

United States Department of the Interior
National Park Service

National Register of Historic Places
Registration Form

This form is for use in nominating or requesting determinations of eligibility for individual properties or districts. See instructions in *Guidelines for Completing National Register Forms* (National Register Bulletin 16). Complete each item by marking "x" in the appropriate box or by entering the requested information. If an item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, styles, materials, and areas of significance, enter only the categories and subcategories listed in the instructions. For additional space use continuation sheets (Form 10-900a). Type all entries.

1. Name of Property

historic name BELLE OF LOUISVILLE (Riverboat)
other names/site number IDLEWILD, AVALON

2. Location

street & number 4th Street and River Rd. not for publication
city, town Louisville vicinity
state Kentucky code KY county Jefferson code III zip code

3. Classification

Ownership of Property	Category of Property	Number of Resources within Property	
<input type="checkbox"/> private	<input type="checkbox"/> building(s)	Contributing	Noncontributing
<input checked="" type="checkbox"/> public-local	<input type="checkbox"/> district	_____	_____ buildings
<input type="checkbox"/> public-State	<input type="checkbox"/> site	_____	_____ sites
<input type="checkbox"/> public-Federal	<input checked="" type="checkbox"/> structure	1	_____ structures
	<input type="checkbox"/> object	_____	_____ objects
		1	_____ Total

Name of related multiple property listing: _____

Number of contributing resources previously listed in the National Register 0

4. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1966, as amended, I hereby certify that this nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of certifying official _____ Date _____

State or Federal agency and bureau _____

In my opinion, the property meets does not meet the National Register criteria. See continuation sheet.

Signature of commenting or other official _____ Date _____

State or Federal agency and bureau _____

5. National Park Service Certification

I, hereby, certify that this property is:

entered in the National Register.
 See continuation sheet.

determined eligible for the National Register. See continuation sheet.

determined not eligible for the National Register.

removed from the National Register.

other, (explain:) _____

Signature of the Keeper

Date of Action

6. Function or Use

Historic Functions (enter categories from instructions)

TRANSPORTATION--water related
RECREATION AND CULTURE^c--outdoor recreation

Current Functions (enter categories from instructions)

RECREATION AND CULTURE--
outdoor recreation

7. Description

Architectural Classification

(enter categories from instructions)

N/A

Materials (enter categories from instructions)

foundation N/A

walls N/A

roof N/A

other N/A

Describe present and historic physical appearance.

Belle of Louisville is a riveted-steel, steam-powered, sternwheel-propelled, day packet and excursion boat. The superstructure is built of wood, and the hull is supported by a hogging truss system in the traditional manner of Western Rivers steamboats. Belle of Louisville's large sternwheel is propelled by a pair of single cylinder, non-condensing, reciprocating steam engines.

Belle of Louisville, built as the Idlewild in 1914 by James Rees and Sons, of Pittsburgh, Pennsylvania, is the only remaining Western Rivers day packet boat. Idlewild began life serving as a ferry, day packet and occasional excursion boat. Today she only carries excursions. Over time she has been modified to meet the requirements of trade and of governmental agencies. Most of the original construction survives and modifications made for safety and accommodation do not detract from her integrity. [1]

Hull

Belle of Louisville was built of heavy steel plates, double-riveted to steel angle frames. She measured 157.5 feet long, 36 feet in beam, and 5 feet depth of hold. [2] The hull was fitted with a bluff, full bow, a flat bottom with no external keel, and a tucked-up run to the stern with rounded indentations to clear the three rudders. Belle was modified in 1953 to decrease her draft by adding bilge sponsons through most her length. In 1968, Belle had an additional 10 feet added forward to fair out the bow and smooth the transition with the bilge sponsons. [3] Internally, Belle is divided into 35 watertight compartments by the two side keelsons, and several athwartships bulkheads.

