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Historical review of the implementation of high-speed vessels in Spain.

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ABSTRACT

Nowadays, inter-island maritime traffic and traffic between the mainland and the Balearic Islands and the ports of Ceuta and Melilla is mainly based on conventional fast-ferries. These are responsible for providing us with the possibility of maintaining fluid communication between islands in such a reasonable time that the inter-island maritime connection via fast-ferries is a direct competitor to air traffic. It can be seen how the vision we had just a few years ago of the ports of the islands full of containers waiting to be loaded has changed. The main ports of the islands are practically empty of containers. In part, the advent of maritime transport by fast ferries has revolutionised transport. In the particular case of the Canary Islands, any type of delivery can be made in less than a day between the larger islands (Tenerife and Gran Canaria) and the smaller ones (La Palma, Gomera, Hierro, Lanzarote and Fuerteventura). Therefore, goods are no longer stored in the ports, but supplies for the five smaller islands can be made with regular return journeys.

Today, the data we have on inter-island maritime traffic on fast ferries for the transport of passengers amounts to more than 6 million passengers a year, so we can consider this type of transport vital for inter-island communications in the Canary Islands, and something similar occurs with the ports on the mainland. The movement of passengers that has been achieved in inter-island maritime traffic means that we can speak of a maritime bridge between the smaller and larger islands, being of such a calibre that it is cheaper to buy a boat ticket per kilometre travelled than to travel by taxi or sometimes even by bus.

The increased frequency of trips by these ships means that the islands are connected on a daily basis, making travel between the islands a sea bypass. Some entrepreneurs want to communicate the islands by the shortest route, making crossings to the least populated places and complete their journeys by land to reach the main urban centres.

In this paper we would like to review how we have arrived at the current situation and the changes that have taken place in the sector in recent decades.

1. Introduction.

The beginnings of high-speed craft in Spain were very complicated. While in other Mediterranean countries, such as Italy, first generation boats were a real boom, in Spain the necessary continuity was never achieved. Nowadays, this market is showing clear signs of maturity, so that neither new operators nor new vessels are expected to enter the market.

One of the reasons why the necessary continuity was not achieved in our country was the length of the trips. While in Italy this type of boat was used on short routes (30-40 minutes maximum), in Spain it was used on longer routes, such as Las Palmas-Santa Cruz de Tenerife, or Ibiza-Palma, which took approximately two hours to sail and were much more exposed to inclement weather.

In addition, the routes were covered by a single vessel. This complicated the operation of the route, as the vessels were not entirely reliable. Spare parts all had to come from abroad, which meant serious customs problems.

The first fast vessel operated in Spain was the hydrofoil

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"Corsario Negro", delivered in 1966 to Marítima Antares. The original project of these shipowners was to use the vessel on the Barcelona-Palma route, but later they decided to use it between the Canary Islands capitals. Its first trip was on 5^{th} august 1967, although it then remained stranded for several months, due to technical and legal problems. The service was re-established in january 1968, only to cease completely in may of that year.

Only two years later, another attempt was made to establish a regular line between the two Canary Islands capitals. The vessel chosen was the "Queen of the Waves", again a hydrofoil, which made its first trip in November 1970. It took 90 minutes, but its presence was also very short-lived, as in 1971 it was returned to its Norwegian owner.

Finally, there is also no market willing to assume that an increase in speed is accompanied by an increase in price. There is only one exception: the jet-foil between Las Palmas and Santa Cruz.

2. High Speed Crafts in Canary Islands.

The inter-island shipping scene in the Canary Islands has undergone a real revolution in the last years.

Trasmediterránea was the first to establish and consolidate, as early as the 1980s, the first first first-generation phase ferry service in the Canary Islands and, therefore, in the whole of Spain. The arrival of the jet-foil in 1980 was the second great revolution in inter-island transport, after the arrival of the ro-ro ferries, which Trasmediterránea also pioneered.

These completely submerged hydrofoils revolutionised transport between the Canary Islands' capitals, becoming fully integrated into island life, and even reaching the Canary Islands' Parliament over the vicissitudes of their future replacement.

This service moves between 2,500 and 3,000 people daily, and in recent years has exceeded 500,000 passengers a year.

Figure 1: Jet foil "Princesa Dácil" de Trasmediterránea.

Source: trasmeships.es.

Trasmediterránea's jet-foils maintain their top speed practically up to the terminal. "Princesa Dácil".

In October 1998, the jet-foil embarked its eight millionth passenger, and in november 2000 it reached nine million passengers, these figures being clear proof of the popularity of this service among the Canary Islanders. However, the jet-foil had a deficit of 500 million in 2000, so Trasmediterranea requested the elimination of the fuel tax for it, and an increase of 33% in the ticket subsidy.

In July 2000, the 20th anniversary of the jet-foil was celebrated, in which the president of Trasmediterránea, Miguel Ángel Fernández Villamandos, once again assured the future of the service, which he described as viable if a minimum quota of 450,000 passengers per year was maintained, and if some personnel adjustments were made.

Trasmediterránea is currently studying the vessels that will replace the jet-foils at the end of their useful life, with several possibilities being considered. The first and most obvious is to maintain the existing service (in terms of frequency and journey time), but also offering to transport cars. This would be the same option as Armas proposed with the "Volcán de Tauro". The second option is to maintain the service as a passenger-only service, but to reduce the journey time between the Canary Islands' capitals to just over 40 minutes, which means using vessels capable of sailing at 65 knots. This type of vessel was already built by Empresa Nacional Bazán in 1997 for BuqueBus. The "Luciano Federico L", used on the route between Buenos Aires and Montevideo, is capable of sailing at 56 knots at full load. This study is being carried out in coordination with the Government of the Canary Islands, which pays Trasmediterránea millions of euros for the provision of this public service.

Trasmediterránea was also the first shipping company to consolidate a stable high-speed line between Los Cristianos and La Gomera, which began in August 1989, with the hydrofoil Barracuda, a type of vessel that is no longer present on its lists, after selling the four it had built at certain times. This service was maintained until the entry into service of the monohull "Gomera Jet" in 1999.

