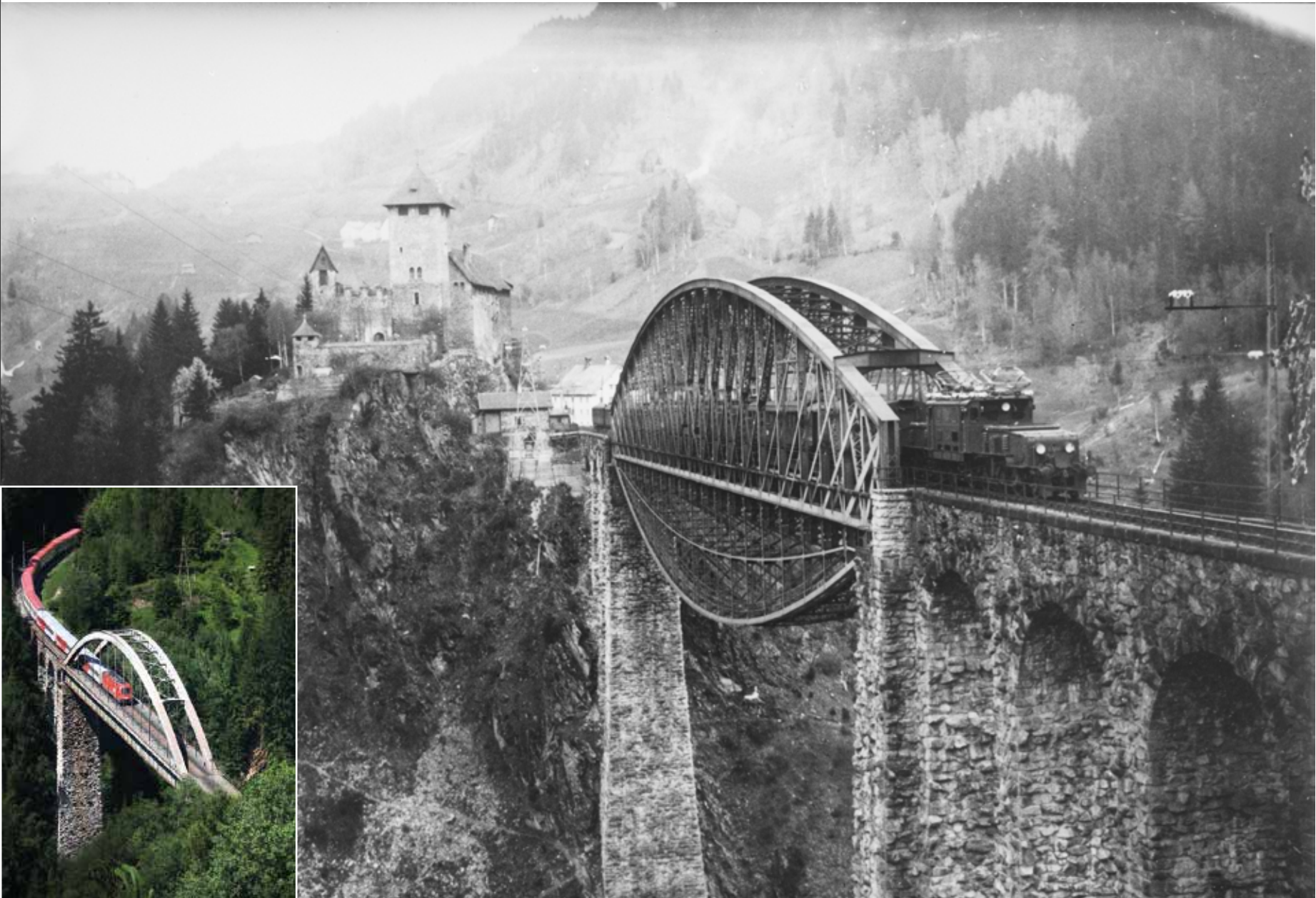


# WAAGNER BIRO GULF —BRIDGE & STRUCTURAL ENGINEERING—

**waagner biro**



Trisanna Bridge, Austria, built in 1884, completely renovated in 1964 and still in use.

# WAAGNER BIRO

## —160 YEARS OF EXCELLENCE.—

—Founded in Vienna, Austria, in 1854, Waagner Biro has been a pioneer in high quality steel engineering for over 160 years. The company has amassed vast experience and an extensive portfolio, and today employs more than 1,500 employees across 15 locations in Europe, the Middle East and Asia.

