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14 The shipbuilding industry in Galați (Romania) under communism, 1948-1989

Constantin Ardeleanu

Introduction

Located on the maritime Danube (the 100-mile section of the river accessible to sea-going ships), the port city of Galați enjoys a favourable geographical position for developing significant shipbuilding installations. The only large fluvial outlet of the historical province of Moldavia, Galați lies on the left bank of the Danube, between two of its largest tributaries, the Siret and the Prut Rivers, which separate Moldavia from the neighbouring regions of Wallachia and Bessarabia respectively. Commerce in Galați increased gradually from the seventeenth century, when the port was visited by maritime ships wanting to convey the rich agro-pastoral resources of the Danubian principalities to the market of Constantinople. In the same period, historical sources refer to shipbuilding in a local shipyard, supplied with cheap and high-quality timber transported as rafts from the deep forests of the Carpathians down Moldavia's network of rivers. Shipbuilding and ship repairing were the most lucrative industrial activities in Galați throughout the late eighteenth and the nineteenth centuries, although construction techniques remained highly traditional and antiquated.

From a state-controlled enterprise, shipbuilding became, in the second quarter of the nineteenth century, a private venture, with dozens of shipwrights working in this flourishing profession. Several decades later, the Navy Arsenal was established at Galați (1862), entrusted with the task of repairing Romania's incipient military fleet. However, the modern history of the shipyard in Galați starts in 1893, when George Fernic founded a new industrial establishment, provided with state-of-the-art equipment and foreign know-how.

During the interwar years, it became one of the largest industrial organisations in Romania, with about 1,000 employees and a large total engine capacity. The Galați Shipyard was greatly affected by Romania's involvement in the Second World War. Between 1940 and 1944, Romania was a close ally of Nazi Germany, so that all Danubian yards served the needs of

the German and Romanian navies. In 1944, when the course of war brought the front line closer to Romania's eastern border, most naval installations were removed upstream along the Danube, to the port of Corabia, and only a smaller part of the industrial equipment and about 350 workers remained in Galați. The shipyard was seriously damaged when the German troops retreated, the destruction of the workshops and installations incurring a notable reduction of the yard's productive capacity. In August 1944, the pro-Nazi government in Bucharest was overthrown in the very period when Romania was occupied by the Soviet armies. In the following months, the naval equipment was returned to Galați and shipbuilders restarted their activity in November 1944, this time serving Soviet military command. Besides repairing Soviet maritime and fluvial ships, the yard resumed the construction of several barges, tugs, and oil tankers.¹ This opened a new phase for the shipbuilding industry in Galați, marked by profound transformations in Romania's political, economic, and social realities following the country's alignment to the communist bloc.

The organisation of Romania's shipbuilding industry under communism

According to the economic agreements concluded with the USSR, several mixed industrial companies, called SovRoms, were established in occupied Romania, with the aim of managing the war reparations that the satellite state was to pay to its almighty liberator. In August 1945 SovRom Transport (SRT), a newly founded shipping company, contracted Galați Shipyard to build six Soviet-designed oil tankers of 2,000 tons, opening the stage in which the Romanian shipbuilding industry switched to Soviet standards. In May 1946 the yard was rented by SRT for thirty years, but the absence of raw materials, the insufficient supply of electricity, and the disastrous situation of staff resulted in the facility's working at about half its capacity.²

A new phase in Romania's economic history began on 11 June 1948 when the communist leadership nationalised the means of production, including

1 Maftai *et al.* (eds), *Șantierul naval Galați*, 45-50; Maftai, "Dezvoltarea industriei navale", 321.

2 Maftai *et al.* (eds), *Șantierul naval Galați*, 50-51; Maftai, "Dezvoltarea industriei navale", 322; balanced historical references to the SovRoms can be found in Moșneagu, *Politica navală postbelică a României*, 261-262, and Cîmpineanu, "Marina comercială română", 213-214.

all “individual enterprises, societies of any type and private industrial, bank, insurance, mining, transport, and telecommunication associations”. The shipyard in Galați was also nationalised, but it remained part of SRT, whereas several other shipbuilding enterprises in Romania worked under the co-ordination of the Ministry of Industry and Trade.³

Based on the doctrine that only larger plants could provide integrated and economically efficient production, similar enterprises were merged into giant industrial units. In 1950 the shipyard and the Navy Arsenal were merged, so as to allow a more systematic and cost-effective use of their industrial infrastructure. The military facility had better-equipped production workshops, but it lacked a proper slipway. The shipyard had modern workshops for building block sections, three good slipways (one of them made of concrete and provided with two electrical cranes of six-ton capacity), machines for working ferrous laminates, and so forth, so that the new unit could improve its productivity and fulfil the tasks assigned from the centre.⁴

In 1952 the shipyard withdrew from SovRom Transport and established a separate company, called SovRom Naval. This operated until 1954, when all mixed enterprises were disbanded, following a political agreement between Romania and the USSR. From that point onward, the shipbuilding industry was co-ordinated from Bucharest by the General Directorate of Industrial Equipment and Naval Constructions, a division within the Ministry of Machine Constructions Industry. A significant administrative change occurred in 1969, from which time Romania’s economic development was co-ordinated by several industrial centrals. Analogous to the production associations of other socialist countries, they were autonomous organisations, created by grouping several similar economic units, and controlled all activities within their fields of expertise. They could set up their own research institutes, supply and selling policies, maintenance and repairing facilities, educational institutions, etc., so as to maximise production by allowing a better division of investments and labour among the component units. The Industrial Central for Naval Constructions, later renamed the Naval Industrial Central, was established in Galați in 1969, and co-ordinated the activity of most shipyards and shipbuilding equipment plants in Romania until 1990. Although these centrals were theoretically created to decentralise planning, investment, and other forms of economic decision-making, their functions remained rather ambiguous and they enjoyed only limited autonomy, mainly in terms

