

## Chapter 4 From Crisis to Growth (1920–1940)

***In 1930–31 Kværner was the first stove foundry in Scandinavia to switch to continuous casting. This system was based on the comprehensive mechanisation of work processes and had a great effect on efficiency. With the transition to continuous casting, Jøtul became the most modern stove foundry in Norway. This laid the most important foundation for the dominant position Jøtul would eventually assume in the Norwegian stove industry.***



In 1920 a time of economic instability began which would last throughout most of the inter-war period. Indeed the picture of the inter-war years as a time marked by recession, depression and unemployment is not entirely adequate. In spite of everything there was considerable economic growth during the period, even though it was not nearly as strong as in the preceding years. But the great fluctuations in the economy were something new. Unlike the clear growth tendency in the years before 1920, the inter-war economy often alternated between growth and recession. In this period Norway lived through three economic crises. The first was linked to the economic turnaround in the international market in 1921 and lasted until about 1923. The second was related to the specifically Norwegian monetary policy that was practised in the second half of the 1920s, the so-called parity policy, which had the greatest impact in the years 1926–27. The source of the third crisis was the great world-wide depression which was started off by the crash of the New York Stock Exchange in the autumn of 1929. The crisis reached Norway with full force during 1930 and lasted until around 1934. All three crises were characterised by diminishing production and high unemployment. The parity policy in the mid-1920s was accompanied by a serious debt crisis which involved banks, business and municipalities.

The scope of the crises varied from one business to another. Some businesses experienced rather good times throughout most of the inter-war period, while others experienced almost constant crises. This was especially true of the timber industry and the fisheries, which were the businesses that were hardest hit. Manufacturing was another. Industrial production fell throughout most of the 1920s and did not regain 1920 production levels until 1930.<sup>133</sup> With the crisis in the early 1930s industrial production dropped again. Unemployment in industry was high throughout the entire 1920s and 1930s. In only one of the years between 1920 and 1940 was unemployment amongst unionised industrial workers below 15 per cent, and in the peak year of 1933 it was over 33 per cent.<sup>134</sup>

The iron foundries were struck hard by the crises, as were most other sectors of the iron and metal industry. Demand for cast-iron goods sometimes fell sharply, and the foundries also had to reduce prices considerably. Many foundries had borrowed money for modernisation and expansion in the years up until 1920, and they were now in a particular bind. The foundries were faced with the many worker's conflicts during the period as well. In addition to the major conflicts which affected great sectors of the economy, they experienced a number of conflicts both within the field and internally. The 1920s in particular were a hard time. In these years a number of foundries collapsed, never to be resurrected. Others went bankrupt, but were kept in operation under new ownership. And still others had to refinance, some several times.

Kværner Stove Foundry was one of the foundries that struggled to keep its head above water in the 1920s. In conjunction with the modernisation of its production plants, the buyback of stock from Norwegian Machine Industry, and the establishment of the Jøtul sales corporation in the years around 1920, the company had amassed a large debt. These obligations became more and more difficult to meet as turnover and profitability fell. The situation was especially critical during the second half of the decade, and on at least one occasion the company was near collapse.

However, the crisis also offered opportunities. At the end of the 1920s the creditors agreed to restructure a large part of the company's debt. This opened the way for continued operation, but that was not the only change. At the same time a radical conversion process was initiated, based on comprehensive rationalisation and modernisation of the operation. This process was completed by the beginning of the 1930s, and Kværner Stove Foundry emerged as one of Scandinavia's most modern and efficient iron foundries. Thus the foundation was laid for a recovery process which, aided by better market conditions, led to Kværner Stove Foundry's growth by the end of the 1930s to the largest stove foundry in Norway. In this chapter we shall take a closer look at how the company in these years managed to turn the situation from crisis into growth.

### **Market weakness and price drop**

On the last day of May in 1922 Kværner Stove Foundry held a general meeting at the office of the chairman of the board, Anton Bernhard Laurantzon. Also present were Anker, Fritz Frølich, and Nils Petersen.<sup>135</sup> The meeting was hardly optimistic in tone. On the agenda was the annual report for 1921, which showed a loss of almost 200,000 kroner. This bottom line was in sharp contrast to the big profits the company had enjoyed in recent years. Indeed, the bottom line for 1920 had not been very large either. But that was mainly because of the considerable funds that had been set aside that year for investments in new machinery and equipment. The loss for 1921 reflected something utterly different, primarily a steep drop in turnover. In 1920 turnover was about 1.3 million kroner. In 1921 that figure had been reduced to 950,000 kroner – in other words, a drop of 25 per cent.

It was not only Kværner Stove Foundry that was struck by declining demand. By the autumn of 1920 some foundries had already reported a noticeable decline in the demand for stoves.<sup>136</sup> The downturn continued into the winter and spring of 1921, and it was becoming increasingly clear that the crisis was real. "The market is ruined. Nothing is being sold," stated the National Association of Stove Foundries in the summer of 1921.<sup>137</sup> This was not far from the truth. In the autumn that same year the association calculated a drop of 50 per cent in the total market compared with 1919.



Kværner Stove Foundry countered the reduced turnover quite early with cost reductions. In April 1921 staff salaries were cut by 10 per cent. A couple of months later the company switched to producing only on demand, and the work force was reduced from 105 to 85 employees. Towards the end of the year an agreement was reached with the workers for a cut in the contract wage of 15 per cent. And in early January 1922 another 13 workers and two staff were laid off, and four foremen were transferred to "productive work," as it was called.<sup>138</sup> Nevertheless the company did not avoid severe losses, and into 1922 it became clear that additional measures would be needed to reduce the loss.

