The Context and Origins of the Brazilian Torpedo Boat Goyaz, 1907*

O contexto e as origens da Torpedeira brasileira Goyaz, 1907

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ABSTRACT

Two experimental vessels of first-class torpedo-boat design were launched by the British shipbuilder Yarrow in 1903-1904. These were turbine-powered vessels of a type of small, fast warship that had been of growing interest to the world's navies since the invention of the Whitehead self-propelled torpedo in 1877. During the Russo-Japanese War 1904-1905, British shipbuilders were prohibited from accepting orders for vessels of war or equipping such vessels for sale to belligerents. However, the first of the two Yarrow vessels, which became known as the *Caroline*, was purchased as an unarmed 'fast steam yacht' by two middlemen acting on behalf of Russia in September 1904. After 'escaping' from the Thames and sailing to Libau in Baltic Russia, the vessel was taken into Russian naval service. The second vessel, known as the *Jeanne*, was intended to be purchased in the same way, but this further sale was halted by the British Government's earlier actions. After remaining in Yarrow's ownership for another two years, the *Jeanne* was bought in 1907 by the Brazilian Navy as a torpedo boat and training ship and renamed BNS *Goyaz*.

KEYWORDS: Yarrow & Company; turbine-engined torpedo boat; 'steam yacht' *Caroline*; 'steam yacht' *Jeanne*; Russo-Japanese War 1904-1905; Brazilian Navy torpedo boat *Goyaz*

RESUMO

Dois navios experimentais com projeto de torpedeiras de primeira classe foram lançados pelo estaleiro naval britânico Yarrow entre 1903-1904. Eram um tipo de navio de guerra pequeno e rápido movidos a turbina, que interessavam cada vez mais às marinhas do mundo desde a invenção do torpedo autopropulsionado Whitehead em 1877. Durante a Guerra Russo-Japonesa de 1904-1905, os construtores navais britânicos foram proibidos de aceitar pedidos da parte dos beligerantes de navios de guerra ou de equipá-los. No entanto, o primeiro dos dois navios Yarrow, que ficou conhecido como Caroline, foi comprado como "iate rápido a vapor" desarmado por dois intermediários que atuavam em nome da Rússia em setembro de 1904. Depois de "fugir" do Tamisa e navegar para Libau na Rússia Báltica, o navio foi levado para o serviço naval russo. O segundo navio, conhecido como Jeanne, deveria ser comprado da mesma maneira, mas essa venda adicional foi interrompida pelo governo britânico. Após permanecer sob propriedade da Yarrow por mais dois anos, o Jeanne foi comprado em 1907 pela Marinha do Brasil como torpedeira e navio de treinamento e renomeado como Goyaz.

PALAVRAS-CHAVE: *Yarrow & Company; Torpedeira movida a turbina; Iate a vapor Caroline; Iate a vapor Jeanne; Guerra Russo-Japonesa 1904-1905; Torpedeira Goyaz*

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INTRODUCTION

In 1903/1904, Yarrow & Company launched two experimental, turbine-powered vessels of first-class torpedo-boat design. These were built on a speculative basis for stock at the company's shipyard at Poplar, East London. The first vessel launched in 1903, and later known as *Caroline*, achieved notoriety during the Russo-Japanese War 1904-1905 on account of its controversial departure from British neutrality and jurisdiction in October 1904. This arose from the vessel being purchased as a 'fast steam yacht' under false pretences by intermediaries acting for Russian interests, leaving British waters without authority, and sailed to Libau in Baltic Russia where it was taken into Imperial Russian naval service.[1]

The second vessel became known in official records as the *Jeanne*. It was to have been bought on the same basis and in the same way to the same intermediaries acting for (presumably, the same) Russian interests, with a deposit on the vessel paid to Yarrow by the conspirators. However, plans for this second transaction and the departure of the *Jeanne* from the River Thames to the Baltic were thwarted by the British authorities' response to the earlier episode involving the *Caroline*. To all intents and purposes, the *Jeanne* was identical to the *Caroline* in terms of its overall design and key parameters. The vessel remained in Yarrow's ownership, under official observation, at least until June 1906 after which British sources appear to be silent on the question of the *Jeanne*. However, in 1907, Yarrow sold a similar vessel of first-class torpedo-boat design to the Brazilian Navy which became BNS *Goyaz*.[2]

The stories of the *Jeanne* and the *Goyaz* are those of mystery as well as history, given that both of these vessels seemingly were identical in all major respects: the research question addressed is thus whether the *Jeanne* in fact became the *Goyaz* in 1907. This article highlights the salient features of an age of innovation and technological development in warship design and shipbuilding, and in the history of Yarrow itself, in the period from the 1870s to the first decade of the twentieth century. The origins of the *Caroline* and the *Jeanne* are outlined, including the relevant political and neutrality issues in 1904 and 1905. The subsequent purchase of the second vessel is discussed by reference to archival material in connecting the initial story of the *Jeanne* with the subsequent story of the *Goyaz*.

AN AGE OF INNOVATION IN SHIPBUILDING

Innovations in ship hull, propulsion and propeller design, together with the use of new engineering materials, enabled rapid developments in shipbuilding techniques in the late nineteenth and early twentieth centuries. Many vessels were built on an experimental basis. The turbine concept pioneered by Parsons in 1884 was a major development in marine propulsion and in the evolution of ship design, the demonstrator vessel *Turbinia* launched in 1894 heralding the use of turbines in many types of vessel (STRONG, 1906, pp. 39-45; SMITH, 1937, pp. 271-272, 275-276).

