

20<sup>th</sup> century

## Shipbuilding: a pioneer of industrialisation

Shipbuilding became the biggest industry in the Lower Loire, introducing a multitude of other industrial activities. The iron and steel industry took over from the sugar refineries, which were the driving force behind the local economy until the end of the Second Empire.

In 1900, 30,000 workers were employed in more than 300 factories in the Lower Loire. The iron and steel industry alone accounted for 60% of labour, while shipbuilding employed 35%.

Manufacture of propellers at the Nantaise de Fonderies in 1950-1960.



View from the air of the heavily industrialised the Prairie-au-Duc in 1919.



The Ateliers et Chantiers de Nantes in 1966. Three Russian trawlers, including the *Natalia Kovshova*, and another vessel being fitted out.



The Dubigeon shipyard in 1978. The ro-ro ship *Le Mans* being fitted out, while a chemical tanker is being built in the dry dock.

1950-1987

## Pinnacle and decline

In the 1950s, shipbuilding reached its pinnacle with 7,000 workers in Nantes and 10,000 in Saint-Nazaire. But the industry soon ran into difficulties due to competition from abroad. Cuts in state subsidies caused the shipyards to merge in order to survive.

The three shipyards became two and then just one - Dubigeon-Normandie - in 1969. Located at La Prairie-au-Duc, the last shipyard closed in 1987.



Launch of the escort vessels *Cassard* at the ACB and Boulonnais at the ACL in 1953.



The departure of *Bougainville*, the last ship built in Nantes in the Dubigeon yard on 3 July 1987.



### THE BANCO

This bucket dredger was launched in 1933 in the Dubigeon yard in Chantenay. It was 32 m long with an average draft of 2.2 m. The dredgers work on the Loire in Nantes to remove the tidal sludge.

## Panel by panel assembly in the dry dock

Up until the 1950s, the cut and shaped panels were brought to the dry dock and assembled with rivets. The assembly work started in the middle of the ship, and progressed simultaneously to the bow and the aft.

This type of work required scaffolding supported by fixed posts made of wood, metal or concrete, that were typical of pre-war shipyards.

Assembly of keel panels around 1930. The uprights can be seen on either side of the dry dock.



## The riveting team

There were three men in the team: the rivet heater, the holder and the riveter.

About one million rivets were used to build the average ship. Depending on their size, the riveters installed between 100 and 300 rivets per day.

### Albert, rivet holder

*"Holding the rivets was hard work. There were places that were hard to reach! It was especially difficult for the people working in the interior. There was a lot of noise and we did not have protectors. When I started at the yard, I went deaf for a week. I was completely deaf for a whole week! My eardrums were stuck and then one day they popped and I could hear again and I wasn't bothered by the noise any more."*

### The boring operator

The boring operators intervened before the riveters. They adjusted the holes that had already been made in the metal sheets and the angle brackets, so that they were perfectly aligned.

### The rivet heater

These apprentices heated the rivets to the required temperature using the forge and handed them to the holders.

### The holder

The holders placed the red hot rivets in the holes with a pair of tongs and held the head with the bar.

### The riveter

The riveters were in charge of the team. They hammered the head of the rivet with a pneumatic hammer.

# Shipbuilding Glossary

Bahoule (Toolbox)	Box containing all the essential tools (nails) for a given trade. Workers carried them everywhere in the shipyard or on the vessels under construction.
Boni marchandage (Bonus bartering)	Up until the 1960s, a given time was allocated to each job. If the worker took less time to do the job, he had to negotiate his bonus, which was not always granted.
Brûleurs de nouilles (Noodle burners)	Term referring to welders, who spent all day burning « noodles », or rods of solder.
Bureau des pleurs (The Crying Office)	The office occupied by the experts or « sweat drinkers » – who defined the time required to do each job. This is where the workers did their deals to obtain their bonuses.
Chien savant (Wise dog)	Term used by the manual labourers to refer to the employees who worked in the engineering and technical departments.
Clous (Nails)	General term used to refer to the workers' tools.
Compagnon (Companion)	Qualified labourer, professional.
Conduite de Grenoble (The Road to Grenoble)	During strikes, the « Road to Grenoble » was an opportunity for the workers to settle their scores with certain members of management. They were escorted to the gates in front of a jeering crowd. The term « Road to Grenoble » probably refers to Napoleon's 100 days, when, on his return from Elba, he sent all the officers who had not been loyal to him to the town of Grenoble.
Cornard (Fog horn)	A siren that sounded in the shipyards at the beginning and end of the working day.
Crèche (Creche)	A school for shipbuilding draughtsmen created by the Chantiers de la Loire in 1897. From the 1930s, young draughtsmen from all of France's leading shipyards were trained in the « creche ». It was closed in 1968.
Doryphore (Beetle)	Term referring to welders, whose working clothes were full of holes made by sparks.
Fabrique de sourds (The Deaf Factory)	The nickname for prefabrication workshop AP3, which was very noisy and poorly soundproofed. The boiler workers frequently suffered from deafness.