The board decided to concentrate its efforts on relieving the debt burden of the company. In the autumn of 1921 Kværner Stove Foundry applied to its main banking connection, Klaveness Bank, for a temporary suspension of payments. This was not approved, but the bank offered instead to convert the company's bank overdraft of 400,000 kroner into a fixed loan at a lower interest rate. Moreover, Norwegian Machine Industry agreed in 1922 to convert a Kværner debt of 400,000 kroner into stock. This would be done by converting one-third of the company's total share capital of 1.2 million kroner into preference shares credited to Norwegian Machine Industry. The preference shares would give the corporation the right to a 6 per cent yield before other shareholders received their dividends.<sup>139</sup> In addition, Kværner Works was persuaded to renew a mortgage bond of 200,000 kroner which dated from the sale in 1916. This would come due in 1922. And finally, a respite was granted for a number of other minor debts, including the excess profits tax to the state, as well as the municipal tax for the years 1919 and 1920.

As a result of the serious recessionary tendencies, an atmosphere of nervousness naturally prevailed in the financial market and business dealings. The fact that Kværner Stove Foundry's creditors were nevertheless so obliging was possibly connected with the special bonds that existed amongst the

***The work force gathered for a photograph in late 1920. The economic crisis had not yet struck the company full force. Over the next few months, however, many of these workers had to be laid off because of a sharp drop in the market for stoves and other cast-iron goods.***

parties. We are familiar with Kværner Stove Foundry's connection to Kværner Works, as well as their relationship with Norwegian Machine Industry. In both these companies we have to assume that Anker had personal relations which were useful in a difficult situation. Relations with Klaveness Bank also dated back to the merger with Norwegian Machine Industry. It was Klaveness that had financed the establishment of the corporation, and several of the central figures in Norwegian Machine Industry were also in the bank's management. One of the board members of Kværner Stove Foundry, engineer Fritz Frølich, was the bank's technical consultant for industrial affairs. This may also have played a role in the difficult economic situation.

The debt relief measures provided a welcome breathing space, and in 1922 the financial statements showed a balance. This occurred despite the fact that turnover was only 875,200 kroner, and thus lower than in the crisis year of 1921. On the other hand, the next three years brought new losses, but they were not too large to handle. Turnover began to climb again, and this alone prompted increased optimism. As early as 1923, turnover had again passed one million kroner. The next year it did fall again – to 850,000 kroner – but that was primarily due to the great labour conflict that occurred in the spring of that year. The so-called "iron strike," and the subsequent lockout implemented by the workshop companies, led to a production halt in the foundry for almost three months. But in 1925 conditions were back to normal, and turnover was again above one million kroner.<sup>140</sup>

***New in the 1920s: a thermostat for the wood stove.***



***As a result of the recessionary times after 1920, it became more important to concentrate on marketing and advertising. Profiling in the shops was one method used. Here is an example from the outlet of Kværner Stove Foundry's main dealer in Rogaland, Eik's Machine Sales A/S.***



*From a model catalogue in the 1920s. Kværner Stove Foundry was one of the first stove foundries to present stoves in "natural surroundings" in its catalogues.*

### **Market promotions in the 1920s**

As we have seen, the first part of the 1920s was a difficult time for Kværner Stove Foundry, with reductions in demand and prices, an increasing debt burden, and labour conflicts. However, there were various ways to deal with such problems. One, and perhaps the most common, was to cut costs. As we have seen, this was a method that Kværner Stove Foundry also utilised. For many companies, including Kværner Stove Foundry, this was crucial because the production apparatus was oversized as a result of the boom after the war.

But the problems could also be dealt with using more aggressive measures, that is, those that aimed at increasing turnover. In this area, too, Kværner Stove Foundry invested much effort during the 1920s. Three methods were central: expansion of the dealer network, increased use of advertising and other sales-promoting measures, and increased effort in product development.

The sales organisation was augmented in the early part of the 1920s. Most important was the establishment of the company's own retail outlet in Bergen in 1923 – the so-called Jøtul Shop. This branch was not profitable at first. But the management of Jøtul must have been very determined to support a long-term effort, and in 1925 the retail outlet broke even for the first time. At the retail outlet in Bergen a travelling salesman was also hired to work the route from Stavanger to Kristiansund.

The Bergen region was a big market. But it was also a market distinguished by tough competition and many vendors, and profit margins were slim. Efforts in other parts of the country thus meant more for profitability. Here it was mainly a matter of expanding the network of dealers.

Central Norway was one target area, and in the first part of the 1920s connections were established with major dealers in Trondheim and Molde. Another target area was the far north of the country.



***Fireplace, probably put into production around 1915. This model was strongly influenced by English design. Perhaps it was intended for export? At any rate, it did not catch on in Norway and rapidly went out of production.***

Here of course the market was less concentrated, but on the other hand the competition was much less. Many stove foundries, including Kværner, had previously not bothered much with this market, and the potential was evidently great. In 1923 Kværner Stove Foundry decided to increase its presence in the three northernmost counties, and Anker made several long journeys through the region to "work the market," as it was called. In 1924 he visited Hammerfest, Harstad, Tromsø, Narvik and Bodø, and he succeeded in obtaining "the best retailers in the various towns."<sup>141</sup> The effort seems to have paid off well financially. In 1925 the board stated that the promotions in northern Norway created "considerably more elevated turnover".<sup>142</sup>

More efforts were also put into a more "planned cultivation of each individual district", as it was stated in 1925.<sup>143</sup> In the summer of that year the sales force was reorganised, and at the same time the market was divided up into 71 districts, each of which was regularly analysed. In this way one could have a better overview as to how sales were developing at any time in the various regions. This would help focus the sales campaigns where they were needed most.

