

A large blue and red ship is under construction in a shipyard. Scaffolding and cranes are visible around the vessel. The ship's name 'MATILDA BELIZE' is partially visible on the side.

Projection of cutting information for improving productivity, precision and reliability

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14 November 2024

Safer, smarter, stronger:
Mari4_YARD human-centric shipbuilding



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101006798

The technology



The technology

- ✓ Projection of guiding information directly in the environment can help the operator work faster and with higher accuracy and reliability when performing cutting, welding and assembly operations.
- ✓ Instead of having to read extensive documentation, perform manual measurements and mark the positions of the cutting / welding / assembly operations, the operator only needs to load the CAD model of the ship section and provide an approximate pose of the tripod that holds the projector, 3D sensor and laptop.
- ✓ The augmented reality system captures a 3D point cloud of the environment, aligns it with the CAD model and then projects the CAD information into the surfaces of the ship.
- ✓ The operator can cut / weld / assemble using the projected CAD outlines or mark with chalk for performing the operations later or assign them to a specialized worker.



The demonstration in the shipyard



Watch the video of [the demonstration in the shipyard](#)



The impact for the shipbuilding industry



The impact for the shipbuilding industry

- ✓ When there are clusters of operations, such as the examples below, the projection system can reduce the marking time by 70%.
- ✓ It can achieve a projection error below 5 mm, making it suitable to be used for inspection of the assembly of the ship's foundations and stiffeners while also providing an analysis of the structural bending due to welding.
- ✓ The system starts up in around 90 seconds and takes around 25 seconds to reposition to a new projection zone.



Thank you!



Catalogue
of technologies



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 **MARI4YARD**

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