

Shipbuilding engineering with the focus on production processes including steel welding, bending (contact person for further details on the topic: dr. Vasilij Djackov, e-mail: Vasilij.Djackov@ku.lt).

General information: the fellowship is provided for postdoctoral researchers in shipbuilding engineering and informatics engineering within the Faculty of Marine Technologies and Natural Sciences, Klaipėda University in close collaboration with the Western Shipyard BLRT Group (<https://wsy.lt/en/>).

Description: Shipbuilding engineering with the focus on production processes including steel welding and bending. Industry 4.0 implementation practices are in high demand in the production sector, especially in shipbuilding industry, where the process of shipbuilding consists of many different production stages, that have own complexity and automation level. One of the ship building stages is the production of the vessel piping systems from steel. The parts of the process have its automation levels reached, however to create complex automated/robotic line for production of the piping systems for ships still needs many questions to be solved. The overall aim is to create ship piping system production automated/robotic line. Automation of pipe production technological stages: material preparation for production, pipes bending process, pipe spools positioning, pipe/flange welding process, pipe spool after welding treatment process (cleaning, galvanizing/painting).

Objectives: 1) development and testing of the material preparation equipment for production of piping systems; 2) development and testing of pipes bending process automation equipment; 3) development and testing of pipe spools positioning equipment; 4) development and testing of pipe/flange welding process equipment; 5) development and testing of pipe spool after welding treatment process equipment (cleaning, galvanizing/painting).