Less fruitful but still interesting as examples of what was done to expand market opportunities were enquiries abroad. In the mid-1920s Anker travelled to Great Britain and the Soviet Union, as well as other destinations, to research the market potential. But it soon became clear that there were several circumstances that made the export of stoves difficult. Norwegian stoves were adapted to a harsh climate, and they had too much heating capacity to be used in countries with milder climates. The company also encountered cultural barriers. Each country had its own favourite fireplace tradition, and foreign models could not diverge too much from these traditions if they wanted to attract customers. For instance, Norwegian stoves did not conform very well to the expectations of Englishmen as to how a cast-iron stove should look, and Anker thus concluded that "sales in England of Norwegian models is hardly feasible".<sup>144</sup> Indeed, in this period contact was established with some foreign dealers, including in Argentina and Canada. But perhaps with the exception of Canada, only insignificant quantities were sold abroad.

### **Product development**

In the 1920s much effort was also devoted to product development. In this regard there were two conditions in particular that were emphasised. First, a much stronger focus was placed on improving the stoves' heating efficiency. Second, creating a broader product selection was stressed. This meant that developing new types of designs was emphasised.

At the time it was commonly thought that the Norwegian stove industry after the turn of the century had made little effort to develop products with higher heating efficiency.<sup>145</sup> As a general observation, this was true. Especially in the years from 1905 to 1920, essentially good market conditions led many foundries to consider it unnecessary to make much effort in this area. Certainly some progress was made during the First World War, driven by sharply increased fuel prices. But apparently even then no great effort was made in this area. The war years and the first post-war years were an especially good time for most stove foundries. And presumably many consumers gained a great deal merely by changing over from old, worn-out stoves to new ones.

There are indications that the period of recession after 1920 had a stimulating effect on technological development in this field, more so than did the higher fuel prices during the war. In the early 1920s there were indeed several factors that prompted more heat-efficient solutions. As many people's real income declined, the cost of coal and coke held steady until the mid-1920s at considerably higher prices than most other consumer goods. The same was true of wood prices, which had a tendency to follow the prices for coal and coke.<sup>146</sup>

The recessionary period also brought with it a mental readjustment that had little to do with the economic situation. Savings and better utilisation of resources in every aspect were regarded as the proper means to recovery. And when it came to energy in particular, there were also quite special circumstances that came into play. The situation during the war had fully revealed how dependent Norway was on imported energy. Better energy utilisation was one way of reducing this dependency. Frequent claims during the 1920s that households wasted fuel must be viewed in light of this.

Kværner Stove Foundry was amongst those that intensified their efforts in this area after 1920. This becomes clear if we look at the patent applications from Kværner Stove Foundry in this period. First, the number of applications increased after 1920. Second, the percentage of applications that dealt with fuel-saving solutions was higher.<sup>147</sup> In many instances it was a matter of improvements to existing models, although we should not underestimate the cumulative result of these improvements. But some major steps were also taken. Here we shall limit our discussion to perhaps the most important innovation in this area: the automatic draught regulator. This example also provides a good illustration of the way in which significant innovations during this period were dependent on the legitimisation of authority to gain acceptance.

In 1923 Kværner Stove Foundry introduced a coke-burning stove that was equipped with automatic draught regulation. The system had been developed by the company's works manager, engineer Knut Stenersen, and represented an important stride forward in fuel economy. The mechanism was arranged in such a way that it used the stove's heat expansion as an automatic regulator of the air supply. This occurred when the air inside the stove was transferred via a damper and a pipe to a grating beneath the combustion chamber. In this way the stove could be set for a specific surface temperature. If combustion was too rapid, the damper closed automatically when the stove expanded due to the heat. Conversely, the damper opened and let in air when combustion was too low. With the regulator the stoves had thus acquired a thermostat, and they could maintain an even temperature in the room 24 hours a day without supervision. In this way the fuel was utilised more efficiently. The stove could also burn all night with less fuel but without a risk of burning itself out.

The regulator aroused a great deal of attention. The magazine *Jernvarehandleren* [The Hardware Dealer] wrote that it "would undoubtedly have great significance for the future of stove technology".<sup>148</sup> The economic advantages were emphasised in particular. The simplification of operation was also viewed as an important advance, and this was exploited commercially, of course. "Don't let your money go up in smoke," was the slogan for this new wonder. It was claimed that the regulator saved 20 per cent of the fuel and 80 per cent of the work.

### Automatisk regulering av magasinovne. Nyt patent.

A/S Kværner Ovnstøperi har i disse dage faaet patent paa en automatisk trækregulering av magasinovne, konstrueret av støperiets verkemester, Ingeniør K. Chr. Stenersen.

Der tales kanske allfor ofte om Columbi egg i forbindelse med patentet, men i dette tilfaelde maa uttrykket sees at vere paa sin plass. Alle de autoriteter som støperiet har foreslagt patentet har erklæret at det utvilsomt vil faa stor betydning for fremtidens ovnsteknik.



