Burrard Drydock Co. Ltd.: The Rise and Demise of Vancouver's Biggest Shipyard

Roland H. Webb

The history of the Burrard Drydock Co. Ltd., Vancouver's largest shipyard, spans a century of fame and famine, massive developments, vicious depressions, corporate upheavals, government policy swings and reaction to every major event in the history of British Columbia and Canada from 1893 to the present. This paper will review several key factors that governed the growth and eventual demise of the company in 1993.

Vancouver at the end of the nineteenth century was little more than a muddy town, far removed from civilization, yet a place to which men and women of talent and drive were drawn to seek their fortunes. In slightly more than 100 years this settlement at the extreme end of thousands of miles of slender steel rails would grow into a city of almost two million with a global reputation both for its natural beauty and its port. Surrounded by seemingly endless tracts of resource-rich land and water, the city functioned both as a seaport and a railhead; the movement of resources and commodities, of people and goods, became the cornerstone of its development as a transport hub.

To this setting in 1891 came Alfred Wallace, a twenty-four-year-old shipwright trained in England. Wallace had arrived in Canada a couple of years earlier, working first at the Poison Iron Works in Ontario before being drawn to Vancouver by the promise of work assembling three steel ships fabricated in Scotland but which were to be assembled on the shores of Burrard Inlet. Before long, Wallace had responded to demand fuelled by fishing, logging and towing, the cornerstones of the BC economy at the dawn of the twentieth century. Throughout its existence they would feed the Wallace family's business with a staple diet of repair and new construction. Wallace earned a reputation as a reputable builder of fishing boats and other small craft, at first constructed in his backyard on evenings and weekends after working for others during the day. By 1894 he had leased a strip of waterfront on False Creek and started his own yard with a partner, who apparently did not have the same work ethic, for the association soon ended. Ownership and control of the company thereafter remained in the family for almost eighty years.[1]

The nature of the vessels Wallace produced depended not only on the needs and demands of the local market but also on the technology of shipbuilding and repairing. Just as the quest for efficiency in construction and operations led to the steam engine replacing sail, so too diesels would supersede steam, steel would replace wood, welding would replace rivetting, and so on. While such changes made ships more challenging to build

The Northern Mariner/Le Marin du nord, **VI, No. 3 (July 1996), 1-10.**

and repair, it was the growth in vessel size that had the greatest impact on shipyards; tugs and barges became bigger as the need for efficient transport along the BC coast was identified and met. As size grew, so did weight, and facilities that were huge for one generation were too small, out of proportion or not strong enough for the next.

