



Statens vegvesen
Norwegian Public Roads
Administration

Teknologidagene 2018

Multi-span suspension bridge on floating foundation

05/11/2018

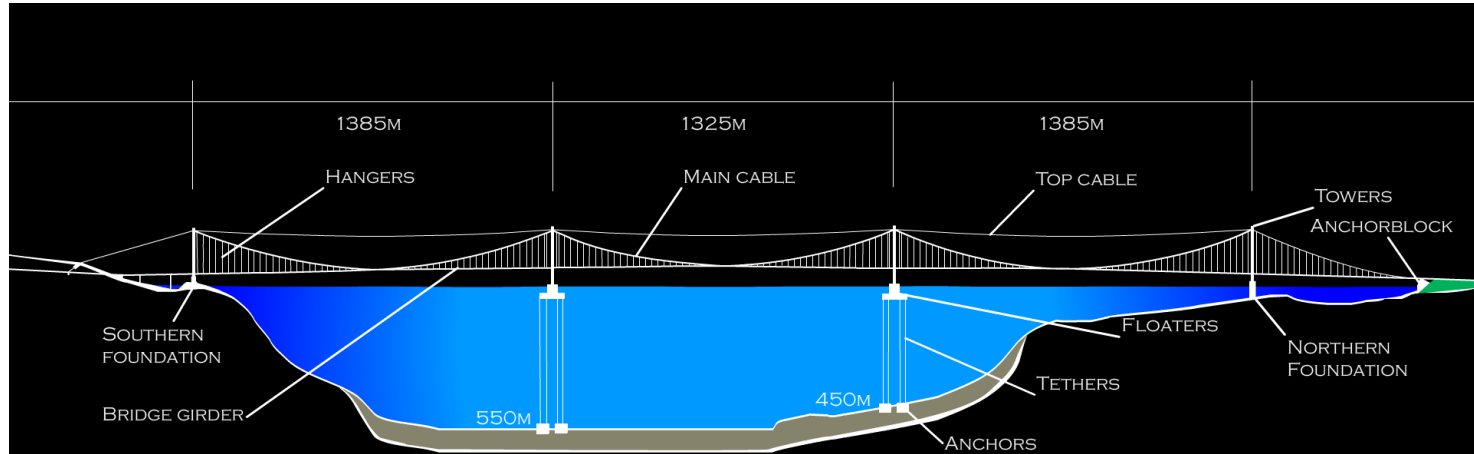
Multi-span suspension bridge on floating foundations





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Bridge elements

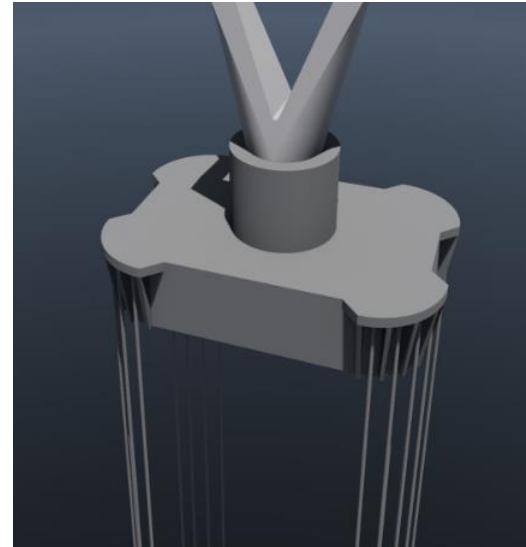
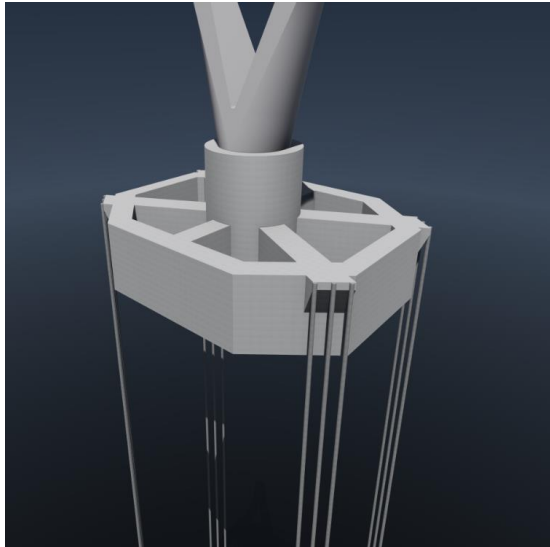