Figure 2: Hidroala "Barracuda".

Source: trasmeships.es.

2.1. Fred Olsen.

The "lion's share" of the Canary Islands fast ferry market is in the hands of Fred Olsen, which has successively introduced the Incat 051 96 catamaran "Bonanza Express", and the twins

”Bentayga Express” Incat 053 and ”Benchijigua Express” Incat 055, both of the Evolution 10 type.

The ”Bonanza Express” was the first Spanish fast ferry capable of carrying lorries.

Figure 3: Bonanza Express.

Source: gomeraverde.es.

This role is all the more strange as Fred Olsen had always been characterised by operating conventional ferries, acquired second-hand, usually in the Scandinavian market.

Its first foray into high speed occurred in 1989, when it chartered the SES-type vessel ’Santa Agata’ (capable only of carrying passengers), for the La Gomera-Los Cristianos route.

Although this trial was not a commercial success, it acquired the vessel in 1994, renaming it ”Bahía Express”, and using it on the route between Corralero and Playa Blanca.

Again, this was a commercial failure, with further serious technical problems, which led to the sale of the vessel in 1996.

However, at the end of 1998, Fred Olsen decided to celebrate its 25th anniversary by ordering two Evolution 10 catamarans from the Australian shipyard Incat.

Fred Olsen had been considering the addition of fast vessels to its fleet for several years, but only placed a firm order when units capable of carrying ro-ro cargo became available.

Figure 4: Bentago Express.

Source: fredolsen.es

Evolution 10 catamaran from the Australian shipyard Incat. ”Benchijigua Express and Bentayga Express.

However, the fact that one of these vessels had to be operational by the summer of 1999 meant that Incat chartered a model 96 catamaran from the Norwegian shipbuilder while the other two vessels were being built.

This vessel, which was to be returned to the Australian shipyard once the next two vessels had been delivered, entered service on 1st april 1999 as ”Bonanza Express” on the route between Santa Cruz de Tenerife and Agaete, Las Palmas.

The two Evolution 10 catamarans, the ”Bentayga Express” and the ”Benchijigua Express”, entered service on 25 October 1999, and 28 January 2000, respectively. Both were fully compatible with the ”Bonanza Express” in terms of ro-ro. However, outwardly they differed in that they had a single passenger deck (instead of the two of the first catamaran), and because they were the first Incat catamarans with conventional dry stacks, instead of having wet exhausts between the two hulls.

The first one covers the 36-mile route between Agaete and Santa Cruz in one hour and ten minutes, which means that it takes around one hour and forty-five minutes between the two Canary Islands capitals. Originally, this vessel was intended for the route between Los Cristianos and La Gomera. But the ramps at both ports were not finished, and traffic on the route between the two main islands had boomed with the ”Bonanza Express”, so Fred Olsen assigned its second catamaran to this route.

The one-year lease that brought the ”Bonanza Express” to the Canary Islands was significantly extended, although in the last months of 2000, thoughts began to be given to the possibility of the ”Bonanza Express” being used in the USA, between Florida and the Bahamas, in a new service called the Fred Olsen Express. The ”Bonanza Express” normally spent its annual lay-up in January 2001 in Astican, but in the first weeks of March it was announced that it would be transferred to the United States. After a transatlantic voyage, she arrived in Freeport (Bahamas) on 24 March 2001, with the Freeport-Miami service (a two-and-a-half hour crossing) scheduled to start on 6 April.

The Fred Olsen catamarans operating on the route between Santa Cruz and Agaete offer two types of accommodation: Gold and Club. The ”Bonanza Express” had the Gold lounge on its upper deck, while the ”Bentayga Express” has it at the stern. Both ships have a splendid interior layout, with facilities that have always distinguished the Fred Olsen fleet, such as the children’s playground, etc.

The ”Benchijigua Express”, the second Evolution 10 catamaran, operates between Los Cristianos and La Gomera, a less demanding route in terms of ro-ro. The main users here are tourists and residents, which is why Fred Olsen opted for a single class configuration.

Fred Olsen’s philosophy has been to integrate into the fast vessels all the services previously provided on the conventional ferries replaced (passenger, private vehicles and roll-on/roll-off cargo). These vessels therefore replaced the old conventional ferries, of which only the aforementioned ”Barlovento” and the small ”Buganvilla” between Playa Blanca and Corralero remain in the fleet. It was a risky gamble, involving an investment of close to 23,000 million pesetas, but it has placed Fred Olsen at the forefront of inter-island traffic. The results have been eloquent: in 2000 it transported 777,857 passengers between Agaete and Santa Cruz (the forecast was 600,000 at the beginning of the year), 177,288 cars, 33,463 vans and 17,020 lorries, of which almost twelve thousand were over six metres long.

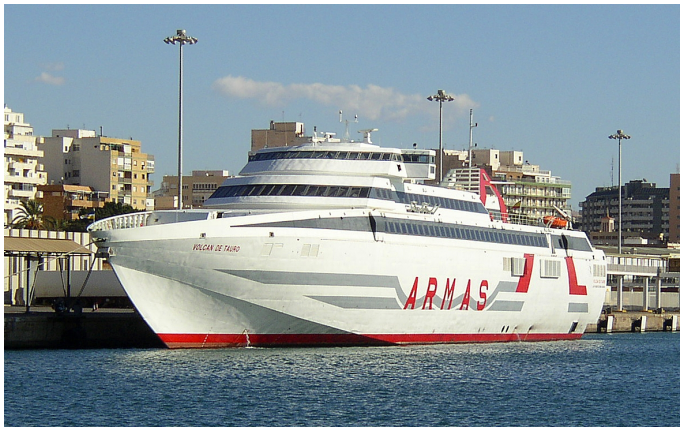
On the Los Cristianos-La Gomera route, the introduction of the "Benchijigua Express" has meant an increase of 9% in passengers and 13.95% in freight.