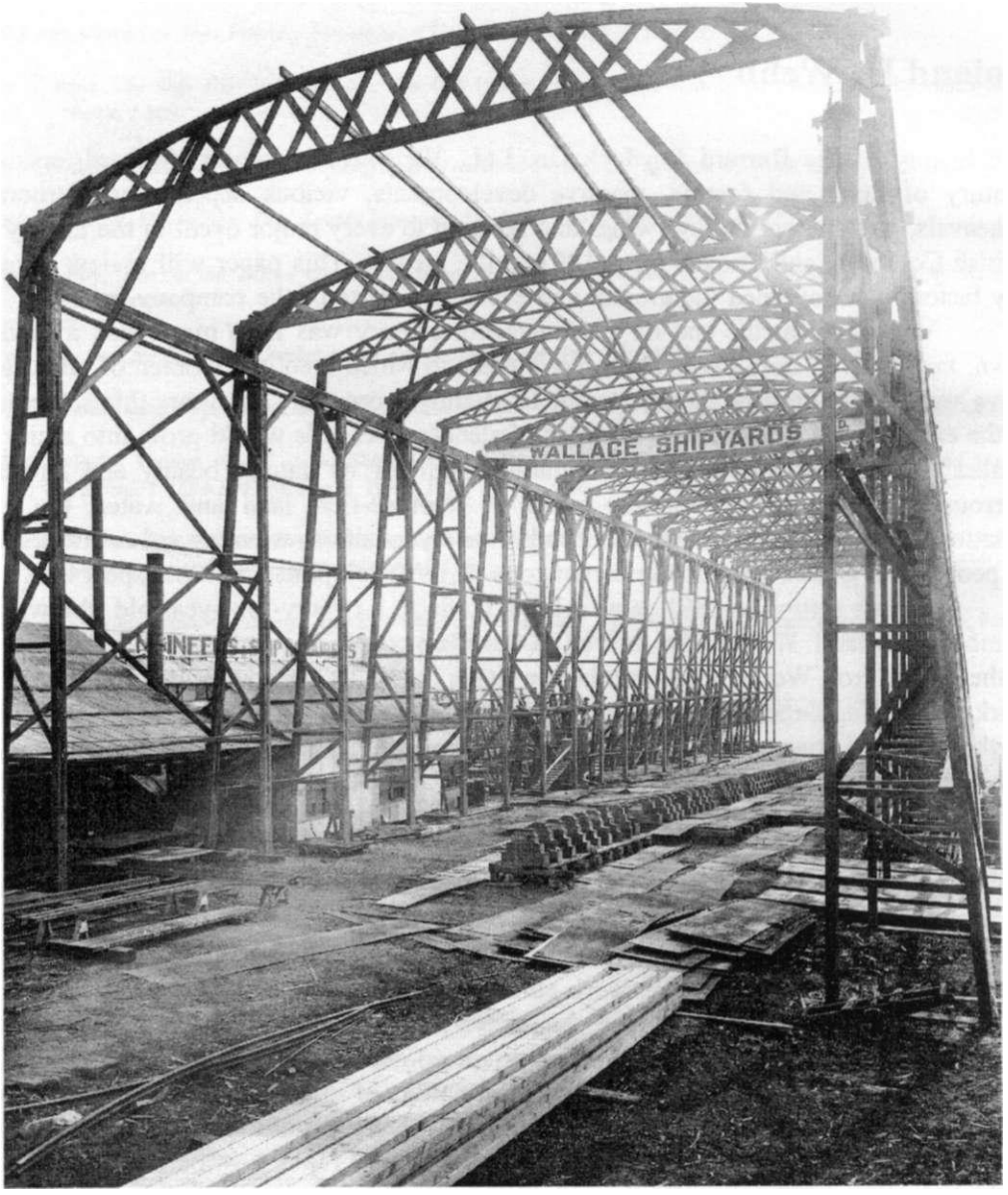

Figure 1: Wallace Shipyards, Fall 1916.

Source: Courtesy of the the author.

As vessels changed, so did Wallace's business. In 1905 the company was incorporated as Wallace Shipyards Ltd. At the same time, Wallace outgrew his False Creek location and moved to a new site on the north shore of Burrard Inlet, where land was cheap and future expansion possible. But Wallace was not yet ready to fulfil another need in the local market. The lack of drydock facilities to service and repair foreign ships was a constant source of irritation to Vancouver during its first forty years as a port by limiting its ability to function as a major deep-sea terminal. Although the advent of the Panama Canal in 1914 brought this need clearly into focus, Alfred Wallace elected to stand aside while developers proposed numerous ventures to fund and build the required dock.[2]

During the first generation of the shipyard's life, Wallace responded easily to the changes in technology. Of these, the biggest was the use of steel in new ship construction. The first steel vessel he built was actually fabricated in Ontario by his previous employer, Poison Iron Works and only assembled in BC. While those that followed were fully constructed on the site, by late 1914 only four steel vessels had been built of a total of just over 100 hulls. Then came World War I, which generated a great demand for shipbuilding in Vancouver that Wallace could not ignore. Much of the needed development was privately financed and the shipyards were left largely on their own at the outset. But government increasingly became a factor in generating demand for ship and vessel construction. For instance, the provincial government assisted the industry by supporting the construction of large wooden-hulled auxiliary sailing vessels for local owners. Shortly thereafter, the British Imperial Munitions Board placed orders for steel freighters and bought up existing orders at the yards.[3] One such vessel was underway at Wallace for Japanese owners — the first export order they ever won. Toward the end of the war, the Canadian government also became involved. Wallace had been building vessels for the federal government since 1899, but there was no concerted policy to benefit the industry except for subsidies to the operators of drydocks. Now orders were placed for the Canadian Government Merchant Marine that would extend the wartime boom beyond 1918. In short, the war enabled Wallace to develop important new skills in steel ship construction and valuable new local and federal government markets that became a steady source of work, not only during the war but also in peacetime.[4]

