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PILOTAGE LAW IN INDIA AND COMPARATIVE JURISDICTIONS: LIABILITY, STATUTORY REFORM AND THE CHALLENGE OF REMOTE NAVIGATION

AUTHORED BY - PREEJI P., ARSHA B & ADARSH S R
LL.M. (Maritime Law), Bharata Mata School of Legal Studies, Aluva

Abstract.

Pilotage is at once a technical safety measure and a juridical institution that allocates authority and risk among the pilot, the master, the shipowner and the port. This article examines the conceptual foundations of pilotage, the displacement of the compulsory-pilot defence, the normative content of IMO Resolution A.960(23), and the evolution of the Indian statutory regime from the Indian Ports Act 1908 to the Indian Ports Act 2025. Comparative reference is made to the United Kingdom, the United States, Canada, China and Singapore. The article then asks whether doctrines premised on a pilot physically present aboard remain adequate in an era of remote pilotage and autonomous surface ships, and it advances proposals for reform.

Keywords: *compulsory pilotage; master–pilot relationship; vicarious liability; Indian Ports Act 2025; remote pilotage; autonomous ships*

I. INTRODUCTION

Maritime pilotage is among the oldest safety institutions in commercial shipping, and it has survived largely intact the arrival of radar, satellite positioning and electronic charts. The explanation lies in the nature of the risk it addresses. In confined and congested waters, the interval between navigational error and casualty is reduced to minutes, and the pilot's knowledge of tidal streams, shifting bottoms, traffic patterns and port regulations cannot readily be replaced by shipboard equipment.[1]

Pilotage is, however, more than a navigational service. It is a legal institution that distributes authority and responsibility among several actors. The pilot directs the movement of the vessel, while the master remains in overall command; the shipowner, although compelled by statute to engage a pilot, is generally answerable for the pilot's default; and the port authority seeks the protection of statutory immunity. The manner in which the law reconciles these positions has

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been contested for over a century. This article considers the concept and rationale of pilotage (Parts II–III), the historical development of liability rules (Part IV), the international, Indian and comparative frameworks (Parts V–VII), the judicial response (Part VIII), contemporary developments (Part IX), and, finally, offers a critical appraisal with suggestions for reform (Parts X–XI).

II. CONCEPTUAL FOUNDATIONS

The common law conceives of the pilot in terms of "conduct" rather than command. Under the English statutory formulation, a pilot is a person not belonging to the ship who has the conduct of her, that is, who directs her course and speed within a defined area.[2] Canadian legislation adopts a comparable approach.[3] The International Maritime Organization (IMO), for its part, treats pilotage as a service to be organised wherever local expertise contributes most effectively to the safety of navigation.[4]

Indian law is preoccupied principally with authorisation. A pilot is a person for the time being authorised by the Government to pilot vessels, a formulation that the Indian Ports Act 2025 preserves.[5] Significantly, the Merchant Shipping Act 2025 and the Major Port Authorities Act 2021 define the "master" as the person having command or charge of a vessel *except* a pilot or harbour master.[6] The exclusion is deliberate: it forestalls a divided command on the bridge. Pilotage also carries proprietary consequences. The Admiralty (Jurisdiction and Settlement of Maritime Claims) Act 2017 recognises pilotage as a maritime claim and treats pilotage dues as a maritime lien, thereby conferring priority and enabling arrest of the vessel.[7]

III. THE RATIONALE OF PILOTAGE

Three justifications are commonly advanced. The first is risk reduction. Industry studies assert that the employment of a licensed pilot in mandatory waters reduces navigational risk several hundredfold, with very serious casualties occurring in fewer than one in ten million pilotage acts.[8] Since these figures originate from the pilots' own representative body, they should be treated as persuasive industry evidence rather than independent findings.

