Shipbuilding and Ship Repair Workers around the World

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Published by Amsterdam University Press

van der Linden, Marcel, et al.
Shipbuilding and Ship Repair Workers around the World: Case Studies 1950-2010.
Amsterdam University Press, 2017.
Project MUSE. muse.jhu.edu/book/66328.

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6 From war reparations to luxury cruise liners

Production changes and labour relations at the Turku shipyard (Finland) between 1950 and 2010

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Introduction

This chapter analyses how production reforms and labour relations of the shipbuilding industry in Turku were interrelated in the shipyard of Crichton-Vulcan in the post-1945 period. In addition, shipyard work and its wider local and national effects, as well as their connections to the global development of shipbuilding, are examined. One of the objectives of this chapter is to reflect on the factors that have affected the nature and speed of production reforms that have taken place in the shipbuilding industry in Turku. To accomplish this, it is necessary to consider the actions of company management, trade unions, and shipyard employees in a wider social context. The extended operational environment of the shipyard was affected by both domestic and international markets, as well as by national industrial relations.

Strong traditions

In order to understand the period after the Second World War, it is necessary to briefly consider the traditions of shipbuilding in Turku. Shipbuilding as a supply-side industry is particularly sensitive to economic fluctuation, and thus prone to slumps in demand; however, continuity of work has had a significant influence on the industry and employment in the field during the period under study. This is due in part to the conscious preservation of traditions, and in part to the phenomenon known as path dependence: shipbuilding is, in many ways, a sluggish field, and earlier technological decisions have influenced its development in numerous ways.

The first notable factor is the significant role that foreign know-how played in the development of Turku's shipyards since the eighteenth century. From 1737 onwards, an Scotsman, Robert Fithie, created a basis for industrial
shipbuilding in Turku; and in 1842 the first foundry and metal workshop was established. After the Crimean War (October 1853-February 1856) it was acquired by another Scot, William Crichton, who built a new shipyard for his foundry near the mouth of the River Aura. He formed a joint stock company, Wm. Crichton & Co., Ab, and merged with some smaller shipyards. Orders from the Russian navy filled the majority of the yard’s orderbook. The warships built for the Russian navy in Turku were usually part of a larger order that would be prepared simultaneously at multiple shipyards, normally according to drawings that the Russian admiralty had acquired from leading British shipyards. Consequently, very little of the actual design work was conducted in Turku. In 1874, another shipyard, Åbo mekaniska verkstads Ab, was founded in Turku, later merged with another firm, and changed its name to Oy Vulcan Ab in 1899. In 1913, Wm. Crichton & Co. Ab was declared bankrupt, and a new company Ab Crichton was established in its place.

At the beginning of the First World War Finland remained an autonomous grand duchy within the Russian Empire, but this status was placed under great strain during the February and October 1917 Russian Revolutions. These events prompted the Finnish Declaration of Independence adopted by the Finnish Parliament on 6 December 1917, which was followed by a short civil war from January to May 1918 when the revolutionary “Reds” were defeated by the conservative “Whites” with support from Germany. After a failed attempt to establish a monarchy, Finland became a republic.

In the early years of Finnish independence in the 1920s and the 1930s, the submarine and warship projects carried out were mainly based on German expertise. Another important feature concerned the labour relations of shipbuilding. The shipyard was the largest and most significant employer in Turku, and the large munitions and warship orders during the First World War only increased its importance, raising the shipyard

1 Robert Fithie (1705-1772) served an apprenticeship at Djurgården shipyard in Stockholm from 1722 to 1726. He was granted citizenship in Turku in November 1741, and was officially granted a permit to begin to construct his own shipyard and rope-making works on the west side of the River Aura in Turku on 13 July 1747. However, he had begun to build ships earlier, and from 1746 he built ships on a regular basis.

2 Von Knorring, Aurajoen veistämöt ja telakat, 75-80.

3 From the twelfth until the early nineteenth century, Finland was part of Sweden, a legacy reflected in the prevalence of the Swedish language and its official status.

4 See Lavery, The History of Finland.

5 Terä, ”Turkulaiset telakat”. 
workers to a special status, both nationally and locally. After the March 1917 revolution in Russia, shipyard workers grew more radical as their means of livelihood weakened with the decrease and eventual end of shipbuilding orders. For the first time, the metalworkers in Turku occupied the front line of the local labour movement, and simultaneously joined the wider international movement of metalworkers in numerous countries acting against the rationalisation of production, and tightened governmental regulation on labour relations. During the First World War, the joint influence of cataclysmic political and production-related changes consolidated a “militant mentality” among the shipyard workers in Turku. This reflected their local and national significance, and their crucial role in production. This mentality led them to the head the struggle for notable reforms in labour relations, including the implementation of the 8-hour working day in 1917, paving the way for similar reforms in other fields of employment in Turku and nationally.6

In 1924, shipbuilding in Turku was concentrated in one large firm, when Oy Vulcan Ab merged with Ab Crichton to form Crichton-Vulcan Oy.7

**Labour relations and conditions of employment**

In Finland, terms of employment were mainly decided locally within each place of employment until the end of the Second World War, as, in contrast to other Nordic countries, industrial employers refused to sign collective agreements with the trade unions. The shipyard in Turku was a substantial local and nationally important employer, and thus, under the circumstances, the changes to its labour relations were reflected in the entire nation. Moreover, the shipyard workers in Turku were highly organised and also had the will to affect industrial relations nationally. Even relatively small disagreements within the shipyard’s labour relations had the tendency to become political, and turn into issues that concerned the industrial relations of the entire country, requiring national politicians to take a stand. In 1927, a strike for collective pay increases lasting more than six months took place at the Turku shipyard, eventually leading to a nationwide lock-out. The workers’ stand attracted national and international solidarity, and the strike’s eventual settlement meant an end to the

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lock-out policy imposed by the metal industry employers’ union. In the end, the strike begun at the Turku shipyard and its settlement resulted in collective pay rises for all the employees who were locked out by employers. The questions of principle that were the main trigger for the industrial activities of 1927 resurfaced in the late 1930s, causing two more large-scale displays of industrial action. Before the mid-1940s, a strike, or the threat of one, was almost the sole means of influencing large-scale questions concerning pay and the terms of employment.8

The national significance of labour relations at the shipyard also played a substantial part in strengthening the environment of distrust prevailing within the company. A void existed between the mainly Swedish-speaking management and the Finnish-speaking workers, and, contrary to what was accomplished in numerous Swedish shipyards, the management’s various labour policy strategies were not enough to close it. For a long time, the management of the Turku shipyard neglected the development of welfare programmes, and the position of Chief of Welfare was established at the Turku shipyard only after the Second World War. However, the leftist mindset of the workers caused them to take a distrustful attitude towards recreational activities, such as factory sports, that the company organised.9

The employer policies did not concern only the Turku shipyard, but also the large Wärtsilä Group, with which the Crichton-Vulcan shipyard in Turku had been merged in 1938. Wärtsilä’s managing director, Wilhelm Wahlfors, was the most influential person in the Finnish metal industry. The Wärtsilä Group aimed at observing a uniform employer policy within its companies, which operated in numerous locations in the country; however, it was in the Turku shipyard that the boundaries of the policy were often stretched. It had been established by experience that any reforms and wage drift accomplished at the Turku shipyard were likely to spread over the entire field. In the shipyard’s industrial relations, the local, the multi-local, and the national were connected in a complex, if somewhat strained manner.10 Wärtsilä’s expansion continued in 1939 when it purchased a neighbouring boat and engine builder, Andros, and merged it with Crichton-Vulcan.