The price of fares increased by around 10% with the entry into service of the catamarans. However, the price of fuel increased by 250% in the first year they operated together, at times reaching 300%. The rise in fuel prices brought with it rumours of rationalisation of the Fred Olsen fleet. It should be borne in mind that its catamarans consumed 7,000 litres per trip between Santa Cruz and Gran Canaria. However, the Canary Islands shipping company's reaction was to rationalise its services on the route between Santa Cruz and Gran Canaria, grouping together the most popular departures, which went from twelve to eight (four in each direction), while suspending the route between the three islands in the province of Gran Canaria, and putting the conventional ferry which provided this service up for sale.

2.2. Naviera Armas.

In 1999, Tras-Armas, a 50/50 joint venture between Trasmediterránea and Naviera Armas, was set up to cover the route between Los Cristianos and La Gomera. The next step was to charter for 10 months the "Berlin Express", a monohull delivered in 1995 in Norway by Mjellem & Karlsen, which entered service in July 1999. It was renamed "Gomera Jet", and made four round trips daily, competing with the conventional Fred Olsen ferry. The crossing took around 40 minutes. Its start was not at all promising, as a breakdown in its engines kept it immobilised for two weeks. Afterwards, her manoeuvrability problems, and her cold Scandinavian decoration, meant that a month before the arrival of the "Benchijigua Express", the "Gomera Jet" was returned to her owners. Tras-Armas continued to operate on that route, but using the ferry "Ciudad de Ceuta", competing with Fred Olsen at lower prices, until this vessel was assigned to cover routes in the Strait of Gibraltar.

Figure 5: "Volcán de Tauro".



Source: Mike Barker.

In july 1998, a contract was signed between Naviera Armas and Cantieri Navale Rodriguez to build an Aquastrada TMV 114 fast craft, worth 44 million dollars. This vessel was destined for the route between Santa Cruz-Las Palmas-Morro Jable, a long voyage, so it was equipped with a powerful propulsion equipment made up of six Caterpillar engines, which made it the most powerful and fastest fast vessel in the Spanish fleet, although this power was also used to move its steel hull, also a singular case in our fleet. Her holds were prepared to carry 220 cars on three decks, but she could not carry lorries. The passenger capacity amounted to 1,100 people, in two classes. This vessel was delivered in the spring of 2000, and began operating on 15 May of that year as "Volcán de Tauro".

Naviera Armas' strategy was clearly different from that of Fred Olsen.

Instead of integrating different traffics in one vessel, Armas opted to segregate ro-ro cargo, for which it continued to rely on the conventional ro-pax and ferries in its fleet, from private passenger traffic, for which it used the fast vessel. The 'Taurus Volcano' did not replace any conventional vessel, but tried to open up a new market. The competition, in this case, was the Trasmediterranea jet-foil, and the commercial advantage was the possibility offered to the private passenger of travelling at the speed of the former, but with a car, and at a lower price.

The commercial results are difficult to interpret: Armas carried practically the same number of passengers and cars between Las Palmas and Morro Jable in 2000 as in 1999, when it operated on that route exclusively with the ferry 'Volcán de Tamasite'. Armas kept the latter vessel on the route together with the 'Volcán de Tauro' in 2000. The Armas fast ferry had a 100% occupancy rate on the trips to Morro Jable (the jet-foil also kept the number of passengers practically constant) and more than 60% on the crossings between capitals, reaching 100% on weekends.

The technical experience, moreover, has not been positive. A few days after arriving in the Canary Islands, the "Volcán de Tauro" lost its stabiliser fins, which caused it to destabilise. The air intakes were poorly positioned, which caused water to enter the engines, to the detriment of their reliability. Engine exhausts, when clutching and changing reduction gear ratios, reached unacceptable levels. In addition, the manoeuvrability problems of the "Volcán de Tauro" caused two accidents at berths, the second of which, on 5 September in Morro Jable, seriously damaged her hull. All these events caused her to return to her builder's yard in Italy for repairs at the end of September, after the end of the summer season on 18/09/2000.

On 19 December 2000, the "Volcán de Tauro" arrived in Barcelona to complete her repairs, where she remained berthed until 7 April 2001. On that date it sailed to Cadiz, where it arrived on 9 April and remained berthed until it was purchased by Balearia, being renamed the "Al-Sabini", destined for the Algeciras-Tangiers route.

Rising fuel prices have complicated the operation of the "Volcán de Tauro", as it consumed 13,000 litres of gas-oil on each trip Tenerife-Gran Canaria-Morro Jable.

The contract for the "Volcán de Tauro" included an option for a second vessel, which, due to technical problems, has been put on hold. However, if built, it will be more versatile than its predecessor, with the possibility of transporting up to 40 lorries.

3. High Speed Crafts in Balearic Islands.

The triangle between Barcelona, Valencia and Palma contains a population of almost ten million people, 744,589 of whom live in the Balearic Islands, all with a per capita income above the national average, while its gross domestic product is half that of Spain.

However, the figures for passengers carried do not come anywhere near those of the other two Spanish regions. Thus, in 1999, the total number of passengers carried on all Balearic routes was 1,300,135, an increase of almost 20% over the previous year, rising to 1,381,380 passengers in 2000. This is the logical consequence of the greater distance of sea routes, which makes the fast craft, and the conventional ferry, more vulnerable to competition from aircraft.

However, car numbers have increased in the last two years, rising by 20% between 1998 and 2000, thanks, of course, to the emergence of fast craft.

Seasonality is another characteristic of the Balearic market. It should be borne in mind that a high percentage of Catalans choose the Balearic archipelago for their summer holidays, while tourism arriving to the islands by other routes represents a notable increase in cargo traffic.

The above figures also give an idea of the tremendous potential to be exploited on these routes, a fact that has not gone unnoticed by the shipping companies, which have incorporated four new ships in the last twelve months: four Trasmediterránea (two ferries and two catamarans), and two Balearia (two single-hulled phase ferries).