Professor Watzinger ved Den tekniske Høiskole har i længere tid gjort undersøkelser og forestaet prøver i det varmetekniske laboratorium med en av Kværner Ovnstøperis magasinovne som var forsynet med den nye reguleringsanordning. Professor Watzinger har avgitt indgaaende rapport om forsøkene, hvori saavel kokasforbruk som varmeeffekt nøye er kontrollert. Dessuten har han avgitt følgende mere kortfattede uttalelser, som sikkert vil læses med interesse av alle:

«Regulatoren arbeider efter et meget enkelt princip, idet den benytter til trækregulering selvs ovenns varmeutvidelse, idet denne med passende omsætning over-

føres til et spejld som regulerer den under risten indstrøende luftmængde. Spejldet lukker ved vægsvirking og alle tapper ligger død i en retning, slik at slitage og slækk i leddene ikke har indflydelse paa virkemaaten.

Har man gjennom indstillingskraven indstillet paa en viss overflatetemperatur av ovnen (som av hensyn til utetemperatur synes passende), saa kan man rolig overlate ovnen til sig selv. Sker forbrændingen for hurtig slik at overflaten blir for varm, lukkes spejldet automatisk, omvendt naar ovnen blir for kald.

En slik regulator har to store fordele. For det første kan man holde ovenns varmeeffekt konstant uten anden paa end nedrytning av aske 1 a 2 gange pr. dags. For det andet kan man faa ovnen til at brænde natten over med mindre varmeproduksjon (mindre kokasforbruk) end uten regulatoren paa en lavere temperatur end man kan ved faste spejld uten fare for at ovnen slukner.

Ovnen gir altsaa en jevnere varme med meget litet paa og formindsker kokasforbruket, idet den med samme paafyldning brænder længere.

En med regulator utrustet prøveovn av firmaet blev i 14 dage holdt i drift ved Norges Tekniske Høiskoles varmekraftlaboratorium, hvorved saavel røkgastemperaturen, som ogsaa overflatetemperaturen av ovenns utsuorede del blev fortløpende registreret. Belastningen blev periodisk foreskrevet ved indstillingskraven. Skorstenstrækket utgjorde i middel 0.2 mm. v. s.

Ved en bestemt belastning indstillet sig efter en kortere indreguleringstid begge temperaturer helt konstant, uavhengig av kokasens skikthede og av trækvariasjoner i den tilsluttede skorsten. Under prøven gikk ovnen 24 timer uten nedrytning eller paafyldning av koks, overhodet helt uten paa, og kunde ha gaat endnu længere, da det ikke viste sig tegn paa avkjøling.

Trondhjem, juli 1923.

Sign. Watzinger.»

Kværner Ovnstøperis salgskontor — A/S Jøtul — fortæller paa forespørsel at professor Watzinger for faa dage siden bestilte en magasinovn med reguleringsanordning for installering i sin private leilighet. Salgskontoret knytter store forhåbninger til det nye patent, og mener at det vil avhjelpe mange av de fyringsvanskeligheter som man nu har at kjempe med i hjemmene her i det kolde Norge.

Det blir nu mulig at opnaa en jevn temperatur i et værelse, uten at man der, for behøvet av kaste bort tid med at paa-se ovnen. Er den en gang indstillet paa en bestemt temperatur, vil denne holdes, og man behøvet kun morgen og aften at ryste ned asken og fylde paa nyt brændsel. Ovnen kan da holdes brændende i ukessvis. Om aftenen, naar man gaar til ro, kan man, om saa ønskes, skru reguleringsventilen helt ned, og kokasforbruket i løpet av natten er da saa minimalt at det alltid vil lønne sig at brænde rundt. Ved forsøk er det ved denne indstilling med koks nr. 2 som brændsel, fundet at melgan 4 a 5 liter pr. 10 timer.

*Base burner equipped with draught regulator. The draught regulator was developed at Kværner Stove Foundry in the early 1920s; it attracted great attention because it could save both fuel and labour.*

But it was not a given that consumers believed these claims. It was not uncommon for stove manufacturers to advertise fuel-saving stoves without having any real basis for their claims. This was possible because there was no protection against the use of misleading advertising. It was also difficult to disprove any sort of technical specifications. There were no authorities available to test such items. Finally, the press could be quite uncritical in its discussion of new products having apparently revolutionary improvements. Teknisk Ukeblad [Technical Weekly], for one, criticised the daily press for not using technical expertise in such circumstances: "By neglecting this, the daily newspapers too easily become the tools of clever businessmen who have no compunction about exploiting the advertising that a skilled reporter can put between the lines in a newspaper article", wrote the paper in its editorial in 1921.<sup>149</sup> The occasion was a mention in Aftenposten [The Evening Post] of a new German type of stove, a so-called "saving stove", which according to the advertising reduced fuel consumption by five sixths. "Any technician will of course realise at once that this is a bluff, but the same would not be the case for the large, gullible public, which has no background for evaluating the reliability of the report", wrote the paper.