3 Maftai *et al.* (eds), *Șantierul naval Galați*, 53; Maftai, “Dezvoltarea industriei navale”, 322.

4 Maftai *et al.* (eds), *Șantierul naval Galați*, 54; Lăcătuș, “Cercetare tehnologică pentru dezvoltarea Șantierului Naval Galați”, 8.

of monitoring plan fulfilment and of designating production schedules for the plants under their jurisdiction.⁵

On 25 November 1970, the communist leader Nicolae Ceaușescu announced a new programme for developing Romania's shipbuilding industry. Huge investments were directed in these decades towards all shipyards, which were entrusted with the patriotic task of building a national fluvial and maritime fleet, able to diminish the country's dependence on foreign transportation and to contribute to its exports and income of hard currency. An ambitious plan was drawn up, with a clear specialisation of each yard in a strongly centralised industry. The facility in Galați was to build maritime ships of 20,000-25,000 dwt and to gradually increase its capacity to vessels of 38,000-40,000 dwt. Similar duties were assigned to the shipyards in Constanța, Oltenița, Drobeta Turnu Severin, Brăila, Giurgiu, etc., and to the new facilities built from scratch at Tulcea, Mangalia, and Hârșova.⁶

During this period, naval design, research, and development activity was entrusted to several institutions. In 1951 the Institute of Naval Design (IPRONAV) was created in Bucharest, and worked until 1957, when it was dissolved following the decision to set up design sections in several major shipyards. However, in 1966, a new centralised institution was established in Galați, the Institute of Scientific Research and Technological Engineering for Naval Constructions (ICEPRONAV), which received the task of designing ships for the entire Romanian shipbuilding industry. It started with a workforce of 159 and by 1988 had reached 1,388 employees, among whom there were 406 engineers and 310 technicians and designers, most of whom had qualified in local educational institutions. They drafted more than 200 designs, used in Romanian shipyards for building, until 1990, a total of about 1,500 ships and other floating installations.⁷

Throughout the totalitarian era, Galați remained the centre of Romania's shipbuilding industry, supported by four main pillars created or developed in the Danubian port city by the communist leadership: the Naval Industrial Central – the administrative co-ordinating body; ICEPRONAV – responsible for design, research, and development activities; the university – entrusted with the creation of qualified human resources; and the shipyard – involved in the productive activity of constructing and repairing fluvial and maritime vessels.

5 Maftai, *Organizarea și conducerea producției în șantierele navale*, 14; Maftai, *Organizarea și conducerea șantierelor navale*, 28-30. For general details on the functionality of Romanian centrals, see Bachman (ed.), *Romania*, 142-143.

6 Maftai *et al.* (eds), *Șantierul naval Galați*, 63-64.

7 Maftai, *ICEPRONAV Galați*, 24-34; Alexandru and Aburel, *ICEPRONAV Galați*, 27-28, 59.

Shipbuilding in Galați Shipyard

Starting with the complete overthrow of the democratic regime in 1947, the communist authorities imposed an ambitious programme of industrialisation, which was seen as a way of swiftly achieving both social homogeneity and harmonious economic development throughout the country. In its early phase, industrialisation closely followed the Soviet model, although a more nationalistic approach followed in the late 1950s, as political relations between Bucharest and Moscow gradually cooled. Large amounts of capital (about half of Romania's total investments) were directed towards developing industrial facilities, most of it (80 per cent) going to the heavy and machine construction industry, regarded as the foundation of further economic progress. Between 1950 and 1965 industrial output grew by 6.5 times and that of heavy industry 8.2 times, the share of machine construction industry increasing from 13.3 per cent to 21.2 per cent of the national economy. The pace of industrialisation speeded up following Nicolae Ceaușescu's accession to power in 1965 and the instigation of his policy of removing Soviet tutelage and of securing Romania's energetic and industrial independence.⁸ In order to maintain a rate of growth of more than 10 per cent a year, industry had to be further streamlined and modernised, a goal accomplished with Western funding, technology, and know-how, provided in the 1970s due to Ceaușescu's vocal anti-Soviet political line. This new programme was also related to the Soviet decision to curtail transfers of naval licences, forcing Romania to further invest in developing the national sector of shipbuilding.⁹

According to the initial plan for economic growth, specialised industrial cores were created in order to exploit strategic resources throughout Romania. Considering its geographical position on the maritime Danube and the existing industrial infrastructure, Galați was officially recognised as the centre of Romania's shipbuilding industry, receiving large capital expenditures for developing the productive capacity of the local shipyard.

The first phase of investment started in 1951, aiming to increase the yard's capacity to build maritime ships. The project, drafted by Centromor Proiect Design Institute in Odessa, stipulated that 90 per cent of activity should be directed to shipbuilding and 10 per cent to ship repair. Large amounts of capital were directed towards the acquisition of modern equipment and means of transport. New facilities were built, including a storehouse for

8 Ianoș *et al.*, "Characteristics of the Industrialization Process Around the Moment of Collapse of a Centralized Political System", 163-166.

9 Bachman, *Romania*, 287.

ferrous laminates (3,000 m²), a storehouse for finished goods, a hall for assembling and welding block sections (provided with cranes allowing the execution of sections up to 40 tons), a slipway for ships of 5,000 dwt, a workshop for mechanical, electrical, carpentry, painting, and tapestry works, a fitting-out quay (84 m, provided with a crane of 10 tons' capacity), etc. The shipyard acquired new machines, its total lifting and transport capacity (cranes and gantry cranes) increasing from 156.5 tons in 1950 to 253.5 tons in 1960. Advanced technologies were also introduced, such as electric welding (1950), semi-automatic and automatic welding (1952), modern cutting of sheets and profiles, a new sandblasting procedure, and so forth.¹⁰