The second justification is institutional independence. The master is the employee of the shipowner and may be exposed to commercial pressure from charterers to maintain schedules. The pilot, by contrast, derives authority from statute and not from private contract, and may therefore decline a movement he considers unsafe.[9] The third is the protection of public interests. Whereas the shipowner perceives pilotage as protection for the vessel, the State

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perceives it as protection for port infrastructure, coastal communities and the marine environment against the vessel.[10]

IV. HISTORICAL EVOLUTION AND THE DISPLACEMENT OF THE COMPULSORY-PILOT DEFENCE

The origins of pilotage lie in antiquity, and Roman law already visited upon a master who neglected to engage a pilot the consequences of resulting loss. In England, pilot guilds emerged in the fourteenth century and the Corporation of Trinity House was chartered by Henry VIII in 1514; by the sixteenth and seventeenth centuries most European maritime states had enacted compulsory pilotage in hazardous districts.[11]

The decisive doctrinal development concerned liability. For a considerable period, the shipowner whose vessel was under compulsory pilotage escaped liability on the footing that the pilot was an expert imposed by the State and not the owner's voluntary servant, leaving innocent third parties without a remedy.[12] Article 5 of the Brussels Collision Convention 1910 corrected this by providing that liability attaches notwithstanding that pilotage is compulsory,[13] and the United Kingdom abolished the defence by the Pilotage Act 1913. India followed: section 31(2) of the Indian Ports Act 1908, as amended with effect from 1 January 1918, rendered owners and masters "answerable" for loss or damage during compulsory pilotage as if the pilot had been engaged voluntarily.[14] Later landmarks include the Calcutta Port (Pilotage) Act 1948, the Admiralty Act 2017, the Major Port Authorities Act 2021 and the Indian Ports Act 2025.

V. THE INTERNATIONAL NORMATIVE FRAMEWORK

The IMO does not license pilots, a power that remains with sovereign States. It has nevertheless sought uniformity through Resolution A.960(23), which replaced Resolution A.485(XII). Annex 1 prescribes entry requirements and training, medical fitness comparable to that required of masters under the STCW Convention, knowledge of local waters and the collision regulations, proficiency in English, periodic verification of proficiency at intervals not exceeding five years, and bridge resource management training adapted for pilots.[15]

Annex 2 addresses the operational relationship. Its governing principle is that the presence of a pilot does not relieve the master or the officer of the watch of responsibility for the safe navigation of the vessel; bridge officers are expected to monitor and support the pilot, and the pilot may decline to act where the vessel presents a manifest danger to the port or the environment. The resolution institutionalises the master–pilot information exchange, under

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which the passage plans, contingencies and the use of tugs are agreed on boarding and the master furnishes the pilot with information on the ship's handling characteristics.[16]

VI. THE INDIAN STATUTORY FRAMEWORK

A. The Indian Ports Acts of 1908 and 2025. Under section 31(1) of the 1908 Act, no vessel of two hundred tons or upwards might enter, leave or be moved within a port to which the section had been extended without a licensed pilot or authorised port officer on board. The 2025 Act retains the requirement in section 32(1) but strengthens enforcement: the nominal fines of the earlier statute are replaced by a penalty extending to two lakh rupees, and every port is required to maintain a Vessel Traffic Service.[17] Both enactments preserve the "answerable" principle and afford the Government an indemnity against the defaults of pilots.[18]

B. The Major Port Authorities Act 2021. This statute repealed the Major Port Trusts Act 1963 and recast the governance of the twelve major ports on the "landlord" model. Port boards now fix their own scales of rates, including pilotage charges formerly determined by the Tariff Authority for Major Ports, and an Adjudicatory Board has been constituted to resolve disputes between ports and concessionaires and to hear complaints of port users. Authorisation of pilots, however, continues to be governed by the national ports legislation, so that credentialing remains uniform notwithstanding administrative autonomy.[19]