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Floater alternatives



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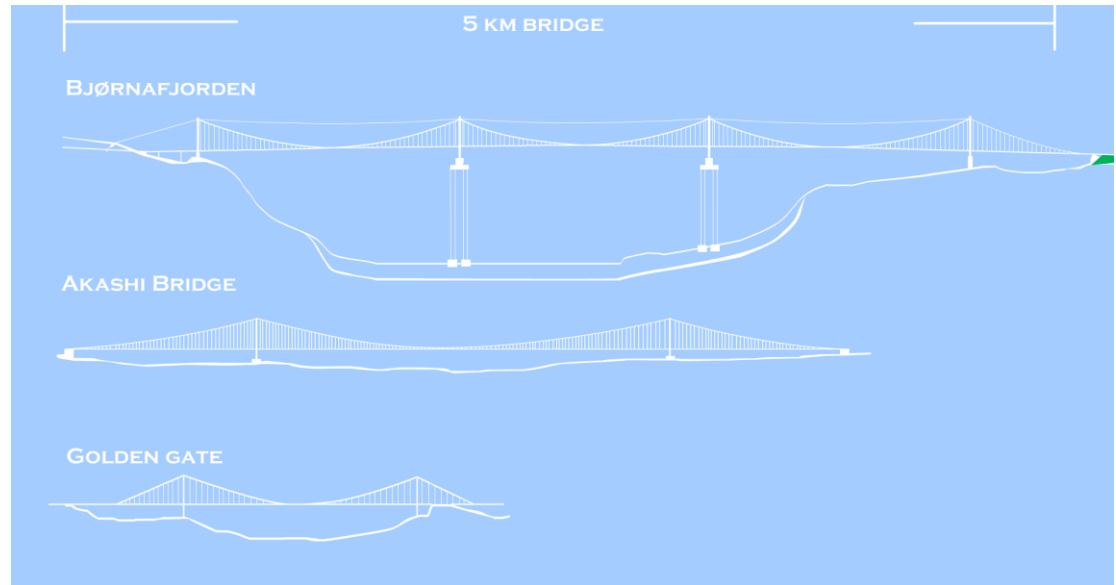
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Comparison to other bridges

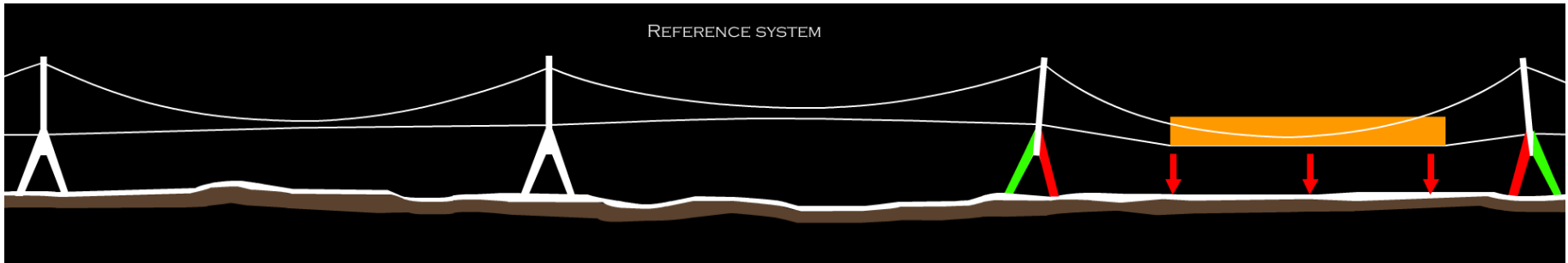
- 1385 + 1325 + 1385 meters
- 1991 meters
- 1280 meters





