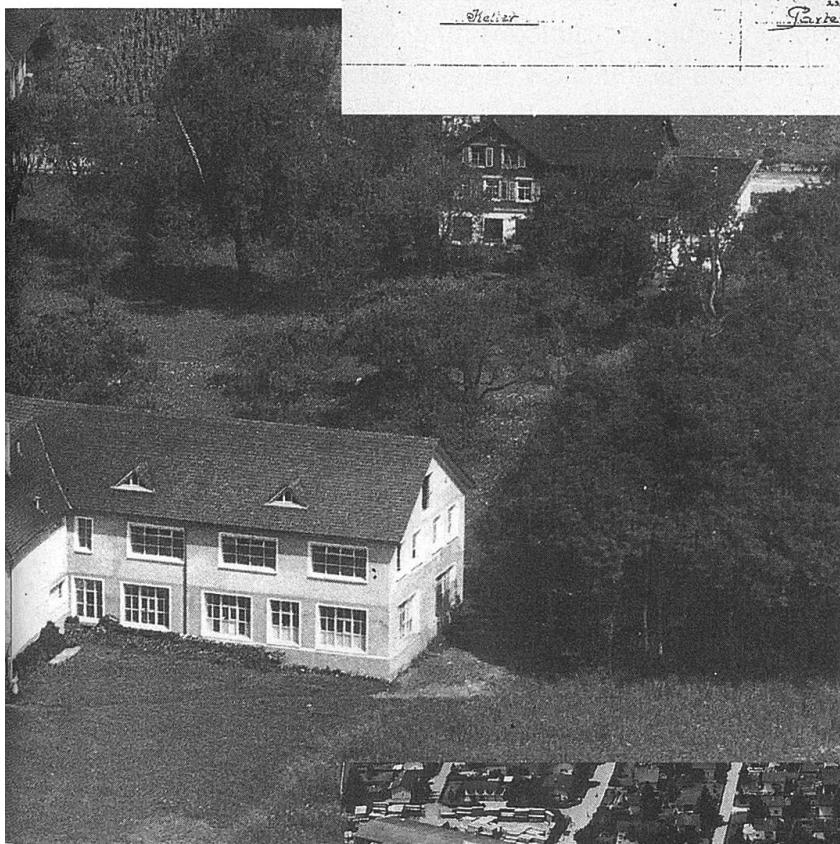
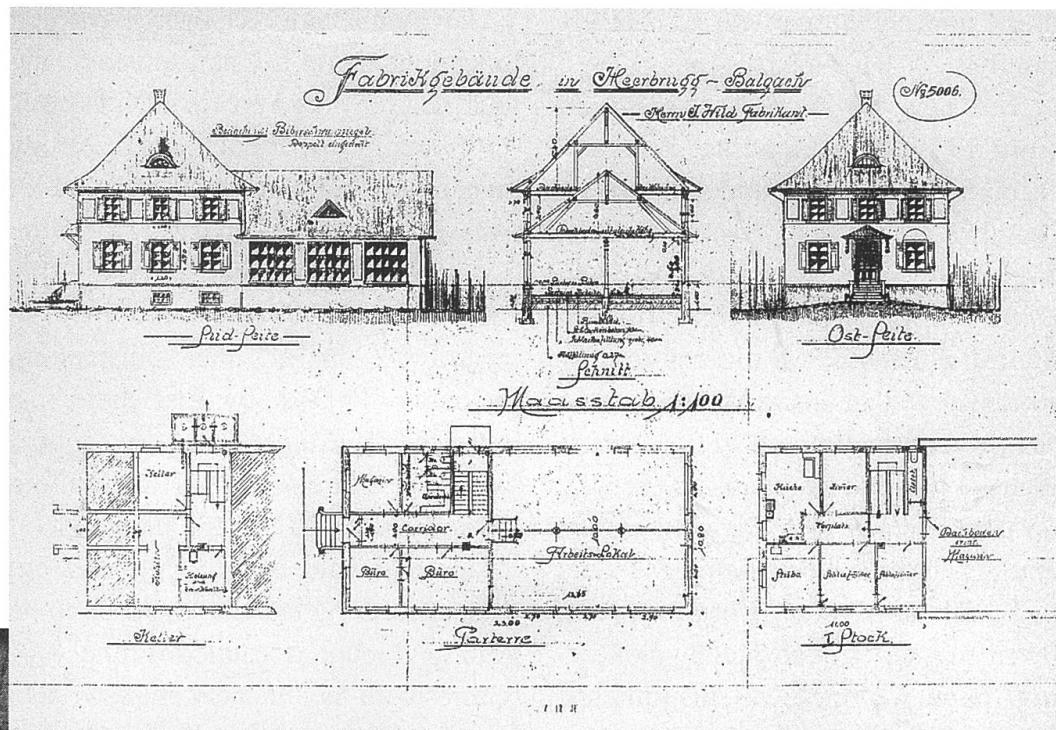
The development of Wild-Heerbrugg

The Wild-Heerbrugg factory building around 1930 – enlarged and modernized



Wild-Heerbrugg started out in 1921–1922 in a building of such unassuming proportions that it looked more like a villa than a factory.

Plan of the first modest factory building for «Mr J. Wild, manufacturer» with planning permit dated 11 June 1921



Wild-Leitz, 1990

of the new beginning with *Wild-Heerbrugg.*»

The new beginning came on 26 April 1921, when Helbling, Wild and Jacob Schmidheiny founded the Heerbrugg company of *Heinrich Wild, Werkstätte für Feinmechanik und Optik* – a precision engineering and optical workshop. An old embroidery works served as the workshop, with a floor space totalling all of 150 square metres. But the problems of starting up the company were far greater than any of the three enterprising founders had ever anticipated. Certainly Wild invented a series of absolutely pioneering photogrammetrical instruments, whose function was to facilitate land surveying and map making on the basis of photographs. But the way from the ingenious idea to the efficiently manufactured and fully functional instrument was a long and costly one. Numerous teething troubles had to be eliminated, and as the trio were seeking to develop a completely new branch of industry, in the first instance they had to rely on importing expertise from abroad. In addition, for a long time there was no certain domestic market the company could count on.

Trading in the early years, therefore, were a struggle for survival. The start-up capital rapidly disappeared, necessitating frequent injections of new cash. With a view to more easily raising the funds needed, the geodesic instrument sales company *Verkaufs-aktiengesellschaft Heinrich Wild's geodätischer Instrumente* was founded on 1 May 1923. A year later Jacob's brother Ernst was called on for help. He would happily have participated in Wild from the beginning, but at first he was given the cold shoulder, and «only when the enterprise threatened to breathe its last», as Max Schmidheiny put it, they called him in like a knight in shining armour.