However, the consolidation of the sector in the area, with the suspension of the BuqueBus service, the Trasmediterránea-Umafisa agreement on the Barcelona-Ibiza line, and that of Balearia with Umafisa-Pitra, on the lines between Denia and Ibiza, will complicate the entry of new operators in this water, although they will also lead to a more rational exploitation of the vessels.

3.1. Balearia.

In august 1998, Balearia was formed on the basis of Flebasa. The new managers began to compete with Trasmediterránea on routes to the Balearic Islands from the Valencia region.

This revitalisation involved new routes, such as the one inaugurated in June 2000 between Valencia and Palma, and joint operating agreements with Pitra on the Denia-Ibiza route. But the main symptom of the strength of this shipping company was the presentation in Palma de Mallorca of the "Aquastrada" ferry phase.

At that event it was confirmed that Balearia Eurolíneas Marítimas SAL, had signed a contract in january 2000 for the construction of a single-hull phase ferry, worth 7,000 million pesetas, for the Valencia-Palma de Mallorca route, with the Italian shipyard Cantieri Navale Rodríguez.

This order is the second incursion of the historic Italian shipbuilder into the Spanish market in the last two years, following the delivery in 2000 of the "Volcán de Tauro".

The "Federico García Lorca" is, however, very different from the Canary Island vessel. To begin with, the hull is made of aluminium. The seasonal nature of passenger traffic in the Balearic Islands implies the need for a more versatile vessel.

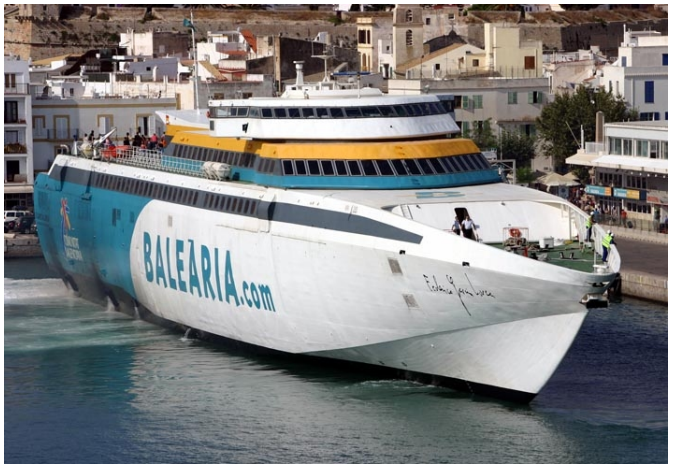
For this reason, the Balearia vessel has 300 linear metres for ro-ro cargo, 130% more than the TVM 114 of the Canarian shipowner.

The "Federico García Lorca", like the Armas vessel, can embark cars on three decks but, unlike the former, the upper deck is made up of mobile platforms which, once stowed (totally or partially), allow the main deck to be used for lorries.

Figure 6: Superfast "Al Sabini".

Source: wwferry.blogspot.com.

Figure 7: Superfast "Federico García Lorca".



Source: ibiza-ferry.com.

3.2. Buquebus.

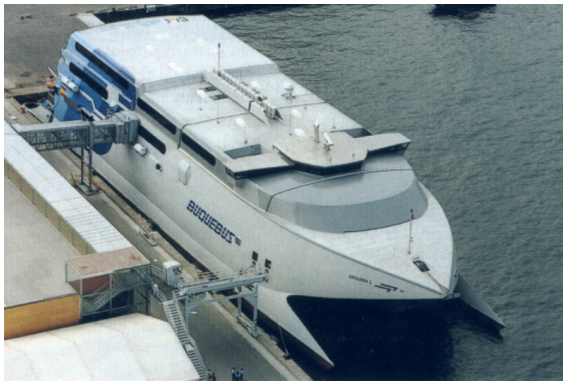
After its establishment in the Strait of Gibraltar, BuqueBus' next objective in its Spanish expansion was the Barcelona-Palma de Mallorca route. In the autumn of 1997, BuqueBus presented its plans for this route, which involved using a state-of-the-art catamaran, faster than Trasmediterránea's "Almudaina" and competitive in time with air links, and having its own terminal in Barcelona.

The objective was twofold: on the one hand, to break Trasmediterránea's monopoly, and on the other, to take customers away from the airline. Originally, the service was to have started in January 1998, but delays in the delivery of the ship and the terminal delayed the start of the service until the summer.

The Argentinian shipping company decided to invest heavily in the ship, assigning a state-of-the-art catamaran, an Incat 91, which was christened "Catalonia". In addition, to increase the propagandistic effect, it was decided that this ship would try

to win the Hales Trophy, the trophy for the fastest crossing of the Atlantic on the section of its positioning voyage between New York and Tarifa.

Figure 8: Superfast "Catalonia" BuqueBus.



Source: BuqueBus.

With the "Catalonia L" Incat 047, BuqueBus broke Trasmediterránea's monopoly on the Barcelona-Palma route.

Once this objective had been achieved (it took 3 days, 9 hours and 55 minutes on the Atlantic crossing), on 12^{th} june 1998 the "Catalonia" arrived in Barcelona and was christened the following day by Marta Ferrusola, Mrs. Pujol, in the presence of the ship's owner, Juan Carlos López MENA, among other personalities.

On 20^{th} June, after completing some pending administrative formalities, the "Catalonia" began its regular service, with two daily rotations, with offers that reached 6,000 pesetas each way.

The trip lasted only three and a half hours, and was an immediate success. The "Catalonia" had a two-deck layout:

The lower deck housed the first class passengers, at the stern and the duty free shop, while the upper deck housed the tourist class passengers.

The decoration included a central atrium with two decks between decks, and the glass window at the stern of the first class lounge.

BuqueBus' usual decorator, Julio César Ortega, did some of his best work on this vessel.

The seasonality of the Balearic service, especially on a vessel that only carried cars, soon led to the service being reduced to a daily rotation, with occupancy levels of 40% in the winter of 98-99.

BuqueBus intended to operate this route in high season with two catamarans, offering four daily rotations.

Thus, on 31^{st} june 1999, the "Avemar", an Incat Evolution 10, only 5 metres longer than the "Catalonia", but with the possibility of offering up to 300 linear metres for ro-ro cargo, joined this service.