With the advent of major steel ship construction the yard had to change. The need for space to lay out and shape frames, plates and other pieces away from the building berth gave rise to bigger shops, while the construction of very large (over 300 feet) steel ships during World War I totally changed forever the face of the shipyard. Launchways arranged perpendicular to the waterfront clearly separated the yard into two halves; this would doom future generations to forever move material back and forth as work was performed in shops scattered on both sides of the launchways. Rivetted ships were not able to benefit from any substantial amount of préfabrication; every piece had to be worked on in a shop before assembly. Assembly itself was "stick by stick" on the building berth, with literally thousands of pieces being lifted into place one at a time. The existing site was initially unsuited for the erection of large rivetted ships. Fortunately the necessary investment was made in response to the demands of World War I that enabled the family to amass sufficient wealth to win the battle to build and operate the first drydock on Burrard Inlet. Moreover, wartime involvement with federal contracts proved useful, as a

federal subsidy helped build the dock and supporting shops. This was the first time federal money was used in facility development.[5] It also allowed the family to develop the drydock without the need to enter into any partnership arrangements. More to the point, the drydock, more than any other single factor, provided a market that virtually guaranteed the survival of the shipyard while also setting it apart from all the others that appeared and disappeared with the demands of the cyclical domestic and government markets. The construction of the drydock, together with the supporting heavy machine shop complex needed to repair components found in large ships, enabled the company to shift its energies into the lucrative repair market at a time when very few new ships were built.[6] Indeed, shipbuilding became of secondary importance. Most coastal vessels at this time were still built of wood, and Wallace Shipyard left this to the many smaller, cheaper yards that competed for the business. With the development of the drydock also came international business, major financial commitments and responsibilities. The construction of the drydock gave reason to change the name to one with more international recognition. Wallace thus became Burrard Dry Dock Co. Ltd., a name that would stay with the firm as long as the family owned it and for a good while after.[7] When Alfred Wallace died in 1929, he left a well-run and successful company in the capable hands of his two Canadian-born sons, who would lead the firm into its second generation of development.

