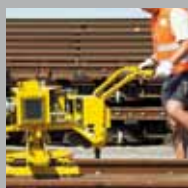




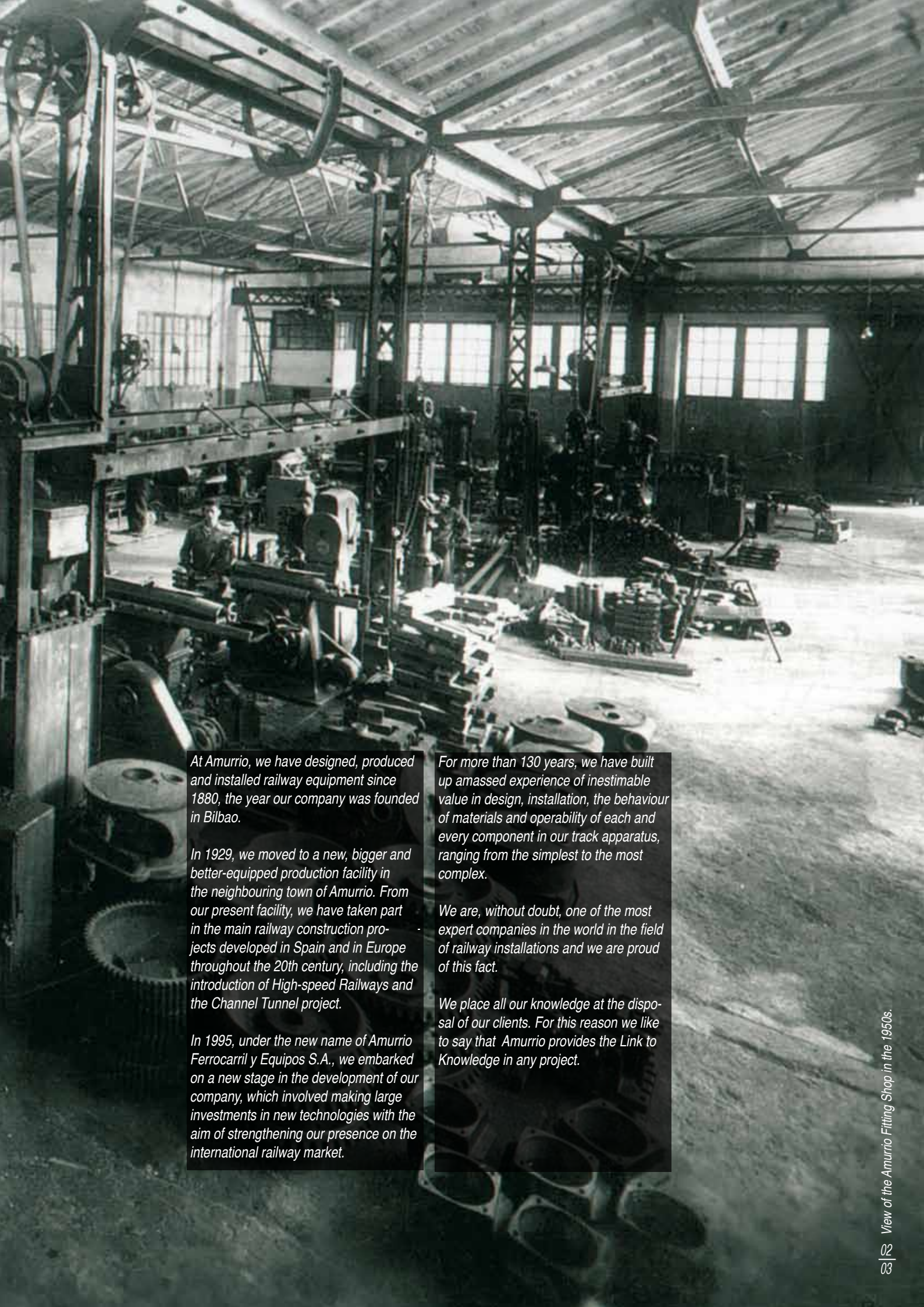
*Turnouts  
Crossings  
Maintenance and services  
Capital goods*



*Link to knowledge*

# *Link to Knowledge*





*At Amurrio, we have designed, produced and installed railway equipment since 1880, the year our company was founded in Bilbao.*

*In 1929, we moved to a new, bigger and better-equipped production facility in the neighbouring town of Amurrio. From our present facility, we have taken part in the main railway construction projects developed in Spain and in Europe throughout the 20th century, including the introduction of High-speed Railways and the Channel Tunnel project.*

*In 1995, under the new name of Amurrio Ferrocarril y Equipos S.A., we embarked on a new stage in the development of our company, which involved making large investments in new technologies with the aim of strengthening our presence on the international railway market.*

*For more than 130 years, we have built up amassed experience of inestimable value in design, installation, the behaviour of materials and operability of each and every component in our track apparatus, ranging from the simplest to the most complex.*

*We are, without doubt, one of the most expert companies in the world in the field of railway installations and we are proud of this fact.*

*We place all our knowledge at the disposal of our clients. For this reason we like to say that Amurrio provides the Link to Knowledge in any project.*



A close-up, artistic photograph of a person's eye and eyebrow, showing fine details of the skin and hair. The image is in soft focus, with the eye looking towards the right. The background is a light, neutral color.