Like most Western Rivers steamboats, Belle's hull is supported by a truss system, which in effect makes the hull one large girder. Two rows of vertical I-beams rise from side keelsons (parallel to the center keelson,) and are tied to the hull and to each other by truss rods. These allow the buoyancy of the entire hull to support the weight of heavy fittings, such as the engines, and boilers. [4]

See continuation sheet

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties:

nationally statewide locally

Applicable National Register Criteria A B C D

Criteria Considerations (Exceptions) A B C D E F G

Areas of Significance (enter categories from instructions)

Maritime History

Engineering

Social History

Period of Significance

1914-1962

Significant Dates

Cultural Affiliation

N/A

Significant Person

N/A

Architect/Builder

James Rees & Sons

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

The sternwheel river steamboat Belle of Louisville, an operating vessel on the Ohio River is one of only two sternwheel river passenger boats operating under steam and is the sole remaining Western Rivers day packet boat. [1] Such boats performed a variety of different tasks to earn a livelihood. When she was built in 1914 as the Idlewild, the boat served primarily as a ferry. In later years she served as a day packet carrying freight and passengers, an excursion boat carrying tourists, a towboat during the Second World War and went tramping on nearly the entire Western Rivers system for excursion business. Today Belle of Louisville works as a goodwill ambassador of the City of Louisville, carrying excursion charters, educational tours, and promotional tour groups on the Ohio River.

The preceding statement of significance is based on the more detailed statements that follow.

The Development of Western Rivers Watercraft

The Western Rivers system, composed of the Mississippi, Ohio, Missouri, and other tributary rivers, carried most of the immigrants and freight that settled the Midwest. Starting in the late 1700s, most settlers travelled from the East Coast overland to Pittsburgh, Wheeling or Redstone and then down the Ohio River to points west. [2] Only a small number traveled north from New Orleans and southern regions using the Mississippi and other rivers running from the North.

To reach the new lands of the West, Europeans adapted boat types already in use by Native Americans and on the East Coast. Explorers used birch bark canoes and settlers used larger dugouts to open the west to settlement. As more people moved west, boats with greater capacity were needed, which called for new boat types. A form of enlarged dugout, called a pirogue, was

See continuation sheet

9. Major Bibliographical References

See footnotes in text.

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # _____
- recorded by Historic American Engineering Record # _____

See continuation sheet

Primary location of additional data:

- State historic preservation office
- Other State agency
- Federal agency
- Local government
- University
- Other

Specify repository: _____

10. Geographical Data

Acreeage of property Less than one acre.

UTM References

A 1,6 38,019,0 337,548,0
 Zone Easting Northing

C _____

B _____
 Zone Easting Northing

D _____

See continuation sheet

Verbal Boundary Description

All that area encompassed by the extreme length and beam of the vessel.

See continuation sheet

Boundary Justification

The boundary encompasses the entire area of the vessel as she floats at her berth.

See continuation sheet

11. Form Prepared By

name/title Kevin J. Foster, Historian date February 5, 1989
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Superstructure

The superstructure consists of three decks: the main, on which the propelling machinery is located; the boiler deck above the boilers; and the texas roof with pilothouse atop. Belle was built with an open main deck except for the engine room aft. The removable bull rails between stanchions were replaced with pressboard panels and glass in 1953. The pressboard was replaced with sheet steel in 1968. Stanchions and framing for the boiler deck are built of steel. [5] Stanchions, decks and bulkheads of the upper decks are built of wood with steel truss-rod reinforcement.

The main deck has an open foredeck which extends aft to the curved partition which encloses the superstructure front. A double steam powered capstan is set in the middle of the foredeck. The single mast, mounted on the centerline, supports a boom and landing stage (gangway). Two large sliding doors, to port and starboard, give access to the interior. A ticket booth stands inside between the sliding doors, opposite the main stairway up to the boiler deck. The main stairway is flanked by rooms to port and starboard which run aft about 10 feet to the boiler room.