9 Group interview with shipyard workers, 8 February 1989 (Museum Centre of Turku), 21-22.
10 Teräs, “Turkulaisten metallityöläisten henki”, 68-76.
War reparations provide work for Turku’s shipyards

After the Finnish declaration of independence in December 1917, Turku’s shipyards, previously operating mostly on exports to Russia, were faced with a thorough structural change. Thereafter, the Finnish metal industry came to mainly comprise domestic manufacturing, with the state as the most significant source of ship orders. The Turku shipyard company also operated a foundry where production could be switched to fill gaps in ship orderbooks: its products included, for example, quay cranes. In order to be able to construct submarines and warships commissioned by the state, the company invested heavily in the modernisation of the shipyard in the late 1920s and early 1930s. New plant and machinery were acquired; a new shipbuilding berth, two plate halls, and a 100-tonne crane were built. Meanwhile, a new German shipbuilding technique was applied during submarine construction in co-operation with German experts.11

Another large-scale wave of modernisation at the Turku shipyard and foundry took place in the late 1930s after the shipyard had been subsumed into the large Wärtsilä Group. From the year 1932 onwards, the shipyard received orders, mostly involving tugboats, from the Soviet Union. However, an expansion in production occurred in 1936, when the shipyard’s orderbook was filled with orders for larger, more modern, and more technically demanding vessels required by both domestic and foreign shipping companies. A vast investment programme was initiated to execute these construction projects; including the construction of a number of notable newbuildings to fulfil the needs of both the shipyard and the foundry. The assembly berths and plate halls in the shipyard were renewed, expanded, and equipped with sturdier cranes manufactured by the company. Large quantities of new machinery, commissioned from leading European manufacturers, were installed just before the start of the Winter War in 1939. Simultaneously with these extensive construction investments, the company decided to begin production of diesel engines in co-operation with the German company Krupp Germaniawerft AG in 1938.12

Another significant improvement to the shipyard operation was a dry dock, built close to the mouth of the River Aura with the assistance of the city of Turku, and finished in 1937. By the decision of the government of Finland, the dry dock was appointed for the use of Crichton-Vulcan, which

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significantly increased the company’s repair capacity and, in particular, enabled the docking of larger vessels. During the war, the dry dock served as a base for large amounts of ship conversion and repair work. Post-war, the shipyard’s repair department worked day and night on vessels that had been damaged in the war.13

The series of ships manufactured for the USSR and the technological reshaping of the shipyard in the late 1930s had played a central role in the Turku shipyard gaining orders for the largest vessels that were included in the war reparations for the Soviet Union. The reparations were so vast that two new shipyards had to be established in Turku to meet demand, even with Crichton-Vulcan operating at full capacity. At the peak of demand, fifteen Finnish shipyards were producing war reparations vessels. A separate body, SOTEVA (the Board of War Reparations Industry), was established in Finland to manage and organise the reparations industry in different fields. Most of the reparation orders issued to the Turku shipyard did not involve technologically challenging vessels. This acknowledged that the shipyard had produced the same type of vessels previously, and thus did not require significant additions to its design capacity in order to accomplish the construction tasks. However, a central difference existed in that the series of vessels constructed for reparations were much longer in length than any previously produced series. The shipyard’s orders included thirty 800-horsepower tugboats, twenty-four barges of 3,000 tonnes, nine 3,200-dwt freighters, and three 3,000-tonne motor barges.14

The shipyard required a substantial increase in its labour force, but post-war reconstruction and reparations offered numerous work opportunities in different fields and resulted in a labour shortage. In order to ease the shortage, SOTEVA offered professional courses to train new plateworkers, welders, and outfitting craftsmen. During the war, the number of employees at the shipyard was between 1,000 and 1,500, rising to 2,000 in 1945; by the time the reparations work ended in 1951, the numbers employed exceeded 3,000.15 At this time, Turku’s 3 shipyards had more than 4,500 employees, which highlighted its status as Finland’s leading shipbuilding town, and the important role the shipyards had in the town’s economy.

15 Von Knorring, Aurajoen veistämöt ja telakat, 117, 123; Teknisk årsberättelse 1951, at Suomen Elinkeinoelämän Keskusarkisto (ELKA).
The serial production of reparation vessels offered the means for the rationalisation of production in the shipyard; however, the nature of the production process remained mostly unchanged. Nevertheless, each vessel built for the reparations served as an education and resulted in more streamlined production, although at this stage a uniform system of flow-line assembly production still remained a distant idea. In the early post-war period, Finnish shipbuilding was still largely based on craftsmanship, experience-based knowledge, and the co-operation of numerous trades. The boundaries between the various crafts were, however, clearly demarcated, and each trade group advanced their respective pay issues separately: all of the central crafts had their own shop stewards. Under these conditions, the employees had relatively extensive means of controlling the production process. Original ship drawings were constantly updated during serial production as the workers kept adding incremental improvements to their ways of working. After 1945, shipyard workers were hierarchically organised, and decisions on production were made by squad leaders directly, with the foreman responsible for particular tasks. In tandem with the plateworkers, riveters maintained their status as one of the primary occupational groups of shipbuilding, as the ships built for reparations were largely riveted. Smooth co-operation among plateworkers and riveters was essential to the flow of shipbuilding.16

The shipyard was able to meet the heavy demands of the war reparations schedule by distributing the work into two or three shifts; the last vessels were delivered to the national commissioner in late November 1951.17 Crichton-Vulcan had to prepare for the more normal post-reparations climate and increasing competition, but its return to normal market conditions was relatively soft, aided by the Soviet Union placing its first orders based on commercial treaties agreed in 1948; accordingly, substantial new orders were received in the early 1950s. Trade with the Soviet Union was conducted on a bilateral basis, within the framework of general agreements covering five-year periods. In the beginning, the commercial treaties signed with the Soviet Union mainly concerned a type of ship similar to those produced for reparations, but the orders gradually became more varied. Orders still comprised extremely long series production, filling shipyard capacity and providing fuller utilisation of overheads within the shipyard.18

17 Crichton-Vulcan Teknisk årsberättelse 1951 (ELKA).
Simultaneously, the shipyard was involved in competition for substantial ship orders with both domestic and Western shipbuilders. Being active in two different markets had a positive effect on the shipyard's development: Soviet trade stabilised the shipyard's employment situation and allowed production reforms to enable the company to succeed in Western markets. In the 1960s, the USSR placed orders for a relatively long series of large, well-equipped ocean-going freighters, but from the 1970s onwards the deliveries primarily consisted of technically challenging special-purpose vessels, such as passenger ferries, icebreakers, and cable ships. During the 1970s, between 35 and 40 per cent of the output went to the Soviet Union. However, due to the longevity of Finnish-Soviet general agreements, a significant proportion of the shipyard’s capacity would continue to be directed eastwards, even though the importance of Western orders was constantly growing from the 1960s, and these orders were for more technologically demanding ships.