## *The vision of a leader*

*At Amurrio, we want our clients to consider us their technological partner in all their railway projects.*

*We establish a link that goes beyond the trust that exists between a supplier and his client. We accept his targets as if they were our own. We contribute all our know-how in order to resolve the multiple challenges involved in any railway project.*

*In this way, we have secured our position as leaders in the technology applied to the design and manufacture of railway equipment for high-speed railways, tramways, metropolitan railways, conventional and heavy haul railways throughout the world.*

*And we have become a reference model for quality in the design, manufacture and installation of track apparatus all over the world.*

## Business areas: track apparatus



At Amurrio, the process to create track apparatus begins with an examination of the technical requirements, then we propose a range of viable solutions in accordance with the needs of our client. This ability to establish a close and flexible collaboration with our clients and place all our experience and know-how at the service of the project is one of the basic precepts of our strategy as a company.



Each of the components used in a track apparatus is assessed by our drawing office to ensure that it meets the highest standards of operability and quality. Our R&D department is constantly on the lookout for solutions to improve the features of these devices. These include innovations such as the new Low Maintenance Roller Clamplock (CRBM), capable of completing more than 250,000 cycles without maintenance.



Depending on our clients' requirements, Amurrio track apparatus are supplied preassembled on concrete or wooden sleepers, or on concrete plates for high-speed railways, tramways, metropolitan railways, conventional and goods railways. The final installation can be carried out and/or supervised by a specialised team of fitters sent from Amurrio.



# Versatility



*Technology*



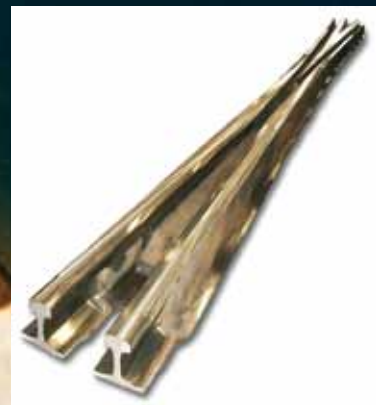


*A crossing that fulfils the purpose for which it was designed should not be noticed at all by the user: It causes no instability, vibrations or noise.*

*A great deal of technology, knowledge of materials and their behaviour is required in order to obtain a crossing like this.*

*Moreover, if a crossing is virtually incident free and requires a minimum amount of maintenance, there is a strong possibility that it has been designed and manufactured at Amurrio.*

*Our monoblock and movable point crossings are installed in railway tracks all over the world.*





# Flexibility

*Amurrio's Services Area comprises three subdivisions:*

*Specialists from our drawing office advise clients on different aspects of the project before work is begun. During this stage, they assess a range of possible solutions and the pros and cons of each one of these.*

*"On the spot" technical assistance. A multidisciplinary team of professionals travels wherever necessary in order to carry out on-the-spot assessments, take the necessary decisions and implement any solutions that may be required.*

*Assembly and maintenance. The fitters approved by Amurrio are somewhat more than just good professionals with long experience in the railway industry: they have first-hand knowledge of the equipment manufactured at Amurrio and they know the best way of optimising its features. And, naturally, they can work with equipment produced by other suppliers.*



# *Experience*

*Beyond simple machining and assembly operations, the experience and know-how acquired over a period of many years gives us the capacity to manufacture a large variety of equipment for a broad range of industrial sectors, whatever their complexity.*

*Besides Spain and Portugal, our capital goods market includes such far-flung parts of the world as North America, North Africa and Asia.*

*Our technical and quality departments guarantee compliance with customer specifications and are capable of providing their advice in the design and/or definition of the process to be followed in the production of a specific piece of equipment or assembly.*

*The most noteworthy sectors for which Amurrio has manufactured capital goods on a regular basis include the following:*

- Glass industry*
- Cement and coal industry*
- Mining*
- Chemical industry*
- Auxiliary automobile industry*
- Public works*





*Main quality control means used in Amurrio:*

- *Emission spectrometer*
- *Fluorescence spectrometer*
- *Magnaflux*
- *Magnatest*
- *Ultrasound*
- *Penetrating liquids*
- *Tensile and resilience tests*
- *Sand laboratory*
- *Microscope*
- *Hardness testers*
- *Radiography*
- *CNC three-dimensional measurement*
- *Impact tests*