For a time, however, even his capital injections could not bail the company out. Just how hard up the business was is shown by the money owed. In one instance an amount of tax of Fr. 125.– was disputed, while on 9 May 1925 the St. Gallen «taxman» requested the *Wild Heerbrugg* sales company to «forthwith remit the outstanding amount of Fr. 312.50». Elsewhere, in a letter of 11 August 1925 the optical company threatened a defaulting customer with an automatic debit order to the tune of fully Fr. 15.50, but with disarming naïvety enclosed in its dunning letter a catalogue and brochures with the innocent enquiry: «Do you not require surveying or plotting equipment?... We look forward to receiving your orders.» Evidently, in those days the art of marketing was still in its infancy.

In the autumn of 1925 the indefatigable but unworldly inventor Wild met up with the business partner he was looking for. This was the 42-year old textile industrialist Albert J. Schmidheini, a man, who with an «i» at the end of his name was not actually a member of the Schmidheiny family, but who through marriage became related to it – he wedded one of Jacob's sisters-in-law. To begin with he was made a director with extensive powers of attorney, rising to the rank of general manager in 1949. In 1956 he was awarded an honorary doctorate by the ETH. At the beginning of his work in Heerbrugg he too had to contend for many years with the adversities of the time. Although the photogrammetrical products of *Wild AG* were slowly acclaimed worldwide, sales proved as problematic as ever. The new technology pioneered by Heerbrugg remained largely unknown. In many places it could only be launched against the odds. As a result corporate activity – as the future chairman Max



Albert Schmidheiny, brother-in-law of Jacob Schmidheiny II, joined Wild-Heerbrugg in 1925, becoming a director and later, 1949 to 1958, general manager.

Schmidheiny stated in a review in 1979 – was «slowed down and held up by one disaster after another. (...) There was no shortage of labour, but first the workforce had to be carefully trained for their jobs in special company-owned skill centres. In the first two decades the shareholders were badly affected by the burden of risks. In the critical years when the company was being built up they had to sustain major financial losses and write off substantial capital sums».

The year 1932 saw the inventor Wild fall out with his partners in Heerbrugg, and he angrily departed from the firm. The company, however, continued to bear his name, and Jacob Schmidheiny remained as before chairman. But from 1933 onwards it

was ultimately Max Schmidheiny, the son of Jacob's brother, who as deputy chairman had the last say. He acquired Wild's shares, which, together with those that had come to him from his father Ernst, left him as the majority shareholder.

Escher Wyss: a company with an eventful history

For Jacob Schmidheiny it must have been a relief to be rid of the burden of *Wild AG*. But in 1936, at the age of 61, he embarked on another adventure with far-reaching implications. He took on the difficult task of trying to turn around the crisis-ridden *Escher Wyss* engineering works in Zurich. He considered that if he could provide it with an assured future, he would be saving one of Switzerland's greatest industrial assets.

At the time the company had behind it an eventful history of over a hundred years. Its founder was Hans Caspar Escher, the son of the silk manufacturer Johann Escher-von Muralt vom Felsenhof, a half brother of the famous Hans Conrad Escher von der Linth, builder of the Linth canal. Born in 1775, Hans Caspar studied architecture in Italy. On his return to Switzerland in 1797 he discovered in St. Gallen Monastery the first spinning machine constructed in the country. The machine fascinated him, and he conceived the idea of himself building a mechanical cotton spinning mill. Although innumerable prejudices stood in the way of the project, in political and economic terms it was not a bad time for founding such a mill in Switzerland. The economic conflict between Paris and London, and in particular Napoleon's continental trade embargo on English goods, resulted in a sharply increased demand for yarns and spinning machines in non-British countries.

In 1803 Hans Caspar Escher set up his own machine in the cellar of his parents' Zurich home. On 31 January 1805 the lower house of Zurich's cantonal parliament granted him permission to construct a mechanical spinning mill with engineering shops. The company's inaugural meeting took place on 10 March of the same year. It was given the name of *Escher Wyss*, because the banker Salomon Wyss not only injected money into the company, but also provided it with legal assistance. In a hereditary tenancy the «Neumühle» or «New Mill» (where today the Kaspar Escher House stands) was acquired to take advantage of the water-power on hand, which was needed to drive the machines.

In 1826 Hans Caspar Escher's son, Albert, joined the company, becoming a partner six years later and expanding the business. Concentrating especially on exports, he started manufacturing steam-driven engines and steamships, as well as the first water turbines. Soon the space available was no longer adequate, with the result that in 1856 the «Stampfenbach» site was acquired. A year later *Escher Wyss* also began building locomotives.

But in 1845 Albert Escher was taken seriously ill while away travelling, dying unexpectedly in Manchester. After his death and also that of his father in 1859 there was nobody in the family with the same business bent to replace them. «The direct successors of the deceased founders were not cut out for the task and thus confined themselves more to the administrative side of the business.» This is what we read in the commemorative publication «150 years of *Escher Wyss*», which in 1955 with remarkable candour also became part of the company's weak points.

From 1888 on, under the chairmanship of engineer Heinrich Zoelly,



*Hans Caspar Escher,
1775–1859, founder of
Escher Wyss*

the firm enjoyed a new period of prosperity. In order to commercially exploit the steam turbines he had developed, Zoelly set up international syndicates, making *Escher Wyss* one of the most important suppliers of steam turbines in the world. Financially, however, the new boss was less successful. His economic consolidation of the company could not keep up with its technological prowess. One thing he favoured was moving the manufacturing facilities from their «Neumühle» site to the location they now occupy in the «Hard» site – undoubtedly a wise decision, for it liberated the firm from the cramped conditions it had had to put up with for decades. Yet the funds deriving from the sale of Stampfenbach land and property had to go largely to paying off partners. In order to build the new factory, the company was forced to rely on borrowed capital. In addition, for the time being effective control passed into German hands. With help from his own family and a number of banks, Zoelly managed to restore the works to Swiss ownership, although it was not possible to completely buy out the German interests until the First World War.

From the heights to the depths

The consequences of neglecting self-financing and relying too heavily on outside money were grave. *Escher Wyss* products continued to enjoy a worldwide reputation, but their edge over the goods of rival companies dwindled. Through research and development the competition had meanwhile made considerable headway. The company fell from its position of preeminence. This was compounded by the disastrous effect the Great Depression of the thirties had on the firm, which exported 75 to 80 per cent of its products. Factory losses mounted up, causing the management weighed down with financial problems, to resort more and more to bank credit and bond loans. Liquidation looked inevitable.

After many painful twists and turns rescue came just in time. For a while the situation looked as dismal as ever. In December 1931 a new engineering company was set up under the name of *Escher Wyss Maschinenfabriken AG*. The main stakeholders were *Eidgenössische Bank Zürich* and *Basler Handelsbank*. They took the factory, which belonged to the creditor company of the old firm, on lease. The directors Victor Frey and Hans Guyer attempted to consolidate the company's position on the world market through better organizational management, but the losses continued. Factory workers and staff felt increasingly insecure. In those days of social upheaval malicious pamphlets appeared, directed against *Escher Wyss*. On 6 February 1932 the Swiss metalworkers' journal «Schweizer Metallarbeiter» reported that «the entire workforce» was to be sacked, rumouring that the whole business was due for closure. On 16 November 1935 the staff newspaper («Der Neumüller») for the employees of *Escher Wyss Ltd.*, carried the sub-

title: «Appears once in the year of the fourth pay cut».