Our mastery of steel engineering, as well as the potential of steel as a material, are showcased in capital cities around the world, from the Lord Norman Foster designed Queen Elizabeth II Great Court in the British Museum, London, to the Louvre, Abu Dhabi. And our commitment to achieving the extraordinary has extended into the design and build of bridges that are as much landmarks as they are functional infrastructure projects.

The Puente Continental, for example, is the longest suspension bridge in Peru, while the Donaustadt Bridge is one of Vienna's most recognisable modern landmarks.

In 1967, Waagner Biro brought its competence, skill and ingenuity to the Gulf with a milestone project – the construction of the Al Maqta Bridge in Abu Dhabi, the first permanent point of crossing between Abu Dhabi and the mainland.

For 50 years, Waagner Biro Gulf has been providing both governments and private clients in the region with reliable, technically-advanced and cost-efficient turnkey engineering solutions, designing, building and maintaining iconic structures such as Dubai's Al Maktoum Bridge and Floating Bridge.—

# —BRIDGING THE CHALLENGE—

—The Bridge & Structural Engineering Division of Waagner Biro Gulf LLC operates throughout the Gulf Cooperation Council States (GCC) in the fields of bridge, mechanical, steel construction and maintenance.

For over 160 years, Waagner Biro has been building bridges. During this time, the company has constructed/erected thousands of bridges in many parts of the world. In doing so, Waagner Biro, then as today, has made a valuable contribution to expanding infrastructures & constructing architecturally impressive bridges.

Waagner-Biro's excellent reputation often plays a decisive role in the acquisition of new projects, particularly in the UAE market for the design and built of various typies of steel bridges.

We offer complete turnkey steel bridge solutions. Led by a multidisciplinary team of civil, mechanical, structural and electrical engineers, and supported by the expertise of our head office in Vienna, Austria, we can handle the entire process from design through build and maintenance of a bridge, to eventual dismantling, if required.

Combining design, consultancy and construction under one roof means better communication, project management and a more cost and time effective end product. Our interdisciplinary team covers everything from design to erection, plus we have our own fabrication yard to produce immediately as required.—

Floating Bridge, Dubai, UAE, designed and built  
by Waagner Biro Gulf LLC in 2007.



# — REFERENCES —



**Al Maqta' Bridge** with a total length of approximately 300 m was the first landmark bridge in Abu Dhabi and the first solid connection of Abu Dhabi Island with the main land constructed in 1967. It was also the first project of Waagner Biro Gulf LLC in the region.

**The Al Maktoum Bridge** provides a road connection between Bur Dubai and Deira crossing the Dubai Creek and also allows larger ships to pass the bridge through its bascule opening mechanism. After completion of several bridge widenings the bridge now accommodates in total 11 lanes and is one of the vital creek crossings in Dubai. The bridge girder consists of a steel box girder with an orthotropic steel deck. Total steel tonnage of the movable part of the bridge amounts to 1,500 tons. Total length of the moving bascule part is 37,5 m. The Al Maktoum Bridge was built by the Bridge & Structural Engineering Division of Waagner Biro Gulf LLC in 1969. Since then it has been successfully operated and maintained by the Maintenance & Infrastructure Engineering Division of Waagner Biro Gulf LLC.





**Za'abel Bridge in Dubai** was the first cable-stay bridge built in Dubai and was designed and built by Waagner Biro Gulf LLC in 2006.

A cable-stay bridge consists of a long main support which is suspended from a tower with inclined hangers. Towers can be designed in numerous ways (e.g. A-Towers, Y-towers, central tower, two towers). The cables can be fixed in a fan-shaped (see left) or harp-shaped arrangement. As with suspension bridges, guarding against wind-based vibration is extremely important.





**Yas Marina Hotel Access Bridge**, one of the many projects Waagner Biro Gulf LLC designed and built in the course of the construction of the Formula 1 GP circuit on Yas Island, Abu Dhabi during 2008 and 2009.





**Adnec Bridge** was fabricated from 600 tonnes of steel and 132 glazed panels. It is 162 m long and spans all eight lanes of the Khaleej Al Arabi Coast Road adjacent to the Abu

Dhabi National Exhibition Centre. The unique structure was designed by internationally renowned architects Dissing & Weitling and built by Waagner Biro Gulf LLC in 2009.