The first experimental, turbine-powered warships entered service with Britain's Royal Navy in 1899, the destroyers *Viper* and *Cobra* both being lost in 1901 and replaced by the *Velox* (ex-*Python*) in 1904[3] (STRONG, 1906, pp. 41-50; SMITH, 1937, pp. 278). By that year, turbine ships had entered commercial service in short-sea and cross-channel ferries, where speed and economy were important factors for operators (DUNELL, 1902, pp. 160-161; DUNELL, 1904, p. 135; STRONG, 1906, pp. 47-50; PARSONS, 1934, pp. 36-37).

Wealthy owners of luxury yachts had also appreciated the vibration-free running of turbines for comfort and the need for less engine space (DUNELL, 1902, pp. 162-163; STRONG, 1906, p. 50; PARSONS, 1934, pp. 38-39). The potential of turbines was soon recognised more widely by shipping companies and navies, with the Royal Navy adopting steam-turbine propulsion for its main classes of warships in January 1905[4] (DUNELL, 1906, pp. 73, 89).

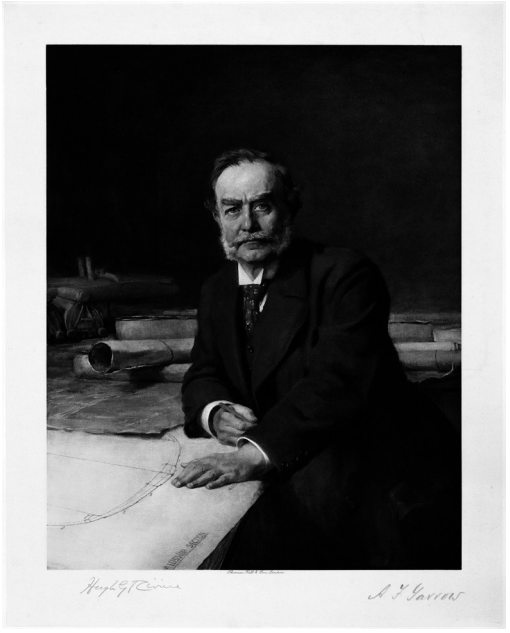

Figure 1: Alfred Fernandez Yarrow (1842-1932), founder of Messrs Yarrow & Co, shipbuilders.
Source: © National Portrait Gallery, London, mezzotint ca. 1880s, reference D36234.

Within the shipbuilding industry, Yarrow was particularly successful in building small, fast naval and special-purpose commercial vessels, and, with other companies, made significant contributions to torpedo boat and destroyer development. This followed Whitehead's invention of the self-propelled torpedo in 1877 and experimental torpedo boats being built for the British Admiralty. The same year, Yarrow won a major order from the Imperial Russian Navy for small torpedo boats, two vessels being built in Britain and with machinery and drawings supplied for the rest of the 100-ship order to be built in Russian shipyards (ARMSTRONG, 1896, pp. 166, 168; BORTHWICK, 1965, p. 22). Within two years, Yarrow had completed the first ocean-going torpedo boat, the 22-knot *Batoum* also for Russia, this vessel setting the pattern for developments over the next decade (ARMSTRONG, 1896, p. 170; BORTHWICK, 1965, p. 25; SMITH, 1937, pp. 258-259). Advances in the size and power of torpedo boats and in the use of armour protection were made with the Japanese vessel *Kotaka* in 1885, marking the start of a long relationship between Yarrow and the Imperial Japanese Navy[5] (ARMSTRONG, 1896, pp. 178-179; SMITH, 1937, p. 259).

In the early 1880s, with many navies adopting torpedo boats, a hiatus arose in Royal Navy orders owing to doctrinal uncertainty and slow decision making. Aware of the business potential, Alfred Yarrow took his arguments to the heart of the British naval establishment (YARROW, 1884, pp. 602-628; ARMSTRONG, 1896, pp. 170-172). The first large-scale Royal Navy orders for first-class torpedo boats were placed with the British shipbuilders Thornycroft, White and Yarrow in 1885 (ARMSTRONG, 1896, pp. 173-174; SMITH, 1937, p. 259). Between 1886 and 1891, manoeuvres held by the British and French navies demonstrated the threat posed to capital ships by torpedo boats and led to the evolution of torpedo boat 'catchers' or destroyers (ARMSTRONG, 1896, pp. 180-182, 185-186, 190-192). Among the first Royal Navy destroyers were the *Havock* and the *Hornet*, both launched in 1893 by Yarrow (BARNES, 1923, pp. 101-105, 134-135; SMITH, 1937, pp. 263-264; BORTHWICK, 1965, p. 28). Another early Yarrow destroyer, the Russian *Sokol* [Сокол] built in 1895, claimed to be the world's fastest warship by exceeding 30 knots on trials and one of the first to use *Yolla* metal[6] in its construction for

increased strength and reduced weight (BARNES, 1923, pp. 105-106, 135; SMITH, 1937, p. 266; BORTHWICK, 1965, p. 28).

Yarrow's success in producing innovative ship designs resulted from numerous technical developments. The quest for better manoeuvrability, speed, range and economy, saw the use of different hull forms, of types and configurations of engines, boilers and shafts, and in the size, shape, and pitch of propeller blades, and an early form of electric propulsion. Structural improvements involved the use of curved decks to provide more strength with the same weight of metal (or, conversely, to save weight for the same strength as conventional flat decks) and the use of aluminium in place of steel. Torpedo-boat capabilities were enhanced by the use of retractable bow rudders to improve handling at speed and a steam impulse system for firing torpedoes (YARROW, 1884, pp. 604, 607, 611, 616-617; ARMSTRONG, 1896, pp. 199-201).

The company's growth was marked by collaboration with technical partners and industry competitors, through technical papers and participation in discussions held by naval architecture and engineering professional bodies[7]. Yarrow also acted altruistically for the wider shipbuilding industry by lobbying for more measured miles to be available for speed trials and by promoting the use of test tank facilities to study the hydrodynamics of hull and propeller designs[8]. The company's success in winning orders from navies, government and commercial clients at home and abroad necessitated a move to larger premises in Poplar on the Isle of Dogs, East London in 1901[9].

