

Construction or Voyage Risk Assessment

Glostén is a leader in the application of engineering risk analysis to projects in the marine environment. Our role has been to work closely with transportation contractors in the planning of complex marine operations, so that operator skills and engineering expertise are combined to best advantage. Our experience in salvage engineering is brought to bear in developing effective contingency planning.

Project:

W.R. Bennett Floating Bridge

Client/Owner:

SNC Lavalin/B.C. Ministry of Transport

Scope: Glostén conducted a three day construction risk assessment workshop at the start of the over-water work. A second risk workshop was held prior to starting removal and demolition of the old bridge.



W.R. Bennett Bridge crosses Lake Okanagan at Kelowna B.C.

Project Description:

The new W.R. Bennett Floating Bridge opened in May of 2008. This five-lane structure replaced the old three-lane Okanagan Lake Bridge, and its route accommodates an average of 46,000 vehicles per day. The bridge was constructed very close to the old bridge, and full traffic capacity had to be maintained throughout the project.

Page 2, Construction or Voyage Risk Assessment

Project:

Kizomba A Floating Production and Storage Platform Delivery

Client/Owner:

ExxonMobil Development Company

Scope: Glosten performed voyage simulation with randomized wind, wave, and currents to evaluate voyage duration and routing alternatives, and conducted a voyage risk assessment workshop. A separate risk assessment session was also conducted for the mooring operation, which involved setting eighteen mooring legs in over 1200 m deep water.



Kizomba A is shown departing Ulsan, Korea on its journey to West Africa.

Project Description:

Glosten has developed and refined the probabilistic analysis of voyages taking place across varying climatologies. Consequently, Glosten was asked to assist with the voyage planning for the *Kizomba A*, a floating production and storage platform (FPSO), which needed to be towed from its construction yard in Korea to its permanent mooring site 200 statute miles offshore from Angola, West Africa. This 10,000-mile tow crossed two different typhoon seasons with 130 shipyard workers on board. *Kizomba A* was the world's largest FPSO at the time of its construction, weighing 81,000 tonnes and measuring 935 ft long, 207 ft wide, and 105 ft high.