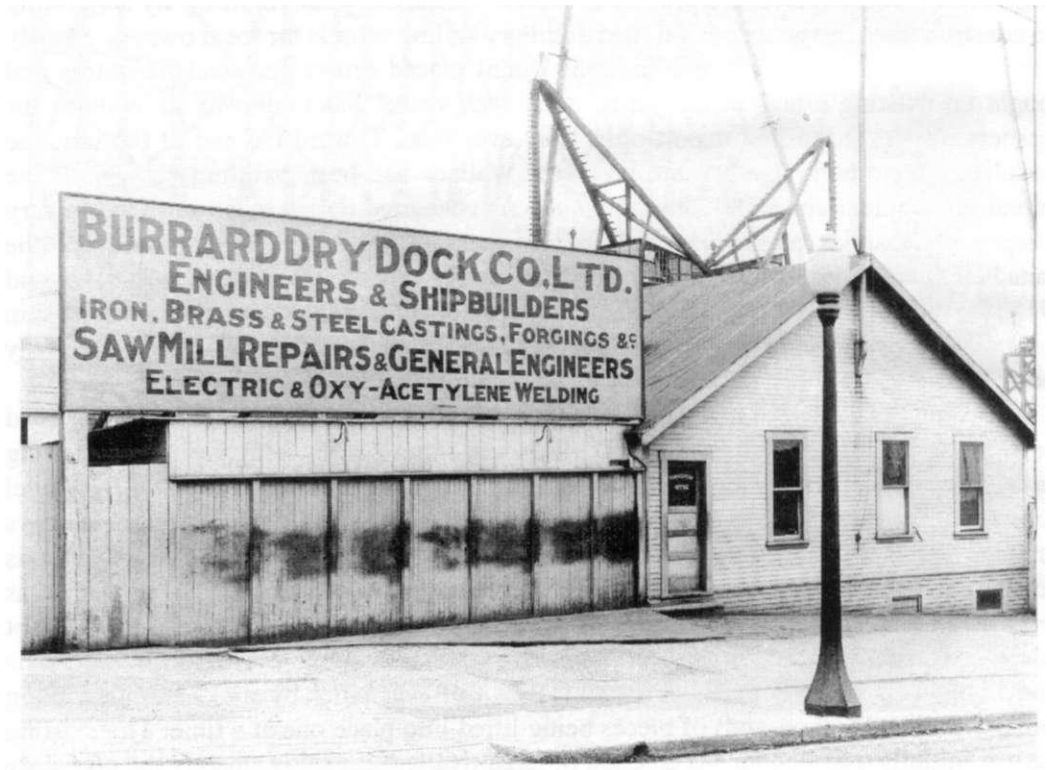

Figure 2: Burrard Dry Dock Co. Ltd., c. 1928.

Source: Courtesy of the author

By then, the Burrard Dry Dock Company was the largest shipyard in British Columbia, rapidly gaining international recognition as a good repair yard.[8] Supported mainly by ship repair work, the firm survived the depression and was one of the very few Canadian shipyards considered to be reasonably well equipped and managed at the start of World War II. During these years, government had become just one of many different clients, and shipyard operations were rarely affected by government policies. But World War II would bring the federal government into the policy game to stay. During the war, Ottawa became the yard's only customer. The immediate and urgent need was for the construction of escort vessels. This work was assigned all across the country and meant control of the supply of components and information to each shipyard. Another challenge that emerged before the end of the second year of the conflict was the need to build cargo vessels. While many yards were capable of building escorts, few had the space and facilities for cargo vessels. Burrard was one of three existing yards in the country initially considered capable of building these vessels.[9] Consequently, money was made available by the Canadian government to support the facility development needed to get underway.

By then, welding was becoming widespread in ship construction.[10] This made the traditional layout of the rivetted shipyard obsolete. Welding allowed the préfabrication of ever larger pieces in the shops, thus creating the need for bigger facilities with massive cranes by the building berths. Bigger ships were needed for World War II in much greater quantities than in the previous war, and the whole focus of the shipyard was again moved as new space was created for more berths.[11] The west end of the yard remained oriented to repair work, while the east end became the focus of new construction. As the shipyard expanded in all directions, moving material and men became a major production. More shops grew around the site, more energy was spent moving and controlling materials, and the building process became dominated by logistics rather than pure technology.

The ships were also much more sophisticated than anything built before the war; as the first warships were built, a much higher level of electrical and sheet-metal outfitting became the norm. The yard became adept at constructing more complicated vessels, mainly for the government, a task that demanded many skills not traditionally required. For instance, the electrician became one of the most important tradesmen in the finishing of a new ship and the skill of the painters became vital to the application of sophisticated coating systems. Yet with the exception of the new steel facility, changes were largely invisible from outside. The development of better systems to loft the shape of a new ship demanded less space rather than more. Electronics reduced the size of most components but increased the complexity, as throughout new ships more "bought in" components were used. The regulatory changes for fire resistance left less work for the joiner, and the shipwright became redundant along with the rigger, riveter, blacksmith and others.