In 1902, Yarrow built a novel fast private yacht for a wealthy client who had already owned a number of larger steam yachts[10]. The *Tarantula* was based on Yarrow's successful first-class torpedo-boat design sold to a number of navies, but using turbine technology[11] (COX & KING, 1913, No. 17; HOFMAN, 1970, pp. 144-145). It employed three Parsons turbines configured for high-, intermediate- and low-power driving three shafts each with three screws, an arrangement that gave flexibility for manoeuvring and lower-speed cruising and a speed of 24 knots[12]. However, the owner of *Tarantula* died the same year and the vessel was sold into American ownership for use as a fast commuter yacht on the Hudson River in New York by W. K. Vanderbilt Jnr[13].

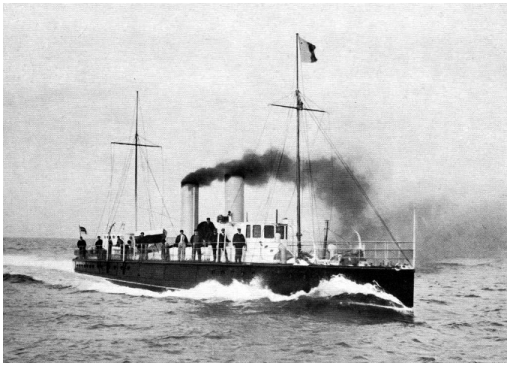

Figure 2: The Yarrow-built Steam Yacht *Tarantula* (1902), forerunner of the *Caroline* (1903).
Source: COX & KING, 1913, No. 17.

The experience of building the *Tarantula* led to two further experimental vessels of first-class torpedo-boat design in 1903-1904, both un-named at launch, built for stock in anticipation of finding a buyer on completion. The first vessel attracted interest by using two turbines operating in conjunction with a reciprocating engine and working through three shafts. This arrangement had been suggested to Yarrow by the Italian naval constructor, Nabor Soliani, to improve efficiency at cruising speeds, at low speeds and in going astern[14]. Trials using different propeller parameters were promoted by Yarrow through technical papers presented by the turbine's French designer, Professor Auguste Rateau[15].

The *Tarantula* and the successor vessels, later to become known as the *Caroline* and the *Jeanne*, were all pioneering vessels and, in effect, technology demonstrators of their day.

A CONSPIRACY AND POLITICAL STORM

While technical developments in these decades were important, the political and legal issues that arose in 1904 presented particular challenges for British shipbuilders. The outbreak of the Russo-Japanese War on 8 February 1904 heightened tensions between Russia and the other major European powers. Britain remained neutral despite several incidents that severely strained relations between the two countries[16]. Britain's neutrality was subject to the 1870 *Foreign Enlistment Act*, which included provisions concerning illegal enlistment, shipbuilding and expeditions[17]. The Act affected British ship builders and ship owners in respect of building new vessels for belligerent states, the 'equipping' of vessels of war, the sale of existing vessels to belligerents, and the involvement of commercial shipping in belligerent 'naval service'[18]. There could be no sales of warships to belligerents or of vessels readily adaptable for war, but the subsequent conversion or use of vessels for warlike purposes was not Britain's problem: the legislation addressed fact, not future matters that might or might not arise in other jurisdictions.

On the outbreak of war, the Act's provisions were promulgated in the official newspaper, with a further reminder sent to shipbuilders and the press the following month[19]. By June 1904, Britain's positions on most legal issues relevant to its maritime interests during the war had been established. These were set out in a secret Cabinet paper, and, in relation to the situation that was about to unfold, addressed the sale of ships by neutrals to belligerents[20]. Events thereafter between July and October 1904 provided the setting for the affair involving Yarrow's two experimental vessels.

In late July 1904, Yarrow received an offer to purchase a first-class turbine torpedo boat from an agent acting for a French munitions company. After seeking official guidance, the company was advised that the British Government "are confident that you will abstain from completing the present sale during the continuance of hostilities between Japan and Russia"[21]. Some weeks later, Yarrow reported that further offers had been received, its letter being intended "merely to advise the authorities" that a sale had been made[22]. This offer had been made by Henry Sinnett, an Irish businessman living in France, in conjunction with the Honourable James Burke Roche, an Irish aristocrat, gambler, adventurer and former politician. Sinnett had paid an instalment for alterations to complete the vessel as a "fast yacht" on behalf of a private client.

While Yarrow had no reason to suppose that the vessel's ultimate destination was one of the belligerents, Foreign Office officials were suspicious that the end customer was a belligerent and an undertaking was sought from the shipbuilder[23]. However, Yarrow replied that the vessel had sailed "some days ago", stating that "as no objection had been made" and the alterations having been completed the *Caroline* had been handed over and departed[24]. Further, Yarrow revealed that negotiations were in hand for the sale of a similar vessel for New York, allegedly for a friend of Mr. Vanderbilt[25].

The following week, the British Embassy in Russia reported that the steam yacht *Caroline*, of "torpedo boat" appearance, arrived at Libau on or about 12 October[26]. Foreign Office minutes

noted that, while Yarrow may have acted in good faith, it was unlikely that Sinnett was acting on his own account[27]. While the example of the *Tarantula* showed the practicality of such a fast yacht conversion, "it was not impossible that Yarrow's were not particularly anxious to know too much"[28]. Given the negotiations for the sale of a second vessel, a letter conveying official displeasure was sent to Yarrow asking for undertakings in respect of this second vessel[29].