However, the two vessels only sailed together until mid-September, when the "Catalonia L" took over the Malaga-Ceuta route.

Figure 9: Fast Ferry Avemar atracado.

Source: trasmeships.es.

"Alborán", ex-"Avemar"; Incat 052 vessel purchased by Trasmediterránea from BuqueBus.

Those months coincided at international level with the maximum expansion of BuqueBus, which at that time had up to twelve fast vessels (four of them built by Empresa Nacional Bazán), several terminals of its own and subsidiaries in three countries. This period also marked the turning point of this shipping company.

The 1999-2000 winter season was covered by the "Avemar", maintaining the previous year's occupancy levels.

BuqueBus' commitment to the Balearic routes meant an increase of 28.5% in passengers carried between 1998 and 1999 (from 589,000 to 758,256 passengers), but with the counterpart of a 94% increase in the number of services (2,208 compared to 1,138). This meant that many crossings were made at lower than commercially viable occupancy levels.

Rising fuel prices, to which BuqueBus was particularly sensitive, having an all-fast ferry fleet, together with the high financial burdens of its rapid international expansion, led to a serious crisis for the South American operator.

On 13^{th} september 2000, BuqueBus suspended the Barcelona-Palma de Mallorca route, after having assured two days earlier that it would not do so, amid rumours that the route and the catamaran covering it, the 'Avemar', were to be sold to Trasmediterránea. After presenting a redundancy plan, the workers of BuqueBus went on strike, occupying the vessel as a guarantee that they would receive the money owed to them. This situation continued until 11^{th} october 2000, when BuqueBus, in a meeting with the workers' representatives, undertook to pay the back wages and severance payments, both to on-board and onshore staff.

The "Avemar" remained in Barcelona undergoing repairs until 16/11/2000, when it sailed for Algeciras.

3.3. Trasmediterránea.

In 1995, Trasmediterránea surprised the maritime world by using a monohull "Alcántara" on the Tarragona-Palma route, instead of between Barcelona and the Balearic capital. The previous year, the hydrofoil "Marrajo" had opened that route, with discreet results. Subsequently, the port itself discovered that it had purchased 2,000 tickets to promote the line.

Figure 10: Monocasco Fast ferry "Alcántara".

Source: Trasmediterránea.

In 1996, Tarragona remained the home port, but in 1997, Trasmediterránea decided to concentrate conventional ferry and fast ferry services from Barcelona, the port from which the "Almudaina" began operating on 13^{th} december 1996.

Figure 11: Hidrofoil "Marrajo" de Trasmediterránea.

Source: trasmeships.es.

Although in the first months there were some cancellations due to rough seas, and occupancy levels of around 30%, the annual results were excellent: the fast service reaped an increase of 54.6% in the number of passengers and 103.3% in the number of vehicles, also demonstrating that it could coexist with the conventional ferry without "cannibalising" it, since the former also showed increases in both types of traffic.

The logical reasoning is that the fast boats had attracted passengers who had previously used the plane, or who simply did not want to spend eight hours sailing. The same results were seen on the route between Mallorca and Valencia, which was also served by the "Almudaina" on Mondays. In 1998, Trasmediterránea's figures on its routes with the Balearic Islands suffered both from the incorporation of BuqueBus' "Catalonia L" (which took 45 minutes less on the Barcelona-Palma crossing), and from the fact that the "Almudaina" did not operate in winter, joining in mid-June of that year.

The entry into service of the second BuqueBus catamaran in 1999 forced Trasmediterránea to improve its fast ferry service between Barcelona and Palma. Like its competitor, Trasmediterránea chartered an Incat Evolution 10, which was christened "Milenium", and which carried out its first service on 9^{th} June 2000.

Trasmediterránea chartered the vessel for four years, with an option to purchase, and the Australian shipyard allowed the Spanish shipowner to defer its decision until only three months before delivery of the vessel, giving another sign of commercial flexibility, as happened with Fred Olsen. The "Almudaina" then went on to cover the Valencia-Ibiza-Palma route.

The "Milenium" and the "Avemar" and Alboran Incat 052 are practically identical, except for the engines and the stabilisation equipment, which on the "Milenium" is retractable.

Figure 12: "Millenium" Catamaran.

Source: trasmeships.es.

The "Milenium" Incat 052 is the first catamaran in the Trasmediterránea fleet.

The stabiliser fins are only used in waves of more than 2.5 metres. When the sea is calm, they are retracted into the central hull, and allow the "Milenium" to save 5% of fuel, as well as to carry out maintenance without the need to go into dry dock, as happened, for example, to the "Volcán de Tauro". On the aesthetic side, the "Milenium" is characterised by the side staircases crowned by a skylight.

Commercially, the "Millennium" was a success. On 21/08/2000, only two and a half months after its entry into service, it carried its 100,000th passenger. However, a collision on 7 September 2000 cut short this progress.

Repairs lasted until December, and during this time, the "Almudaina" returned to cover the Barcelona-Palma route. It should also be noted that the "Milenium" joined the route at a time when fuel prices were at their highest.

This alone accounts for almost one million per trip, and its annual budget amounts to almost one billion.

However, it appears to be operating at a loss for the year as a whole. Summer profits do not compensate for winter losses.

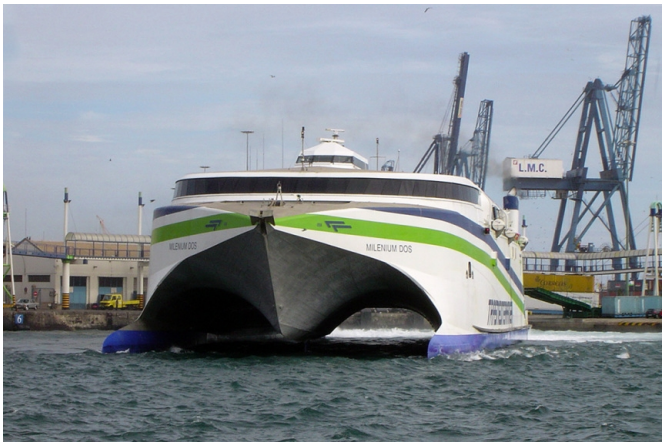
It should be noted that the entry into service of the "Milenium" and the chartering, from March 2000, of the ro-pax "Alissa" enabled Trasmediterránea to offer almost 3,000 linear metres of ro-ro cargo with only two vessels, whereas two years ago it used five vessels for this service, taking a further step in the rationalisation and modernisation of its fleet.