The late breakthrough of welding

The focus on reparations work had delayed numerous new technical innovations and rationalisation, but in the early 1950s such delays could no longer be afforded. According to the workers' recollections, the end of reparations work resulted in a tense environment at the shipyard as the onset of increasing competition was reflected in labour relations and working processes. The shipyard lagged significantly behind, for example, its Swedish competitors in terms of welding techniques, but it still had to compete partially in the same markets. The first vessel to be constructed almost exclusively by welding at the Turku shipyard was an oil tanker, *Esso Finlandia*, launched in 1949, but welding slowly became more common during the 1950s. It was acknowledged by management that many foreign shipyards had been building completely welded vessels since the 1940s, and that it was a gap that they would have to close. However, many naval architects and ship designers were somewhat distrustful of the endurance of welded structures.

19 From the 1950s onwards, ships exported to the USSR amounted to half of the production capacity of Wärtsilä's shipyards.
20 Wärtsilä Group annual reports, 1974-1976.
21 Group interview with shipyard workers, 10 February 1988, 3-5.
22 Svensson, *Från ackord till månads lönn*, 235-251. For the British case, see Murphy, “The Health of Arc Welders”.
23 Heino, “Muutamia huomionarvoisia seikkoja”, 74-78.
Moreover, shipowners’ conservatism, insurance companies’ reluctance to take a chance on a new method of metal joining applicable to ships, and classification societies’ collective wariness all contributed to the delayed introduction of welding. However, all-welded ships were generally introduced in the 1950s as the technique and its application to shipbuilding progressed. Welding was initially applied more often in limited areas. However, by the mid-1950s it was generally accepted that constructing an entire vessel by welding was appropriate, not least by savings in weight and hydrodynamic efficiency, and thus riveting could be abandoned. This did not occur overnight and the shipyard underwent a relatively long transition period in the 1950s, with old and new technology working side by side. There were numerous obstacles hindering the wide application of welding; one of the most central was removed when cold bending replaced heating in frame construction in the 1960s, after which “welding was suddenly smoother”, as a former welders’ shop steward stated.

The introduction of welding was affected by numerous factors, particularly in the Finnish climate, which is characterised by great temperature variations. When welding was performed outdoors, winter cold and summer humidity caused significant problems for the quality of the welding seams. Furthermore, even when welding indoors in the fabrication halls, the problems could not be entirely avoided as initially the halls were not heated, and were thus prone to humidity in summer and cold in winter. Bad weather conditions delayed the work significantly: in freezing weather it was necessary to separately dry and heat the parts to be welded. A Soviet classification society set severe conditions and limitations for outdoor welding, recommending that it be ceased immediately if cessation was technically possible. Sweden, already ahead of Finland in welding advancements, allowed outdoor welding only with an exceptional permit in the early 1960s. Riveting was not similarly susceptible to changes in weather, which was one of the reasons its use was prolonged, and some classification societies demanded, as late as in the mid-1950s, that ships be partially riveted.  

24 Group interview with shipyard workers, 8 March 1988, 1. In the late 1980s, Usko Nurmi, a long-term foreman at the Turku shipyard, recalled that a problem with welding was the warping of steel plates, which was especially bad in the deck structures of the vessels.
25 Ibid., 12.
26 Sorje, “Kylmissä lämpötiloissa suoritettavia hitsauksia koskevia määräyksiä”, 142-144.
27 In the UK, the passenger liner Canberra was launched by the Belfast shipbuilders and engineers, Harland and Wolff, in 1960. Her hull had riveted frames and three riveted seams, and she was the last significant large vessel built to incorporate significant amounts of riveting in
At first, the possibilities offered by welding were not sufficiently exploited in ship design, and its use became more common mainly by following foreign examples and through experience of practical work. Low-quality welding electrodes delayed progress, and no crucial steps were taken until 1963, when high-efficiency electrodes gradually started replacing traditional ones. The shipyard was constantly on the lookout for new welding equipment: earlier, in 1958, it already possessed 441 hand welding units and seven fully automatic and five semi-automatic welding machines. In 1959, shipyard engineer Jouko Sorje had reason to state, in a magazine concerning the welding field, that the automatic machines allowed an increased welding speed compared to hand welding, but he also noted that cutting-edge welding machinery was a very expensive investment. This was one of the areas where Finnish shipbuilding lagged behind the more developed shipbuilding countries. Automatic welding had seen its breakthrough in the USA on Liberty-type vessels built during the Second World War, and the technique was widely adopted in Sweden immediately after the war. In the beginning, automatic welding machines were only in restricted use, but they were applied more widely once the work could be moved into fabrication halls and the construction of ships from blocks started.

It was not until welding became more commonplace that its use enabled the substantial reform of working processes: production-line work increased, work was more frequently divided into different stages, and the wages of different occupational groups were reassessed. With the drive to more construction in fabrication halls, time-and-motion studies became more common and systematic in numerous departments of the Turku shipyard, particularly in the mid-1950s. The work on new, large-scale prototypes for series of ships was planned, studied, and priced in more detail than hitherto, taking into consideration the increased work efficiency brought about by serialised production. Unsurprisingly, the size and targets of series-based efficiencies prompted a constant stream of discord in the labour relations of the shipyard.

the UK shipbuilding industry. See Moss and Hume, Shipbuilders to the World, 378-381. See also Johnman and Murphy, “Welding and the British Shipbuilding Industry”.
29 Sorje, “Nykysistä hitsausmenetelmistä”, 22-26, 36.
30 Ekman, “Turun hitsaava teollisuus”, 51-55; Mäkelä, Ossin aika, 15-19, 31-34.
31 Mäkelä, Ossin aika, 43-50.
32 Wärtsilä Group annual reports 1951-1954; von Knorring, Aurajoen veistämöt ja telakat, 164.
The fact that welding had become more commonplace affected the organisation of work in many ways: the traditional job description of plateworkers in particular was changed once they assumed some of the welding tasks, and the professional requirements for welders started to develop in a different direction from those of other occupational groups. The welders’ professional skills, as well as pay, were at first divided into four and eventually into five classes. It was not possible to learn welding simply through practical training in the same way as, for example, plateworkers could learn their craft, and this enabled welders’ professional qualifications to be better controlled than those of other trades. The previously mentioned SOTEVA training courses for welders and plateworkers were short: welders were trained for two months, and plateworkers for only 40 hours. Sheet-iron workers in particular received the majority of their professional training through practical work, normally starting their careers as apprentices working in squads, or in pairs with skilled workers.\(^{33}\) Once these courses were no longer arranged, the shipyards in Turku started organising six-month welding courses, and the participants had work at the shipyards for a certain period of time. The workers at Crichton-Vulcan were also offered the chance to study in the Gothenburg vocational institute in Sweden, where local shipyards had run vocational schools since the 1950s, but this never became a popular course of education.