At Kværner Stove Foundry they were obviously aware of this problem. During work on the regulator, a co-operation was established with the heating-power laboratory at the Technical College of Norway to test the regulator. The intention was to provide scientific support for the effects the regulator had on fuel consumption. The tests were carried out in the fall of 1923. Under the leadership of Professor Georg Watzinger, a base burner with a regulator was kept going in the laboratory 24 hours a day for 14 days. Smoke gas temperatures, surface temperature and fuel consumption were measured continuously over the entire period. The results were edifying. They showed that the regulator stove at optimal load had an efficiency of 73 per cent, which corresponded to a reduction of 20 per cent in fuel consumption. Further, he ascertained that the stove maintained a very even temperature and that it could burn for more than 24 hours without being refilled with fuel. Watzinger concluded in his report: "The stove therefore produces a more even heat with very little attention and reduces the consumption of coke because it burns longer with the same charge".<sup>150</sup>

Naturally Watzinger's results were aggressively used in marketing the regulator stove. With expertise supporting the company's claims, its advertising took on much greater authority and weight. This was also an effective tool for the dealers, who could now present scientific documentation to the customer. It was also easier to counter advertising that talked about great breakthroughs with new heat-saving stoves. For example, in 1927 a new type of stove was launched that was said to have two to four times as much heating capacity as the best existing stoves. Measured against Kværner Stove Foundry's regulator stove, this meant that it could achieve an efficiency of close to 400 per cent. "When talking about savings, one ought to economise a bit with the numbers", wrote Jøtul in an article about the matter.<sup>151</sup> In addition, the scientific documentation provided a basis for the dissemination of the system to other countries. In the mid-1920s Kværner Stove Foundry sold the patent to foundries in several European countries. In most instances this occurred because the manufacturers were familiar with Watzinger's report.<sup>152</sup> The contact with Watzinger led eventually to a close co-operation with the college in order to develop better and more heat-efficient solutions.

Moreover, it is worth mentioning that Kværner Stove Foundry attempted to introduce a common standard for the measurement of heat efficiency, which all Norwegian foundries would have to fol-



*In the 1920s Kværner Stove Foundry began to manufacture electric stoves. This effort was not successful, however, and production was shut down after only a few years.*



**Architect Gudolv Blakstad's classic base burner, which was put into production in 1922. The stove gained great attention for its clean, simple lines, and it heralded a new trend in stove design.**

low. This would take place in co-operation with the heat laboratory at the college in Trondheim, and the intention was to create a more consistent system for consumers. But the attempt must also be viewed in light of the fact that Kværner Stove Foundry's stoves performed well in this area, and that such a common standard would benefit the company. It was not possible, however, to muster broad support for such a system. The smaller foundries, in particular, were sceptical, as well as those that did not have stoves as their primary product. Presumably they were the ones who would lose in such an arrangement, since they were the least specialised and thus did not have the best products.

Finally we should mention that Kværner Stove Foundry in the 1920s also entered into a completely new product area. In 1923 the company began to produce cooking stoves that combined wood and electricity. During and just after the First World War in particular, electricity began to be widely used in homes, primarily for lighting, cooking, and a number of other purposes. Kværner Stove Foundry obviously wanted to be a part of this market.

Technologically speaking, this effort may seem bold. But in reality it was not. The basics of an electrical and a wood-fired cooking stove were largely the same. All that was new was that a couple of electrical heating elements were connected to the cooking plates. The challenge was primarily in market access. A few large electrical suppliers dominated this market, and it proved difficult for Kværner Stove Foundry to gain access. At the same time there were problems because the products were not always up to standard. Turnover was slow, and in 1926 this production was terminated.

#### **New features in design development**

In exterior design as well there was an alteration in Kværner Stove Foundry's models after 1920. As we have seen in Chapter 3, after 1905 Norwegian stove foundries reverted to the traditions from the old iron works, with large, gaudy, richly decorated stoves in the Empire style. This development gained impetus during and just after the First World War, strongly encouraged by the good economic times. But the style seemed discordant with the new reality of the inter-war period. Partly as a result of the recession after 1920, many stove foundries changed over to a more sober and "clean" style. Empire and Art Nouveau were replaced by strict classicism, characterised by symmetry and clean lines. This was a style that was better suited to the tenor of the inter-war period. Even more important was the fact that simpler stoves also meant less expensive stoves.

Young architects without previous association with the stove industry were often behind the new models. Finn Bryn began to design products for Ulefos Works, and several of them became very popular in the early 1920s. Eidsfos Works also hired Bryn, while another architect, Helge Thiis, was used by several other stove foundries.

Kværner Stove Foundry relied on the team of Guldolv Blakstad and Herman Munthe-Kaas. Their first model was a continuous burner designed by Blakstad in 1922, when he was only 22 years old. The stove received a good deal of attention for its design. On the occasion of an exhibition arranged by Foreningen Brukskunst [The Association for Applied Art] in 1923, Byggekunst [Building Art] wrote: "Amongst the works on exhibit, special notice was given to Kværner Stove Foundry. Here we encountered again the architect Blakstad's charming little continuous burner ... This stove is a pearl of its type. Blessedly free of all pasted-on humbug – rational and well-proportioned".<sup>153</sup> The magazine

Brukskunst [Applied Art] was equally enthusiastic: "A modern cooking stove that is elegant in all aspects, rational and well-proportioned. A good example of modern 'applied art,'" they wrote about the stove. Munthe-Kaas was the designer of a series of new square stoves. These too adhered to the new design trend, with emphasis on clean lines and a more minimalist design.