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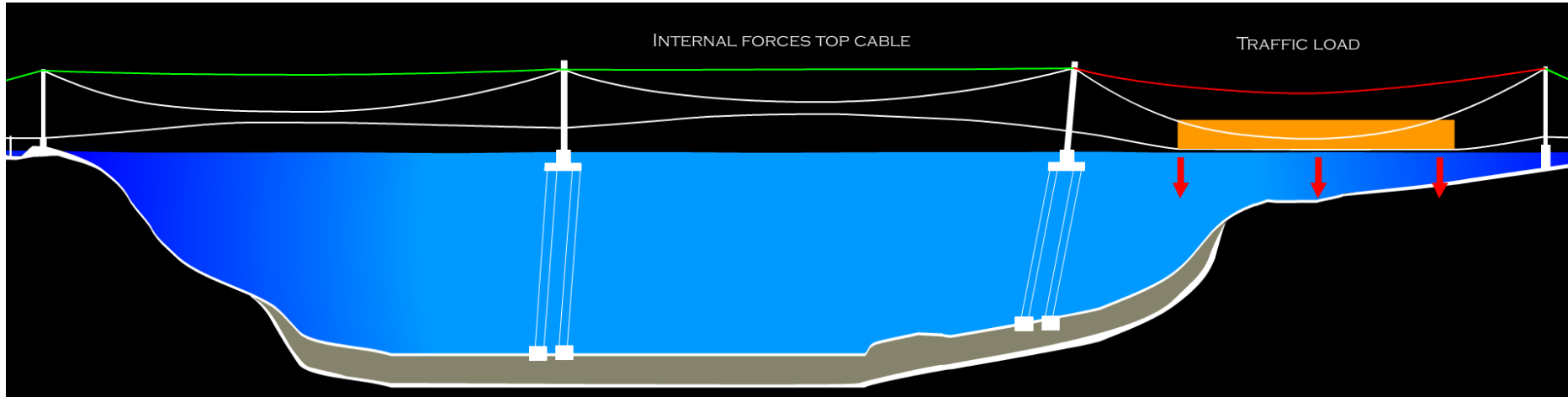
Normal multi-span suspension bridge





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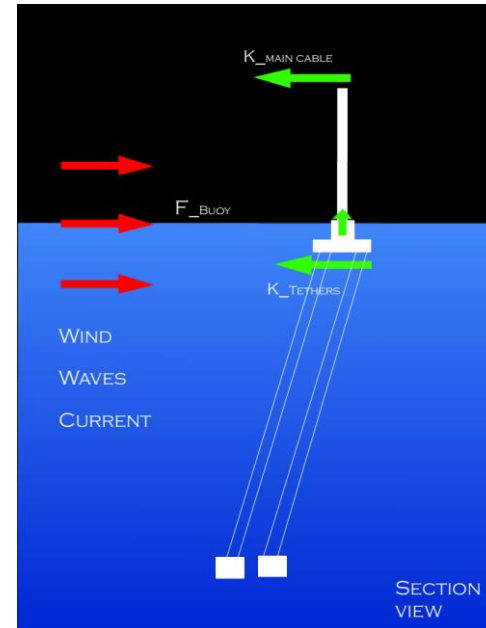
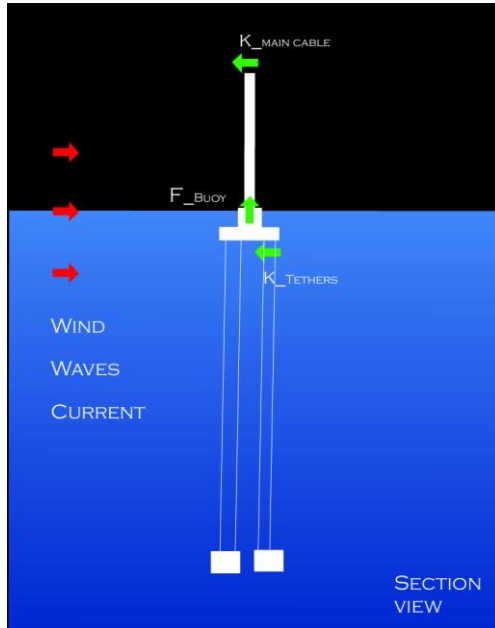
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Tension Legged Platform technology