During the 1950s, the shipyard built a total of 285 ships (Table 14.1), ranging from simple fishing boats to large barges and tankers. In the second part of the decade, a notable specialisation is obvious, allowing a quantitative increase in production (barges of 1,000 tons, ferry boats of 100 tons, motorboats of 200 tons, tugboats of 1,200 hp). However, the most important technical accomplishment was the construction of two cargo boats of 4,500 dwt, the first large maritime vessels completely designed and manufactured by Romanian specialists. The project for the cargo ship of 3,250/4,500 dwt was drafted by IPRONAV, but it was later adjusted to fit with the technical facilities of Galați Shipyard. The two ships were commenced in 1958, launched in 1959, and delivered in 1960, and their technical features (length – 100.6 m, breadth – 13.90 m, height – 8.10 m, draught – 6.58 m, weight – 2,000 tons) allowed them to carry general cargo, in pallets or bulk, except for heavy minerals.¹¹

In 1958, as the Romanian fleet needed larger ships, the Ministry of the Machine-Building Industry decided to increase the productive capacity of Galați Shipyard. As the existing slipway allowed the construction of vessels of a maximum of 5,000 dwt, the main priority was to erect a larger slipway. The technical survey, completed in 1960, proposed the construction of a new slipway, with a length of 170 m and a maximum breadth of 25 m, provided with cranes of 50 tons, capable of supporting ships of up to 18,000 dwt. Important expenditures were directed to extend the storehouse for ferrous laminates and the workshop for cutting sheets and profiles, as well as for enlarging the fitting-out quay from 84 m to 120 m (provided with a 15-ton

10 Maftai *et al.* (eds), *Șantierul naval Galați*, 67-68, 75-82; Lăcătuș, "Cercetare tehnologică. I", 11-14.

11 Lăcătuș, "Cercetare tehnologică. I", 9-10. For the cargo boat, see Palamiuc, *Nave românești pe meridianele globului*, 7, and the technical details in Alexandru and Aburel, *ICEPRONAV Galați*, 73.

Table 14.1 Shipbuilding in Galați, 1944-1960

No.	Type of ship	1944-50	1951-55	1956-60	Total
Non-propelled fluvial ships					
1	Ergo barge for the Danube	4	-	-	4
2	Barge, 1,000 tons	12	50	52	114
3	Tanker, 35 tons	-	-	1	1
4	Tanker, 600 tons	2	-	-	2
5	Tanker, 1,000 tons	2	-	-	2
6	Tanker, 2,000 tons	10	4	-	14
7	Ferry boat, 100 tons	-	31	13	44
8	Scow, 80 tons	9	5	-	14
9	Tiltable lighter	-	1	-	1
Self-propelled fluvial ships					
10	Motorboat, KD 35	-	-	11	11
11	Study motorboat, 150 hp	-	-	2	2
12	Tugboat, 160 hp	2	-	-	2
13	Tugboat, 200 hp	2	3	-	5
14	Tugboat, 400 hp	4	4	-	8
15	Tugboat, 2 X 300 hp	7	1	-	8
16	Motorboat, 2,000 tons	-	-	14	14
Technical ships					
17	Floating dock, 600 tons	1	-	-	1
18	Drill pontoon	-	1	-	1
19	Pumping station	-	1	-	1
Small maritime ships					
20	Wooden fishing boats	29	15	-	44
21	Metal fishing boats	-	22	-	22
22	Tugboats, 900 hp	-	-	2	2
23	Tugboats, 1,200 hp	-	10	25	35
24	Various ships (mine-sweeping vessels, etc.)	-	2	13	15
Large maritime ships					
25	Cargo boat, 4,500 dwt	-	-	2	2
TOTAL		84	150	135	369

Source: Lăcătuș, "Cercetare tehnologică. I", 9-10

capacity crane). A workshop for assembling and welding block sections, fitting-out workshops, two acetylene stations, and several other storehouses were also built from scratch.¹²

¹² Maftai *et al.* (eds), *Șantierul naval Galați*, 69-70; Lăcătuș and Călina, "Cercetare tehnologică II", 17-22.

The number of cranes increased from twenty-six in 1950 to seventy-one in 1970, and the lifting capacity reached almost 1,000 tons. Raw materials and component parts were transported within the site with electro-cars, lifts, tractors, plant locomotives, trailers, and mechanised wagons (Table 14.2). The value of capital assets increased by 4.45 times during the period 1950-1972, and the number of machines and welders by 62.7 per cent. New technologies were implemented, such as oxy-fuel cutting, new sandblasting and passivation of sheets and profiles, welding in protected dioxide medium, argon arc welding, plasma welding and cutting, gravitational welding, air arc cutting, etc. Propellers and larger pieces of non-ferrous metal were manufactured in a new foundry, provided with modern technological aggregates and installations, the most important of which were ten crucible furnaces with a capacity of 2,500 kg each. Not least, the shipyard increased its capacity to build block sections of up to 100 tons.¹³

In order to outfit the new vessels with Romanian equipment, the Mechanical Plant in Galați changed its industrial profile in 1961 and became the Naval Mechanical Plant, specialising in manufacturing shipbuilding equipment such as a large diversity of deck mechanisms, winches, capstans, mechanic caps, electro pumps, armour, electrical boards, etc.¹⁴ It organised its production on the basis of orders coming from all Romanian shipyards, and in 1969 it was also subordinated to the Industrial Naval Central.