The demands of the war led to exponential growth, with Burrard delivering more tonnage than any other Canadian yard.[12] The response of the company to government needs and priorities at the beginning of hostilities was vital in setting the stage for massive government-backed expansion in the post-war era. This had long-term benefits to the owners and the yard. The lessons of the war showed that welding was the way of the future, and while only limited use of this technique was accomplished during the war, the benefits were clear. The need for large enclosed shops to fabricate steel efficiently by welding was identified, and with the start of the naval programme in 1950 a complete

new shop and cranes dominated the landscape. With these new shops and welding techniques came the need for "clean" steel, free of millscale, to prevent weld contamination and to ease future painting during outfitting. Moreover, further expansion was necessary to store, sort, clean and prepare steel for this type of fabrication.

New construction of these steel facilities absorbed immense amounts of capital, and so repair work was replaced from 1945 to 1975 by new construction as the focus of development. The exception was the purchase of two other wartime-built drydocks. During the years immediately following the war, major competitors that could perform deep-sea repair work, such as Yarrows in Victoria and Pacific Drydock in North Vancouver, were bought out. As a result, by 1950 there was no competition for large repair jobs left in BC. But the debt from these buyouts, together with the need to provide for more permanent improvements than the wartime rush had allowed, contributed to the decision to make Burrard a public company, though control continued with the family.[13]

Figure 3: Burrard Dry Dock Company Limited, North Vancouver, B.C., c. 1944.

Source: Courtesy of the author.

The company emerged from the war well run, well funded and committed to the industry. With the second-generation now in its late fifties and a third generation appearing on the scene, the firm continued down the proven and profitable road of shipbuilding and repairing for almost twenty years without interruption. The stature of the owners was such that Clarence Wallace, the eldest second-generation son, served as Lieutenant-Governor of the province from 1950 to 1955.

By then, Canadian shipbuilding had become sufficiently well-equipped, organized and wealthy that it was able, for the first time, to establish a national voice in Ottawa

where it could lead politicians in desired directions.[14] Federal government policy in the post-war years continued from the foreign aid programmes of the late 1940s to the new naval fleet of the 1950s. Tax advantages became available for commercial owners to build in Canada and government departments built their ships at home rather than in England as was the practice prior to the war. Shipbuilding contracts were tendered regionally, thereby giving the west coast a share of the work despite higher wages. Policy also came into play in 1961 with the establishment of a real subsidy programme for commercial shipbuilding that lasted for almost twenty-five years. During that time, the domestic merchant and fishing fleets were almost completely replaced, and over 1500 new ships of one form or another were built in Canada, including a considerable number for foreign owners. The BC government added to this boom by taking over the local ferry fleets and beginning construction of a large number of new vessels. The oil exploration boom in the Beaufort Sea was another source of work and became a policy-driven market fuelled with federal money. Under such conditions, stable workforces were maintained in the shipyards.

Figure 4: Burrard Dry Dock Company Ltd., c. 1966.

Source: Courtesy of the author.

But times change and so do government policies. The first change occurred in the late 1960s when regional allocations for federal vessels began to disappear. Burrard passed up bidding on the "Tribal" class DDH's after being told that no vessels would be allocated to the west; in the company's view, this made the chances of winning the contract rather slim. When a short-term slump developed in the late 1960s, the family was prompted to consider selling the firm. As the third generation gained control, problems with estate planning, the need for massive investment and a wavering commitment led to the decision to sell to a Vancouver-based financial services company that was starting to build a conglomerate. When the deal was eventually closed on 30 April 1972, three generations

and seventy-eight years of family-controlled operations ended. What had been founded for a few thousand dollars was sold for $10 million.

For the new owners, it was a timely purchase; the 1970s ushered in the longest sustained boom in shipbuilding and ship repair in Canadian history. The company, now known as Burrard Yarrows Group (later Burrard Yarrows Corporation), became the most prized jewel in the new owners' rapidly expanding crown. With excellent profits from the shipyard, they prospered and bought other industries across the country. By 1984 the corporation was large, visible and generally successful. At this point the owners, now known as Versatile Corporation, changed the name of the yards to Versatile Pacific Shipyards Inc., thus severing all reference with the original names of Burrard and Yarrows.