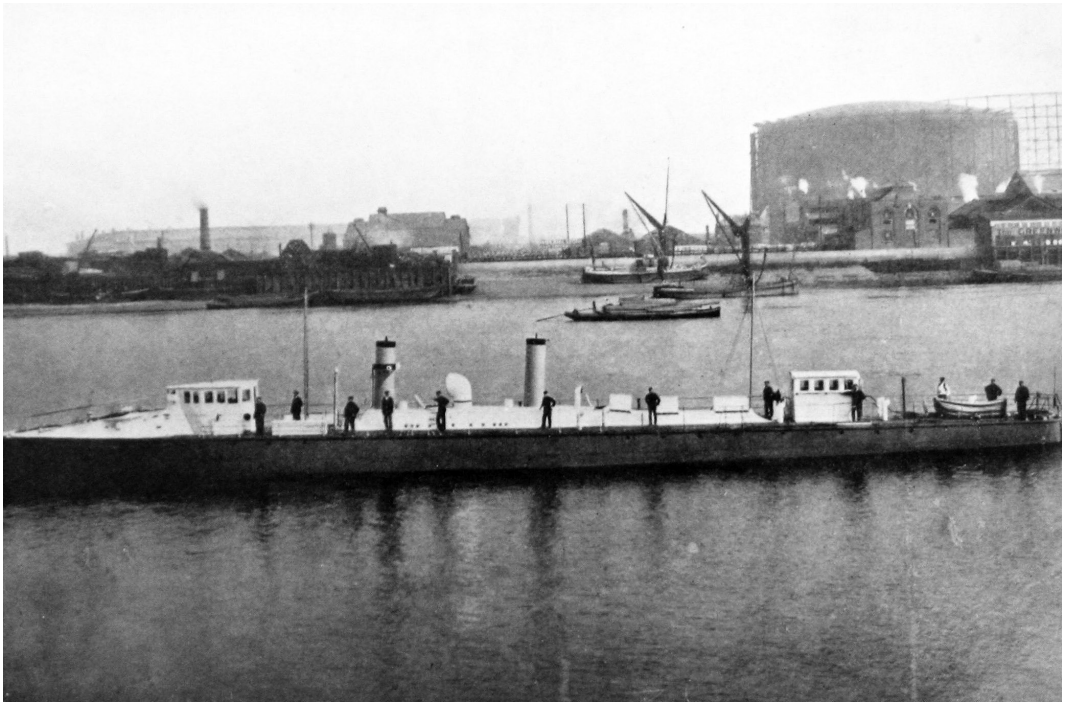

Figure 3: The 'steam yacht' *Caroline* in the River Thames, equipped with bridge and aft saloon, shortly before the vessel's escape from British waters to Libau in Baltic Russia in October 1904.
Source: RYDER, 1931, p. 152.

Prior to the departure of the *Caroline* from the Thames, its conversion as a yacht involved the building of a bridge and aft saloon, similar to those on the *Tarantula*, and Samuel Ryder had been appointed in command for the delivery voyage[30]. By 6 October, the *Caroline*, with Sinnett on board, was working-up on the Thames when the police visited the shipyard intending to detain the vessel (RYDER, 1931, pp. 153-155). Despite a lack of preparation, the vessel made a hurried departure and after crossing the North Sea entered the Kiel Canal. However, German suspicions about the *Caroline* were raised and the boat was ordered to report to the port authorities. Ryder ignored these instructions and a guard ship's warning shot, and headed for the open sea *en route* to Libau. On arrival, the *Caroline* was moored alongside the Russian Baltic Fleet flagship, *Imperator Nikolai I*, before being taken over, renamed *Lástochka* (Ласточка), and equipped as a torpedo boat[31] (RYDER, 1931, pp. 163-166).

News of the *Caroline* affair broke a few weeks later in international newspapers[32]. Yarrow's position was that the relevant government departments had been informed of the proposed sale and no official comment on the matter had been forthcoming[33]. Its argument was that the *Caroline*, like the *Tarantula*, was an unarmed yacht with extensive work needed to equip it as a vessel of war within the scope of legislation. Formal

enquiries were launched, with Alfred Yarrow being interviewed. He confirmed that the press stories were "true in every particular" and that his engineers on the vessel were expecting to go to Hamburg in the belief that the vessel was bound for America, like the *Tarantula* two years before[34]. Subsequently, warrants were issued for the arrest of Sinnett and Roche, but these could not be executed in their absence abroad[35].

As the year drew to an end, a confidential Cabinet memorandum reflected on HM Government's handling of the *Caroline* affair from July 1904 onwards, although with no mention of the *Jeanne*[36]. However, Yarrow had confirmed that the second vessel was to be sold to an American "client" as a duplicate to the *Tarantula* and that a deposit of £1000 had been paid by Sinnett on this vessel on 4 October (that is, two days before the *Caroline* had sailed)[37]. A watch therefore was kept on the *Jeanne* while fitting out, with officers stationed on board to prevent its departure until further assurances had been given[38].

THE PURCHASE OF THE *GOYAZ*

As the political and legal consequences of the escape of the *Caroline* subsided, Sinnett and Roche remained abroad, the arrest warrants still in force but unable to be actioned. The question of the *Jeanne* thus remained unresolved. British archives mention the continued monitoring of the *Jeanne* by officials until the Russo-Japanese War ended in September 1905[39]. A river police report in mid-1906 noted that the vessel, still in Yarrow's ownership and unarmed as a potential warship, was moored at buoys in the River Thames shipyard[40]. The same year, 1906, as a result of increasing wage demands and industrial unrest in the London area, Yarrow began to move its shipbuilding activities to Scotstoun on the River Clyde in Scotland. The Poplar yard that had seen so many innovations in specialist designs of naval and civilian vessels continued in operation until its final closure in March 1908 (BORTHWICK, 1965, p. 31).