These investments, most of them completed by 1965, allowed a new increase in the quantity and quality of industrial output. The number of non-propelled simple ships greatly decreased (only nine such ships were completed), whereas the construction of maritime vessels entered a new phase. Thirty motor boats of 2,000 tons each were built for export to the Soviet Union, but most ships were delivered to Romania's navigation companies (Table 14.3). The most representative ship is the ore carrier of 12,500 dwt (maximum length – 151.5 m, maximum breadth – 19.7 m, height – 10.7 m, speed – 15 knots, five electro-hydraulic cranes of 5 tons each for loading and unloading cargo), which was built starting in 1965.¹⁵

During this stage, ship repair amounted to only 0.3 per cent of the shipyard's activity, which was even lower than the previous decade. The shipyard in Galați was the largest in Romania, contributing about a third of the country's shipbuilding industry. Its production increased by 2.3 times in

13 Maftai *et al.* (eds), *Șantierul naval Galați*, 69-82; Lăcătuș and Călina, "Cercetare tehnologică II", 22-23.

14 Maftai *et al.* (eds), *Șantierul naval Galați*, 57.

15 Lăcătuș and Călina, "Cercetare tehnologică II", 23-24.

Table 14.2 Technical facilities in Galați Shipyard, 1950-1970

	1950	1960	1970
Cranes and bridges (number)	26	32	71
Total lifting power (tons)	156,5	253,5	932,6
Machines and welding machines (number)	1,063	1,276	1,508
Total power (kw)	6,883	8,300	20,120
Electro-cars (number)	-	31	59

Source: Maftai et al. (eds), *Șantierul naval Galați*, 70; Lăcătuș and Călina, "Cercetare tehnologică II", 22-23

Table 14.3 Shipbuilding in Galați, 1961-1970

No.	Type of ship	1961-65	1966-70	Total
Non-propelled fluvial ships				
1	Barge for fruit, 1,000 tons	5	-	5
2	Barge block for fruit, 1,700 tons	4	-	4
Propelled fluvial ships				
3	Motorboat, 2,000 tons	30	-	30
Technical ships				
4	Floating pile hammer	2	-	2
5	Block for floating pile hammer	1	-	1
6	Floating pile hammer for the Iron Gates	2	-	2
Propelled maritime ships				
7	Cargo boat, 4,500 dwt, project 262	13	15	28
8	Cargo boat, 4,200 dwt, project 351	5	-	5
9	Cargo boat, 4,800 tons, project 382	-	2	2
10	Cargo boat, 3,400 tons, project 357	3	2	5
11	Timber cargo boat, 3,800 tons, project 450B	-	22	22
12	Ore carrier, 12,500 dwt, project 354	-	4	4
Total		65	45	110

Source: Lăcătuș and Călina, "Cercetare tehnologică II", 23

1970 as compared to 1965, more than the average growth rate of the national industry (1.75 times) and of the shipbuilding industry (2.0 times). If in 1965 the yard held 32 per cent of Romania's total ship production, it reached 37 per cent by 1970, as compared to 18 per cent for Oltenița, 12 per cent for Drobeta Turnu Severin, 10 per cent for Brăila, and 9 per cent for Constanța.¹⁶

Romania's shipbuilding exports increased by 2.57 times between 1965 and 1970, whereas the exports of the shipyard in Galați grew by only 1.99

16 Maftai et al. (eds), *Șantierul naval Galați*, 60-62.

times.¹⁷ Most products were exported to other member nations of the Council for Mutual Economic Assistance (COMECON) or to states from the Non-Aligned Movement: USSR, China, Poland, India, Vietnam, Bulgaria, Egypt, etc.¹⁸ In 1970, for example, more than 59 per cent of the production of the Galați Shipyard was exported to shipping corporations such as India Ltd Bombay, the Mogul Line Ltd Bombay, Naviera SA Panama, Merchant Marine Greece, Marine Société Anonyme Greece, Zim Israel, and Navigation Company Ltd Haifa.¹⁹ In 1971, a special company, called NAVIMPEX, was founded at Galați and was entrusted with the foreign trade of Romania's naval industry. It co-ordinated both the acquisition of the equipment that could not be domestically manufactured and the completion of the sale of ships constructed in Romanian shipyards.

In 1970, the State Planning Committee drafted the new five-year plan for the period 1971-1975, which required a growth of 2.5 times for the national shipbuilding industry. To accomplish this task, the Naval Industrial Central assigned Galați Shipyard the task of building ships of 40,000 dwt. This third phase of investment included the construction of a new storehouse of ferrous laminates, provided with all necessary transportation and lifting equipment, a new workhouse for cutting sheets and profiles, and a workhouse for assembling and welding larger block sections placed closer to the Danube slipway. However, the most important asset completed was a dry dock with a length of 235 m and a breadth of 35 m, allowing the building of ships of up to 60,000 dwt and having the capacity to operate with block sections of up to 300 tons. In the same time, until 1977, local engineers built from scratch a fitting-out quay of 180 m, provided with a crane of 40 tons and two mooring spots, a new basin, an assembling and welding workshop, an acetylene factory, fitting-out workshops, an open storehouse for large pieces, an oxygen factory, a compressed-air plant, a fuel storehouse, a steam power plant, and several other warehouses.²⁰ In 1976, a new industrial plant, INETOF, was founded in Galați, with the task of manufacturing propellers, steal and cast iron pieces, forged pieces, etc., which were either produced in Romanian shipyards with low productivity or were imported. In 1978 it delivered the first products, and by the late 1980s it had a workforce of about 1,100 employees.²¹

17 *Ibid.*, 61.

18 Nistor, "Romania's Participation in the Specialization and Cooperation on Production in the Shipbuilding Program of COMECON Member Nations".

19 The National Archives, Galați County, Șantierul Naval Galați, File 7/1971.

20 Lăcătuș and Aruscuței, "Cercetare tehnologică III", 36-40.

21 M.A.S., "INETOF, Mircea Roibu și elicele pentru nave realizate la Galați".

The most representative ships for this decade were the 7,500-dwt cargo boats, commenced in 1970 and delivered in 1972. With a length of 131 m, a breadth of 17.7 m, a draught of 8.10 m, and a speed of 16 knots, they were equipped with 6,100-hp engines manufactured in Poland under a licence from Sulzer. Thereafter, in order to decrease the importation of foreign technology, 6,000-hp engines were built in Romania at a factory located in Reșița, under a licence from MAN. Ro-Ro ships were built for Israel, and coal carriers were exported to India. Container ships were built after a design drafted in Norway, whereas a licence from the American Offshore Company based in Houston was used for building maritime drilling platforms. They were constructed to drill at a maximum depth of 94 m, with maximum wave height of 10 m and a wind speed of 185 km/hr, maximum load per each of the four feet – 2,300 tons, and length of feet – 121.9 m.²² The first installation, *Gloria*, started to drill in the Black Sea in September 1976, 72 miles off Romania's coast, at a depth of 65 m. Romania was thus one of only ten countries producing offshore oil-drilling rigs. In 1988 seven such platforms operated in the Black Sea under the supervision of Petromar Company.²³ The bulk carrier of 55,000 dwt (length – 220 m, breadth – 32.2 m, draught – 12.40 m, force – 17,400 hp, speed – 16 knots) was delivered to the Romanian fleet, as well as several complex refrigerated ships.²⁴ A total of 116 ships, among which 95 complex maritime vessels and 1 drilling platform were delivered in the golden decade of Galați Shipyard (Table 14.4).