Blakstad and Munthe-Kaas continued to draw patterns for Kværner Stove Foundry for a generation. Eventually they became the leaders of the new style that emerged in architecture around 1930 – functionalism.<sup>155</sup> This design trend had only a limited influence on the stoves that were designed for Kværner Stove Foundry. Simple rectangular models did appear in the latter half of the 1930s, of course, adapted to the "by now so common 'functional' villas". During the entire inter-war period it was classicism that predominated – at Kværner Stove Foundry as at other foundries. A cautious shift in style did take place in the 1930s, as rectangular stoves in new designs became more widespread. At the same time Kværner Stove Foundry tried out a couple of completely new concepts. Most striking in this regard was a combined stove and fireplace that was launched in 1940. The model was designed by the architect Fjoran. The combined fireplace was, however, far ahead of its time. Such models only became popular several years after the war. The first truly new direction in design arrived with the models that Blakstad and Munthe-Kaas designed in the late 1950s. We shall discuss those in the next chapter.

As we have seen, Kværner Stove Foundry was by no means stagnating under the pressure of the recession years. The drop in demand throughout the 1920s was met by a number of different measures that were intended to spur increased turnover. Of course we should be careful not to overrate the immediate economic effects of this effort. The competition amongst the foundries was fierce, and profit margins were small.

On the other hand, the effort on the sales, marketing and product development front was definitely a contributing factor which allowed Kværner Stove Foundry towards the middle of the 1920s to take a sunnier view of the future. At the same time there were signs that the market in general was on the road to improvement. In the summer of 1924 the board decided that there was a basis for an "increase in prices".<sup>156</sup> A little later that same year, all office workers received a salary increase of 10 per cent. And at the New Year in 1925 the board stated, in a commentary on the results for 1924, that the times seemed "considerably more favourable".<sup>157</sup> Other conditions also spoke to the fact that better times were on the way. "We are also expecting in the near future to see a reduction in the bank interest", said Anker in August 1925.<sup>158</sup>

### Debt crisis

But it was not to be. Over the next few years Kværner Stove Foundry entered a deep financial crisis which eventually threatened to break the company. Now the problems went deeper than in the early 1920s, and towards the end of the decade the business was kept afloat only on the hard-won goodwill of the company's creditors. The reasons for the setback are complex, but one decisive factor was the monetary policy pursued in Norway from the mid-1920s on.

*Between the wars Jøtul focused on developing stoves and fireplaces for new purposes. One example of this effort was the combined fireplace stove that was launched in 1940. But Jøtul did not always correctly anticipate the demands of the market. In this specific instance Jøtul was ahead of its time; not until after the Second World War did combination models really become popular.*





During the 1920s the Norwegian government pursued a "parity policy". Its objective was to restore the Norwegian krone to the gold standard, which had served as the basis for most Western currencies up until the First World War. This system had broken down during and immediately after the war because of rampant inflation in most of the belligerent countries. After 1920 many countries decided to raise the value of their currencies again, but Norway was amongst the countries which went furthest towards reaching this goal. We shall not discuss here whether this was a necessary policy. However, we can state that parity policy led a good many Norwegian companies into difficulties after it was implemented fully in the middle of the decade. Kværner Stove Foundry was amongst those affected.

Norges Bank [Central Bank of Norway] had taken steps to raise the value of the Norwegian krone as early as 1920, but it was not until 1924 that Norges Bank began to pursue a parity policy in earnest. The bank did this by reducing the supply of money while simultaneously raising the discount rate, that is, the interest charged by Norges Bank on loans to other banks. This policy had a number of unexpected consequences. The higher krone value encouraged speculation. Norwegian and foreign speculators began to buy up kroner on a large scale in hopes of selling them later at a higher rate. This further diminished the amount of money in circulation, and the value of the krone rose much more rapidly than had been calculated. The consequence to companies was that they had to pay back cheap kroner with more expensive kroner, and their debt burdens became much more onerous. Many companies failed under these circumstances. As a result, 1926 was the worst year of the entire inter-war period, as measured in numbers of bankruptcies. Nearly 1400 registered companies failed in just one year. This was more than in any year during the depression of the early 1930s.<sup>159</sup>



*From the assembly hall with a well-lighted space and acoustic insulation on ceilings and walls. There was plenty of room for the individual operator to do his job (according to the standards of the day).*