While the company seemed to concentrate on new construction when spending funds, the world's deep-sea ships were getting bigger. The development of Vancouver as a bulk cargo port attracted ever-larger vessels, but this meant that each year fewer ships could fit inside the existing docks. What had been a fairly secure and highly lucrative market was shrinking. At the same time, more political pressure was being applied in Ottawa to award work to regions of high unemployment or major political pull. Generally, Burrard was poorly served in this respect, because BC's voice in Ottawa was never loud. Nevertheless, as the subsidy programme neared its end Burrard was able to tap the federal policy bank for assistance to build a big new "Panamax" class drydock. The construction of this new facility, together with the supporting piers, cranes and machine shop, was completed in 1982 and changed the focus of the shipyard once again by shifting it further east. The west end, where the company had been born, was adjacent to a lucrative section of waterfront where upscale development was by then taking place. The simple act of establishing the Seabus Terminal near the shipyard turned a dead end road with a view of the harbour into the transportation and entertainment centre of North Vancouver.

The construction of the "Panamax" drydock turned out to be the last major investment in North Vancouver. As the 1980s wore on, Versatile's costly expansion turned sour: losses incurred elsewhere drained vital cash from the successful shipyards. To exacerbate the situation, the long shipbuilding boom came to an end and the yards faced a bleak future. The effective rates of government subsidies decreased and the number of owners who needed or wanted new vessels also dropped. The era of single-source Crown projects arrived and it became policy to award a complete class of vessels — such as the patrol frigate — to one yard. Changes in technology throughout the 1970s and 1980s had little effect on the shipyard. Indeed, large facilities became unfashionable when interest rates overloaded companies with debt and the battles over union jurisdiction and work practices had to be fought. The importation of Japanese concepts for shipbuilding in 1984/1985 meant more time planning and drawing, fewer men working in the yard and the need for more space than ever. Once again the shipyard found itself poorly laid out for the concepts of modular construction and pre-outfitting. Further capital investment could not be justified because of poor markets and a generally uncertain future. Finally, the facility had become an unsupportable millstone around the company's neck. Too big from a tax perspective, too scattered for efficient production and too attractive to those interested in using the site for other purposes, the shipyard ground to a halt.

When the Versatile conglomerate imploded in late 1987, its many assets were acquired by the merchant bankers, Hees Corporation of Toronto. This was a short-lived ownership, as Hees undertook to sell the shipyards and other functioning companies as tax losses. The effort to sell the firm was aided by a promised federal carrot: the largest shipbuilding contract ever for the Polar-8 icebreaker. Consequently, a buyer was found in 1989. The provincial government agitated to maintain some level of support for the industry, but would not use its own revenues, expecting instead that the federal government would continue to spend. But by then "rationalization" of the industry had become federal policy, while the new owners of the yard turned out to be Toronto-based venture capitalists attracted more by the value of the North Vancouver lands than any other single factor.[15] Shortly after the new owners took over, the federal government killed the Polar-8 in the February 1990 budget. It was only then that the provincial government looked seriously at the BC shipbuilding industry. New provincial policies to support the existence of the drydock in Vancouver and to build new ferries in BC have been the saviour of the industry in the last few years. Otherwise, what little chance the North Vancouver shipyard had to survive had vanished.

In recent years, local interest groups (including the customers in the fishing, logging, and towing industries who continued to provide the yard with work as they had since its inception) have responded to redevelopment plans. They became vocal, driven by their perceived need to preserve an industry for jobs and as a tax base. They were successful enough eventually to cause two levels of government to step in to buy the new drydock and lease some adjoining land; this allowed a new operating company to be founded to perform repair work only. Yet having chased an elusive ideal of being all things to all people, the yard ended up being nothing to most of them. In the end, the new drydock was the only portion of the whole site considered to have any ongoing value to the industry and it has become a rallying point to maintain some level of activity. As a result, nothing could prevent the final stage of the tragedy. The bankers behind the venture capitalists came into the fray to protect their investment by forcing redevelopment on the balance of the site. At the time this essay was written, the struggle for control of the property was continuing. Even the drydock became a victim of technology, because ships had become so much more reliable that the need for such a facility has greatly decreased. Today it is mainly an emergency repair facility rather than one a shipowner might plan to use, and its future is uncertain. The yard had been gutted, its equipment sold or moved to Victoria, the land classified as contaminated and only the land developers backed by outside bankers were in a position to generate enough money to complete the site's transition into something suitable for the markets of the next century.