A fourth phase of investment started in 1982, allowing a further increase in production. The most important developments were the construction of new fitting-out workshops closer to the dry dock, of new berths for ships, and of a workshop for sandblasting and painting block sections; the consolidation of the basin slipway so as support ships of up to 10,000 dwt; new storage areas; increased mechanisation; new equipment; etc. The proportion of ship repairing slightly increased, providing capital repair to the ships built in Galați. A new workshop, especially designed for ship repair, started work in 1980.²⁵

During this decade, production suffered greatly due to several problems Romania was facing as a result of Ceaușescu's decision to repay the entire foreign debt to the country's "imperialist" creditors. The need for hard

22 Lăcătuș and Aruscuței, "Cercetare tehnologică III", 40-42.

23 Details in Lăcătuș, "Epopeea construirii platformelor de foraj marin românești".

24 Lăcătuș and Aruscuței, "Cercetare tehnologică III", 41-42. Technical details of the Ro-Ro ships for the drilling platforms can be found in Alexandru and Aburel, *ICEPRONAV Galați*, 81, 104-105.

25 Lăcătuș and Popescu, "Cercetare tehnologică IV", 52-56.

Table 14.4 Shipbuilding in Galați, 1971-1980

No.	Type of ship	1971-75	1976-80	Total
1	Cargo boat, 4,800 dwt	17	-	17
2	Cargo boat, 7,500 dwt (slow engine, Sulzer)	11	-	11
3	Cargo boat, 8,700 dwt (slow engine, Sulzer)	1	15	16
4	Cargo boat, 8,700 dwt (semi-rapid engine, MAN)	-	9	9
5	Refrigerated cargo boat, 7,000 dwt	-	2	2
6	Port container cargo boat, 8,250 dwt	5	-	5
7	Multi-functional cargo boat, 15,000 dwt	4	4	8
8	Ore carrier, 12,500 dwt	4	-	4
9	Coal carrier, 15,000 dwt	10	-	10
10	Bulk carrier, 18,200 dwt	-	8	8
11	Bulk carrier, 55,000 dwt	-	3	3
12	Ro-Ro ship, 3,800 tons	2	-	2
13	Drilling platform	-	1	1
14	Dredging machine	-	20	20
	Total	54	62	116

Source: Lăcătuș and Aruscuței, "Cercetare tehnologică III", 41

Table 14.5 Shipbuilding in Galați, 1981-1990

No.	Type of ship	1981-85	1986-90	Total
1	Refrigerated cargo boat, 7,000 dwt	4	-	4
2	Cargo boat, 8,700 dwt	5	-	5
3	Multi-functional cargo boat, 15,000 dwt	2	4	6
4	Cargo boat, 15,000 dwt, Liner	8	-	8
5	Universal cargo boat, 15,000 dwt	-	9	9
7	Ro-Ro cargo boat, 3,800 dwt	4	-	4
8	Ro-Ro cargo boat, 4,000 dwt	8	-	8
9	Port container, 8,000 dwt	-	2	2
10	Bulk carrier, 55,000 dwt	2	-	2
11	Oil tanker, 10,000 dwt	-	1	1
12	Oil tanker, 39,000 dwt	-	2	2
13	Tugboat, 2 X 2,000 hp	3	1	4
14	Maritime drilling platform	4	2	6
15	Rock-cutting platform	1	-	1
16	Barge, 3,000 tons	10	-	10
17	Coastal ship, 300 dwt	10	-	10
	Total	61	21	82

Source: Lăcătuș and Popescu, "Cercetare tehnologică IV", 56-57

currency imposed a policy of extreme cutbacks on imports, and the building of all equipment was entrusted to Romanian factories. However, these products arrived late and their quality was usually unsatisfactory. In the same time, exports dwindled, as Romania lost several traditional clients, such as the USSR and China, and competition on the market sharpened.

In these years 82 ships were delivered (Table 14.5), the most representative of which is the cargo boat of 15,000 dwt. Multi-functional cargo boats (six ships), universal cargo boats (nine ships), and liner cargo boats (eight ships) were built along with other extremely complex ships (Ro-Ro, port containers, bulk carriers, oil tankers, refrigerated ships, offshore drilling platforms, etc.). In 1990 45 ships were under construction in the shipyard, in different phases of production.²⁶

Socio-economic working conditions of shipbuilders in Galați

Significant qualitative and quantitative changes were recorded in relation to the workforce employed in Galați Shipyard during communist times. In the early 1950s it had about 3,000 workers, and in 1964 the figure reached 3,762 employees, among whom there were 487 engineers and technicians, 71 foremen, 2,929 workers, 250 administrative staff, 74 guards and firefighters, and 22 janitors. Additional staff served at the canteen (21 persons) and the nursery. In 1971 the yard had 5,105 employees, with 4,419 people hired as workers (as opposed to managerial or administrative staff, for example).²⁷ In 1988, it counted 7,900 labourers, among whom 7,250 workers involved in production and 650 in the administrative staff.²⁸ Besides these, the shipbuilding industry in Galați included about 2,000 people employed at the Naval Mechanical Plant (1,259 employees in 1971 and 1,664 in 1975),²⁹ 1,100 working for INETOF and 1,300 for ICEPRONAV, amounting to a total of more than 12,000.