The ro-pax plus fast ferry concept is used on the main European routes by shipowners which, like Trasmediterránea, do not entrust the ro-ro market to fast ferries.

For example, the two routes (Harwich-Hook of Holland, with more than 120,000 trucks a year, and Dublin-Holyhead) on which Stena uses its HSS, the largest fast ferries afloat, are also covered by fast ro-pax (more than twenty knots) to guarantee service in all weather conditions and take on a volume of cargo that is currently unaffordable for fast vessels.

Trasmediterránea has incorporated the new catamaran "Milenium Dos" to the high-speed lines that the shipping company covers between the Balearic Islands and the ports of Barcelona and Valencia. This new fast vessel joins the "Milenium" which has been operating for three years.

Figure 13: New "Millenium Dos" Catamaran.



Source: trasmeships.es.

The new catamaran "Milenium Dos", in the port of Valencia. Built at the Incat shipyard in Tasmania, it has a capacity for 882 passengers and 328 vehicles.

The "Milenium Dos" is scheduled to operate on the Valencia-Ibiza-Palma line, with daily departures in both directions, replacing the fast-ferry "Almudaina", with which Trasmediterránea introduced high speed to the Mediterranean lines.

With similar technical characteristics to the "Milenium", the new unit has been built at the Incat shipyard in Tasmania. It is 97.22 m long; 26.00 m beam and 3.43 m maximum draught. It has the capacity to carry 882 passengers and 328 vehicles or 16 trucks and 82 vehicles in the hold-garage.

4. High Speed Crafts in Strait of Gibraltar.

The Strait of Gibraltar routes are those with the greatest seasonality, a conditioning factor that prejudges investments, rotations, etc. In 1999, of the 4,033,903 people who crossed the Strait, 45.40% did so between 15^{th} june and 15^{th} september. In terms of goods, 426,075 vehicles were transported during this period, 50% of the total. There were days, such as 01/08/1999, with 40,795 people and 10,830 vehicles in transit. However, to perceive the true potential of the route in the rest of the year, it is sufficient to bear in mind that Ceuta and Melilla have a population of 68,796 and 69,880 people respectively, far from the figures recorded on the Island routes.

All in all, its volume is such that, for example, it is Trasmediterránea's busiest route. Other important characteristics are that the distance between ports is very short, and without competition from aircraft, so speed is not an important aspect. Despite these peculiarities, the Algeciras-Ceuta route is practically covered by fast ferries ("Alborán" and "Euroferrys Pacífica"), both with capacity to carry lorries, which are the logical response to the 117,949 industrial vehicles that crossed the Strait in 1999.

The Strait lines have seen the arrival of new operators, especially in 2000. However, technical and administrative problems have prevented these new shipping lines from competing with the traditional operators.

FerryMed, a company with similar origins to Euroferrys, chartered the catamaran "Felix E" (an Austal 82 which had been on sale for more than a year for 23 million dollars) for two years in September 2000, in order to operate on the Algeciras-Ceuta route. After having obtained the mandatory authorisation from the DGMM, mechanical problems, the refusal of the Capitanía Marítima to allow the vessel to sail with three engines, and the inability of the operator to replace it, led to the suspension of the authorisation in december 2000.

The Malaga-Almeria-Melilla line was the object of Africa Affaire, which intended to link the peninsula with the autonomous city in three and a half hours with the vessel "Pegasus Two", a monohull capable of carrying 600 passengers and 171 cars. This line did not materialise either, as Marina Mercante did not issue the necessary authorisation due to problems with the ship's certificates and mechanics, and it never came into operation.

Others have also disappeared, such as Isnasa, which operated two Fjellstrand catamarans, the "Sevilla 92" and the "Rápido de Algeciras", between Algeciras and Ceuta from 1990 to 1998, the year in which it suspended payments and stopped operating.

Yasmine Line, which in 1993 became Goleen Line, also ceased operations that same year.

The competition between the fast ferry companies on the Algeciras-Ceuta route gave rise, in 1998, to the first commercial ticket interchangeability agreement between Trasmediterránea and Euroferrys, which in 2000 was extended to BuqueBus. With this agreement, passengers can board any vessel, regardless of the company from which they have purchased the ticket, both on the outward and return journeys.

This rationalises the market, and has the additional advantage that there are always reserve vessels. On the other hand, this system is the origin of the incorporation of the first third-generation vessels, the "Alborán" and the "Euroferrys Pacífica", to the route.

On the Algeciras-Tangier route, the only operator with a certain continuity is Trasmediterránea, but always with hydrofoils, although in 1998 the "Alcántara" was operating for a few weeks. In 1998, the Incat 74 "Condor 10" was chartered to cover this route during the summer, but did not make any commercial crossing.

4.1. Euroferrys.

In 1996, a group of travel agents from Ceuta and Algeciras decided to set up a company to create a service in the Strait of Gibraltar.

Euroferrys was born, which received permission from the Directorate General of the Merchant Navy to operate between Algeciras and Ceuta on 19 May 1998.

In April of that year they had chartered their first fast vessel, the Incat 78 ”Cat-Link II”, which was renamed ”Euroferrys I” and presented in Algeciras on 15 June.

From then on, this vessel made six daily rotations between the two ports, with crossings lasting 40 minutes.

In its first four months of operation, it carried 670,000 passengers and 160,000 vehicles.

These figures were maintained throughout 1999, so the logical consequence was an increase in supply with a larger vessel.