Boilers

The boiler room occupies the middle half of the deck behind partitions to port and starboard of the boilers. The three boilers are connected by a single mud drum below and a single steam drum above. Each cylindrical boiler is fired from the front with No. 4 fuel oil atomized by an air blower when starting cold, or by a steam jet when hot. The fire passes beneath the water to the back of the boiler and returns through flues through the water. Exhaust gasses then pass through uptakes above the fire box, and exit the boat through smokestacks to port and starboard. Steam produced by the boilers is extracted from the steam drum and passes through the main steam line overhead to the engine room. The entire assembly is covered by a sheet steel jacket over the refractory material covering the boilers.

The current boilers are at least the fourth set fitted to Belle. She was first fitted with three return flue boilers, 44 inches in diameter and 24 feet long. These were rated for 157 PSI. In 1954, these, or a second set of boilers were replaced by three similar boilers from the famous overnight packet Gordon C. Greene

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that were rated for 200 PSI. A third, or fourth, set replaced these in 1965. These were not of traditional river pattern but were instead a pair of fintube boilers intended to increase her speed for the annual races with Delta Queen. These did not add materially to her speed (she lost again) and deteriorated rapidly. The fintube boilers were replaced in 1968 with the boilers still in use. The current boilers are very similar to the original boilers installed in 1914 and include many fittings from retired steamboats. They are rated for pressures of up to 200 PSI by their latest inspection permit. [6]

Three types of instruments indicate the level of water in the boilers. The oldest form of instrument is a vertical row of three small spigots, called test cocks, set into the back of each boiler. The water level is found by opening each one briefly to see whether steam or water comes out. The next oldest type, called a Van Duzen gauge for the inventor, is a clock face gauge activated by a float inside the center boiler. The third, and most modern type of water level indicator, called a sight glass, is a pipe open at the top and bottom to the interior of the boiler. The sight glass is a heavy glass window set into the pipe through which the water level can be viewed. The redundancy of water level indicators assures that the water will not be allowed to drop low enough to damage the boilers. [7]

The passageways outboard of the boilers are lined with storage and shop compartments. These compartments are believed to have been added in the 1930s when Belle began making extensive excursion trips. The last two side compartments aft extend beyond the rear of the boilers. Passengers can walk from the bow aft to the engine room by way of the passageway to starboard. In the engine room they can ascend to the deck above on the stairway at the stern bulkhead.

Engine Room

The engine room occupies the entire width of the stern and contains the engines, rudders, auxiliary machinery, and engine controls. The engines are mounted to port and starboard in the engine room on massive structural members called cylinder timbers. The cylinder timbers support the cylinders and crossheads at their inboard ends and the paddlewheel shaft at the after end.

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The engines were transferred from another steamer to Idlewild when she was built. The name of the steamboat or steamboats that used the engines prior to Belle is unknown, but engines were often reused on new boats and the engines could have powered several boats prior to Belle. The date when they were built can be established by reference to the end braces from the cylinder which spell the city of manufacture as Pittsburg. The spelling omitting the "H" was only used officially in 1889 and 1890, and those two years are believed to be the time when the engines were built.

The engines are high-pressure, poppet-valve lever engines equipped with Rees-patent adjustable or variable cut-off and inside cam motion. The cam turns inside a frame as the pitman turns the paddlewheel, and converts the motion to linear to-and-fro motion. This motion operates the valve gear which admits steam to the cylinders. The pistons push a heavy crosshead along a slide attached atop the cylinder timbers. The crosshead pushes and pulls the pitman which turns the crank and thus the paddlewheel. The cylinders are each 16 inches in diameter and have a stroke of 6 1/2 feet. Each engine develops 450 Indicated Horse Power. [8]

The paddlewheel is the massive construction of steel and wood, mounted at the stern, which propels the boat. It is 19 feet in diameter and 24 feet long. Six flanges, holding sixteen arms each, are evenly spaced along the paddleshaft. The arms are all held rigid by iron circles and blocking. Each arm and flange assembly forms one segment of the entire paddlewheel. The ends of the arms on each segment are attached to the paddle bucket planks which actually push the boat. [9]

A number of small auxiliary steam engines power various pumps and generators. Belle does not use any gas or Diesel motors in regular service though she does possess a Diesel generator for emergency electrical power. Four steam reciprocating, double-acting, duplex pumps handle all regular pumping duties and a large overhead-beam pumping engine called a "doctor" pump acts as a backup and toy for the engineers. The steam pumps are all located between the engine cylinders as is the single steam turbine electrical generator which provides ship's power.