Available sources do not allow us to differentiate between male and female employees. However, under communism women were highly encouraged to work in industrial plants, as the regime needed their labour, but traditional social and educational patterns allowed them to occupy only inferior positions in those industries favoured by the regime. In a list of

²⁶ *Ibid.*, 56-58.

²⁷ The National Archives, Galați County, Șantierul Naval Galați, File 12/1971, f. 103.

²⁸ Maftei, *Organizarea și conducerea șantierelor navale*, 328.

²⁹ The National Archives, Galați County, Șantierul Naval Galați, File 12/1971, f. 327.

those who worked in Galați Shipyard, only 5 women out of a total of about 100 people are mentioned as having occupied top management positions.³⁰ However, 53 per cent of the employees of ICEPRONAV were women.³¹

The socialist salary system was introduced in Romania in February 1949. Wages were increased regularly, according to the party's directives, with a new unique tariff settled at the level of the national economy, stressing the accomplishment of planned norms and giving bonuses for extra labour. In 1964 the average annual salary in Romania was 11,500 lei (about USD \$760 at an average exchange parity of 15 lei for USD \$1), and in the shipyard it was 13,667 lei for workers, 21,652 lei for engineers, 22,957 lei for foremen, 12,356 lei for clerks, 8,897 lei for firefighters, and 8,109 lei for janitors. Workers from the capital repairs sections had an average salary of 9,785 lei a year, whereas canteen personnel earned 8,273 lei and nursery staff 7,800 lei a year. As it is clearly visible, the leadership encouraged productive professions, which were better paid according to state policy.³²

The work schedule remained strenuous throughout the period, with an average of 48 hours per week, not including unpaid "patriotic labour". Of the nominal salary 80 per cent was paid regardless of performance, and the remaining 20 per cent was dependent on the individual's productivity. However, in 1983 Ceaușescu abolished fixed wages in favour of a policy that tied workers' income directly to plan fulfilment by the enterprise.³³

The new technical equipment and procedures induced a notable shift in working professions. About 120 engineers were employed in the shipyard in the early 1970s, but new professions also appeared that had been completely unknown before, such as welders, electricians, electronicians, electro-technicians, refrigerationists, etc. Thus, it was decisive to also invest in getting human resources trained and qualified. The need to train engineers for the shipbuilding industry led the authorities to establish in Galați, in 1951, a Mechanic Naval Institute, divided into two faculties – the Faculty of Naval Construction and the Faculty of Ship and Port Exploitation. The first had two specialisations, body construction and construction of ship machinery and deck instruments, which remained unique in Romania throughout this period. In 1971 a group of junior shipbuilding engineers was also created, with two sections: body construction and ships' mechanism assembling. In the same period, starting with the academic year 1972/73,

30 Lăcătuș, "Personalități din cadrul Șantierului Naval din Galați".

31 Alexandru and Aburel, *ICEPRONAV Galați*, 50-51.

32 The National Archives, Galați County, Șantierul Naval Galați, File 8/1965, ff. 1-10.

33 Bachman, *Romania*, 159-160.

a section in welding technology was established. During this period more than 1,000 shipbuilding engineers graduated from this Polytechnic Institute (now the University of Galați) and were employed throughout Romania.³⁴

The same need for qualified workers resulted in 1955 in the creation of a school of foremen within the shipyard, which schooled specialists for all Romanian shipyards. In 1956 a post-high school specialisation was also founded. All these professional schools were merged in 1962 with the A.I. Cuza High School, qualifying labourers for the professions of tabulators, naval builders, electricians, etc. Within a decade, between 1963 and 1972, it schooled 1,690 workers who were deployed in shipyards around Romania. Two other high schools in Galați, the Machine Constructions High School and the High School for Naval Transport also provided technical education for shipbuilders. The school of foremen trained for the shipyard in Galați, during the period 1962-1972, a total of 147 foremen in the following specialisations: boiler forges and welding, ships' ironware, naval buildings, welding, metal splintering, etc.³⁵

The shipyard also educated its own apprentices, so that between 1948 and 1960 the professional school trained 1,622 linesmen, shipbuilders, adjusters, mechanics, assemblers, carpenters, etc. Over the course of a decade, about 850 workers qualified as apprentices and studied at a school near the shipyard. In 1966 it also had an industrial school for machine building, which trained qualified labourers and technicians for three professions: ship construction, technology of machine construction, and machine and electrical fittings. In the 1970s the shipyard co-ordinated the technical activity in several secondary and high schools in Galați: the A.I. Cuza High School, the Industrial School for Machine Construction, a secondary school in Galați, and one in a small village called Vânători, by investing in building and equipping the schools' workshops and employing most of the graduates.³⁶

The communist leadership invested heavily in providing social facilities to workers. The shipyard was endowed with a medical section (1950), reorganised in 1955 when a small hospital with fifty beds for internal diseases and a polyclinic were created. The employees were served their meals in a canteen with a capacity of 500, extended in the 1980s, when it could no longer cope with the demand. Families with children were supported by a new nursery for children aged between 4 months and 3 years old, most of

34 Brezeanu, *Universitatea din Galați*, 41-85.

35 Maftei *et al.* (eds), *Șantierul naval Galați*, 69, 100-101.

36 *Ibid.*, 100-102.

the monthly expenses being covered by the shipyard. In the early 1970s it had eighteen employees, among whom were twelve nurses.³⁷