The story of the Burrard Dry Dock Company unfolded over the course of a century. What began as the backyard operation of one man grew into a massive organization with thousands of employees. Generations of owners guided its fortunes through a pattern of growth, prosperity and eventual decline. During its century of existence, over four hundred new ships were built and many thousands more repaired or converted. The firm provided employment to thousands and earned a global reputation for quality in building new ships and repairing existing vessels, many of which will be around well into the next century. Thanks to this lasting legacy and the impact that the company had on the history and geography of North Vancouver, it will long be remembered.

NOTES

* Roland H. Webb is President and Chief Operating Officer of Todd Pacific Shipyards in Seattle, WA. He was employed by Burrard Yarrows in the 1980s.

1. The other partner was a man named T. Thompson, about whom very little is known. See "History of Burrard Drydock Co.," Unpublished Mss. (1972), 1-7.

2. G.W. Taylor, *Shipyards of British Columbia* (Victoria, 1986), 137-143.

3. See W.H. Mitchell and L.S. Sawyer, *Wartime StandardShips* (3 vols., Liverpool, 1966-1968), III.

4. Over the years Wallace and his heirs spent a great deal of time cultivating both local customers and the various levels of government and balancing their cyclical demands so that the yard could handle both without being flooded with work one year and starved the next. Good relations with the federal and provincial governments became a cornerstone of corporate policy, with the result that government has remained a key player in the utilization of the shipyard as well as a maker of policy that affects the industry.

5. On the relationship between subsidies and drydocks in Vancouver, see Taylor, *Shipyards,* chapter 7.

6. Throughout its life the yard also serviced the heavy "industrial" market by machining and fabricating components for the forest, mining and similar industries in British Columbia. This work was vital to keep the necessary but expensive machine tools occupied from day to day.

7. "History of Burrard Drydock Co.," 99-101.

8. The size of a shipyard is normally measured by land area or the size of the workforce. The only companies that came close at the time were the two Victoria-based shipyards, Yarrows and Victoria Machinery Depot, neither of which had even half the space as Burrard. Moreover, the Victoria yards shared the same labour force when working on ships at the Esquimalt Graving Dock.

9. Mitchell and Sawyer, *WartimeStandardShips,* II, 7-8.

10. Canadian shipyards made very limited use of welding prior to World War II. Welding was first used to build logging tugs on the Great Lakes in the mid-1920s; larger ships that were nearly fully-welded were built on the east coast at Canadian Vickers and Marine Industries after about 1935. The almost total lack of steel shipbuilding in BC (there was one small company building the occasional steel fishing boat) in the interwar period meant that there was little experience when the war began. As it was, Canadian shipyards built ships to British designs, most of which were completely rivetted. As the war progressed, more and more welding was used, but never to the extent as in American yards.

11. The standard 10,000-ton "Fort" and "Park" ships built by Burrard were twenty percent larger than the biggest World War I freighters. But the real change was in the quantity built: 109 in the Second World War compared to ten in World War I.

12. Burrard Dry Dock Co., *Progress*(Vancouver, 1946).

13. "History of Burrard Drydock Co.," 253.

14. Canadian Shipbuilding and Ship Repair Association, *Brief/or Shipbuilding(Otta-wa,* 1944).

15. "Rationalization" refers to the policy in which federal money is made available to help shipyards leave the business to direct their talents and workforce elsewhere. This programme has resulted in yards closing mainly where the real estate was suitable for other uses, and has only closed yards in or near large urban centres, leaving those in less efficient corners of the country in place.