Managerial attempts to reach some understanding with «friendly» engineering works, to work together with them or even amalgamate, also came to little. On the contrary, such overtures met stubborn resistance on the part of the competitors, who would not have been sorry to see *Escher Wyss* go to the wall. In this predicament the two directors turned to the Zurich city president Emil Klöti and the Canton of Zurich's director of economic affairs Rudolf Streuli, who entered into negotiations with the creditor group and the banks involved. The problems were daunting. The recovery programme was once again bitterly resisted by other companies in the engineering industry as well as by some trade associations and political groups.

In the words of Zurich's city president Emil Klöti «a stroke of luck»

Finally, in spite of everything, agreement was reached on 21 November 1935. The city of Zurich would take over from the liquidation assets *Escher Wyss*' entire real estate, including the factory workshops, leasing it back to the company with right of purchase. In an aid agreement the city and canton of Zurich undertook further to underwrite for a period of three years a loss guarantee of an amount not exceeding 500,000 francs a year. The agreements, however, constituted no more than a breathing space. In the long term it was unthinkable that the public sector should jointly shoulder so much responsibility for an engineering sector business that exported 80 per cent of its output and in addition owned subsidiary companies abroad. The management realized that there would have to be massive injections of private funds to replace their inventory

of machine tools neglected in the crisis years and to recommence and intensify research. It was a question of finding a new interest group of industrialists.

The initiative was taken by a company director of the time, Victor Frey. He got in touch with his army friend Colonel Jacob Schmidheiny. The latter proved interested. The world-famous engineering successes of the *Escher Wyss* concern motivated him, as he later wrote in a curriculum vitae, «to investigate the possibility of keeping it going. In my opinion the disappearance of the company would have meant a great loss for the workers and staff employed there, as well as for the city of Zurich and the economy of the country as a whole».

In 1936 he decided to acquire the company shares owned by the creditor banks, something he did with the mechanical engineer Dr. Hans Gygi, the son of the former *«Holderbank»* director Adolf Gygi. Jacob Schmidheiny made his involvement conditional on one thing, that his son Peter, 28 years old at the time, could also join the company, likewise with a financial interest, and there spread his professional wings. The following year the deal was complete. In the decidedly thin annual company report for 1937 the event would have passed unnoticed, except that in the list of board members for that year the names of *«J. Schmidheiny, Heerbrugg»*, chairman, and *«Dr. H. Gygi»*, deputy chairman, – both managing directors – made their debut. This meant that Jacob Schmidheiny was in effect the owner of *Escher Wyss* – «a stroke of luck», as city president Emil Klöti later wrote in his local historical recollections with a quiet sigh of relief. «For it was this enterprising and energetic businessman who understood how to successfully overcome

the considerable difficulties that initially lay in the way of a lasting rehabilitation and expansion of the company.»

There had been no lack of warnings. Jacob Schmidheiny himself knew very well from the outset what to expect, as Hans Gygi, deputy chairman of the board of directors at the time, observed in 1945, on the occasion of the industrialist's 70th birthday: «When you came to *Escher Wyss*, you brought with you the experience of your age and the enterprise of youth. You knew very well the gravity of the task you were then taking on and made no secret of it from me either. Taking over an engineering works such as *Escher Wyss*, which relies so heavily on exports, is no sinecure, and quite especially not after the blood-letting that *Escher Wyss* had gone through at that time. What you could expect of the company for the foreseeable future was not brilliant financial transactions, but just hard work and risk. But it was precisely this which was in keeping with your temperament, and which also corresponded to your understanding of the entrepreneur, making *Escher Wyss* attractive to you. Early on in your career you had already taken an interest in starting up new industries and generating jobs. But it had been your concern to bring into being industries that did not compete with existing ones but instead created new work. Participation in enterprises that were already on a sound footing was not in accord with your notion of the business of the entrepreneur.» Jacob Schmidheiny himself said as much in those dark days of the thirties. When he was trying to drum up financial support for *Escher Wyss*, one of the country's best-known financiers advised him in all honesty not to touch the company, which would only lose him money. Schmidheiny's reply

was characteristic: the brick and tile works were running like clockwork, and they presented no real challenges. But it was precisely the problems piling up at *Escher Wyss* which appealed to him. He had never, since his earliest days, been afraid to take a risk. When a business friend once proudly reminded him that he had not sustained losses for years, Schmidheiny answered with a bored air that he was «not the sort of person who hangs up his coat and lives off the interest on his capital».

1937 was the beginning of the «Schmidheiny era» at *Escher Wyss*. It was possible to wind up the aid agreement with the canton and city of Zurich with retroactive effect to 1936, and the representatives of the authorities withdrew from the company's board of directors at their own request. Then in 1941 the firm was in a position to buy back the concern from the city of Zurich for 2 million francs plus handling fees. With that *Escher Wyss* once again stood on its own two feet.