The Turku shipyard began organising its own courses in welding and platework in 1957. They included basic and advanced courses in welding for welders, and courses in plating, flame cutting, and tack welding for plateworkers. According to information from the company’s technical management, by the end of the 1950s the shipyard had already provided training for approximately 1,200 welders.\(^{34}\) In 1961, the first course for automatic welding was arranged at the Turku shipyard; indeed, emergent information technology stimulated a constant need for new training in the shipyard. There was also a lack of a skilled workforce to operate new, digitally controlled machine tools, computers, automatic flame-cutting and welding machines, and other rapidly improving automatic tools acquired during the 1960s.\(^{35}\)

Women were also accepted into the shipyard’s welding classes: the first females started work as trainee welders in the early 1970s. Beforehand,

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33 Group interview with shipyard workers, 8 February 1989; Teräs, “Työssäoppiminen ja työelämän murros”.
34 Ekman, “Turun hitsaava teollisuus”, 51-52.
women had been working at the shipyard as cleaners, but in a step-change at the beginning of the 1960s they were also employed as crane operators.\textsuperscript{36} In 1958, a head of training was employed at the Turku shipyard, and in 1965 a two-year vocational school was established, settling into a building of its own in 1968. Due to labour shortages, the vocational school had to be extended in the mid-1970s, after which the annual graduate count of the school was approximately 250 students.\textsuperscript{37}

The downside of the training provided for the welders was that riveters were no longer considered to be skilled professionals, and were demoted to common labourers. The number of riveters had begun to drop in the 1950s as welding gained popularity, and during the following decade the entire trade practically disappeared from shipbuilding. This signified a notable cultural turning point in shipyard work: along with the occupational group, a rich professional vocabulary and a significant part of the shipyard's group work culture disappeared.\textsuperscript{38} Nonetheless, a cohort of riveters retrained as welders, some as sheet-iron workers, and others were moved to less important tasks; some changed profession altogether. As the transition period was relatively long, in the end relatively few workers had to be paid off. Furthermore, the professional skills of riveters were still needed at the shipyard foundry for crane construction and ship repairs.\textsuperscript{39}

Ship repair activities were frequent at the Turku shipyard, and its operational preconditions were much improved when the dry dock was enlarged in 1960, allowing all contemporary Finnish vessels to be docked at Turku. Between 100 and 200 repairs were performed at the shipyard annually in the 1970s, a portion of which consisted of annual overhauls, and another portion of large-scale vessel conversions. In 1979, the Wärtsilä Group's Kotka repair shipyard, specialising in smaller-scale repair work, was merged with the Turku shipyard; during that year, 185 repairs were performed at the shipyards. In 1980, ship repairs at the Wärtsilä Turku shipyard employed 576 workers, comprising nearly one-tenth of the shipyard’s employees; simultaneously, 13 per cent of the shipyard's invoicing concerned repair operations. A notable portion of the repair orders came from the USSR and the company increased its capacity for ship repairs through corporate acquisitions; in addition, an 8,500-tonne floating dock commissioned from

\textsuperscript{36} Ukkonen, \textit{Metallinaiset työssä ja kotona}, 22-36.


\textsuperscript{38} Terä, \textit{Veritasliikkeistä suurtaisteluihin}, 29-33, 93-100; Terä, \textit{Paikallisten työmarkkinasuhteiden kausi}, 81-88.

\textsuperscript{39} Group interview with shipyard workers, 8 February 1989, 21; Grönros, \textit{Laivanrakentaja 1938-1988}, 83-84.
the USSR was in operation in 1984.\textsuperscript{40} The ship repair operations, along with the manufacture of diesel engines, had an important role in stabilising the trade cycle that would have otherwise fluctuated due to the changes in vessel order numbers.

**Taylorism and piece rate conflicts**

Taylorist ideas, which were difficult to apply to shipbuilding owing to the multiplicity of tasks involved, emerged at the Turku shipyard during the war reparations period. The first time-and-motion analysts arrived at the shipyard only in the late 1940s, whereas in many other fields time-and-motion studies had had their breakthrough during the war years. Contemporaneously, numerous recently graduated technicians were hired at the Turku shipyard to work in tasks related to piecework pricing and planning. The pricing of the tasks studied began to move more and more often from the work supervisors to the piece rate settlers in the mid-1950s. However, the workers had little faith in the price settlers’ ability to set the correct prices for tasks in the challenging conditions of shipbuilding, and problems concerning piecework rates were a source of continuous tension in the shipyard’s labour relations.\textsuperscript{41}

As tasks were moved indoors and their descriptions were reformulated, the employer would unilaterally adopt new, discounted piecework rates, which they justified with the improvements in working conditions, and the effects that serial work had on contract rates. The workers would not agree to the new terms of contract, which, they maintained, would lead to a consistent decrease in wages. They felt that, as rates had been set unilaterally from the shipyard office, there had been no real chances of negotiation. The conflict surrounding the matter demonstrated the special nature of shipbuilding: the time used for a piece of work could be prolonged due to unexpected causes, normally a lag in the chain of production, accidents, lack of sufficient materials, etc. Another trigger for disputes was the removal of bonus payments for dirty and heavy work from numerous tasks after the work processes had been reformulated, and conditions of work improved. Even when work was partially moved indoors, the working processes, and consequently the rates, would be altered. From the late 1950s onwards,

\textsuperscript{40} Wärtsilä Group annual reports 1970-1980, 1984.
\textsuperscript{41} Group interview with shipyard workers, 8 February 1989, 11, 21; Haavikko, Wärtsilä 1934-1984, 72; Mäkelä, Ossin aika, 37-38.
technical innovations caused wages to become a cause of serious conflicts at the shipyard. The disagreements mostly concerned the benefits of work rationalisation and serial work, and their distribution between the employer and the employees. The employees consistently felt that all of the benefits of rationalisation were flowing to the employer.42

The different occupational groups took part in negotiations on discounted piecework rates led by their respective shop stewards, and frequently the employees would switch to working for time-based rates, allowed by the collective agreement, if the rates could not be settled locally. This was fairly common in the 1950s. Occasionally the disagreements would be taken to trade unions for negotiations. The employers did not always agree to local negotiations, nor would they acknowledge the status of the department shop stewards, some of whom were discharged during the labour conflicts of the late 1950s. On the shop floor, negotiating machinery remained relatively underdeveloped, and the atmosphere grew more hostile during the second half of the decade when piecerates were systematically redefined.43