Before 1914

## The first organisations

Labour organisations (fraternities, mutual aid societies, etc.) came into being in the modern era. In the industrial age, the first strikes for better working conditions and pay resulted in the creation of the boat builders union in 1881.

In 1898, the riveters organised a lengthy conflict.

By 1900, the shipyard workers formed the hard core of the local iron and steel workforce and were at the origin of a number of strikes. Up until the First World War, most strikes were for pay rather than for working conditions.



Workers from Dubigeon demonstrate against the closure of the yard on 7 October 1985.



A meeting on the steps of the building in Boulevard Léon Bureau in 1965.

Classification of personnel and wages in the 1955 collective agreement.

I. OUVRIERS		II. TECHNICIENS	
Code	Titre	Code	Titre
100	Professionnel qualifié, ad hoc	170	Producteur de travail
101	Professionnel qualifié, ad hoc	171	Producteur de travail
102	Professionnel qualifié, ad hoc	172	Producteur de travail
103	Professionnel qualifié, ad hoc	173	Producteur de travail
104	Professionnel qualifié, ad hoc	174	Producteur de travail
105	Professionnel qualifié, ad hoc	175	Producteur de travail
106	Professionnel qualifié, ad hoc	176	Producteur de travail
107	Professionnel qualifié, ad hoc	177	Producteur de travail
108	Professionnel qualifié, ad hoc	178	Producteur de travail
109	Professionnel qualifié, ad hoc	179	Producteur de travail
110	Professionnel qualifié, ad hoc	180	Producteur de travail
111	Professionnel qualifié, ad hoc	181	Producteur de travail
112	Professionnel qualifié, ad hoc	182	Producteur de travail
113	Professionnel qualifié, ad hoc	183	Producteur de travail
114	Professionnel qualifié, ad hoc	184	Producteur de travail
115	Professionnel qualifié, ad hoc	185	Producteur de travail
116	Professionnel qualifié, ad hoc	186	Producteur de travail
117	Professionnel qualifié, ad hoc	187	Producteur de travail
118	Professionnel qualifié, ad hoc	188	Producteur de travail
119	Professionnel qualifié, ad hoc	189	Producteur de travail
120	Professionnel qualifié, ad hoc	190	Producteur de travail



Marcel Guihéneuf (CFDT) and Yves Jaillier (CGT) address demonstrators in front of the Prefecture.

Pay statement of a worker at Dubigeon in the 1920s. The bonuses, which depend on productivity, represent one third of the total salary.

ANCIENS CHANTIERS DUBIGEON - NAVIL	
QUINZAINE DU	12
Motivés	100
Retraites	100
Allocations	100
Mise à l'écart	100
Engagements	100
Retraites :	
Retraites sur salaire	
Indemnité	
Opposition	
Montant payé :	300 00
Montant de :	11 00
Nulles à verser sur salaire	
Régime de la LUNDS	



Demonstration during the 1955 strikes. An image reproduced by Jacques Demy in *Une chambre en ville*.



A police car falls foul of demonstrators during the 1985 conflict.

## Improving navigation

The sand conveyed by the river made life difficult for ships. A certain stability was established when the royal powers encouraged the islands to be converted to pasture land. But the most important step was protecting access to the port of quai de la Fosse through a channel to the north of the river.

Magin's dykes between the islands prevented the river from straying, increased the speed of the water flow and made the Loire accessible to vessels all year long.

The city and port seen from the slopes of the Hermitage. Attributed to Jacques André Portail, Salorges de Nantes, around 1723.



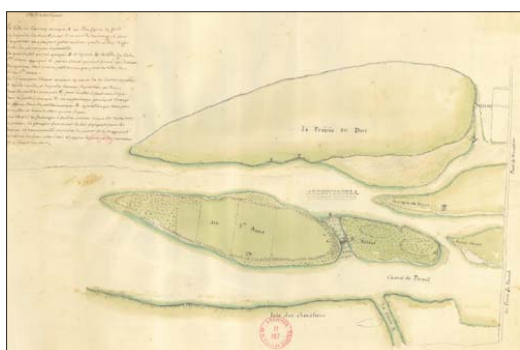
- The town and the port spread from the quai de la Fosse to Chézine
- Sainte-Anne island appears to the south of La Prairie-au-Duc
- Improved control of the water flow

In order to boost the volume of maritime traffic, the watercourses between the islands are filled in one by one.

In 1758, the city acquired ownership of the land reclaimed from the river. Three arms of the Loire could be accessed by ships: the Saint-Félix channel, which surrounds Feydeau island, and the Madeleine and Pirmil channels. The outline of a single island in the middle of the river started to emerge.



- Nantes becomes a major maritime port
- The shipyards move to La Prairie-au-Duc
- Channels used for industry



Map by Jean-Antoine Bonvoux, inspector in charge of channelling works on the Loire in 1780.