During 2000, Euroferrys commissioned the Australian shipyard Austal to build a catamaran of the Auto Express 101 model, 101 metres long, at a cost of 8,000 million pesetas.

The vessel was launched as ”Euroferrys Pacifica” at the beginning of this year, and was presented to authorities, clients and travel agents on May 17th, in ceremonies in Ceuta and Algeciras.

The ”Euroferrys Pacifica” is the largest fast ferry in the Spanish fleet and the largest diesel-powered fast ferry in the world.

It came on line on May 22nd, replacing the ”Euroferrys Primero”, which has been chartered by Austal to a Venezuelan shipowner for the route to Margarita Island, and the conventional ferry ”Bahía de Ceuta”.

Following the latest trends, it has a high degree of versatility, as it is capable of carrying 950 passengers and 251 vehicles, or 16 trucks (stowing the central portable decks) and 96 cars.

Her semi-SWATH layout allows her to carry up to 750 tons deadweight, and she also has ramps both fore and aft, a very important consideration in order to reduce embarkation times in ports to a minimum, especially in Operation Crossing the Strait of Gibraltar.

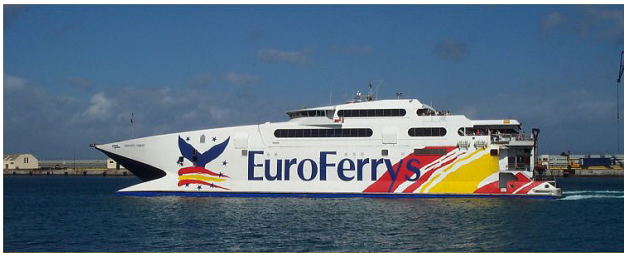
Its speed will be 37 knots, sufficient for a route as short as the Strait of Gibraltar. Her interior decoration, the work of the Basque firm Oliver Design, is splendid, with seats arranged in terraces both fore and aft, as well as on both sides, while the shop, bar, etc. are located in the centre of the ship.

The ambience on offer is very warm, far from the ”airy” atmosphere found on some fast ferries.

Its incorporation together with that of the ”Alborán” on the same route by Trasmediterránea, could mean the first appearance of the first route completely served by phase ferries in Spain: Ceuta-Algeciras.

On the route to Tangiers, Euroferrys, like Trasmediterránea, continues to rely on conventional ferries, in this case the ”Euroferrys Atlántica”, the only fleet partner of the catamaran.

Figure 14: Euroferrys I.



Source: spanishshipping.com.

Figure 15: Euroferrys Pacífica at 40 knots.

Source: tecnologia-maritima.blogspot.com.

4.2. Buquebus.

BuqueBus was founded in the 1980s by Juan Carlos López Mena, with the aim of covering the maritime lines between Buenos Aires and several Uruguayan coastal cities. In 1992 it bought its first second generation catamaran, an Incat 74, which was soon followed by other vessels, including four built by Empresa Nacional Bazán.

BuqueBus’ problem was the seasonality of the routes in the Mar de la Plata (the austral summer, winter in our latitudes), which it solved by chartering its fast vessels during the austral winter (summer in our latitudes) to European operators, generally Scandinavian and British, although we also find references of charters to New Zealand, Turkish, etc. operators.

The next step in the globalisation of BuqueBus was the creation of its own subsidiaries outside the countries of La Plata, with Spain and the USA being its first targets. The American subsidiary of BuqueBus had serious problems starting up the line between Fort Myers and Key West, first with the American authorities, who questioned whether the BuqueBus subsidiary in the USA was really an American shipowner, and later with the USCG, which forced a change in the means of rescue on board the ”Thomas Alba Edison”. The vessel, built in the USA to comply with the Jones Act, was unable to operate for almost two years, which seriously affected the group’s finances.

In Spain, the vessels of the Argentinian shipping company started sailing between Ceuta and Algeciras on 1 September 1997 with the ”Albayzin”, the first Mestral delivered by Bazán (with six daily rotations), while the Incat 74 ”Patricia Olivia” joined a few weeks later, bringing the number of round trips to twelve.

Since then, BuqueBus has maintained two fast vessels on that route, although rotations have been constant.

The ”Patricia Olivia” was replaced in 1998 by the ”Ronda Marina”, an Incat 78 which, after the delivery of the ”Avemar” in July 1999, was returned to its builder’s shipyard... to be chartered by Trasmediterránea as ”Fast Ceuta” in the Strait in the summer of 2000.

This meant the return of the ”Patricia Olivia”, which, together with the ”Albayzin”, covered the 1999 summer season.

It should be noted that BuqueBus did not originally take part in successive pools set up in the Strait of Gibraltar. Only in 2000 did it begin to collaborate with Trasmediterránea and Euroferrys on the Algeciras-Ceuta route.

In the autumn of 1999, BuqueBus decided to strengthen its services in the Strait of Gibraltar, opening a new route between Malaga and Ceuta, with two daily rotations carried out by the "Catalonia L", which had replaced the "Albayzin". In addition, in the middle of the day it covered the route between Ceuta and Algeciras. At that time, BuqueBus made 10 round trips a day between the two ports.

The "Catalonia L" was the first large fast ferry to sail in the Strait of Gibraltar, but its occupancy level, in the low season, did not reach an acceptable level and it was soon leased to P&O. This meant the return of the "Albayzin".

After its economic problems, the route between Ceuta and Algeciras is the only one that BuqueBus maintains in Spain.

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Figure 16: Fast ferry "Patricia Olivia" de BuqueBus.

Source: trasmeships.es.

4.3. Trasmediterranea.

Trasmediterránea's first fast vessel appeared on the Algeciras-Ceuta route in 1989: it was the hydrofoil "Barracuda".

This service continued without interruption until the arrival, in July 1995, of the phase ferry "Albayzin", chartered for four months to BuqueBus until it was replaced by its twin "Alcántara", the first Mestral armed by Trasmediterránea.

Subsequently, her sister ship "Almudaina" has been used in the Strait of Gibraltar covering the Algeciras-Tangier route during the winter, starting in 1998.