In the same period, the Brazilian Naval Commission in Europe was engaged with substantial work in British shipyards arising from the 1904 and 1906 Modernisation Programmes (WALDMANN JÚNIOR, 2019, pp. 49-52). Its role included the negotiation of purchase agreements and contracts, technical evaluations, and liaison with shipyards on new construction. The Commission was led by Rear Admiral João Justino de Proença, with Engineer Commander José Thomaz Machado Portella and Engineer Lieutenant Commander Bartholomeu Francisco de Souza e Silva as principal officers[41].

Yarrow had already supplied several gunboats to Brazil from its Poplar shipyard which were commissioned in 1905 and 1906[42]. Among the first vessels laid down at Yarrow's new Scotstoun yard were the *Pará* class of 10 destroyers built between 1907 and 1910 as part of the Brazilian Navy's modernisation programme[43] (BORTHWICK, 1965, p. 112). Given these factors, the Commission would have been aware of the first-class torpedo-boat *Jeanne* that remained unsold since completion. At this time, the Brazilian torpedo boat *Pedro Affonso* had been damaged and needed replacing with a vessel that could be used also for the training of engineers[44] (DE ALENCAR, 1908, pp. 5-6). Thus, in late 1906 and early 1907, discussions took place about the purchase of the *Jeanne*, and Brazilian Navy archive sources shed light on the subsequent negotiations[45].

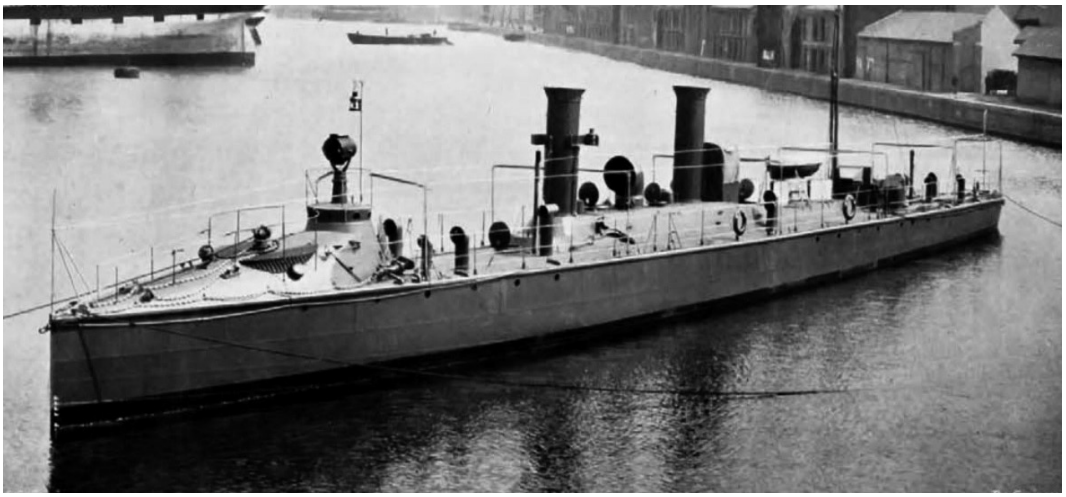

Figure 4: The Brazilian torpedo boat *Goyaz*
Source: *The Engineer*, 3 January 1908, Supplement, p. 8, courtesy of Lloyd's Register Foundation, Heritage & Education Centre.

Following a letter from Rear Admiral Proença, an official (unnamed) acknowledges his instructions "to depart for London to examine a 150-tonne torpedo boat which the Government intends to acquire from Yarrow & Co. Lt"'[46]. A follow-up letter raised technical questions of (to paraphrase) "the specifications of the torpedo boat *Jeanne*, which the Government intends to acquire from Yarrow, are deficient (…) The normal flotation displacement at its sea trials and fully-loaded with coal are required"[47]. Yarrow provided the necessary data and information requested[48].

The Jeanne was inspected out of the water on 11 May 1907 by Machado Portella and Souza e Silva. It was stated to be about three years old, having been at sea only a few times and kept in good order. They reported that the hull was clean, the steering gear and propellers in good condition, with machinery and boilers having been serviced. They noted also that modifications would be needed, including improved ventilation to cope with hotter climates, air extraction in the engine compartments, improved access to the boilers, more power for electric lighting and the searchlight, and fire-fighting equipment[49].

On 30 May 1907, a speed trial with all three Naval Commission senior officers on board was conducted, with six runs over the Maplin Sands measured mile in the Thames estuary producing a mean speed of 26.49 knots over a three-hour period. Subsequent consumption trials were made in the presence of the two engineer officers[50]. A special report was made to the Head of the Naval Commission on the inspection of the torpedo boat *Jeanne* and the technical issues involved[51].

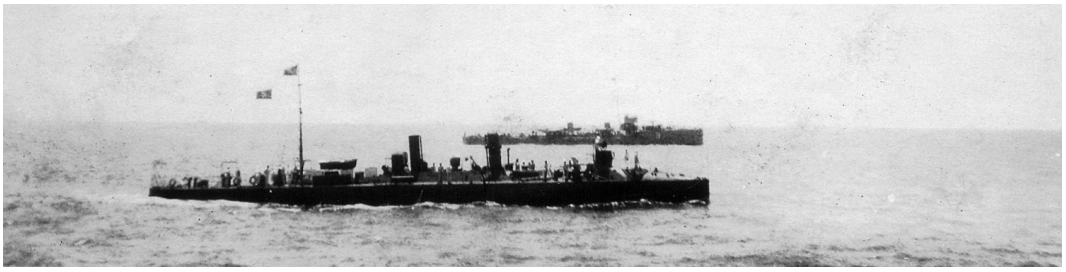

Figure 5: The torpedo boat *Goyaz* off the coast of Rio de Janeiro in 1922, with the Yarrow-built destroyer *Piauí* in the background. **Source**: Courtesy of DPHDM.