C. The Admiralty Act 2017 and the Merchant Shipping Act 2025. By recognising pilotage as a maritime claim, the Admiralty Act vests the High Courts with jurisdiction and furnishes the claimant with the remedy of arrest.[20] The Merchant Shipping Act 2025 governs professional standards: pilots must hold the certificates and undergo the training prescribed by the Director-General of Shipping, and must satisfy medical standards, particularly of eyesight and hearing, consistent with international watchkeeping norms.[21]

D. Compulsory pilotage and its exceptions. The compulsory requirement is subject to qualifications. A master may move a vessel without a pilot where he has applied to the proper officer and been unable to procure one, or where he holds the written authority of the port conservator. Holders of a Pilotage Exemption Certificate, ordinarily masters or mates who frequent a port and demonstrate superior local knowledge, are likewise exempt, though they remain accountable to the issuing authority. Vessels belonging to or in the service of the Government, and foreign warships, fall outside the requirement.[22]

E. Master and pilot. Indian law adopts the English position. The pilot directs the vessel's movements within the pilotage district, but the master retains command and, where he has

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reasonable grounds to believe that the pilot is incompetent or intoxicated, may intervene. The shipowner nevertheless remains answerable for the compulsory pilot's negligence.[23]

VII. COMPARATIVE PERSPECTIVES

In the *United Kingdom*, the Pilotage Act 1987 devolved responsibility to Competent Harbour Authorities, which determine whether pilotage is to be compulsory in their harbours, authorise pilots and frequently provide the service. Entry into a compulsory area without a pilot or Pilotage Exemption Certificate is an offence. The pilot's civil liability is limited to £1,000 together with the pilotage fee, and that of the harbour authority to £1,000 multiplied by the number of pilots it employs.[24] The *United States* operates a dual system: the States regulate pilotage of vessels in foreign trade under 46 USC § 8501, while the federal government regulates coastwise vessels under § 8502, an arrangement sanctioned in *Cooley v Board of Wardens*.[25] American law is distinguished by the doctrine of *The China*, under which the owner may escape personal liability for a compulsory pilot's fault but the vessel remains liable *in rem*.[26]

Canada has established four Regional Pilotage Authorities, required to be financially self-sustaining, and limits a pilot's personal liability to CAD 1,000 while shielding the Crown and the authorities from vicarious liability; the shipowner remains responsible.[27] In the *People's Republic of China*, the Maritime Traffic Safety Law, as revised with effect from 1 September 2021, prescribes the categories of vessel subject to compulsory pilotage, including foreign vessels and certain tankers and gas or chemical carriers, while Article 39 of the Maritime Code confirms that the master's responsibility is not discharged by the presence of a pilot.[28] *Singapore* employs a mixed system under which the State supervises pilots while PSA Marine provides the service; the pilot's liability is capped at the pilotage fee plus S$1,000, and the Port Authority is not vicariously liable for pilot negligence.[29]

The comparison is instructive. The United Kingdom, Canada and Singapore mitigate the pilot's exposure through statutory caps, whereas the Indian statutes, as reviewed here, contain no corresponding limitation and look principally to the shipowner.

VIII. JUDICIAL APPROACHES

Indian courts have been occupied chiefly with the word "answerable". In *South India Shipping Corporation Ltd v Board of Trustees for the Port of Calcutta*, the reasoning reported is that the legislature chose "answerable" in preference to "liable" so as to afford the owner an opportunity

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to answer the claim, rather than to impose automatic responsibility.[30] In *Essar Shipping Ltd v Board of Trustees for the Port of Calcutta*, the Supreme Court restored a finding that a port authority may be held liable for "systemic negligence", the casualty having been attributed to the inadequate expertise of a berthing master and a defective communication system.[31]