During the 1950s, the shipyard was the largest industrial plant in Galați, but the city's position on the Danube and the need for steel to develop the national industry led the central authorities to start the construction (1962) of the largest industrial establishment in communist Romania, the Sidex steel plant, which also provided sheet and ferrous laminates for the shipbuilding industry. With huge investment in the heavy and machine construction industry, Galați emerged in the 1960s as one of the fastest-growing municipalities of Romania. Population spiked, and from 80,411 in 1948 it grew to 151,412 in 1966 and 307,376 in 1989. This completely changed the architecture of the city, whole quarters of blocks of flats being built from scratch. This marked urbanisation was not a simple consequence of forced industrialisation, being centrally directed by the communist authorities under the guiding influence of Marxist concepts. Urbanisation was decisive in the creation of a new socialist society, in which urban areas were considered economically, socially, and culturally superior. Cities swelled from migration of workers from the rural areas, so that the industrial plants needed to provide housing for their employees. In 1953, the Galați Shipyard built three blocks with fifty-eight flats each, and in the following years thirty-two more flats. In 1969 it established a hostel for bachelor employees, with 300 beds in 79 rooms, 2 more such constructions being finished in the next decade.³⁸

Throughout this period, the authorities also invested in “building” the new man, who was to be educated according to communist ideology. Work was a respected method of education, and labour was regarded as a way in which respectable citizens served and showed devotion to the party and the country. Labour had to endow employees with the highest moral qualities, to make them militant activists, capable of defending their social class and the entire nation against all domestic and foreign enemies. Workers had to be disciplined, to obey the commandments of their leaders, and to contribute their best to the welfare of the socialist state. But they were not human machines that only produced material goods, so they also received a literary, artistic, and sporting education to make them worthy members of the community.³⁹

37 “Din activitatea creșei de copii SNG”, *Șantierul Roșu*, 17 October 1972; Maftai *et al.* (eds), *Șantierul naval Galați*, 152-154.

38 Maftai *et al.* (eds), *Șantierul naval Galați*, 154.

39 Dascălu, “Modelul ‘Omului nou’ în ideologiile totalitare din România secolului XX”, 41-42.

Propaganda was an important part of the shipbuilders' professional life. All employees had to join artistic and cultural organisations and take part in social activities in their free time, closely organised by the trade union and the local branches of the Communist Party, activities that served the double goals of indoctrination and surveillance. In Galați Shipyard propaganda was co-ordinated until the mid-1970s by means of a bi-monthly organ called *Șantierul Roșu* (The Red Shipyard). It published in 3,500 copies per issue, enough for a copy for each employee. The journal shared all kinds of information, from technical data to columns devoted to the political and moral values of the working class. It commended diligent labourers, preached working discipline, and strongly criticised those employees who did not fulfil their material, social, or moral obligations towards the factory, their colleagues, their families, or the country's leaders. Men who divorced their wives were cited as bad social examples,⁴⁰ and the validity of the proverb "like father, like son" was demonstrated by the low school performance of children whose parents were not diligent workers.⁴¹

Another means of propaganda was the loudspeaker system, which broadcast a large variety of programmes, from those popularising technical or literary books to those related to the need to respect the work schedule. Employees who arrived late at work or spent too much time in the canteen during the lunch break were publicly criticised.⁴² Not least of all, wall gazettes presented the activity of each workshop, and provided details on competitions for increasing production.⁴³

Propaganda lectures were periodically organised in the shipyard, with courses on the new directives of the party, but also on the political values of the "new man". An Evening University of Marxism-Leninism educated the participants in the values of socialist doctrine. However, propagandists and lecturers complained of poor attendance. In January 1967, 72 per cent of the students attended these courses, with only 50 per cent attendance at the course on "Problems of Industrial Economy". A "working university"

40 "Un 'flăcău' la 40 de ani", *Șantierul Roșu*, 15 May 1967.

41 "Educarea copiilor – preocupare de seamă a fiecărui comunist, a întregii organizații", *Șantierul Roșu*, 1 April 1970.

42 "De ce mai sunt curenți în activitatea stației de amplificare", *Șantierul Roșu*, 1 April 1967; "Stația de radioamplificarea SNG transmite", *Șantierul Roșu*, 15 May 1972.

43 "Gazetele de perete – mijloc eficient în munca educativă cu oamenii", *Șantierul Roșu*, 15 April 1970; "Concursul gazetelor de perete", *Șantierul Roșu*, 1 May 1972; "Gazetele de perete în concurs", *Șantierul Roșu*, 17 October 1972.

also offered courses in legislation and geography, with 120 people enrolled to attend.⁴⁴

Technical propaganda, defined “as the popularisation and spread by mass actions of the new conquests in science and technology, of advanced working procedures and exercises, of the elite workers’ activity in the socialist competition”, was organised by conferences, lectures, and scientific symposia. Regular meetings were scheduled among workers in different sections, with, for instance, mechanics debating the necessity of accomplishing their working plan and of showing discipline and seriousness in their productive activities.⁴⁵

In the same time, employees were included in different forms of cultural, social, and sporting activities. The shipyard’s library included 9,180 volumes in 1950 and almost 30,000 in the early 1970s, including both technical books and general literature. According to official statistics (most probably rigged), 80 per cent of workers borrowed and read books in 1966, with an annual average of sixteen literary and two technical books per employee.⁴⁶

In 1957 the shipyard established a sporting association called Ancora (The Anchor), with 3,000 members involved in mass sport and 190 in official competitions. In the 1970s it had eight sections: canoeing-kayaking, rugby, football, volleyball, handball, table tennis, chess, and orienteering.⁴⁷ Sporting competitions were organised in the workers’ free time; Spartakiada followed the Soviet model, the hero being embodied by a slave, a true social model. During the national communist phase, the leadership organised the Daciada, preaching the qualities of the Romanians’ brave forerunners, the ancient Dacians.

