

e-mosty

03/2019 September

Vessels and Equipment for Bridge Construction

Multipurpose Underwater Machinery



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Photo Front Cover: Multi-Purpose & Modular Underwater Machinery (MUM) in the Dardanelles
Photo Credit: Aras Marine Construction

Photo Back Cover: Yavuz Sultan Selim Bridge: Lifting of a deck segment from M/V Neta
Photo Credit: Gemak Group

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Dear Readers

This special issue covers two areas: **Vessels and Equipment Used for Bridge Construction** and **Bridge Pier Protection in navigation channels**.

In the first article, the **Multi-Purpose & Modular Underwater Machinery (MUM)** which was used in underwater foundation levelling works of the “1915 Çanakkale Bridge Project” is introduced.

The next article was prepared by **Gemak Group** and looks back at the **Yavuz Sultan Selim Bridge** (3rd Bosphorus Bridge) construction. Gemak Group was contracted as the sub-contractor of Hyundai Engineering & Steel Industries to construct the steel orthotropic decks and their transportation to the construction site by the cargo ship **M/V NETA**.

A unique **Ship Arrest Boom** which was built 500m upstream of the recently constructed A30 motorway bridge at Beauharnois, Quebec near Montreal is described in the subsequent article. As the bridge crosses over a navigation channel and a 1km wide canal there is a risk of potential collision of a vessel with the bridge piers. The Ship Arrest Boom is designed to absorb the impact energy of a 35,000 DWT ship moving at 3.5 knots, and to eventually stop it.

The last article of this issue was prepared by **ALE** and brings details of the recent **removal of a temporary Road-Rail** bridge over the River Danube in Serbia.

On behalf of the organizers **we invite you to two forthcoming Conferences** (more information on pages 37 and 38):

- Under the theme “Arch Bridges – Natural beauty for all time” the [9th International Conference on Arch Bridges \(ARCH 2019\)](#) will be held in Porto, Portugal, on October 2nd to 4th, 2019.
The conference is be organized by the Civil Engineering Department of the Faculty of Engineering of the University of Porto
- [3rd Annual Cost / Procurement / Risk International Conference](#) together with 2nd Annual International Arbitrators and Experts in Engineering Sector Conference will be held from 11th to 12th December in Dubai, UAE

We are already **working on future editions**, and planning articles which include for example:

- Bridges on the River Danube, featuring a bridge in Bratislava which is part of [D4R7](#) motorway construction, with two MSS [BERD](#)
- The [Extradosed Bridge over the River Barrow](#) in Ireland, in cooperation especially with [ARUP](#), [CFCSL](#) and [Rúbrica](#)
- A series of articles in cooperation with the [The Universitat Politècnica de Catalunya](#)
- Technical articles about lifting and transportation of bridges in cooperation with [ALE](#)
- An article about a floating crane “I lift New York”– Left Coast Lifter in cooperation with TZC/Fluor
- And hopefully a special edition dedicated to 1915 Çanakkale Bridge in Turkey which is planned for publication around the time of completion of the bridge.

For the publication of more articles **we kindly invite you to contribute** and assist us with your ideas, information about your projects, articles, photos etc.

In a few weeks I will contact some of you with our **partnership offer**. If our invitation fails to reach you and you are interested in cooperating with us as our partner, please [contact us](#). General information on partnership with our magazines can be found at [e-mosty](#) or [e-maritime](#).

I would like to thank to **Ken Wheeler, Richard Cooke and Derya Thompson** for reviewing this issue and for their assistance.

Magdaléna Sobotková
Chief Editor



e-mosty

The magazine e-mosty (“e-bridges”) is an international, interactive, peer-reviewed magazine about bridges.

It is published on www.e-mosty.cz and can be read free of charge (open access) with possibility to subscribe.

It is published quarterly: 20 March, 20 June, 20 September and 20 December.
The magazines stay **available on-line** on our website as pdf.

The magazine brings original articles about bridges and bridge engineers from around the world. Its electronic form enables publishing of high-quality photos, videos, drawings, links etc.

We aim to include **all important and technical information** and show the grace and beauty of the structures.

We are happy to provide [media support](#) for important bridge conferences, educational activities, charitable projects, books etc.

Our [Editorial Board](#) comprises bridge engineers and experts from the UK, US and Australia.

The readers are mainly bridge engineers, designers, constructors and managers of construction companies, university lecturers and students, or people who just love bridges.



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e-maritime

The magazine e-maritime is an international, interactive, peer-reviewed magazine about vessels, ports, docks and maritime equipment.

It is published on www.e-maritime.cz three times a year:
30 March, 30 June and 30 November.

September Issue is shared with the magazine e-mosty (“e-bridges”):
“Bridges, Vessels and Maritime Equipment”
which is published on 20 September on www.e-mosty.cz.

It can be read **free of charge** (open access) with possibility to subscribe.
The magazines stay **available on-line** on our website as pdf.

The magazine brings **original articles** about design, construction, operation and maintenance of vessels and maritime equipment, docks and ports from around the world.

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Lifting of Deck Segments
from M/V NETA