Modernization despite war and crisis

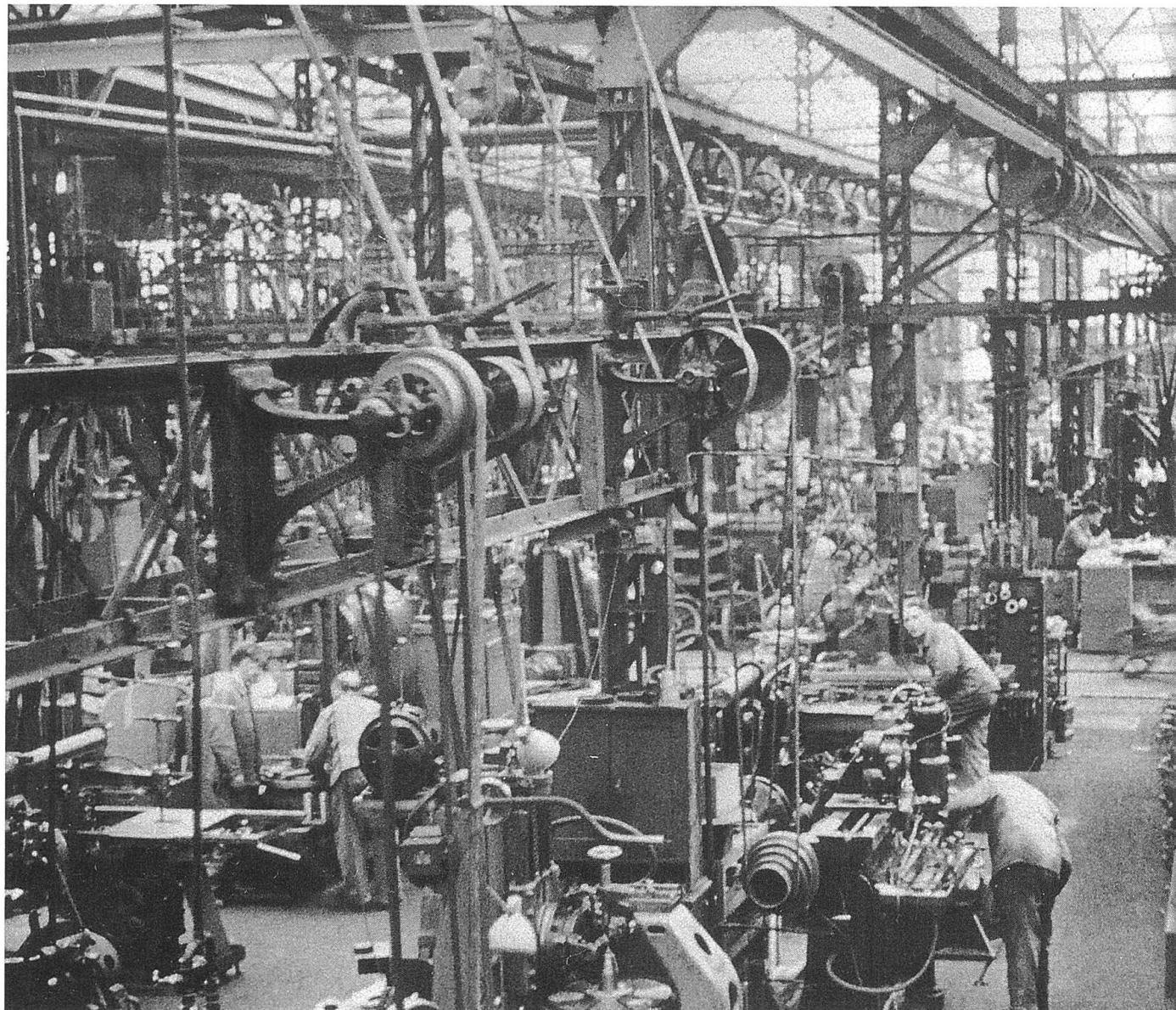
However, it was no easy matter to turn *Escher Wyss* around. In many areas of the business Jacob Schmidheiny was obliged in the words of one of his former colleagues «to start again from scratch». Quite particularly at this juncture the task was a doubly tricky one. What with the devaluation of the franc, general currency instability in the surrounding countries, the Spanish Civil War, the fateful Munich Agreement, the rise of Nazism, and generally the stormclouds that were gathering on the eve of the Second World War – Europe was in the grip of a political upheaval which seriously hampered all commercial activity. Traditional customers from the «Old World» were only able

to make absolutely vital new purchases. Major overseas companies were disinclined to place further orders in Europe. For a firm like *Escher Wyss*, which largely depended on exports for its existence, all this was a severe handicap.

The outbreak of the Second World War further aggravated the situation both for Swiss industry as a whole and, of course, for *Escher Wyss* in particular. The mobilization of the army deprived the company of part of its workforce. Imports of raw materials and coal became problematic, while exports involved mountains of red tape. The transportation of goods and payment transactions suffered from both the Allies' economic blockade and the German counterblockade. Switzerland was truly cut off from the outside world.

It was all the more remarkable, therefore, that under Jacob Schmidheiny's leadership *Escher Wyss* managed during these years and despite all the obstacles to record something of a boom, even contriving to sustain a large part of its exports. The nature of the company's products naturally favoured this. The annual business report for the year 1941 records, for example, an increased demand for water turbines. This was the result of many countries progressively switching over during the war to generating their power not with coal, which was in short supply, but by hydroelectric means.

The firm *Escher Wyss* fared relatively well even during difficult years not least because of a consistent corporate policy, which even in times of war and crisis was not to be deterred from resolutely updating completely obsolete factories and plants. Individual branches of the business and some workshops were expanded, while on the «Hard» site a welfare centre (plan-



ned as early as the last year of the war) as well as a new office block were built.

Continuous modernization and timely efforts to improve productivity meant that *Escher Wyss* was well placed to profit for the boom of the postwar years. In the late forties and early fifties it landed major orders in the face of stiff international competition. As he had done in the brick-making and optical engineering industries, Jacob Schmidheiny now stressed the paramount importance of technical and scientific research in the mechanical engineering sector, knowing full well that only by constantly pushing back the frontiers of research could the company's competitiveness

and hence its whole export business be guaranteed. «For some enterprises technological research is a necessity», Schmidheiny wrote. «Research means coming up with new and better things. But these new and better things are only of interest to the industrialist if they are also open to commercial exploitation. (...) The function of research, therefore, is first and foremost to provide work. (...) Technological research is not an end in itself, but is there to serve people.» The practical consequences of such an insight were that the laboratories of *Escher Wyss* were handsomely expanded.

In this way *Escher Wyss* managed to retain its position among the international leaders. Innovative design

In 1937 the Escher Wyss workshops were modernized. The dangerous belt transmission drives were replaced by individual drives at each workplace.

helped improve the quality and performance of the machines in the traditional areas of water turbine, steam turbine and paper-making mechanical engineering. And then there were new products, such as the adjustable aircraft and marine screw propeller.

A stronger parent company also benefited the foreign subsidiaries. With help from the Zurich factory both *Escher Wyss GmbH* in the German town of Ravensburg and the Italian subsidiary *De Pretto-Escher Wyss* in Schio recovered relatively quickly from the damage wreaked by the Second World War. The parent company's technical know-how flowed even further afield when *Escher Wyss* signed licence agreements with foreign firms or acquired an interest in yet other subsidiaries. As the group

was expanded, every effort was made mostly to retain for the parent factory not just the design work, but also the manufacture of complicated labour-intensive special parts. In this way *Escher Wyss* both ensured that it had work to do and retained overall control of the group despite decentralized production. In the mid-fifties, when the company was celebrating its 150th birthday, it boasted a workforce of some 10,000, of whom approximately 2700 were employed in the Zurich works. In addition there were 50 representations abroad – individual people or sales outlets – spread throughout five continents.