Foreign authority supplies the doctrinal vocabulary of the bridge. Dr Lushington's caution in *The Peerless* that interference by the master should be confined to rare and urgent cases, since divided authority is productive of confusion, remains a touchstone.[32] *The Tactician* supplies the corollary: the master may not "fold his arms" but must draw the pilot's attention to material facts and errors of judgment.[33] The Supreme Court of Israel, in *Ports and Railways Authority v Zim Integrated Shipping Services Ltd*, adopted a purposive construction of pilotage ordinances and concluded that the owner is vicariously liable for the pilot's fault, not liable absent fault.[34] As to commencement, *The Adoni* ties pilotage to the pilot's coming on board for the purpose of conducting the vessel.[35]

IX. CONTEMPORARY DEVELOPMENTS

Remote pilotage. In 2024, DanPilot of Denmark commenced trials of remote pilotage in the Western Baltic, in which radar and sensor data are transmitted to a shore-based control centre from which a qualified pilot guides the vessel without boarding. Preliminary assessments identified the absence of a satisfactory optical solution for day and night visual reference, radar latency of several seconds as against the sub-second performance required for precise manoeuvring, and difficulty in closed-loop communication with tugs and mooring personnel. The model presently appears better suited to transit than to berthing.[36]

Autonomous ships. Remotely controlled and autonomous surface ships challenge fault-based collision liability, which presupposes that a court can interrogate the reasoning behind a human decision. The opacity of self-learning navigation systems, the so-called "black box" problem, has prompted proposals for strict liability of owners, analogous to the pollution regimes, subject to limitation under the LLMC.[37]

Indian reforms. India has pursued digitalisation through port operating systems and the National Logistics Portal (Marine), and Jawaharlal Nehru Port is cited as a leader in the adoption of digital twin technology. Institutionally, the Adjudicatory Board under the 2021 Act, reported as notified in August 2025, is vested with the powers of a civil court and is intended to provide a specialist forum for port disputes.[38]

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X. CRITICAL APPRAISAL AND SUGGESTIONS

First, the indeterminacy of "answerable". The word has produced decades of controversy as to whether it denotes strict liability or merely a right to be heard.[39] Parliament's re-enactment of the provision in 2025 without clarification is a missed opportunity; the statute should state expressly that the owner is vicariously liable for the compulsory pilot's default, subject to the usual defences.[40]

Second, the statutory shield. The indemnity afforded to the Government and port authorities confines recovery to cases of proven "systemic negligence", as in *Essar*, and may weaken incentives to invest in training and equipment. The American doctrine of implied warranty of workmanlike service, under which an entity that charges for pilotage is held to a standard of skilled performance, offers a useful model.[41]

Third, the illusory liability of the pilot. Where the pilot's liability is capped or he is without means, the economic burden falls on the shipowner and its P&I insurer notwithstanding that the pilot had the conduct of the vessel. Compulsory professional indemnity insurance for pilots would give injured parties a more realistic recourse.[42]

Fourth, the meaning of "conduct". The traditional concept presupposes a pilot aboard. Where guidance is rendered from ashore, it is uncertain whether the pilot has "conduct" of the vessel for purposes of liability. The Merchant Shipping Act 2025 and the Indian Ports Act 2025 should be amended to define conduct so as to include remote navigational guidance and to specify the liability regime applicable to autonomous vessels.[43]

Fifth, the appellate bottleneck. Appeals from the Adjudicatory Board are stated to lie directly to the Supreme Court, which is an inapt forum for technical maritime disputes. A specialist Maritime Appellate Tribunal, composed of legal and nautical members, would be preferable, an approach said to have been suggested by the Supreme Court itself.[44]

XI. CONCLUSION

Pilotage endures because it works. The law has constructed around it a coherent allocation of roles: the pilot directs, the master commands, the owner answers and the port is expected to furnish a competent service. India has refreshed this structure through the Admiralty Act 2017; the Major Port Authorities Act 2021 and the Indian Ports Act 2025. What remains is the unfinished work of detail: clarity in the language of liability, accountability for the quality of port services, realistic insurance for pilots, and a definition of pilotage adequate to a profession that may soon be practised from a screen rather than from a ladder.

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