The official correspondence of the Brazilian Navy Commission in Europe between May and July 1907 thus provides evidence that the first-class torpedo-boat *Jeanne* was of interest to the Brazilian Navy, becoming the *Goyaz*. Negotiations were concluded to purchase the vessel for UK£16 000, this price including a sum of UK£2000 for the cost of conveying the *Goyaz* to Brazil that was subsequently offset from the overall price (De Alencar, 1908, pp. 5-6). The services of a Yarrow engineer, Thomas Wood, were included in the contract to help with training naval engineers on the turbine technology in Brazil for a year[52]. The vessel's armament would be fitted on arrival in Rio de Janeiro and consist of two single 47mm Hotchkiss quick-firing cannons and two single 45cm centreline rotating torpedo tubes[53].

With the sale completed, the *Goyaz* departed from the River Thames at Gravesend on 4 September 1907[54]. Bound initially for the transit port of Falmouth, Cornwall, the *Goyaz* had a rendezvous there with the British steamship *Halizones* which was to tow the vessel across the Atlantic[55]. This vessel was a River Plate trader owned by the British and South American Steam Navigation Co (R. P. Houston, managers) of Liverpool[56]. Leaving Falmouth on or soon after 9 September 1907, the two vessels passed Madeira on 15 September and Fernando de Noronha on 28 September, reaching Cabo Frio in early October[57].

While the steamer proceeded to Montevideo and Buenos Aires, the *Goyaz* sailed under its own power for the short voyage to Rio de Janeiro, arriving on 5 October 1907[58]. The *Goyaz* was incorporated into the Navy the same day through a Ministerial Notice and commissioned on 9 October 1907 as the first Brazilian warship to bear the name of the State of Goyaz. Its first commanding officer was Lieutenant Bento Machado da Silva, later to become Admiral and Chief of Staff of the Brazilian Navy. For much of its career, the *Goyaz* served with the Fleet as a training ship for cadets and midshipmen and at other periods was attached to the Naval Academy[59].

Of political note, the vessel became embroiled in the disturbances in the Navy in November 1910, when some crews mutinied against harsh conditions of service. Although the crew of the *Goyaz* remained loyal, at one point in the dispute they were removed and the vessel armed and manned by officers before the matter was resolved (MORGAN, 2014, pp. 32-37). During the First World War, the *Goyaz* remained in Brazilian waters taking part in coastal patrols against the threat of German surface ships in the South Atlantic. After 26 years of Brazilian Navy service, and having helped to train several generations of young officers, the *Goyaz* was removed from the active list on 6 May 1933 and stricken in August 1933[60].

Figure 6: Lt. Rodolpho Burmester and the torpedo boat *Goyaz*, together with students of the Naval School training at Guanabara Bay in 1924.
Source: Courtesy of DPHDM.

COMMENTARY

The early histories of the *Caroline* and *Jeanne* resulted in the Russian and Brazilian navies acquiring early examples of a new generation of torpedo boat and the first turbine-powered vessels in the respective navies.

There were minor differences in the planned provision of torpedo tubes,

although both vessels were unarmed on their individual departures from British waters. The most notable difference between the two vessels was in the turbine manufacturer used, with Rateau turbines for the *Caroline* / *Lástochka* and Parsons turbines for the *Jeanne* / *Goyaz*. It might be considered unusual for a shipyard to build a pair of vessels with turbines of different design from different suppliers. Such an action would accord with Yarrow's reputation for innovation, and, given that the two boats were experimental vessels, would enable useful technical comparisons to be made. However, it has not been established whether the turbines fitted to the *Jeanne* / *Goyaz* were: (a) Parsons turbines supplied to Yarrow by the Parsons Company itself; or (b) Parsons-type turbines produced by another company, possibly Yarrow, under a licence agreement. Discussions had taken place between Parsons and Yarrow about turbine licence and patent issues in late 1903 and early 1904, and, given the timing involved, these may have been relevant to the *Jeanne* / *Goyaz*[61].

Both vessels benefitted from Yarrow's experience with the turbine-powered fast yacht *Tarantula* in 1902. This vessel's hull configuration was based on a series of conventionally-powered torpedo boats built by Yarrow between 1896 and 1904. The project to build the *Caroline* and *Jeanne* on a speculative basis as technical successors to the *Tarantula* was in progress by late 1903. The laying-down and launch dates for these two vessels are unknown, but on 10 February 1904, two days after the Russo-Japanese War started, Yarrow had advised the British Admiralty of foreign interest in the two stock boats, noting presciently that it was sometimes difficult to ensure the ultimate destination or use of vessels sold abroad[62]. Such a situation came about in respect of the *Caroline* in 1904, was thwarted in the subsequent case of the *Jeanne*, and did not arise in the case of the *Goyaz* (ex-*Jeanne*) in 1907.

The *Caroline* played the central role in an international intrigue that arose during the Russo-Japanese War in late 1904. As well as being a pioneering vessel in a new era of marine propulsion, its short life of a few months in British waters highlighted the difficulties the British Government and shipbuilders faced in reconciling national interests and foreign policy with contemporary international and maritime law and commercial interests. As the Lástochka, the *Caroline* served as a torpedo boat, despatch vessel and training ship in the Russian Baltic Fleet until the 1917 Revolution and then in Bolshevik service. In the Russian Civil War 1917-1922, the vessel served as a gunboat in the 1919 Volga River campaigns before being broken-up in the Caspian Sea area in 1923.