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Advantages

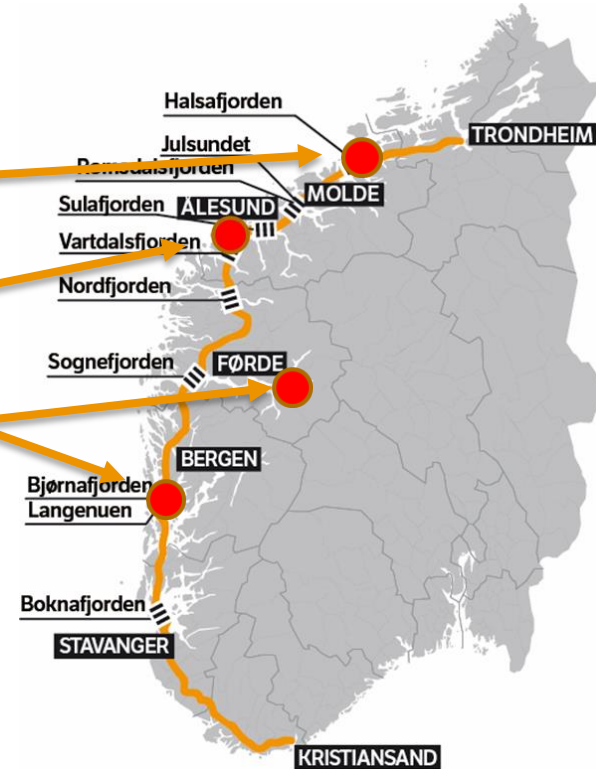
- Nearly no disruption of ship traffic
- Robust with regard to environmental loads
- Flexible with regard to crossing location
- High level road for entry to tunnel in steep fjords
- Aesthetically pleasing



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Crossings

- Halsafjorden
- (Bjørnafjorden)
- Sulafjorden
- E16 Mannheller – Fodnes





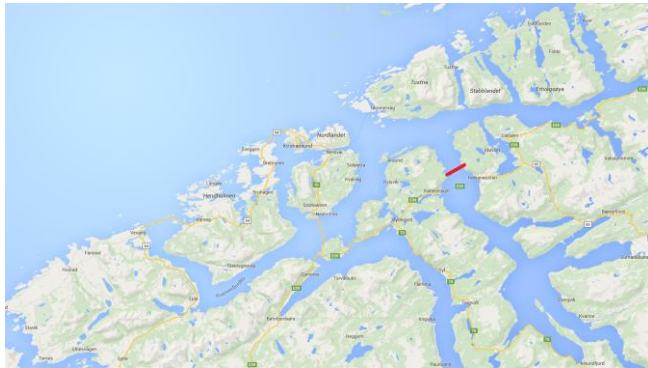
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Halsafjorden

HALSAFJORDEN BRIDGE

LENGTH: 2.5KM
SPANS: 2 x 1200M
FJORD DEPTH: 500M
BRIDGE GIRDER WIDTH: 30.6M
BRIDGE DECK HEIGHT: 3.92M
SPECIAL FEATURES: MULTI SPAN SYSTEM, FLOATING SUPPORT (TLP) AND USE OF TOP CABLE



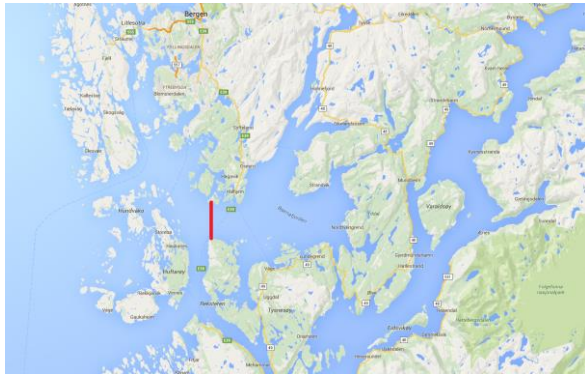


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Bjørnafjorden

BJØRNAFJORDEN BRIDGE

LENGTH: OVER 5KM
SPANS: 1385M + 1325M + 1385M
FJORD DEPTH: 550M
BRIDGE GIRDER WIDTH: 30.6M
BRIDGE DECK HEIGHT: 3.92M
SPECIAL FEATURES: MULTI SPAN SYSTEM, FLOATING SUPPORT (TLP) AND USE OF TOP CABLE





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Sulafjorden

- Width: 3000 – 5000 meters
- Depth: 450 – 500 meters
- 2 or 3 span solution
- Tough environmental conditions
- Large ships





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E16 Mannheller – Fodnes

- Not yet concluded in the national transportation plan (NTP)
- A part of the Sognefjord
- About 3 kilometres wide
- About 700 meters deep
- Large ships passing through





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Thank you for your time 😊

Simen H. Holtberget, NPRA