**Trade Center Footbridge in Dubai** is an example of an architectural accomplished footbridge designed, constructed and built by Waagner Biro Gulf LLC in 2012.



**Camel Race Track Footbridge,**  
designed and built by Waagner Biro  
Gulf LLC in 2013.





Waagner Biro Gulf LLC was awarded the design and build contract for the development of **Al Noor Island**, Sharjah, based on an idea by Austrian artist André Heller in cooperation with 3Deluxe architects. The island has a bastion of exotic trees, prehistoric rocks, a Butterfly Pavilion and other

architectural features. It is intertwined by meandering wooden walkways that take visitors through the greenery and is connected to Buhairah Corniche, Sharjah, by the uniquely-designed pedestrian bridge adjacent to Al Noor mosque. The 45,470 square metre island features a pedestrian bridge,

a covered and streamlined structure inspired by a natural environment for butterflies, a Literature Pavilion, a children's playground and an egg-shaped OVO Art Sculpture. At night, special laser lighting gives the island a fantasy fairy tale look, with trees and rocks illuminated in bright colours.



Weighing approximately 160 tons, this newly built 78 m long **bridge** enables pedestrians to safely cross the busy, five lane Al Wasl Road, Dubai. The bridge also spans a further service road and two slip roads making a total span of eight lanes.

Waagner Biro Gulf LLC was entrusted with the turnkey construction of the pedestrian bridge which was completed ahead of schedule for the official inauguration of the Dubai Water Canal Project in November 2016.

Waagner Biro Gulf LLC was awarded the design and build contract of **seven pedestrian bridges** at various locations throughout Dubai in order to facilitate safe crossing for pedestrian of extremely busy roads.

The span lengths of the seven pedestrian bridges ranged from 41m to 92 m and the bridges are equipped with access ramps, stair cases and panoramic lifts to enable access for people with disabilities.



Weighing approximately 65 tons of steel, this newly built single span, 41 m long **pedestrian bridge** crosses the highly frequented eight lane Baniyas Road, Dubai.

Waagner Biro Gulf LLC was entrusted with the turnkey construction of this pedestrian bridge which was completed in May 2016.



With an 85 tons steel structure this newly built double span, 52 m long **pedestrian bridge** crosses the four lane highway at Bagdad Street, Dubai.

Waagner Biro Gulf LLC was entrusted with the turnkey construction of the pedestrian bridge which was completed in May 2016.



# —PROFILE—

In 1964, Waagner Biro was invited to work on the Al Maqta Bridge in Abu Dhabi. With its completion in 1967 this bridge marked Waagner Biro's entry into the Gulf region.

Following the successful completion of the Al Maqta Bridge, Waagner Biro were awarded and delivered further prestigious projects within the region. To further develop their engineering excellence and provide clients with a more specialised and individual service Waagner Biro divided its core expertise into three (3) separate divisions.

**Bridge & Structural Engineering Division** – This division works throughout the gulf region on a vast range of steel bridge projects, from the iconic and technically-demanding moveable bridges to custom design & build pedestrian bridges, as well as modular bridges, panel bridges and standard bridge structures.

**Marine & Coastal Engineering Division** - Created to meet the requirements for projects which involve extensive marine engineering expertise. Today, this division has expanded and provides clients with a full turnkey solution to their project needs covering the complete design and build of harbours, marinas, breakwaters, jetties and wharfs as well as dredging, beach improvement and protection works.

**Maintenance & Infrastructure Engineering Division** – Provides comprehensive facilities management services designed to meet the distinct and diverse needs of each client and individual project. This division provides a full range of services for preventative, corrective and annual maintenance of bridges, roads, underpasses, tunnels and civil structures, as well as buildings, historical monuments and aviation facilities.

With these divisions and the delivery of numerous prestigious projects for both private and public clients Waagner Biro has established itself in the market as the go-to company for specialized engineering services. In addition to offering clients a complete turnkey solution for their projects Waagner Biro can also provide complete in-house design and build solutions, repair, maintenance, and in particular services of an expansive fabrication yard, all under one roof.

FABRICATION YARD



MARINE & COASTAL ENGINEERING



MAINTENANCE & INFRASTRUCTURE ENGINEERING



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The new 123 metres high **flagpole** adjacent to the Etihad Museum, Dubai, UAE, designed and built by Waagner Biro Gulf in 2016.



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