The *Jeanne* was also part of the scheme to purchase two modern torpedo boats from Yarrow and to supply them to Russia in contravention of Britain's neutrality policy. The second stage of the plan failed once news of the "escape" of the *Caroline* emerged and the British Government took steps to prevent the sale and to pursue Sinnett and Roche as architects of the conspiracy. The situation left Yarrow with a vessel that was unsaleable while the war continued, but from late 1905 onwards the shipyard was free to market the vessel to potential interested parties, leading to the sale to Brazil and the vessel becoming the *Goyaz* in mid-1907.

CONCLUSIONS

The early paths of the Yarrow first-class torpedo boats *Caroline* / *Lástochka* and *Jeanne* / *Goyaz* shared common features. Both were involved in an intriguing affair involving aspects of maritime history, government policy and

international relations. Both derived from the inventiveness of Yarrow & Company, building on existing proven designs but taking advantage of emerging technological developments. Both were pioneering vessels at the forefront of a new era in marine propulsion and the first turbine-powered vessels in the Russian and Brazilian navies respectively. And for more than two decades, each served their intended design purpose as warships.

The histories of the *Caroline* / *Lástochka* and *Jeanne* / *Goyaz*, together with the precursor vessel *Tarantula*, are significant in the timeline of torpedo boat evolution from the late 1870s and in marine turbine propulsion advances from the 1890s onwards. The sources that link these vessels encompass official archives, professional/technical books and journals, news reports and memoires/biographies. While the British official archives appear silent on the fate of the *Jeanne* after 1906, the Brazilian Navy archive material from 1907 confirms the direct connection between the *Jeanne* and the *Goyaz*.

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NOTAS

[1] *The Times* (London), 25 November 1904, p. 3. Libau is now known as Liepāja in modern-day Latvia.

[2] *The Times*, 6 September 1907, p. 4.

[3] The *Velox* (ex-*Python*) (1902), a private-venture destroyer design by Parsons and Hawthorn Leslie, was purchased by the Admiralty to replace the *Viper* and *Cobra*.

[4] The National Archives (hereafter TNA), ADM 1/7737, January 1905.

[5] This vessel was built by Yarrow, dismantled into sections for final reassembly in Japan.

[6] Yolla metal was a form of high-tensile steel using nickel alloy with the same ductility as normal steel, but a higher breaking strain.

[7] For example: *The Engineer*, 3 July 1903, pp. 9-10, a paper by Professor A. Rateau at *The Institution of Civil Engineers* Engineering Conference; *The Engineer*, 8 April 1904, p. 372 and *Engineering*, 8 April 1904, pp. 515-516, a paper by Professor A. Rateau at the *Institution of Naval Architects* meeting (25 March 1904); *The Engineer*, 1 July 1904, pp. 3-4, a paper by Professor A. Rateau at the *Institution of Mechanical Engineers in America*, Chicago.

[8] For example: *The Engineer*, 1 April 1904, pp. 335-356, a paper by Sir William H. White at an *Institution of Naval Architects* meeting (25 March 1904), with the discussion opened by Alfred Yarrow.

[9] *The Engineer*: 5 April 1901, pp. 348, 353; 19 June 1903, pp. 611, 626; and 3 July 1903, pp. 6-7.

[10] Colonel Harry McCalmont was a racehorse owner, politician and a keen yachtsman. His previous yachts included: the *Giralda* (FAIRFIELDS, 1894) that became the Spanish Royal Yacht in 1898 and a despatch boat until 1935; and the *Banshee* (RAMAGE & FERGUSON, 1901) that became the Portuguese Royal Yacht in 1905 and then a despatch vessel from 1908 to 1937 (HOFMAN, 1970, pp. 88-89, 132-123).

[11] The hull configuration of the *Tarantula* was based on some 26 torpedo boats with conventional reciprocating engines built by Yarrow for the navies of Austria-Hungary, Chile, Japan, and the Netherlands between 1896 and 1904.

[12] *Engineering*, 6 June 1902, pp. 744-5. Richardson, 1911, p. 105.

[13] The vessel served in the Royal Canadian Navy during the First World War as HMCS *Tuna* (HOFMAN, 1970, p. 145).

[14] *The Engineer*, 8 April 1904, pp. 372-4. *Engineering*, 8 April 1904, pp. 515-8. These two articles reported a paper by Professor Rateau at the *Institution of Naval Architects* meeting

on 25 March 1904 comparing Yarrow's first-class torpedo boat (later the *Caroline*) with a similar French torpedo boat.

[15] *The Times*, 13 July 1904, p. 4. *The Engineer*, 15 July 1904, p. 72. *Engineering*, 15 July 1904, p. 90.

[16] Actions by Russian warships and auxiliary cruisers against British merchant shipping in 1904 included the stopping or seizure of vessels in the Red Sea, Mediterranean and Eastern Atlantic and the North Sea incident in which the Baltic Fleet fired on a fishing fleet sinking and damaging vessels with loss of life.

[17] UK *Foreign Enlistment Act* (1870) (hereafter FEA), 33 & 34 Vict. 90.

[18] FEA, Sections 8-13 on illegal shipbuilding and expeditions.

[19] *The London Gazette*, 11 February 1904, pp. 931-4. TNA, FO 881/8404/509i, *Foreign Enlistment Act 1870: Notice to Shipbuilders and Others*, 28 March 1904.

[20] TNA, CAB 38/5/68, June 1904, Section IX on the sale of ships by neutrals to belligerents.

[21] TNA, FO 881/8433/333, Monson (Paris) to Lansdowne, 4 August 1904. TNA, FO 881/8433/380, Foreign Office to Yarrow, 10 August 1904. TNA, FO 881/8433/408, Yarrow to Lansdowne, 11 August 1904.

[22] TNA, FO 881/8512/16i, Yarrow to Admiralty, 24 September 1904.

