



101 Riverboat Row - Newport, KY 41071

Design and Construction

Contracted in 1933 as part of the Missouri River Improvement plan, the William S. Mitchell was built by the Marietta Manufacturing Company in Point Pleasant, West Virginia for the United States Army Corps of Engineers. Its sister ship, the William M. Black was constructed later but based on the same base blueprint.

The light vessel displacement is 1362 long tons. The boat's overall length is 286.66 feet with a width of 76.66 feet and normal draft of 6.66 feet. It is powered by two 1300 horsepower steam engines operating at 16 RPM.

The vessel is a pipeline dredge with a 34-inch pump. The William S. Mitchell and her sister ship were the largest dredges built for river service that incorporated a hydraulic "dustpan style" dredge mechanism. This method used dual 28" pumps to produce water jets at the cutting edge to jet through river bottom, and a center 34" pipeline pump that dredges pipeline. The dredge has a cutting depth of twenty feet and thirty-six feet wide. This 34-inch pump was the largest pump used in dredging, and power from a 1300 horsepower steam engine also made it the most powerful.

A walk through the engine room is a clear demonstration of the complexity of the vessel. Built as state of the art for the times, there are generators to produce power and steam-powered fire pumps. The engines and all of the associated filters, pump condensers and evaporators combined with the dredge equipment and environmental equipment fill the enormous engine room. Adjacent to this space is the onboard machine shop capable of black smith work, forging and machining any required part of the vessel. Just aft of mid ship in a recessed section are the main oil-fired three pass boilers. The large area below the deck is not wasted space; in addition to numerous steam-powered pumps for oil, water and refrigeration, there are also large stores of wood for side-wheel and vessel repair and other raw material for servicing the vessel.

The vessel is a city of its own. Crew would live aboard for months at a time. All of the ship and crew needs would be provided on board - from cooks, dentists and surgeons to carpenters, engineers, and chaplains. One Master and five additional officers with 60 crewmembers all lived and worked on the boat.

"Home away from home is how a lot of us thought of her when we first got aboard...and then we would find out differently as she would show her dark side." ~V. Freeman, Pilot 1938-1939