During the interwar period, work-related issues resulted in strikes due to the weak negotiation machinery, and later strikes became an extra step in negotiations. If the disputes could not be settled quickly enough, the negotiations would normally be “hastened” with a short strike, and it was only after this that the serious negotiations would begin. This reflected, and simultaneously strengthened, the adversarial and distrustful atmosphere at the Turku shipyard, where the power relations of the working life surfaced easily. According to the workers, the three-step negotiation system was too slow, too rigid, and too centralised, with the management of the Wärtsilä Group wishing, not unusually, to keep a tight rein on the company’s pay policies.44 The employees used strikes to highlight the importance of their demands, and to show the employers that, as a group, they were serious about the issues. The relationship that shipyard workers had with strikes can be characterised by stating that strikes were no longer considered a break in everyday life, but rather a part of it.45

In their own estimation, many shipyard workers gave strikes emphatically social meanings and did not wish to regard them as merely a means to an end towards increased financial benefits. In the early 1980s, one of

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42 Mäkelä, Ossin aika, 37-50.
43 Ibid., 21-24.
the shipyard’s shop stewards answered a question presented by researchers concerning the financial losses caused by strikes, by stating that too much attention was being paid to counting the losses; he emphasised that strikes gave “additional value in the eyes of the workers themselves, and even the opposite side would show some respect”.46 The shipyard’s communist-led trade union made conscious efforts to maintain a fighting tradition, which it regarded as an asset among the workers when handling issues relating to wages and other terms of employment.

Concerning labour relations, the shift from serially produced ships to one-off production, and the increasing complexity of the ships built, made piecework pricing technically more difficult and thus more liable to cause conflict. It became more difficult to take disturbances or changes to production chains into account when setting contract rates; thus prices would often be decided afterwards, based on arbitrary interpretations and prone to causing disagreements. In one-off production, the drawings could no longer be fixed as in serial production, where small alterations were common and it was possible to constantly take advantage of knowledge gained from previous experience.47

**Strikes**

According to a study conducted on the industrial action that took place in Finnish shipyards between 1972 and 1982, two-thirds of the strikes were related to pay disputes, of which a majority concerned piecerates. There was a clear increase in the number of strikes at the beginning of the 1970s, when twelve strikes took place at the Turku shipyard, but at their highest the numbers reached eighty-seven strikes in 1974 and ninety-one strikes in 1980. At the Perno shipyard, the number of strikes altered between seventeen and eighty-nine between the years 1976 and 1982. The economic depression had a clear effect on the numbers of strikes: when the economy eventually improved during the second half of the 1970s, the number of strikes increased. Work stoppages at the shipyards tended to occur as a result of wildcat strikes and concerned only certain trades in wage competition with each other. At the Turku shipyard, welders, plateworkers, pipefitters, carpenters, and engineer fitters were at the head of the strike statistics. The proportion of strikes concerning the entire shipyard (all

occupational groups) of all strikes at the workplace was 10 per cent at the Wärtsilä shipyard in Turku, and 14 per cent at the Perno shipyard (from 1976 to 1982). Measured in strike hours, their share in Turku was 53 per cent and 58 per cent in Perno respectively. Strikes concerning the entire shipyard were primarily used to influence matters outside the workplace, normally the collective-agreement negotiations held between the labour market organisations nationally. In the 1970s and at the beginning of the 1980s, shipbuilding was the most strike-prone branch in the engineering sector and in the Finnish economy as a whole.48 One of the outcomes of the Wärtsilä Group’s special role in determining Finnish labour relations took place in 1985, when the legal maximum amount of strike fines was increased ninefold, and the law became known as “Lex Wärtsilä” among the public. The objective of the law was to make the threshold for strikes much higher, as it was viewed as considerably too low and regarded as a major problem especially for Wärtsilä Group’s shipyards.49

Sub-contracting

Another source of internal tension at the Turku shipyard was sub-contracting: a form of employment that management relied on to alleviate skill shortages, which became critical in the early 1970s when the shipyard started placing larger orders to suppliers outside the shipyard and increased the use of external labour.50 Through sub-contracting, the shipyard management also aimed at cost savings, bringing more flexibility to the production process, and enabling shorter production times for the ships. One of the factors affecting management decisions may have been that sub-contracted workers would dilute the shipyard’s own departments that were liable to strikes. In the midst of the shipyard crisis at the end of the 1980s, sub-contracting became increasingly common, while the number of the shipyard’s own employees was cut. Sub-contractors were hired from Germany, as well as from other Nordic countries. It was soon discovered that promoting the use of sub-contracting over the shipyard’s own permanent workforce to this extent was, in fact, a great financial error, as costs of sub-contractors rose steadily. Moreover, it caused friction between the sub-contractors and the permanent employees, disturbing production. Even if the sub-contractors

48 Kauppinen and Alasoini, Työtaistelut telakoilla, 40, 47-62.  
49 Teräs, “Turkulaisten metallityöläisten henki”, 75-76.  
were able to produce ship parts more affordably than the shipyard itself, this was not the case for installation work. Already in the early 1970s, the shipyard’s trade union opposed the use of sub-contractors, in particular in outfitting: it was a question both of pay and of defending the traditions of occupational groups.51

In many West European shipyards, fixed hourly wages had been a reality ever since the 1970s, as piecework had caused conflicts in labour relations and complicated the solving of the organisational problems in shipbuilding.52 At the Turku shipyard, the aim had been to increase task flexibility and co-operation between separate working groups through group tasks and large-scale projects; however, they, too, only led to more conflicts and strikes. In spite of the failure of these new types of tasks and other reforms to lower the thresholds between different occupations, they did, for their part, pave the way towards hourly wages and merit pay. It became very difficult to maintain a piecework system in respect of the one-off production of ships, because the production conditions were so variable. After the transition period, it was easier for both the shipyard management and the employees to accept the idea of abandoning piecerates. At the Turku shipyard, this step was taken only at the end of the 1980s, when Wärtsilä exited the shipbuilding industry in 1989 after its bankruptcy.53

The new shipbuilding company, Masa-Yards, formed with the aid of shipping companies that had ships in various phases of construction at Wärtsilä’s shipyards in Helsinki and Turku and aid from the Finnish state, was consciously oriented towards management-union co-operation instead of antagonism. Negotiations were improved once the decision-making was taken directly to the shipyard level, and because the new, co-operative climate brought about by the international shipbuilding crisis allowed a fresh start. This was accomplished on the grounds of a common understanding of the reasons that had led to the crisis. Co-operation and mutual trust were maintained for some time, but, little by little, friction emerged between the shipbuilding company’s management and the shipyard’s trade unions. In the mid-1990s, the good negotiating spirit that had prevailed during the first years of the decade was somewhat diminished; however, the previous antagonistic situation was avoided. Nevertheless, the increase in large-scale turn-key sub-contracts would occasionally cause discontent