[23] TNA, FO 881/8512/16, Foreign Office minutes, W. Maycock, 3 October 1904. TNA, FO 881/8512/76, Foreign Office minutes, W. Maycock/F. A. Campbell/W. E. Davidson, 12 October 1904. TNA, FO 881/8512/100i1, Admiralty to Yarrow, 13 October 1904.

[24] TNA, FO 881/8512/100i2, Yarrow to Admiralty, 14 October 1904. This was the first time the name of the first vessel appears in documents as *Caroline*.

[25] Although not stated, this appears to refer to the second vessel, later known as *Jeanne*, the Vanderbilt name arising in relation to the 1903 sale of the *Tarantula* and used again in the *Caroline* negotiations.

[26] TNA, FO 881/8512/111, Hardinge (St. Petersburg) to Lansdowne, 17 October 1904.

[27] Although Sinnett and Roche were joint conspirators in the *Caroline* affair, Sinnett was the nominal purchaser (BORTHWICK, 1965, p. 120).

[28] TNA, FO 881/8512/111, Foreign Office minutes, F. A. Campbell, W. E. Davidson, 18 October 1904.

[29] TNA, FO 881/8512/118, Foreign Office to Admiralty, 20 October 1904. TNA, FO 881/8512/136i, Admiralty to Yarrow, 24 October 1904.

[30] Ryder was a merchant marine master and naval reserve officer, and a fluent Russian speaker with experience of working in Russia.

[31] TNA, MEPO 3/167, 6 December 1904. The *Imperator Nikolai I* surrendered to the Imperial Japanese Navy on 28 May 1905 following the Battle of Tsushima.

[32] Including *The Times*, 25 November 1904, p. 3.

[33] *The Times*, 3 December 1904, p. 11, 'The Case of the Caroline', A. F. Yarrow letter; reprinted in Barnes, 1923, pp. 111-3.

[34] TNA, MEPO 3/167, 6 December 1904.

[35] *The Times*, 17 December 1904, p. 10. TNA, MEPO 3/167, 19 December 1904.

[36] TNA, CAB 37/73/158, *Memorandum on the Case of the 'Caroline'*, 5 December 1904.

[37] TNA, FO 881/8512/374, Yarrow to Treasury Solicitor, 6 December 1904. TNA, MEPO 3/167, 19 December 1904.

[38] TNA: FO 881/8512/399, Customs to Foreign Office and minutes, 10 December 1904; FO 881/8512/417, Customs to Foreign Office, 13 December 1904; FO 881/8512/427-8, 438, 442, Correspondence: Foreign Office/Customs and Foreign Office/Yarrow, 14 -15 December 1904; FO 881/8512/463, 465, Correspondence: Board of Trade/Foreign Office/Admiralty/ Home Office, 19 December 1904; MEPO 3/167, 23 December 1904.

[39] TNA, MEPO 3/167, 23 December 1904. The directions issued in November 1904 after the escape of the *Caroline* were that the *Jeanne* was not to be interfered with except (in) suspicious circumstances as to sale *etc* arising (TNA, CUST 46/314, File 21316, 14 November 1904). These remained in force until the conditions of the UK Foreign Enlistment Act 1870 were no longer relevant with the ending of the war.

[40] TNA, MEPO 3/167, Papers 432918, 13 June 1906.

[41] *The Engineer*, 20 September 1907, p. 294.

[42] Including the *Acre*, *Amapá*, *Juruá* and *Missões* (BORTHWICK, 1965, p. 112).

[43] The lead vessel of the new class, the *Pará*, was launched on 14 July 1908 (*The Brazilian Review*, 11 August 1908, p. 843).

[44] The *Pedro Affonso* was one of a class of five torpedo boats built by Schichau, Elbing, launched in 1890, completed in 1892-1893, and stricken from service between 1910 and 1915.

[45] Archive of the Brazilian Navy (hereafter ARQMAR), Book No. 19403, 1906-1907.

[46] ARQMAR, Book No. 19403, letter 10 May 1907.

[47] ARQMAR, Book No. 19403, further letter 10 May 1907.

[48] ARQMAR, Book No. 19403, exchange of letters 25 May 1907.

[49] ARQMAR, Book No. 19403, report 30 May 1907.

[50] *The Engineer*, 20 September 1907, p. 294. A general arrangement schematic of the *Goyaz* was published in *The Engineer*, 4 October 1907, p. 342.

[51] ARQMAR, Book No. 19403, letter with report 8 July 1907.

[52] ARQMAR, Book No. 19403, extract from *Goyaz* Ship's Book 1907-1933.

[53] The Marine Ministry 1908 Report cites the cost of armaments as UK£2841 (DE ALENCAR, 1908, pp. 5-6).

[54] *The Times*, 6 September 1907, p. 4.

[55] ARQMAR, Book No. 19403, extract from *Goyaz* Ship's Book 1907-1933.

[56] The *Halizones* was sunk by gunfire from German submarine *U39* on 7 October 1915 off Crete while on a voyage from Bombay to Liverpool (Clydeships).

[57] *Lloyd's Weekly Shipping Index*, 19 September and 3 October 1907.

[58] *Lloyd's Weekly Shipping Index*, 17 October to 28 November 1907. *The Brazilian Review*, 15 October 1907, p. 1200.

[59] Diretoria do Patrimônio Histórico e Documentação da Marinha do Brasil (hereafter DPHDM), Histórico de Navios, *Goiás* I (nd).

[60] DPHDM, Histórico de Navios, *Goiás* I (nd).

[61] Science Museum, Parsons Archive, PAR 37/3 (13 February 1904 and PAR 37/6 (24 March 1904). letters from S F Prest, Parsons Foreign Patents Co Ltd to the Hon C A Parsons on discussions with Yarrow & Co. about turbine patents and licences.

[62] TNA, FO 881/8404/138i, Yarrow to Admiralty (and subsequent departmental correspondence) (10 February 1904 *et seq*).