# Precision

*Amurrio's quality policy can be summarised in just one word: precision.*

*Precision in our compliance with the standards specified for each project by clients in 65 countries and in continuous improvement, attained thanks to the feedback received from the same clients.*

*Precision as the expression of a total quality system, set out in the Quality Manual and in more detail in the Specific Procedures Manual in accordance with the International Standard ISO 9001:2008.*

*Precision in the reading and interpretation of the data provided by our quality control systems.*

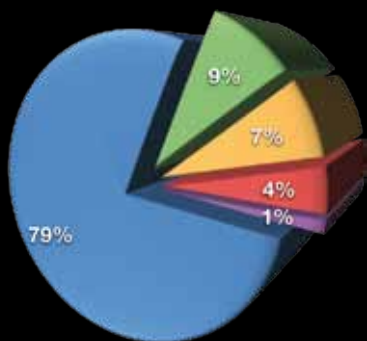
*Precision, in short, in the commitment to continuous improvement of each and every one of the workers in this company, as a key factor in ensuring the confidence of our clients.*

# Commitment

*At Amurrio, we are aware that know-how is an attribute that lies in each individual. For that reason we prefer to treat people as individuals rather than numbers.*

*We invest in training and in the development of people and their welfare in the company. Because we want them to develop their professional careers steadily over many years.*

*In this way we have attained a workforce with a high degree of commitment to the company.*



**Staff distribution:**

- Production
- Offices
- Engineers
- Management
- Sales





*The natural thing is  
to look after  
our environment*



*Amurrio's commitment to the environment is based on the conviction that, if we want our company to continue in business for many years into the future, we must contribute to the conservation, recovery and improvement of our environmental conditions.*

*We comply strictly with all the environmental aspects required by law and, as far as possible, try to comply with future legislation even before this comes into effect. We are certified according to the ISO14001:2004 standard.*

*Each one of our products is designed and manufactured in such a way as to minimise their environmental impact.*

## 1. Machining shop: 2.500 m<sup>2</sup>

- Fixed and multi-spindle drills of up to 24 arms, as well as radial drills with arms of up to 3.5 m and 120 mm steel bit capacity.
- Interior and exterior grinders.
- 1 automatic motor driven three-dimensional control machine, with CNC, travel 1800 x 1400 x 1000 (x,y,z) with automatic, programmable electronic measuring system.

## 2. Main offices: 800 m<sup>2</sup>

## 3. Warehouse: 500 m<sup>2</sup>

## 4. Crossing machining, fitting, checking and control bays: 2700 m<sup>2</sup>

- 5 x Waldrich horizontal boring machines with CNC, up to 12000 mm
- 2 x 200 tonnes hydraulic presses.
- Dye penetrant control, verification and reception.
- 1 x Automatic CNC lathe of up to 6.5 m between points and diameter up to 1200 mm.
- 1 x machining centre with palletising system and equipped with CNC, pallet surface 1000 x 1000 mm maximum admissible load on pallet 1500 kg and 360° pallet turn.
- 1 x 160 mm horizontal boring machine with 9m bar diameter, 9 m length of travel and 3 m column height, with visualisation of datum points and numerical control.

## 5. Steel Foundry: 4500 m<sup>2</sup>

- 2 x electric arc furnaces with load capacities of up to 6000 Kg.
- 1 x heat treatment furnace with a capacity of up to 7 tonnes and with dimensions of 12,300 x 1500 x 1020 mm and pool for hyper-tempering.
- 2 x manual and mechanical moulding lines.
- 1 x laboratory for chemical and mechanical analysis such as spectrographs, as well as non-destructive tests, ultrasound, magnetic particles, penetrating liquids, x-rays, etc.



**6. Turnout assembly: 5000 m<sup>2</sup>**

- Shearcutter
- Rail press
- Punching machine
- Vertical press
- Milling machine
- Several frog and turnout assembly rigs for High Speed Lines
- Several assembly rigs for switches, turnouts and crossovers, expansion devices and re-railers on crossovers of concrete and wood.
- Steel construction section.

**7. Insulating joints assembly shop: 300 m<sup>2</sup>**

Assembly line for up to 30 Insulated joints / day.

**8. Carpentry 300 m<sup>2</sup>**

Several band-saws, grinders, etc.  
Several band-saws, grinders, etc.

**9. Pattern warehouse of 2528 m<sup>2</sup>**

- Computerized warehousing
- Capacity for over 600 foundry patterns.

*Preparation*

## *Proximity*

*Amurrio is located in the Nervión river basin, an area with a long industrial tradition in the north of Spain, with excellent communications with Europe and the world. We are only 30 km from the seaport of Bilbao, and 20 and 35 minutes by motorway from Bilbao and Vitoria airports.*

*The Amurrio factory, located next to the Spanish national railway line, has 50,000 m<sup>2</sup> of installations, with more than 18,000 m<sup>2</sup> of buildings.*







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