All engine room controls are located aft of the generators between the engines. A system of bells, connected to the pilothouse, guide the engineer on duty as to what speed and

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direction is desired. There must be a chief engineer, and a striker on duty in the engine room and a fireman in the boiler room when Belle is operated. [10]

The steering is controlled from the pilothouse, but much of the multiple rudder system is located in the engine room. Cables from the pilothouse run through the superstructure and over sheaves at each side of the engine room to the long central tiller at the rear of the boat. This central tiller arm is yoked to two other rudders for additional control in maneuvering. Belle is unusual among modern boats for her lack of additional rudders, called monkey rudders, behind the paddlewheel. [11]

One item of Belle's original equipment still aboard is an iron bar cage which served as the brig attached to the stern bulkhead. The brig is said to have held criminals being transported aboard, and also has been called into service more recently to handle obstreperous drunks on excursion cruises.

Boiler Deck

The deck above the boilers is traditionally known as the boiler deck. This deck was mostly open when Idlewild was built, with an enclosed cabin space running down the middle. There are stairways to port and starboard aft and a single large stairway amidships between the stacks. Men's and women's restrooms run along the after bulkhead. Subsequent alterations removed the cabin from the central boiler deck and replaced the entire outer railing by windows and solid metal. A large ballroom was formed from the enclosed space. The central portion of the overhead is raised to provide room for a row of skylights. A band stand is aft against the lavatories. The purser's office and a gift stand are to starboard, and a concession stand is to port, opposite the main stairway.

Texas and Skylight Decks

The roof over the boiler deck did not originally also serve as a deck. This surface, which is on two levels, was the hurricane roof, and skylight roof when Belle of Louisville was new and called Idlewild. Later, when Idlewild was employed mostly on excursions, this roof also became a deck by the addition of passenger stairways and railings.

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Texas

The raised section of deck over the skylights on Western Rivers steamboats was used to build a small group of cabins for officers. This cabin area, called the Texas, is only about thirty feet long, and supports the pilothouse on its roof. Small staterooms serve the officers for occasional cruises away from Louisville. The keyboard for the calliope is located on the after side of the Texas.

In 1968, an additional roof was built over the entire skylight deck, level with the top of the Texas. This roof is not railed, or open to passengers, but supports railed extensions to its forward corners to allow the Captain to view the bow and side when maneuvering. Carbon-arc searchlights of Second World War vintage are mounted at the outboard wings of the extensions. The large bronze ship's bell of about 400 pounds is mounted amidships at the bow between the extensions. The steam calliope whistles are amidships on this deck, well behind the pilothouse, with steam provided by pipes from the boiler and controlled by the keyboard on the back of the Texas. [12]

Pilothouse

The pilothouse is a small, glass-enclosed, house with a domed roof mounted amidships atop the Texas. The roof is ornamented by acorn finials on the four corners, and an elaborate wrought iron ornament at the peak. The three-pipe steam whistle is mounted above the pilothouse, on an iron steam pipe.

The main feature of the pilothouse interior is the huge ship's wheel at the forward side, half hidden by the floor. This wheel steers the boat by means of cables which run down to the stern. A foot brake in the pilothouse floor, uses leather pads to stop and hold the wheel at the desired rudder angle. Belle is the only steamboat operating on the Western Rivers using only this method of steering, which Mark Twain would have found familiar. The pilothouse interior also holds a raised bench against the back windows. This bench, called the lazy bench, is provided for the comfort of visitors on many Western Rivers boats.

The pilothouse is surrounded by sliding windows which can be moved out of the way for clearer visibility. The front face is also fitted with chest boards which protect the person at the wheel from some of the rain and wind when the windows are open.