In 1945 the Federal Institute of Technology (ETH) acknowledged Jacob Schmidheiny's work in connection with *Escher Wyss* in a special way,





Second World War General Henri Guisan at Escher Wyss inspecting the production of the adjustable-pitch airscrew for the Swiss airforce. He is accompanied (left) by company chairman Jacob Schmidheiny and (right) by director Victor Frey. Between the General and Frey (behind): Director Hans Guyer; far left (in the background): Dr Hans Gygi.

as he himself later described with a show of false modesty: «On 21 June 1945 I became 70. I had settled down peacefully in Heerbrugg, expecting nothing more than that the village musicians should come and play before my house, as is the wont of old men,

when suddenly tail-coated gentlemen from the Federal Institute of Technology surprised me with one of their honorary doctorates.» Whether the honour really came as such a surprise is open to doubt. Whatever the case, it was awarded in recognition of Jacob



Jacob Schmidheiny personally lays the foundation stone as work commences on the building of the welfare centre. He is accompanied by representatives of the workers' committee and staff association. Far right his son Peter Schmidheiny.



The welfare centre, officially opened in 1949

Schmidheiny's «outstanding contribution to the promotion of Swiss mechanical engineering through his sympathetic support of the scientific and technical research and development that gave rise to new industries and new jobs».

No time for «high politics»

It was natural that a personality such as Jacob Schmidheiny should also be called upon to tackle «political» problems in the widest sense of the word. At the local level there was, he wrote, «almost no post that I have not held», from being a census official to the «phantom fireman», whose job it was in the days before the advent of telephones (his brother Ernst had also held the post) to alert the fire brigade if a fire broke out. His own notes reveal that he was further «a schools inspector, a church councillor, a district councillor, and a member of the cantonal parliament, but that still left a bit of time for the noble art of hunting». In Heerbrugg he was chairman of the board of school governors for twenty years, and for four full decades he was a member of Balgach's

Protestant church council, also acting as its chairman for a quarter of a century. Sunday he set aside as a day when fellow citizens could come and discuss their problems with him or ask his advice. This was a genuine matter of concern for him. On being re-elected to the parish council, he wrote to a friend in 1946: «I have accepted this job once again because it means more to me than just some public duty.»

For many terms of office Jacob Schmidheiny sat as a member of St. Gallen's cantonal parliament on its economic and financial commission. But he soon bowed out from «high politics». «Between 1934 and 1935 I put in a fleeting appearance at the National Council. I thought I had no time to spare for Berne. To young people today I preach the contrary, that they simply must make the time to get involved in politics.» At the time the leaders of the St. Gallen Liberals could not hide their disappointment at Schmidheiny's departure, but they were unable to undo his resignation, which he had sent to Berne by telegram.

Whether he cared to admit it or not,



as one of the country's most important captains of industry he was drawn into «high politics» in spite of his disinclination. His attitude alone to the then highly controversial question of workers' committees and staff associations showed this. Unlike many of his professional colleagues, he recognized such organizations, their legitimacy and value, from the outset. This explains his wholehearted approval of the peace agreement in the engineering and metal-working industry. «If one has grown up in the countryside in a small community and numbers fellow parishioners and old schoolmates among one's workers and staff, one quickly discovers what the latter expect of their «boss» – that they are appreciated as workers and respected as people. And the situation is no different in the towns and cities.»

Heinrich Spoerry, for many years a board director and deputy chairman of

Zürcher Ziegeleien, characterized the social elements in Schmidheiny's thinking and acting similarly. The industrialist always allowed himself to be guided by the principle: «If the company is doing well, the workers should be doing well too.» That is why the organization and expansion of employee insurance and medical cover at *Zürcher Ziegeleien* were very much «his work. But he also generously supported its tuberculosis care, child welfare clinic and other public welfare institutions». Schmidheiny himself once put it thus: «In each of our fellow workers we must not lose sight of the human being. Today's division of labour being what it is, there is a great danger that we see only the work and not the person behind it.»

It was in these terms that Jacob Schmidheiny viewed the relationship between employer and employee. Another of his guiding principles was:

21 June 1945: Jacob Schmidheiny II on his 70th birthday, surrounded by his family. From left to right: Ursula, father Jacob, his wife Fanny (née Alder), Helen, Peter and Marianne.

«A liberal economy must go hand in hand with social responsibility.» Federal councillor Walter Stampfli acknowledged in later years the «extraordinary recovery» which the firm of *Escher Wyss* had made under the Heerbrugg magnate. Tellingly he added that this remarkable success was «not least to be attributed to the modern industrialist's art of gaining his employees' trust and of getting them to see that the need to pull together is something that should be self-evident.»

The right man for the right job

Jacob Schmidheiny loved giving his employees an opportunity to develop and prove themselves. He never forgot a lesson he had learned at home. «My father wanted to come to the aid of a builder (whom I considered unreliable) with a substantial sum of money. I thought that I might persuade my father out of his intention. Not mincing his words, he replied: «It may well be that I am taking a risk helping this man. But your judgement is based purely on supposition. It is not right to mistrust someone merely on the basis of supposition. If no one had once trusted and helped me, I would not have been in a position to have you trained at the Federal Institute of Technology as an engineer.»» From that time on Jacob Schmidheiny junior also retained a certain personal pleasure in taking risks. Sometimes it extended even to advancing loans to employees for experiments or acquisitions whose success or usefulness he himself viewed with scepticism. Everyone, including ordinary workers, should have the chance to learn from their mistakes.

It seemed to him that in commercial undertakings true partnership was of paramount importance, as he himself never tired of pointing out: «A boss

who makes decisions solely by virtue of his position is no true boss. Similarly, a worker who expects decisions from his boss simply because he is the superior is no fellow employee, but a true underling. Decision-making no less than the subject to be decided upon presupposes that the matter has been studied and understood» – professional know-how, as we would say today. To promote it, the Heerbrugg industrialist set up in 1952, three years before his death, a foundation, called the *Jacob Schmidheinyscher Fonds zur Förderung der beruflichen Weiterbildung* (Jacob Schmidheiny Fund for the Promotion of Further Professional Education and Training). The fund was intended to «facilitate the professional training and to promote the further education of young people of both sexes, who both through their character and inclination could profit from this, but whose parents are financially not in a position to support such education or for whom it would constitute a very great burden in relation to their income and savings were they to try to fund such an education. The purpose of the fund extends to all spheres of activity, and is intended also for those who wish to pursue an academic or artistic career.» Application to the fund was open to any young person whose parents either lived in the Balgach area or were employed in a company associated with the benefactor – brickworks, *Wild-Heerbrugg, Escher Wyss*.

One gift always stood Jacob Schmidheiny in good stead in his relations with his employees – his renowned ability to find the right man for the right job. This did not come about without effort on his part. He spent a lot of time trying personally to get to know his employees as people, so that he could then determine whether they were suited to a particular job not just in terms of their

technical qualifications, but also temperamentally. One young man, who wanted to become his secretary and whose background, training and work experience he knew very well, he invited to a discussion with the characteristic words «Let's first see if we are compatible».