The Mestral has a single aluminium hull. They originally carried 450 people in two classes, although later refurbishments increased this capacity to 590 passengers.

It can also carry up to 84 cars, on a single deck which can be accessed via a ramp at the stern, and another on the forecastle to port.

Their passenger/car ratio is almost 7, which is very high (on the "Milenium" and the "Alboran" it is around 3), which has always made their commercial operation difficult. They are powered by four Caterpillar engines of 5,000 kW each, each driving a waterjet.

The three vessels of this type were the first exponents of phase ferries built by Empresa Nacional Bazán. For Trasmediterránea they meant its entry into the second generation high-speed market.

In this way, Trasmediterránea was the first shipowner to operate a second generation fast ferry in the Strait of Gibraltar. The results were outstanding: in 1996, the first full year of the fast ferry, it carried 766,762 passengers, 88% more than in 1996, while the number of private vehicles grew by 11%.

In 1997, Trasmediterránea decided to homologate the "Alcántara" with its sister ship "Almudaina": the four waterjets were equipped with steering and manoeuvring systems, it was certified as a category B vessel, according to the HSC code, and its passenger capacity was increased to 590 people. With this last reform, Trasmediterránea was trying to respond to the 750,000 people and 100,000 cars that the "Alcántara" transported during its first year of existence.

1997 was also the first year in which Trasmediterránea had competition from another fast ferry (BuqueBus) on the Algeciras-Ceuta route, despite which it obtained increases of 22.4% in passengers and 25.7% in vehicles over 1996. The following year (1998), with three shipping companies (Euroferrys joined) offering fast crossings, was the first year in which there were more fast vessels than conventional ferries operating between Algeciras and Ceuta, in a further sign of the transfer of traffic towards this type of vessel.

The increase in competition significantly affected Trasmediterránea, which lost 11% of passengers and 14% of vehicles compared to 1997, although the conventional ferry operating that year was the most affected.

In 1999, Trasmediterránea's plan to build up to three fast ferries for the Strait of Gibraltar route, worth 21 billion pesetas, was widely reported in the media. In the end, this project did not materialise. The oversupply on the route would have had dire consequences for all operators.

The possibility of using a fast ferry on the route between Malaga and Melilla was also considered, which would reduce the journey from eight to three hours, in competition with air transport. However, the population of Melilla (around 55,000 inhabitants) and existing competition from other operators from Almeria prevented the service from crystallising.

The shortcomings of Trasmediterránea's fleet became evident in the 2000 Strait Crossing operation, when Trasmediterránea chartered from Incat what was to be the first catamaran in its fleet, a model 74 which was christened "Fast Ceuta". This vessel had previously sailed for BuqueBus as "Ronda Marina", and had been berthed in Tenerife in 1999 in the Fred Olsen colours... but only on the port side, to launch her bigger brothers. The flexibility of the Australian shipyard saved Trasmediterránea from a very tight situation, after the fire on the "Alcántara" and the collision between the "Ciudad de Ceuta" and the "Ciudad de Tánger".

The solution to Trasmediterránea's fleet problems came after the withdrawal of BuqueBus from the Balearic Islands, which implied the sale of the "Avemar". Despite rumours that this vessel would join the state-owned shipping company's fleet in September, Trasmediterránea was able to bide its time and only on 27 December 2000 announced the purchase of the "Avemar" from BuqueBus' creditors for 5 billion pesetas. Although

there were rumours about its use on the Valencia-Palma route, in the end it was renamed "Alborán" and dedicated to the Ceuta-Algeciras route, starting on 23 April 2001. As a direct consequence, the "Alcantara" has been put up for sale. Its main problem is that it can only load by stern at single ramp terminals, and on a route with many rotations.

On the Algeciras-Tangier route, Trasmediterránea started operating in 1992 with the hydrofoil "Pez Volador", which it maintained until the beginning of 2000.

5. Future of fast ferries in Spain.

The market for high-speed vessels in Spain shows clear signs of maturity, such that no new operators are expected to enter the market. The year 2001 was the turning point for this type of vessel in Spain, as the incorporation of three new vessels ("Alborán", "Euroferrys Pacífica" and "Federico García Lorca") coincided with the withdrawal of others, such as the "Alcántara".

This picture also corresponds to that existing in Europe, where conventional ferries, with speeds of up to 30 knots, seem to have won out over fast vessels, especially in the markets with the greatest potential, such as Greece and Italy. There are also a number of fast ferries ordered in the mid-1990s by shipowners, particularly in Scandinavia, which are either for sale or available for time charter as a result of the entry into service of bridges or tunnels, or mergers or takeovers between shipping lines, which is likely to lead to a decrease in orders for new units.

One factor that has slowed down the growth of this type of vessel is the rise in fuel prices. For example, in 1998, Trasmediterranea spent 3,000 million pesetas (6% of turnover) on this item. In 1999, this amount rose to 4,500 million pesetas, and in 2000 it reached 7,000 million pesetas (16% of its turnover). But these absolute figures have to be translated into the operating costs of each type of ship, and here the differences are obvious: fuel represents 8% of the operating costs of a ro-pax, 18% of a catamaran with car-car capacity, and up to 31% in Stena Line's HSS.

One fact to bear in mind is that the most prolific shipyard in catamaran construction, the Australian Incat, reduced its workers' working week to four days in May 2001, in response to the fall in demand for this type of vessel. Its aggressive commercial policy, based on speculative constructions and on buying back obsolete vessels when new vessels were added, is difficult to continue in a mature market.

Conclusions.

The introduction of high-speed ships in the Canary Islands' inter-island maritime traffic for passengers and ro-ro freight has brought with it a level of communication between the islands, mainly between the two provincial capitals and the smaller ones, which was unthinkable until a few years ago. This level is only comparable to air traffic, although only in the case of passenger transport, as there is no competitor for ro-ro freight.

The design of ships has been established to obtain the highest possible economic performance, although it is true that in recent years, the construction of ships has guaranteed optimum conditions of comfort and safety for passengers and goods.

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