52 Svensson, Från ackord till månadslön, 346-368.
in the shipyard's labour relations. The yard's trade union criticised the management for neglecting the shipyard's own employees, as there were sub-contractors in turn-key projects, working on tasks that had been assigned to permanent workers who had either been laid off or were under the threat of being laid off.54

In the shipyard's labour relations, strong, craft traditions and rigid boundaries between occupational groups complicated production-related reforms. According to Jukka Niemelä, over the course of a long period of time, work organisation at the shipyard developed into an mixture of Taylorism and traditional craft production, the latter remaining vibrant, especially in the outfitting department.55 The craft tradition was still alive at the beginning of the 1980s, and Taylorist methods never became as strongly implanted in the Finnish shipbuilding industry as they did, for instance, in the Swedish yards in their golden period during the 1950s and 1960s.56 In the 1990s, Masa-Yards tried to modernise and to develop the squad tradition of shipbuilding. Group work was discussed and implemented under the heading “team work”. Through team work, management tried to enlarge tasks, to remove skill demarcations, and to improve communication and co-operation between the production departments and other departments. Since the change to co-operation in industrial relations took place in 1989, job redesign has not aroused stiff resistance at the yard where the local union accepted functional flexibility. In Turku shipyard (Masa-Yards) the union was active in reorganisation issues which ran against long-established traditions of shipyard trade unionism.57

Block fabrication and ship design

At the Turku shipyard, block fabrication was introduced in the 1960s and adopted gradually. The first blocks to be fabricated were deck blocks. Blocks could be assembled from mostly standardised parts, which were more and more commonly prefabricated in factory-like conditions. The shift to block fabrication required large investments in cranes with a significantly higher lifting capacity. In the 1950s, the lifting capacity of the shipyard's cranes was

55 Ibid., 49; Niemelä, “Kriisin kautta joustavaan tuotantoon”, 104-105.
10 tonnes, but it reached 60 tonnes in the late 1960s; it was not until the early 1970s that the old machinery was finally replaced with 100-tonne cranes, manufactured at the shipyard. The size of the blocks grew proportionally with the increase in crane capacity.\textsuperscript{58} According to ex-employees of the shipyard, it was the capacity of the lifting equipment that played a crucial role in the development of block assembly; particularly after all of the technical problems previously posed by welding had been solved.\textsuperscript{59}

The increase in lifting capacity meant that, from 1970 onwards, it was possible to systematically develop larger block assemblies and modular production at the Turku shipyard. It was essential that the time needed for outfitting, previously performed separately and only after the ship's hull had been finished, could be significantly cut through block outfitting and prefabrication. As late as the 1960s, outfitting would be started only after the hull had been finished; in the 1970s, it could be performed after laying down the keel, when the hull of the ship was assembled of blocks on an assembly base. In the next phase, in the 1980s, it was already possible to perform a notable proportion of the outfitting directly on the blocks, significantly shortening the time needed for finishing a ship. The ships, previously built in consecutive phases, could now be built more and more often in overlapping and simultaneous stages.\textsuperscript{60}

Welding and block-fabrication techniques required not only improved lifting equipment, but also the renewal of the shipyard's building stock. The construction work for an assembly base, targeted at large ships, had begun in 1949, but it was not until the mid-1950s that a conscious effort was made to expand and modernise the building stock of the shipyard to make it more adaptable to new production technology. Finally, in early 1960s, halls suitable for block fabrication and outfitting were finished on both the east and the west sides of the shipyard.\textsuperscript{61} Cutting-edge optical flame cutters, hydraulic presses, and additional tools for automatic welding were acquired for indoor use. These renewal projects also increased the competitiveness of the Turku shipyard in Western markets, even though the technical level of the shipyard's equipment was lagging behind its competitors, including Sweden, where block fabrication had been adopted much earlier. The employment-increasing effect of the deliveries to the

\textsuperscript{58} Grönros, Laivanrakentaja 1938-1988, 80.
\textsuperscript{59} Group interview with shipyard workers, 8 March 1989, 12-14.
\textsuperscript{60} Grönros, Laivanrakentaja 1938-1988, 79-81; Niemelä, Ammattirajoista tiimityöskentelyyn, 45-46.
\textsuperscript{61} Wärtsilä Group annual report, 1960.
USSR began to diminish in the 1960s, when the number of special-use vessels included in the commercial treaties signed between the countries began to drop. Thus, in the 1960s, the shipyard had to compete for ship orders from domestic shipping companies, whose orders increased in number due to state support, as well as for orders from the Nordic countries. In the beginning of the following decade, the proportion of the orders received from Scandinavian countries varied between 30 and 47 per cent by invoice value, while the share of domestic orders was between 10 and 20 per cent.\(^{62}\)

In the 1960s, block fabrication and the construction of special vessels demanded significant additions to the shipyard’s design capacity. The objective was to accomplish an all-inclusive design system based on information technology and allowing the execution and management of increasingly challenging projects. A separate IT department was established at the shipyard in 1966 when the significance of information technology in production and ship design grew notably. In the same year, the Crichton-Vulcan yard’s name was changed to Oy Wärtsilä Ab Turun telakka. In 1967, the shipyard saw the birth of a separate department for product design and projects involving special vessels,\(^{63}\) and Wärtsilä shipyards signed a technical co-operation agreement with the Kockums shipyard at Malmö, and in this context a Saab computer was ordered from Sweden for use at the Turku shipyard. Information technology-related co-operation with Kockums resulted in an administrative computer information system named “Project Q”, whose objective was to considerably rationalise and integrate the planning and monitoring of material flows, labour, and costs. The system required considerable training and education of employees and was thought to be fully implemented at Wärtsilä shipyards in 1971-1972.\(^{64}\)

In 1969, the Swedish consultancy MEC launched the first production engineering-related development project in the shipyard’s eastern assembly hall, and in the following year it offered its expertise for the launch of a new block-fabrication project. MEC launched time-and-motion studies in the different departments of the shipyard to change more than 80 per

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\(^{64}\) Wärtsilä Group annual report, 1967; Haavikko, *Wärtsilä 1934-1984*, 120-121. Kockums sold the same system to other competitors as well. In the 1990s, the Kockums system was said to have been used by about 300 shipyards worldwide: Nilsson (ed.), *Kockums marina fartyg*, 232-233. I am very grateful to Tobias Karlsson for this information.
cent of operations to piecerates based on the MTM system; the consultancy promised a productivity rise of 20-30 per cent. The implementation of the MTM system triggered numerous disputes at the shipyard from the end of 1960s. According to the Wärtsilä annual report, there were over 600 employees working in the “large, first-class” design departments of its shipyards in the mid-1970s. In order to succeed in the context of a global overcapacity for shipbuilding, the company’s shipyards channelled their design work towards new and more challenging types of special-purpose vessels. The proportion of white-collar workers at the Turku shipyard was around one-quarter in the mid-1970s.