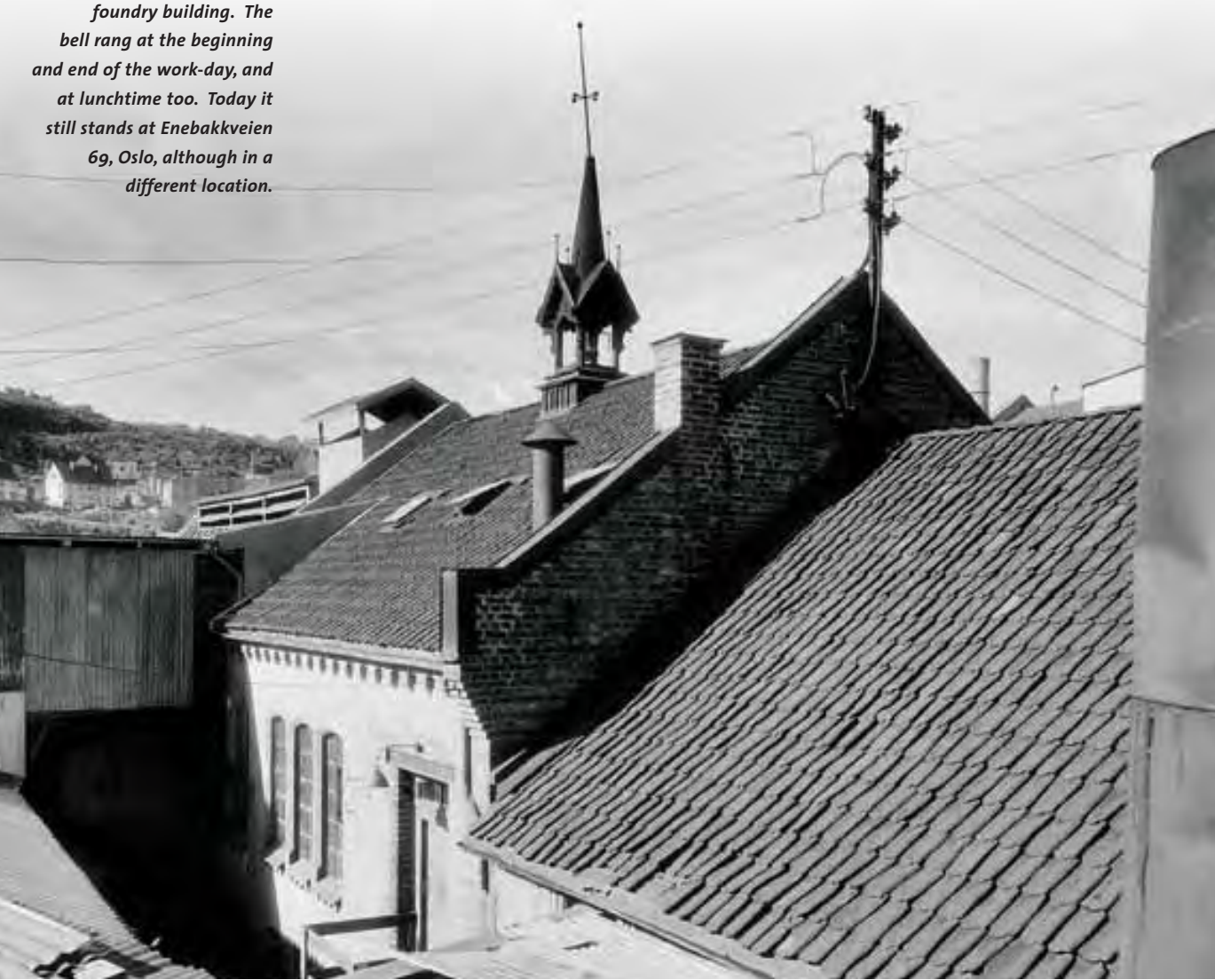
The problems encountered by Kværner Stove Foundry after 1925 were both directly and indirectly tied to the parity policy. The decline in prices led to severely reduced turnover and profitability. The crisis per se also had a negative impact on demand. Finally, the rise of the krone gave foreign producers ingress into the Norwegian market. From 1925 to 1928, the Norwegian krone rose 18 per cent against the Danish currency and 35 per cent against the Swedish.<sup>160</sup> Swedish and Danish stoves thus became much less expensive, and many retailers switched over to selling imported stoves.<sup>161</sup>

The first signs of recession became apparent towards the end of 1925. Turnover for the last quarter, the part of the year when turnover was traditionally strongest, was substantially lower than the year before. This downward trend continued with increasing force throughout the first part of 1926, and the turnover for the first half of the year was 25 per cent lower than in 1925. The latter half of the year was even worse, and turnover for the year as a whole totalled a meagre 640,000 kroner. This was 30 per cent lower than in 1924, previously the lowest year, and well below half the turnover for 1920, the peak year. Nevertheless, the bottom had still not been reached. The stagnation continued, and the turnover for 1927 was even lower, totalling 580,000 kroner.

Drastic cutback measures were implemented as early as 1926. In March, all the salaried employees were laid off on three months' notice. The intent had been to retain a smaller number of these people, and the collective layoff was attributed primarily to management's desire to "stand unencumbered at the end of the notice period and cut salaries in connection with any rehiring."<sup>162</sup> Some of these employees did stay on, but, as expected, at a substantially lower salary. The situation of the labourers was worse. In the course of the first six months, over half of the work force of about 100 men was dismissed. As of year-end, almost none had been rehired. Even more workers were let go over the course of 1927.

The company's variable costs were much reduced as a result of such measures. However, Kværner Stove Foundry also had considerable fixed costs, which were more difficult to address. The large debt stemming from the years of prosperity was particularly burdensome. Interest and instalments had to be paid regardless of the company's operations, and diminished turnover meant less funds to cover these obligations. In addition, the parity policy meant that the loans became more expensive than they had been before. The entire situation became even more problematic once Kværner Stove Foundry's primary banking connection, Klaveness Bank, began having serious problems of its own. In the autumn of 1926 it became clear that the bank was insolvent. It soon came under official administration, and it gradually became evident that the bank would have to be liquidated. This was of course a very serious matter since the company was, more than ever, dependent upon understanding creditors.

*The bell tower in the old foundry building. The bell rang at the beginning and end of the work-day, and at lunchtime too. Today it still stands at Enebakkveien 69, Oslo, although in a different location.*



### **Debt reorganisation and refinancing**

Kværner Stove Foundry began to experience difficulties in meeting its debt obligations as early as the spring of 1926. The bankers at Klaveness were openly concerned about the status of the company. Early in July, the bank demanded a review of the company's financial situation.<sup>163</sup> This was issued in August and confirmed the bank's apprehensions. Anker declared that Kværner Stove Foundry was unable to service its debts and requested that the bank propose a solution. Somewhat later Kværner Stove Foundry was allowed to stop its payments for four months. While this gave the company a certain amount of breathing space, it helped little in the long term. As we have seen, the turnover for 1926 was catastrophically low, and this in turn resulted in catastrophically poor net income. In February 1927, the board of directors had to announce that the loss for 1926 totalled 541,000 kroner.<sup>164</sup> The company was less able to meet its obligations than ever before.