Unreliability, superficiality and indifference were an abomination for Jacob Schmidheiny, and when he was confronted by these tiresome qualities, he could become quite discomposed and abrasive. As an opponent in the business world he could be, as Konrad Auer, a long-standing board member of *Zürcher Ziegeleien*, knew from experience, «utterly intransigent if that was necessary for him to get his way. But he could also be magnanimous and fair». Or yet again ironic, as the following story shows. One day a man from Appenzell called on him, looking for a job. He was not especially cut out for manual work, the job-seeker admitted, but that made him all the better at giving orders. Schmidheiny bade him set about some job together with a second man, expressly enjoining the «Appenzeller» to work exactly like his colleague. The would-be commander naturally ignored this last injunction and began ordering the second man around with a thunderous voice – to no avail, because for the trial lesson Schmidheiny had specially got hold of... a deaf-mute.

In the matter of genuine misery, however, Jacob Schmidheiny was invariably socially enlightened. For him «welfare means neither alms-giving nor interfering in people's private affairs. We make it our concern because, if circumstances require, we want to support our company employees in both word and deed». Evidently his readiness to help in a private capacity was also great. The list of sureties which he took on out of the kindness

of his heart or which had come to him from his father was a long one. It was to shorten only in later years. His sympathy for impoverished or unfortunate people he often formulated in the saying that the poor man was not in a position to make economies.

Upright bearing in a colonel's uniform

It was not just in civilian life that Jacob Schmidheiny understood how to find the right person for the right job. As a captain in the army he had once (against the regulations) promoted an able battery mechanic to lance corporal, with the recommendation that the man be sent for further training. The mechanic rose up through the ranks of the army to corps commander – his

*Jacob Schmidheiny,
«the Colonel»*



name: Alfred Gübeli. Schmidheiny himself made it to colonel, and it was as «Colonel» that many of his fellow citizens addressed him until his dying day. By all accounts his military position meant a great deal to him. The family albums contain numerous photos of him with an upright bearing in his colonel's uniform. His final position was as artillery commander of an army corps. But he never wanted the command of a military unit. He believed that all his civilian commitments as a businessman would prevent him from devoting sufficient time and energy to the task.

It was as an army officer, incidentally, that the industrialist demonstrated his ability to think on his feet. During the First World War Major Schmidheiny, as he then was, was sitting with his staff in some remote Jura village awaiting the arrival of Army commander-in-chief General Ulrich Wille, who was to dine with them at seven that evening. Eight o'clock came, half past eight – no General in sight. It transpired that he and his entourage had had a breakdown somewhere along the line. Tired of waiting, Major Schmidheiny ordered his men to eat. They ate and cleared up – when suddenly the news came through that the General would be arriving after all in half an hour. Some of the officers in Schmidheiny's staff began making up lame excuses to present to Wille, but the Major decided otherwise: «We shall eat all over again.» New cutlery and crockery was laid out, and a second dinner followed, this time with the General, who perhaps wondered to himself why those officers over there in the Jura had such poor appetites...

Chairman of the Dornier aircraft factory

Jacob Schmidheiny's dual role as both senior officer and major indus-

trialist was to play an important part when the Thal-based *Dornier* airplane corporation (established in 1926) decided to set up an aircraft factory in Altenrhein on Lake Constance. The state, the canton and the municipalities expressed considerable interest in the project, launched in 1928, for it promised to generate numerous jobs. To start with they subsidized the construction of an airfield, a precondition for the erection of the factory. But then, naturally, they wanted managerial control of the works. At the express wish of the then head of the Federal Ministry of Defence, of the chief of the general staff and of the cantonal authorities, Colonel Jacob Schmidheiny offered his services as chairman of the factory's board of directors. In this function he officiated as an Army Ministry representative and as an intermediary for the *Ordnance Department*.

At the beginning of the Second World War the post, taken in an honorary capacity (Schmidheiny had no financial stake in the company), was to become a burden with ominous implications. The *Dornier* works, which in 1940 had meanwhile set up a branch on Emmen airfield, was financed with German money and was hence through Jacob Schmidheiny personally linked with the firm of *Escher Wyss*. The Allies immediately threatened to put the Zurich mechanical engineering factory on their black-list. They were only to be persuaded out of this when the federal authorities gave a solemn undertaking that since September 1939 the entire output of the various *Dornier* plants had been produced exclusively for Swiss army use.

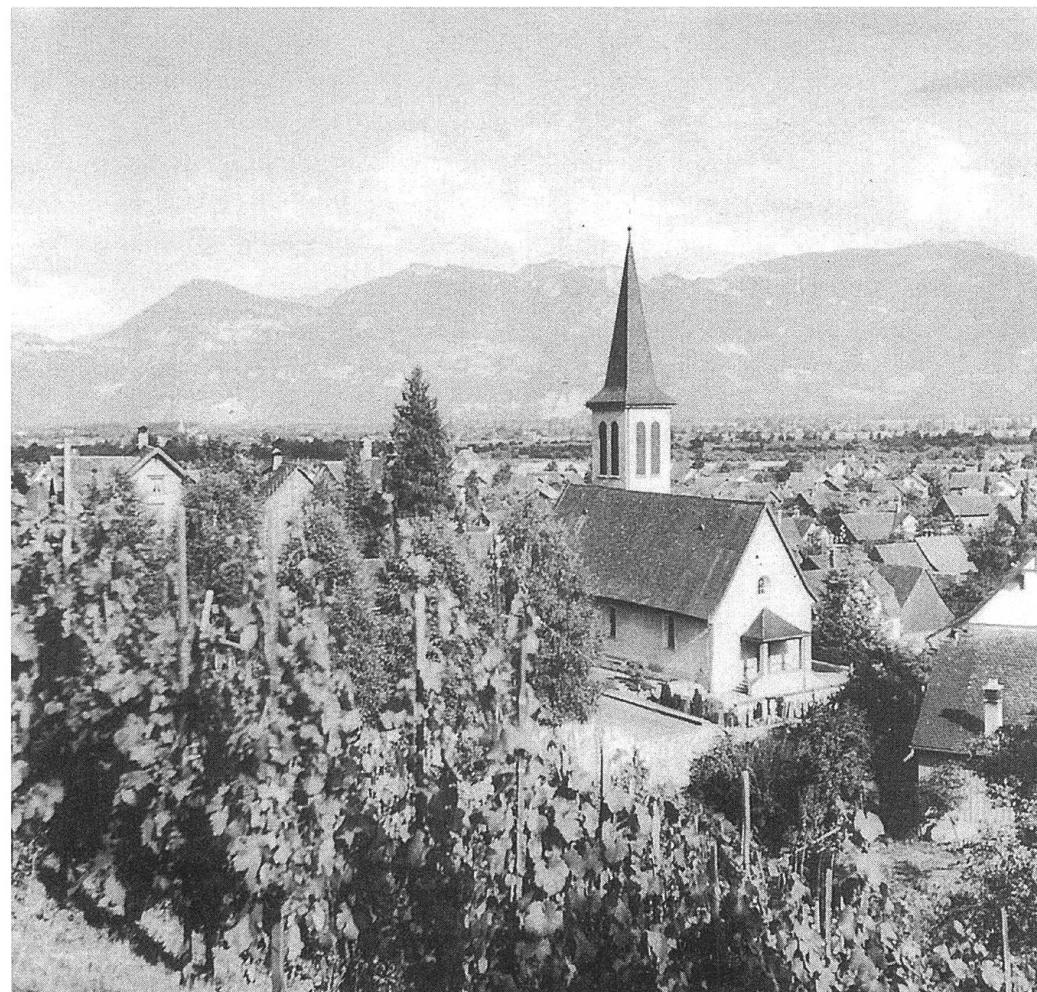
After the war Jacob Schmidheiny resigned his post as *Dornier* chairman. Aircraft construction alone could no longer guarantee a sufficient flow of

work, so a group of Swiss industrialists tried to run the works as a joint venture. But their plan fell through, and Dornier took to building wagons, at the same time regrouping to form the aircraft and vehicle factory *Flug- und Fahrzeugwerke Altenrhein*.