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Controls over the windows aim the powerful spot lights used to pick out landmarks used for navigation.

Rig

The single mast, with topmast, is stepped amidships just forward of the superstructure. The foremast supports a heavy boom at the level of the boiler deck. The boom is used to support and position the heavy landing stage by means of the stage hoist and guys, a multiple pulley system. [13]

Boiler exhaust travels up from the boilers on two sides and out of the boat through two tall smokestacks. When the boat was new she had simple "puddings," or donut shaped ornaments at the stack tops. In 1962 the puddings were replaced with fancier "feathers," which are delicate appearing steel cutouts at the stack tops. [14]

The only other features on the upper silhouette of Belle are the two 'scape pipes and a flag staff aft. The flagstaff serves double duty as a place to raise the national flag and as a mark for the pilot to judge the centerline of the boat. The 'scape pipes are small-diameter exhaust pipes for the steam used by the engines. Western Rivers steamboats use high pressure steam which is exhausted to the atmosphere rather than reused by a condenser.

Notes

1

Alan L. Bates, The Western Rivers Steamboat Cyclopoedium (Leonia, New Jersey: Hustle Press, 1968) passim.

2

Frederick Way, Jr., Way's Packet Directory: 1848-1983 (Athens, Ohio: Ohio University, 1983) p. 222.

3

Alan L. Bates, "Idlewild - Avalon - Belle Of Louisville" (Blueprint plans, Louisville, Kentucky: Alan L. Bates. N.D.) p.8.

4

Bates, Steamboat Cyclopoedium, pp. 22-30.

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5
For details of construction when built and appearance of bull rails see Photo No. 1.

6
David Tschiggare, "Belle of Louisville Steams On" Steamboat Bill (No. 102, Summer, 1967) pp. 67-69, and Bates, Steamboat Cyclopoedium, pp. 41-44, and United States Coast Guard, Certificate of Inspection (Washington, D.C.: issued April 1, 1987) p. 2.

7
Reports and Documents upon the subject of The Explosions of Steamboat Boilers (Washington, D.C.: Duff Green, 1833) passim.

8
James H. Rees, James Rees & Sons Company, Illustrated Catalog Pittsburgh: N.P., 1913) pp. 30-31.

9
Bates, Steamboat Cyclopoedium, pp. 92-97.

10
United States Coast Guard, op. cit., p.1.

11
Bates, Steamboat Cyclopoedium, pp. 36-39.

12
Bates, "Idlewild - Avalon - Belle of Louisville".

13
Bates, Steamboat Cyclopoedium, pp. 80-84.

14
For details of rig and ornament see photos and Tschiggfre, op.cit., pp. 67-69.

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developed first. Pirogues were more capacious than dugouts and were themselves adapted into more useful forms. The first adaptation changed the method of construction, by taking the well-formed hull shape of the pirogue and replacing the hewn multiple-log construction of pirogues with European plank-on-frame construction. [3]

Plank-on-frame construction was also used for another boat type called a bateau. Bateaus had been adapted for frontier use on the eastern seaboard in the early 1700s and were built for use on the Western Rivers later. When more traditional European construction practice was followed with these vessels, they resembled ship's boats but with more substantial timbers. When the best features of pirogues and bateaus were combined, they were given a hull shape that provided little resistance to the water, an external keel to help in steering, and sufficient cargo capacity to pay their way. This new type was called a keelboat. [4]

Keelboats were the most developed form of watercraft on the river and were used for rapid transportation of passengers and high value freight. Keelboats were usually 40-80 feet long and 7-10 feet broad. They possessed a well-modelled form, and could be propelled about 15 miles a day, by either oars at the bow or by poles pushed by the crew walking along a footway at each side. A single steersman stood atop a block at the stern to guide the keelboat using a long steering oar. Some keelboats which sailed an advertised route on a regular schedule came to be known as packets, the deep water term for vessels in such service. [5]