The old shipyard area, located by the mouth of the River Aura in Turku, grew too crowded for large, specialised vessels and provided no possibility for flexible, factory-like production. With the shipyard’s production capacity reaching its boundaries, in the late 1960s management began to develop the idea of founding a new “ship factory”, following the example of Götaverken in Gothenburg. The project was already well underway when, in 1973, its progress was further hastened by the oil crisis, which increased the global demand for LPG vessels used for carrying liquefied petroleum gas. For their design, too, the shipyard resorted to international co-operation: in 1972, the Turku shipyard had signed a licensing agreement with the Norwegian Moss Rosenberg Verft AS. After the positive outcome of the negotiations held with the Norwegian shipowners’ group concerning an enormous order for seven LPG carriers, a final decision was made to build a new shipyard in Perno. The building dock commissioned in 1976 at the Perno shipyard was 250 m long, 80 m wide, and 10 m deep, and it was equipped with 600-tonne gantry crane and two 50-tonne outfitting cranes; the building dock was later extended to 365 m in length and 15 m in depth to suit even larger LPG carriers and cruise liners. Notable investments were made to acquire efficient controlling systems, CAD/CAM technology and more automatic production tools were allocated to Perno in the 1980s. The Turku shipyard’s operations were gradually moved from the River Aura shipyard to Perno, which mainly served as a shipyard for outfitting and repairs until the beginning of the 1990s.

65 Grönros, Laivanrakentaja 1938-1988, 60; Mäkelä, Ossin aika, 130-138. The MTM (Methods Time Measurement) system is an industry time-and-motion analysis system developed in the 1940s.
66 Wärtsilä Group annual reports, 1974-1976.
The economy

The drop in the global tanker market took place during the construction period of the Perno shipyard; however, the Wärtsilä management had not invested in the construction of tankers, which had been the basis of operation for Swedish and many other West European shipyards. Once the Perno shipyard was set for use, the Turku shipyard could concentrate on building large special-purpose vessels. The rise in oil prices caused by the oil crisis in the 1970s was an advantage to Finnish shipyards, as Finland was able to increase the number of ship deliveries to the Soviet Union and thus pay for the importation of Soviet oil. Compared to other West European countries, the entire Finnish shipyard industry was able to keep its order numbers and employment rate exceptionally steady until the mid-1980s. The markets and employment levels of Finnish shipyards fell nearly a decade later than those of their Western competitors, as the Finnish shipyard crisis did not start until the late 1980s. Then, the number of exports to the USSR began to decrease, and the shipyards were unable to find a substitute market for Soviet orders. Furthermore, the implosion of the Soviet Union in 1991 brought to an end most of the bilateral trade between the countries. The radical decrease in global market prices and the artificially high strength of the fixed exchange-rate Finnish mark during the boom years of the 1980s, when financial deregulation included the removal of bank borrowing controls and liberalisation of overseas borrowing and consumer debt controls, further accelerated the crisis in Finland and fuelled a debt mountain. Competitive devaluations had been a feature of the Finnish economy, and were particularly valuable to its large paper industry, which mainly traded in US dollars. The early 1990s recession in Finland was particularly damaging and by 1992 – after the artificially fixed exchange rate had been abandoned and the mark had floated on foreign exchanges – it had lost 12 per cent of its value, and artificially high nominal prices dropped accordingly. Many entrepreneurs who had borrowed money denominated in foreign currency were ruined as the value of the mark during the recession depreciated by almost 40 per cent. In all of this, the price competitiveness of Finnish shipyards was weakened by the fact that the state refused to pay direct production subsidies to the shipyards.68

Wärtsilä

Earlier, in 1986, Ab Wärtsilä Oy and the state-owned Valmet Oy decided to merge their shipyards to reduce overcapacity and bring detrimental competition between the companies to an end. The rationale of the merger was to close down the Valmet shipyards and to centralise shipbuilding in the stronger of the companies. The new shipbuilding company, known as Wärtsilä Marine, began operations in early 1987. Due to problems relating to the underpricing of contracts, its organisation of production, liquidity problems, labour shortages, and the combined effect of oversupply and a lack of demand, Wärtsilä Marine ran into financial trouble and eventually went bankrupt in 1989, leaving the future of Turku-based shipbuilding hanging by a thread. In the end, the industry’s centuries-old traditions were allowed to remain uninterrupted, as shipbuilding in Turku was continued under the company Masa-Yards, founded largely on financial support from the Finnish state. The new company continued the interrupted construction of passenger ferries, and the numerous new ship orders, which filled its orderbook during its first year of operation, were enough to secure employment at the shipyard. However, the ownership of the hastily formed company was not stabilised. The company’s future and orderbook were strengthened in 1991 when the Norwegian conglomerate, Kvaerner, became its largest shareholder. That year, the shipbuilding businesses of Holming Oy of Rauma and Rauma-Repola were merged to form Finnyards, and in the mid-1990s Kvaerner purchased Masa-Yards. In 1999, Kvaerner announced it would give up shipbuilding operations, but the reorganisation of the Norwegian company resulted in the founding of the Aker Kvaerner Group, under which the Turku shipyard could continue its operations using its old name.69

The new century

The Turku shipyard at Perno concentrated increasingly on car and passenger ferries and luxury cruise liners, and at the beginning of the 2000s the share of shipyards at Turku and Helsinki of these markets worldwide was around an impressive 25 per cent.70 The Turku shipyard built ten large-scale cruise

70 Arctech Helsinki Shipyard Oy specialises in building icebreakers and other Arctic offshore and special vessels. It was formed in a joint venture agreement signed in December 2010 by STX
liners for the American-owned Miami-based Royal Caribbean International between 1999 and 2010.\textsuperscript{71}

In September 2004, the Aker Kvaerner Yards Group announced that it would merge its two shipyards in Finland, Kvaerner Masa-Yards Inc. and Aker Finnyards Inc., to form Aker Finnyards Oy to take effect on 1 January 2005.\textsuperscript{72} The name of the company was changed to Aker Yards Oy on 7 June 2006. In October 2007 the South Korean shipbuilding and shipping conglomerate STX secured an almost 40 per cent stake in Aker Yards, and in October of the following year it gained control as STX Europe. From September 2009 the company was renamed STX Finland Oy, a division of STX Europe, with three shipyards at Helsinki (Arctech), Rauma, and Turku. However, the lag effects of the 2008 world financial crisis continued to have an impact on both shipping and shipbuilding and, by 2012, STX’s shipping arm, Pan Ocean, had filed for bankruptcy protection in South Korea in June 2013. STX had sold ten of its STX Europe subsidiary shipyards, many of which specialised in offshore supply vessels, to Fincantieri of Trieste, which renamed the group Vard and listed it on the Singapore Stock Exchange. By December 2012, Fincantieri held the controlling stake in Vard.\textsuperscript{73} However, STX Europe retained its three Finnish operations and its French yard at St Nazaire, in which the French state held a one-third share, for cruise-ship building.