There were also artistic troops of folk and modern dance, theatre, music, and so forth, with about 100 amateur artists involved in these activities. Artistic performances in each workshop were adapted to serving propaganda needs. Two of the shows presented in 1967 were called “Competition Is in Full Swing” and “We Are the Youth Brigade”, and they referred to model workers, preaching respect and good organisation of production. A new show was entitled “A Good Day Starts in the Morning”, which was conceived

44 Lucreția Maftai and Ion Palamiuc, “Conținutul corespunde cerințelor. Notă slabă frecvenței și muncii unor propagandiști. Carențe la capitolul: însușirea problemelor”, *Șantierul Roșu*, 16 February 1967; “La universitatea muncitorească tematica a fost judicios întocmită. De ce nu s-a respectat? Frecvența slabă. Uneori sub 25%”, *Șantierul Roșu*, 1 April 1967.

45 “Ridicarea continuă a calității personalului”, *Șantierul Roșu*, 16 January 1967.

46 “Propaganda tehnică în șantier”, *Șantierul Roșu*; Maftai *et al.* (eds), *Șantierul naval Galați*, 155-156.

47 Maftai *et al.* (eds), *Șantierul naval Galați*, 160-162.

as “a lyrical incursion into how working time is used”.⁴⁸ In the same time, a literary club, called Nicolae Labiș, was founded in 1961, with poems preaching the productive activity of the shipyard, of the party leaders, and of the country. The following lines (literally translated, without respecting rhyme and measure) are extracted from a poem devoted by a local planner to his beloved shipyard, a good example of proletarian culture encouraged by the regime:⁴⁹

The Danube godfathered it at its baptism
 And people brought it up and made it great,
 Its name has ever since appeared in all chronicles,
 Written in our pure alphabet in golden letters
 That stand all storms: GALAȚI SHIPYARD.
 I see the Danube at a twilight hour and a new song
 Caresse the shipyard with every new wave
 And the yard kisses back the old river
 And lays in Danube's arms a charming cargo boat.

By 1989, almost all Romanian workers belonged to trade unions, which were organs for worker representation in name only. In fact labour unions were completely controlled by the party and acted as transmission belts carrying directives from the central administration to the rank and file. Workers had to join unions to receive social welfare and several other benefits, as they were responsible for distributing flats, for subsidising holiday permits to Romanian resorts, and for providing financial support in times of need (when children were born or close relatives died). In 1971 workers' councils were established in all economic enterprises, allegedly to involve workers in economic decision-making, but in reality to shore up support for the regime. However, the employees' interest in such organisations remained limited, as they were dominated by the same diligent activists.⁵⁰

The Union of Communist Youth (UCY) had the same structure as the Communist Party and was both a youth political party and a mass organisation. Membership was open to those between the ages of 15 and 26, and employees over 18 could also become members of the party. Its mission was to educate young people in the spirit of communism and mobilise

48 “Activitate rodnică a brigăzii artistice de agitație din atelierul strungărie”, *Șantierul Roșu*, 15 May 1967; Maftai *et al.* (eds), *Șantierul naval Galați*, 156-159.

49 Jan Parfeni, “Șantierul Naval”, *Șantierul Roșu*, 3 March 1973.

50 Bachman, *Romania*, 100-101.

them for building a socialist society.⁵¹ It organised political and patriotic courses in schools and factories, but also had regular meetings to analyse social behaviour and to condemn those workers accused of immoral attitudes. A certain Ion Oprea was publicly admonished for his deeds (theft and drunkenness), but also for his lack of interest in reading the shipyard's newspaper and in improving his working capacities, because he was smug and disrespectful with his elders.⁵² A list of the activities UCY held in September 1973 is illustrative of the organisation's role: 200 young workers did patriotic labour cleaning a street in Galați; on a free Sunday 235 youngsters worked to dehusk seventy tons of corn in a neighbouring village; forty people made a trip to a resort in the Carpathians; 600 men were trained to fire weapons in the compulsory lessons for defending the country; and the UCY members collected 150 tons of waste iron.⁵³

Conclusions

After four decades of continuous transformation and four phases of investment, the balance sheet for the local shipbuilding industry indicated a marked quantitative increase. Under the co-ordination of the Naval Industrial Central, 2,281 ships amounting to 6,191,000 dwt were built in Romanian shipyard between 1971 and 1988, almost twenty times more than the displacement of the vessels constructed in the previous two decades. Of these ships, 90 per cent were Romanian-designed projects drafted by ICEPRONAV Galați and were fitted with engines, naval equipment, electrical cables, and radio-navigation equipment manufactured in the country. About 12,000 employees worked in Galați in the naval industry, with about 8,000 in Galați Shipyard, about 2.5 times more than in the early 1950s. Engineers were trained in a naval engineering department within the local university, with about 1,000 graduates in these four decades. The shipyard had three modern production lines, two with side launch facilities and a dry dock, in which about 500 ships were built throughout this period.

However, things were not as good in terms of quality. Many components manufactured in Romania lacked the proper quality, delivery times were hardly respected, and acquisitions of foreign technologies and equipment

51 *Ibid.*, 220-221.

52 "UTC-iștii nu l-au iertat pe tovarășul Ion Oprea", *Șantierul Roșu*, 16 February 1967; "În contradicție cu etica. Bun e vinul ghiurghiului", *Șantierul Roșu*, 1 February 1969.

53 "Acțiuni inițiate de UTC din SNG", *Șantierul Roșu*, 3 October 1972.

were blocked due to the lack of hard currency. In the last years of the totalitarian regime, production visibly dwindled, a trend confirmed after 1990. The first effects of the transition to a private economy and to a free market were quickly apparent, as the shipyard lost its main clients, the shipping companies of the Romanian state, which no longer had capital to pay for the contracted ships. In a difficult market, the yard survived by building ship bodies for Western contractors, and was finally privatised in 1999, when 99 per cent of the shares were bought by the Holland Damen Shipyards Group. However, the number of employees continuously decreased, with only about 2,000 workers left in the shipyard and about 2,000 more people in outsourcing companies. In a post-communist country still in transition towards economic and political stability, the current decline in heavy and machine construction industry, accentuated by the financial crisis of the past five years, is rendered even more painful by a concomitant growth of nostalgia after the golden times of the industrial boom.