Klaveness Bank was already under official administration by this time. Throughout the 1920s, the bank had lost large sums on various industrial commitments during the years before the crisis. As we have seen earlier, Klaveness was also heavily involved in financing Norwegian Machine Industry, and it was primarily this commitment that brought the crisis upon the bank. In 1926, the bank had roughly 26 million kroner in outstanding loans to Norwegian Machine Industry, but only fractions of this debt had been paid off during the final years leading up to 1926. By October of 1926 the bank was in fact bankrupt, and it applied to be placed under official administration.

In November 1926 the Norwegian Bank Inspectorate established an administrative board to take over the administration of the bank. This board immediately set out to evaluate each individual debtor's status. The investigation revealed that the situation was very bleak for the bulk of the companies in Norwegian Machine Industry. The administrative board did not believe that it would recoup more than about 30 per cent of the total debt owed by these companies. This corresponded to a loss of roughly 18 million kroner. Among the least favourably disposed companies were Thunes Mechanical Workshop, Rosenberg Shipyards and, to some extent, Hamar Iron Foundry and Mechanical Workshop. The administrative board also discovered a number of other commitments deriving from Norwegian Machine Industry which had to be regarded as "dubious". This group included Kværner Stove Foundry.<sup>165</sup>

By the end of 1926, Kværner Stove Foundry's indebtedness to Klaveness totalled a bit less than 2 million kroner. It was clear, however, that it would not be possible to recover very much of this money. The administrative board conducted an analysis of the company's financial situation in the spring of 1927. It was revealed that Kværner Stove Foundry would scarcely be able to pay off more than half of the debt, and perhaps less.<sup>166</sup> The most important thing for the administrative board was thus to secure as much of the outstanding sum as possible. This could be done in two ways. By cancelling portions of the debt, they could give Kværner Stove Foundry an opportunity to recover, and thus potentially become capable of paying off a larger share of the debt in the long term, or else the company could declare bankruptcy, in which case its assets would be realised immediately by being sold off.

Bankruptcy was considered a last resort.<sup>167</sup> First, it was hardly a good time to be selling a company such as Kværner Stove Foundry. Assuming that there were any buyers to be found, it would scarcely fetch a high price. Second, the administrative board had to consider more than just Kværner

Stove Foundry's debt. As we have seen, Klaveness owned a major block of 400,000 shares in the company. This would also be lost in the event of a bankruptcy. The final argument against bankruptcy was that, despite everything, Kværner Stove Foundry did have a good foundation on which to build. It was a renowned foundry company with recognised products, a reasonably modern manufacturing plant and a well established network of retailers. A bankruptcy would thus have meant that an intrinsically viable company would have paid with its life as a result of quite extraordinary financial circumstances. The attitude of the Bank Inspectorate at that time was that banks under administration should be liquidated as quickly as possible.<sup>168</sup> In cases involving debtors which were in serious straits, this could potentially mean that bankruptcy was the preferred option over other, more long-term solutions. On the other hand, certain economic policy factors had to be taken into account. It would at least appear that the administrative board for Klaveness emphasised the fact that, in Kværner Stove Foundry's case, they were dealing with a company that had a right to exist, and it should be given a chance to resurrect itself.<sup>169</sup>

It was by no means given that the administrative board would in fact allow Kværner Stove Foundry to survive, and the parties conducted negotiations regarding a solution for more than a year. However, the final result was in Kværner Stove Foundry's favour. In the spring of 1928, the administrative board consented to write down the debt by 50 per cent, or nearly 1 million kroner.<sup>170</sup> The results of this reprieve came quickly. Despite continued weak turnover, Kværner Stove Foundry was able to issue financial statements showing only a negligible loss in 1928, and the numbers for 1929 edged just barely into the black.

The relationship with Klaveness Bank ended completely over the course of the next two years. The authorities sought to liquidate banks under administration as quickly as possible, and pressure was thus brought to bear on debtors to find new banking connections. Most of the debtors also had the goal of establishing new connections, as it was disadvantageous to be associated with a bank under bankruptcy administration, nor would it be possible to obtain new loans or lines of credit there. Ties to banks under bankruptcy administration could thus impede the growth of a business.

However, it was not so easy to find new banking connections at that time, especially for a company in poor financial condition. Kværner Stove Foundry indeed found this to be the case. The company worked long and hard to find someone who would be willing to assume the roughly one million kroner in outstanding debt to Klaveness Bank. Negotiations were conducted with a number of banks and other financial institutions, but without result. It may also appear that banks were sceptical of granting new loans to Kværner Stove Foundry, given its ties to a bank under bankruptcy administration. All in all, the situation appeared quite hopeless. The debt burden had been reduced, but without access to new capital, the situation was still deadlocked.

### **Change of regime**

In the midst of this very critical period, Kværner Stove Foundry lost its founder and driving force. After a brief illness Herman Anker died on 29 November 1927, only 37 years old. He left a company in crisis which perhaps more than ever was dependent on Anker's drive and work capacity. Anker had not stood alone during the development of the company, of course; others had also been quite significant. But he was the driving force, the one who took the initiative. Who would fill the vacuum left