Cheaper transportation was afforded by the use of barges and flatboats. Flatboats were box-shaped variants of the scow hull form used for ferries on shallow Eastern rivers. Flatboats were the cheapest form of transportation on the rivers. Intended to travel only one way and then be broken up for lumber, flatboats could be built, loaded with household goods, and sailed by the settlers themselves. [6]

Barges occupied the middle range of watercraft between keelboats and flatboats. Though similar in construction to keelboats, barges were built wider, more robust, and drew more water. Barges transported heavy freight on the deeper rivers. [7]

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Development of the Western Rivers Steamboat

Robert Fulton built the steamboat New Orleans at Pittsburgh, Pennsylvania, in 1811, and started a revolution which changed the pattern of commerce on the rivers. She proceeded down the Ohio and Mississippi rivers to her namesake city attracting publicity and attention along the way. The advent of steam propulsion on the Western Rivers revolutionized river transportation. Steamboats would provide convenient, inexpensive transportation and greatly facilitate the opening of the continent to settlement. New Orleans, and the boats which were built on her pattern, were powered versions of canal boats. Their long, narrow, deep hulls were better suited to deep eastern rivers than the shallow Mississippi, but were needed to support heavy steam machinery. Another sort of boat was required, but several design problems had to be overcome before steamboats could be a success on the Western Rivers. [7]

To navigate on the shallow rivers of the West, steamboat hulls and machinery had to be made as light as possible. Machinery weight problems were solved first. A light weight, high-pressure engine was employed to propel a small boat, called Comet, in 1813. The powerplant was further refined in 1816 by Henry Shreve, who put the boilers on deck and designed a new type of engine to distribute machinery weights out over a large area of hull. Shreve's new engine design used a direct-acting, horizontal, high-pressure engine to drive the paddlewheel propeller. The second design problem was overcome over time. Lightweight hull construction gradually replaced earlier robust "canal boat" construction and a broad, shallow-draft, hull form, using a truss rod system rather than heavy wooden beams, was developed over time.

To succeed in business, these lightly built boats had to carry a large amount of freight and many passengers. In answer to this requirement, sponsons were built over each side of the hull to extend the deck area and the superstructure was extended several decks above the boiler deck to support passenger cabins.

All of the essential elements of the Western Rivers steamboat were present by 1825. Broad, shallow-draft, vessels with boilers and engines on deck, side or sternwheels for propulsion, and cabins built on lightweight decks above the freight and machinery-laden maindeck, soon appeared on every tributary of the Mississippi. The ease and economy of this service caused the

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value of goods reaching New Orleans to double every ten years from 1820 to 1860. [8]

One feature of cardinal concern in the development of Western Rivers steamboats was safety. Early boats were particularly susceptible to boiler explosions, fires, and sinkings caused by hitting snags. Extraordinary dangers included being damaged in floods, tornadoes, and ice gorges. The lifetime of a steamboat in the 1840s and 1850s was estimated to be below five years. This situation changed very slowly.

Government intervention forced builders and operators of steamboats to become more conscious of safety considerations in a way that commercial motivations could not. In 1838, Congress responded to the need for increased safety aboard steamboats when it passed an act requiring the inspection of steamboats. In 1851, six steamboat disasters took more than 700 lives and caused Congress to tighten these safety regulations. The Steamboat Inspection Act of 1852 set standards for both boats and operators, and created a system of Federal inspection to oversee them. [9]

Hazards to navigation did not deter business and new boats were built to replace those lost to various causes. A substantial salvage business grew up in consequence, and parts produced for one steamboat might be reused on a succession of later boats.