A salute without the Colonel

In the other companies he managed, «his own» businesses, Jacob Schmidheiny remained at his post a while longer. In December 1953 he made over the chairmanship of the *Escher Wyss* works to his son Peter, 45 years old at the time. But what should have

been the real culmination of his life-time's work he himself did not live to see. On the occasion of the company's 150th anniversary in 1955 workers and staff had commissioned a plaque for him from the sculptor Hermann Hubacher, a friend of the industrialist. The plaque was intended to honour «a courageous entrepreneur» and «a man with a profound sense of social responsibility». But on 8 January of the same year, at the age of eighty, Jacob Schmidheiny died in Schloss Heerbrugg. Peter Schmidheiny, his son and successor, accepted the plaque on his father's behalf.



Balgach with its little Protestant church. The Schmidheiny family tombs lie in its graveyard. For 40 years Jacob Schmidheiny II was a member of the parish council and for 25 years its chairman.

Chronology

1875 21 June: birth of Jacob Schmidheiny II

1895 School-leaving certificate (Matura) from St. Gallen cantonal school

1899 Awarded engineering degree (civil engineering) at the Federal Institute of Technology (ETH)

1901–1902 Jacob Schmidheiny II represents *Société Franco-Suisse pour l'Industrie Electrique* (Geneva) as site supervisor of the *Derivazione del Tirino* in Bussi (Abruzzi Mountains)

1902 Returns to Heerbrugg to succeed his father – with his brother Ernst I, Jacob Schmidheiny joins the new firm of *Jacob Schmidheiny und Söhne* as a partner

1903 President of the *Schweizerischer Zieglerverband* (Association of Swiss Brick and Tile-makers)

1904 25 April: marriage to Fanny Alder

1905 18 February: death of father Jacob Schmidheiny I – the firm of *Jacob Schmidheiny und Söhne* is renamed *Jacob Schmidheinys Söhne* – chairman of the board of directors of the tramway company *Strassenbahn Altstätten-Berneck* (renamed in 1915 *Rheintalische Strassenbahnen* – chairman until his death in 1955) – 27 December: birth of daughter Nelly Helen

1906 Deputy chairman of the board of directors of the automobile factory *SAFIR AG, Schweizerische Automobilfabrik Rheineck* (until 1910) – together with Ernst Schmidheiny sits on the board of the steam brickworks *Dampfziegelei Heurieth*

1907 Jacob Schmidheiny becomes partner with unlimited liability in the new firm *Jacob Schmidheiny & Co. Heerbrugg* – demolition of the Espenmoos brickworks – the Heurieth and Albishof brickworks merge to form the *Albishof-Heurieth* brickworks