The Turku shipyard – still under the operation of STX-Finland Oy as one of the company’s three shipyards – continued building large specialised vessels, particularly luxury cruise liners. However, the continuity of shipyard operations in Turku came under threat in late 2012 as the shipyard lost a large cruise-liner order from Royal Caribbean International to the St Nazaire shipyard of the STX Group.\textsuperscript{74} This did not augur well for the future of the yard and, on 16 September 2013, STX Finland announced

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\textsuperscript{72} The new Aker Finnyards formed a part of the Norwegian-based Aker Yards shipbuilding group, which in addition to Aker Finnyards included yards in Norway, Germany, Romania, and Brazil. The new company employed some 4,500 personnel, of whom 1,000 were located at the Rauma Repola shipyard, 2,000 at the Turku shipyard, 1,250 at the Helsinki shipyard, and some 250 at the cabin manufacturer in Piikkiö and Paimio. The combined revenues of Kvaerner Masa-Yards and Aker Finnyards for 2003 was roughly €1 bn.

\textsuperscript{73} Vard comprised five shipyards in Norway, two in Romania, two in Brazil, and one in Vietnam.

\textsuperscript{74} Cruise Industry News, 27 December 2012.
that the shipyard in Rauma, which had not won newbuilding orders for several years, would close its gates at the end of June 2014. According to the company, which had not made a profit for six consecutive years, this was the only way to guarantee the continuation of the shipbuilding industry elsewhere in Finland. The closure of the shipyard would lead to around 600 people losing their jobs in Rauma. It was envisaged that, after the completion of the last two ships at Rauma in June 2014, the yard's ownership would shift to the town of Rauma, which paid STX Europe €18.1 mn on 22 January 2014 to create a new marine business park on the site, subsequently named the Rauma Seaside Industry Park. Given this scenario, a return to major shipbuilding at Rauma was unlikely; however, Rauma Marine Constructions was formed on the site to utilise some of the skills of ex-Rauma employees.

Beforehand, the position of STX Corporation in South Korea remained uncertain. At October 2013 it was reported that the state-run Korea Development Bank, the major creditor of STX, was looking to sell STX's remaining European shipyards. STX has a huge debt mountain and faces continuing financial and debt restructuring. As is so often the case in instances of foreign direct investment, the South Korean shipyards and manufacturing plants of the STX Corporation undoubtedly took precedence over their European counterparts in any future restructuring. In the present world of multi-national capital inflows and outflows, workers are increasingly becoming irrelevant and usually nationally impotent in terms of closures of shipyards.

With the Turku shipyard’s future guaranteed only to 2015, there had obviously been considerable behind-the-scenes attempts by the Finnish state to interest a buyer in the shipyard. Negotiations with the German shipbuilder, Meyer Werft, with yards in Papenburg and Rostock, were already underway by June 2014, and by August a deal was announced that Meyer Werft, in conjunction with the Finnish state (which would take a 30 per cent stake), would purchase the Turku shipyard.76 Accordingly, the deal was confirmed by the German competition authorities in September. In the interim the yard, renamed Meyer Turku Shipyard Oy, received an order for two German TUI cruise ships worth €1 bn, giving continuity of employment. The deal was aided by Finnvera, a government-owned export credit organisation, which pledged to underwrite 50 to 80 per cent of the cost of building. Clearly the hope is that Meyer Turku will become a long-term

75 Finland Times, 16 September 2013.
76 Helsinki Times, 4 August 2014.
player in Finnish shipbuilding, although the Finnish state announced soon after the purchase that it would relinquish its shares as soon as possible.77

Conclusion

The Turku shipyard has long been the flagship of the Finnish shipbuilding industry. As the largest shipyard in the country, it has had a significant effect on both local and national employment rates. After the Second World War, war reparation deliveries and, later on, bilateral trade relations with the Soviet Union provided the shipyard with large orders consisting of series of vessels. Consequently, the operation of the shipyard was rather predictable and stable. In fact, it was largely due to the Finnish-Soviet trade and to the Finnish shipyard industry’s focus on building large specialised vessels that the international shipbuilding industry crisis hit the Finnish shipyards approximately ten years later than in many other Western countries.

Labour relations at the Turku shipyard were characterised by confrontations and distrust up until the beginning of the 1990s, when the Wärtsilä Group gave up shipbuilding. The shipyard had a long history of industrial conflicts, and this tradition was consciously maintained by the communist-led local trade union. The relatively stable flow of orders also strengthened the employees’ position with regard to labour relations. Industrial action was frequently taken at the shipyard, especially after the management started a systematic reform of production; thereafter the numbers of strikes increased significantly, especially after the mid-1970s, when the economic situation began to improve. As a result of technical reforms, piecerates became a source of serious conflict, as the time needed to complete piece-work often varied due to unexpected circumstances. The conflicts often boiled down to how the benefits gained from work rationalisation and serial working were distributed between the employer and employees. Strikes became almost like an additional negotiation phase at the Turku shipyard: serious negotiations to solve any contract disputes were started only after the negotiations had been given “a boost” with a short strike.

Production reforms were slowed down by strong craft traditions, which characterised the operation of the shipyard until the 1980s. The post-war shipbuilding industry relied heavily on workers’ craft expertise and experience, and on the co-operation of different occupational groups. There were rigid boundaries between different occupational groups, and each group

77 Helsinki Times, 19 September 2014.
promoted its own interests with regard to separate payment; all essential occupational groups had their own shop stewards. Under these conditions, the employees had relatively extensive control over the production process, as part of the design work was still carried out at the factory-floor level. Many shipyards in Western Europe adopted fixed salary rates in the 1970s as contract deals were causing conflict in labour relations and hindering the solving of organisational issues in the shipbuilding industry. However, this step was taken at the Turku shipyard only at the end of the 1980s, when the Wärtsilä Group abandoned the shipyard industry as a result of bankruptcy, and the new shipbuilding company Masa-Yards consciously promoted co-operative labour relations. Consequently, the situation began to improve, which was evidenced by, for example, a decreasing number of strikes. However, conflicts did still occur, especially with regard to the use of sub-contractors at the shipyard. The continuous uncertainty with regard to the future of the Turku shipyard has been an important incentive for the employer as well as the employees to work together in order to keep the shipyard in operation.

Although there were many changes in the ownership of the yard, it is clear that the Finnish state wishes to retain a semblance of large shipbuilding capacity in the country: witness its involvement with Meyer Werft in the Turku yard. Contemporaneously, in the medium term, it seems that West European ownership will be more successful than South Korean in keeping the Turku yard in employment.