As time progressed, steamboat designs began to diversify to meet the needs of various trades and routes. Various features of advantage to a particular trade or route were accentuated in vessels built for them. Passenger vessels required high speed and high-class accommodations. Ferries called for wide stable hulls. Package freighters required dependable engines and robust construction as they carried heavy cargo on deck or in barges alongside. In some services speed came to be of paramount importance even surpassing safety concerns. Faster vessels required fine lines, powerful engines, and multiple boilers to supply plenty of steam. [10]

Shallow tributary rivers such as the Missouri and the upper regions of other rivers required boats with exceptionally shoal draft. Bertrand, sunk in 1865 on the Missouri River, drew only 18 inches when light. To operate in such shallow water steamboats had to sacrifice all unnecessary weight and be satisfied with minimal superstructures. [11]

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By 1880, though a depression in river trade had hurt steamboat companies, there continued to be advances in riverboat technology. Several distinct types of steamboats had been developed for work on the Western Rivers. Passengers were carried on riverboats of any kind from time to time but several types were particularly adapted for passenger service. The most elaborate of these were saloon or palace steamers providing luxury passenger transportation in elegant cabins. Such boats usually ran on schedule, and often carried mail to designated ports. These services duplicated those of ocean-going packet companies and these boats were aptly termed packets. [12]

Other passenger vessels were adapted for short day excursions carrying groups and charters to nearby scenic areas and for cruises to nowhere. These excursion boats were usually large sidewheelers operating from large port towns, but smaller boats also made occasional trips on the rivers "tramping" for charters.

More mundane sisters to the packets operated carrying passengers and cargo, wherever it could be found. Such non-scheduled steamboats often pushed one or more barges to increase cargo capacity. These barges were of two general types. The more common type was a long narrow scow hull built of planks and used on one-way trips down river carrying coal. This type was generally developed from the flatboat. When they were unloaded they were broken up and sold as lumber. The other type of barge was used for voyages both up and down stream. These were usually greatly enlarged versions of the barges of the 1820s called "model" barges, for their finely modeled ends. Over time a separate type developed that was adapted just to tow barges. [13]

Towboats were designed to act as floating engines to propel barges. Only the barge was detained while loading or unloading cargo, and not the expensive towboat. Towboats have straight sides and ends to ease tying off to a string of barges. Strings of up to 60 barges were pushed on occasion but 15 barges has been the more usual number because of the limited size of river locks. [14]

Some passenger boats were adapted to carry vehicles and livestock across the river or for short distances up or downstream. These boats were of two general types; ferries and day packets.

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Ferries were more heavily built than day packets. Western Rivers ferries were unlike ferries in most other regions of the country. Vehicles entered the main deck from the sides rather than the ends of the boat because swift currents forced the ferry to always land with the bow upstream. [15]

Day packets were faster and designed to provide better accommodations than ferries so that they could be used for occasional excursion trips. This adaptability allowed day packets to survive when bridge construction put ordinary ferries out of business.

Construction and Career of Belle of Louisville

The West Memphis Packet Company ordered a new steamboat from the yard of James Rees and Sons in Pittsburgh, Pennsylvania, in 1914. She was to serve as a day packet, excursion boat, and ferry. On October 18, 1914, the steamboat was christened Idlewild, and was launched from the Rees yard on the banks of the Allegheny River. The new boat was completed early in 1915 and she departed for her first home port, Memphis, on January 8, 1915. [16]

Idlewild operated primarily as a ferry between Memphis and Hopefield Point, Arkansas. Emblazoned on her pilothouse below her name, Idlewild carried the motto "Safety First." She could only take a small number of vehicles on to her restricted foredeck and alongside her boilers but on excursion trips the Steamboat Inspection Service allowed her to carry up to 1600 passengers. The company changed the schedule to allow Idlewild to substitute for the well known Kate Adams. The ferry business at Memphis ended when a bridge joined the shores she served and Idlewild was sold on November 7, 1925, to the Tri-State Ferry Company of Cairo, Illinois. The Tri-State Ferry Company used her for ferry service between Cairo and Bird's Point, Missouri. Tri-State sent their new boat down to New Orleans in 1925 to compete with the bigger excursion boats of the Streckfus Company, but four big excursion boats made the same trip south and "none made any money." They sent her to St. Louis the next season for work on the upper Mississippi and Illinois rivers. In 1931, she was chartered to the Rose Island Company. [17]