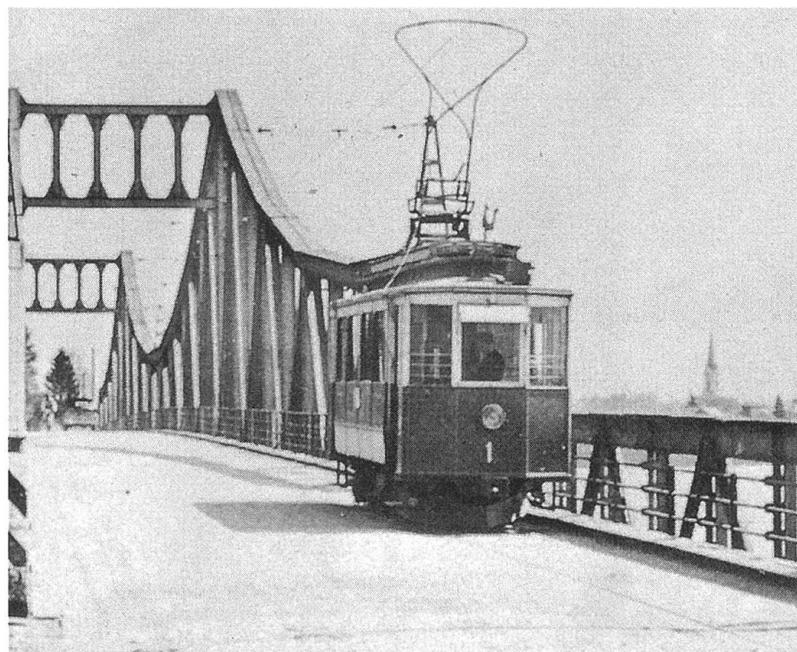
1908 12 July: birth of son Peter

1911 10 December: birth of daughter Marianne

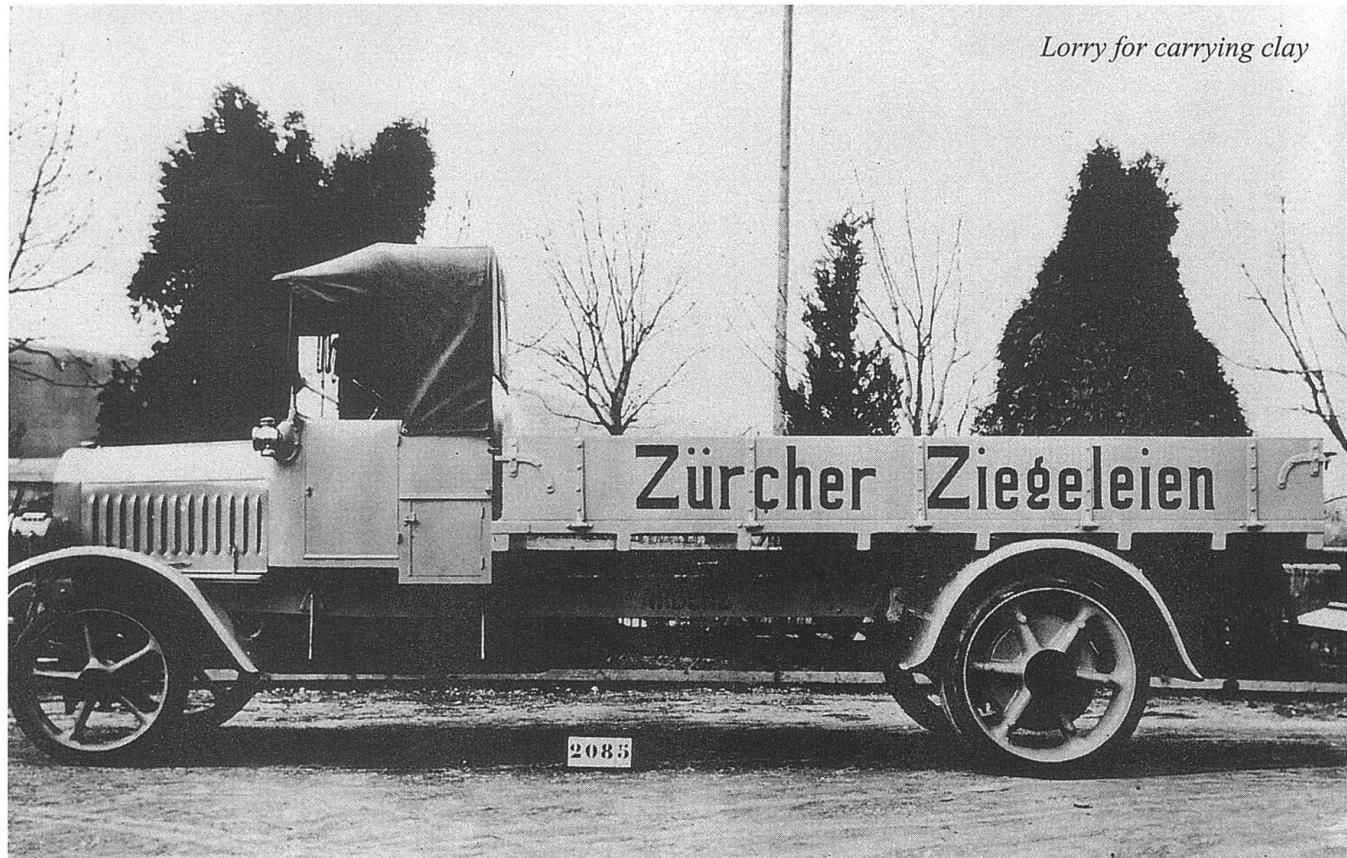
1917 11 June: birth of daughter Ursula – Jacob Schmidheiny becomes a managing director of the newly founded oil and fat works *Öl- und Fettwerke SAIS Horn (Società Anonima Italo-Svizzera)* – Männedorf brickworks taken over by Jacob Schmidheiny II

1921 26 April: Together with Heinrich Wild and Robert Helbling, Jacob Schmidheiny sets up in Heerbrugg a precision engineering and optical workshop under the name of *Heinrich Wild, Werkstätte für Fein-*

The Heerbrugg–
Diepoldsau tramway



Lorry for carrying clay



mechanik und Optik, which in 1924 merges with geodesic instrument sales company *Verkaufsaktiengesellschaft Heinrich Wild's geodätischer Instrumente*, established in 1923

1924 Enters the St. Gallen cantonal parliament (until 1935)

1925 21 March: board member of *Zürcher Ziegeleien*, succeeding his brother Ernst Schmidheiny I – work begins on the house at Talstrasse 83 in Zurich

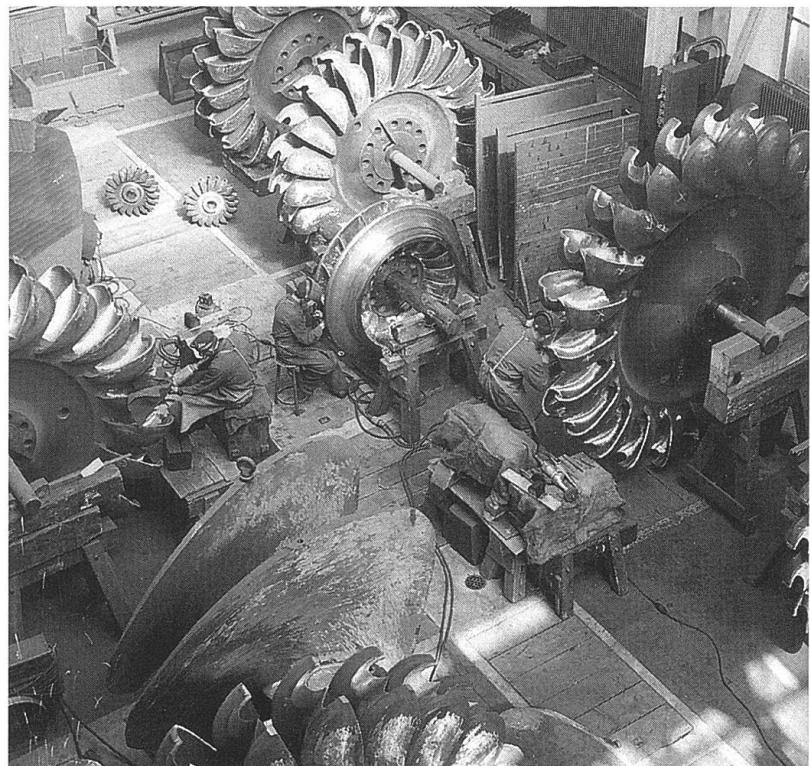
1926 Becomes a managing director of *Zürcher Ziegeleien*

1928 Chairman of the board of *SAIS* – chairman of the board of *Dornier AG* in Altenrhein (until 1945)

1932–1941
Incorporation of *Ostschweizerische Ziegeleien* into *Zürcher Ziegeleien*

1933 Chairman of the board of *Zürcher Ziegeleien*

1934 Member of the National Council (until 1935)



Grinding hydroturbine rotor disks at Escher Wyss

1936 Jacob Schmidheiny II and Hans Gygi acquire *Escher Wyss* shares. They are elected managing directors on 30 June 1937 – Jacob Schmidheiny becomes chairman of the board of directors

1941 *Escher Wyss* buys back the land and property which the city of Zurich had acquired when the company failed in 1935

1945 21 June: The Department of Mechanical Engineering at the ETH, Zurich, awards Jacob Schmidheiny an honorary doctorate on his 70th birthday

1952 *Jacob Schmidheinyscher Fonds zur Förderung der beruflichen Weiterbildung* (Jacob Schmidheiny Fund for the Promotion of Further Professional Education and Training) set up

1953 15 December: Jacob Schmidheiny II hands over the chairmanship of the board of *Escher Wyss* to his son Peter

1954 16 March: Jacob Schmidheiny passes on the chairmanship of the board of *Wild-Heerbrugg* to his nephew Max Schmidheiny

1955 8 January: Death of Jacob Schmidheiny II

Jacob Schmidheiny