By 1928, this ferry route and the packet trade had dried up, and the excursion business was not enough to support a boat there. Idlewild was sold to the New St. Louis and Calhoun Packet Company of Hardin, Illinois. The new owners ran Idlewild mainly on the

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Ohio carrying excursion parties and occasionally produce. In the hard times prevalent on the river in the early 1930s, the versatility that made her a maid-of-all-work allowed Idlewild to survive. A new type of service was also added to her repertoire, when she performed barge towing contracts, when not employed with excursion work. Most of the excursion work was done during the warm months from Louisville, Kentucky, but some "tramping" trips were made as well, in search of excursion business away from home.

The Second World War brought more towing jobs providing badly needed oil in barges to various points on the Mississippi and Ohio rivers. In January, 1945, Idlewild received a new paddlewheel shaft at the Frisbee Engine and Machine Company of Cincinnati. [18]

In April, 1947, Idlewild was sold to J. Herod Gorsage of Peoria, Illinois. He renamed Idlewild in February, 1948 to grant the death-bed wish of his good friend, Captain Ben Winters, who had worked on a previous Avalon. Mr. Gorsage sent Avalon tramping for excursion business west to Omaha, Nebraska, south to New Orleans, north to Stillwater, Minnesota, and Joliet, Illinois, and west to Charleston, West Virginia, and Knoxville, Tennessee.

Mr. Gorsage sold Avalon in 1950, to E.A. Meyer of Cincinnati, who ran her under an operating company, Steamer Avalon, Inc. This company operated Avalon on the same sort of strenuous tramping excursion trips as had Mr. Gorsage. They made improvements to make the boat more attractive and comfortable to passengers. These included a 33 by 96 foot maple dance floor and enclosing the main, and boiler decks to allow a longer operating season. The stacks were shortened about 10 feet and the pilothouse dome was removed to allow operation beneath bridges high up the head waters of rivers in 17 states. [19]

Further modifications allowed Avalon to operate as the last tramp excursion boat in the 1950s. In 1953, the Texas was shortened 30 feet to reduce unneeded topside weight. The boilers were switched to oil fuel from coal in the same year. In 1954, sponsons were added to the hull to offset the added weight of enclosing the topsides by increasing the buoyancy and stability. [20]

Financial difficulties forced the Steamer Avalon company to turn the boat over to a printing company which was the major creditor and the boat was laid up for the winter. Her captain at that

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time, Captain Clarke 'Doc' Hawley, hired an engine room hand "from his own pocket" to drain the pipes and boilers. This action probably saved the machinery from serious damage during the winter freeze. The company filed bankruptcy proceedings in February, 1962, and Avalon was sold at auction, May 24, 1962. [21]

The purchaser was Judge Marlo Cook, for the Jefferson County Fiscal Court, who bought her over objections by some taxpayers. Jefferson County now owned an expensive steamboat in need of work, but with financial help from the City of Louisville, Avalon was put back in service. The Jeffersonville boat and Machine Company reconditioned her in their yard, across from Louisville, from August to October 14, 1962. On that day she was rechristened Belle Of Louisville before a crowd of 3,000.

One of the most important annual activities was begun on June 5, 1962, when Belle raced Delta Queen during the celebrations surrounding the Kentucky Derby. She lost to the tune of "Goodbye Little Girl Goodbye" on the calliope of Delta Queen and a racing tradition was begun. In 1965 Belle was given new boilers to increase her speed, but they failed to live up to their billing and were soon replaced with traditional boilers. In the years since the races began, the golden elkhorns have been about evenly awarded to each of the two boats with tremendous hoopla surrounding the event no matter which boat wins. [22]

Today, Belle Of Louisville, plays an important part in the cultural and historical heritage of the City of Louisville and in the entire region, where she is regarded with particular affection. Belle is also of great importance as the sole remaining example of her type, which played an important part in America's westward expansion.

Notes

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18

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19

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20

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21

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22

Tschigarre, op. cit., pp. 69-70 and Stoll, op. cit.