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# Saint Petersburg Ring

## Innovation

# The Production and Erection of Viaduct and Bridge Decks



[www.ferrostrada-uk.com](http://www.ferrostrada-uk.com)

[www.spicsrl.com](http://www.spicsrl.com)

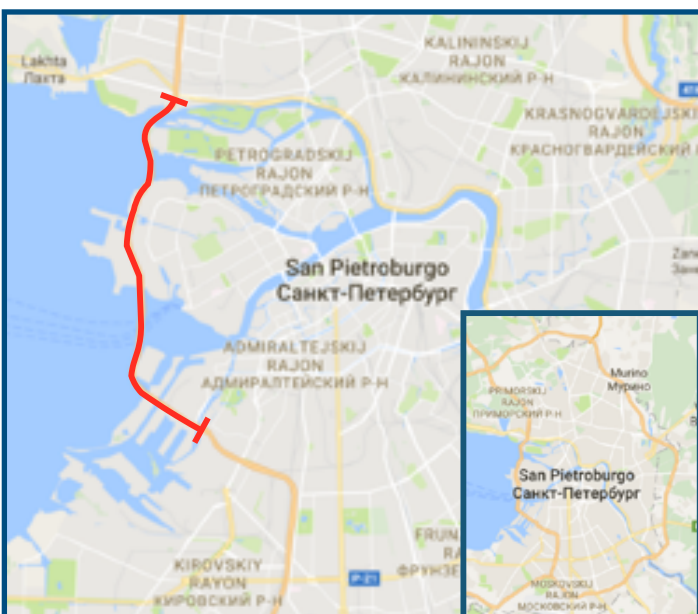


# Activity



St Petersburg Ring.

The scope was to connect the north and south sections on the west side of the city for vehicular traffic to complete an external ring road around the city. The connection was to simultaneously allow ships to enter into the bay day and night without interrupting road traffic by the opening and closing of an existing Bascule Bridge.



# Development & Activities

Working on behalf of Principal Contractor Joint Venture ICTAS and ASTALDI, FerroStrada SPIC was awarded the construction of Sections 2 and 3 (as illustrated) to complement the construction of a project in excess of 11.5km of road and two cable stayed bridges.

## Auxiliary Structures

Using inventive concepts, the preparation and execution of a thought through method statement saw the erection and deinstallation of over 19,500 tonnes of steel structures needed for the erection of the bridge decks.

## Main Structures

The main structures consisted of 40,000 tonnes of steel structures and 55,000m<sup>2</sup> of deck.

Section 2 consisted of 1km of structure with a maximum span of 168m

Section 3 consisted of 1.6km of structure with a maximum span of 85m

The work was delivered by 45 technical managers and supervisors and employing up to 850 local staff working in total 2.7 million hours over a two year period.



# Auxiliary Structures

## Auxiliary Structures

Realising the scope, the concept and the local area, auxiliary structures were designed a developed bespoke to the project.

SECTION 2 in pictures



# Auxiliary Structures



# Auxiliary Structures

## Auxiliary Structures

Erection of Auxiliary Structures.

SECTION 3 in pictures



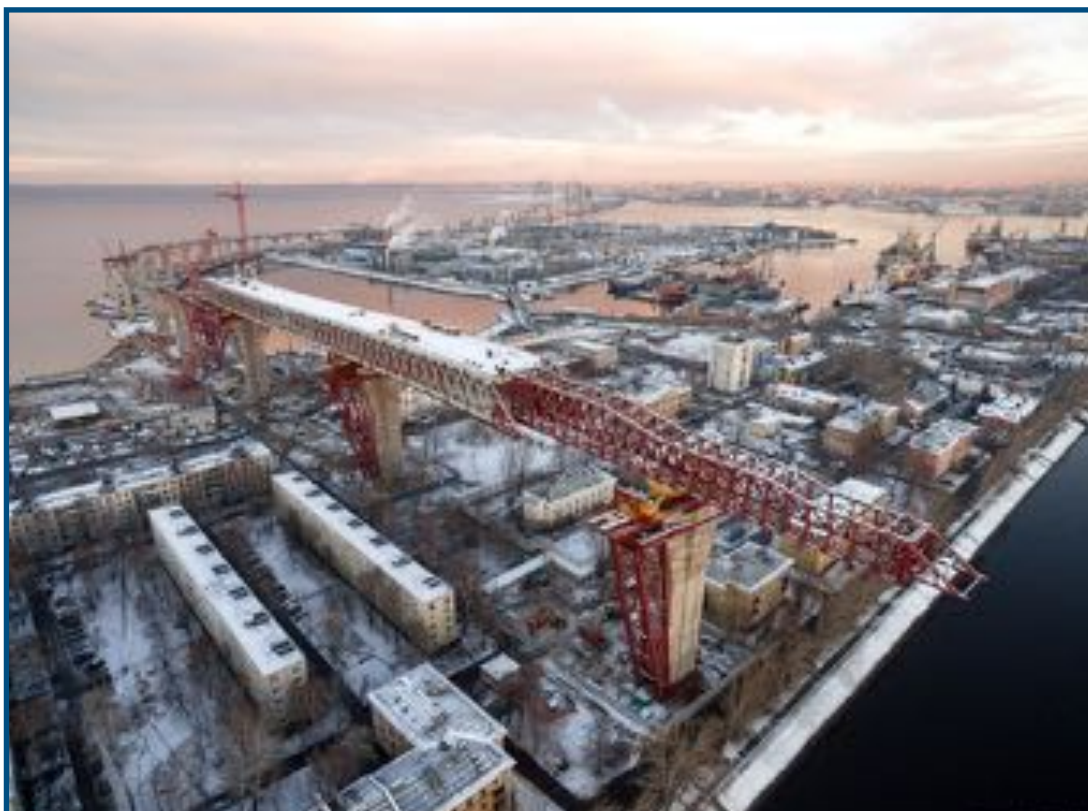
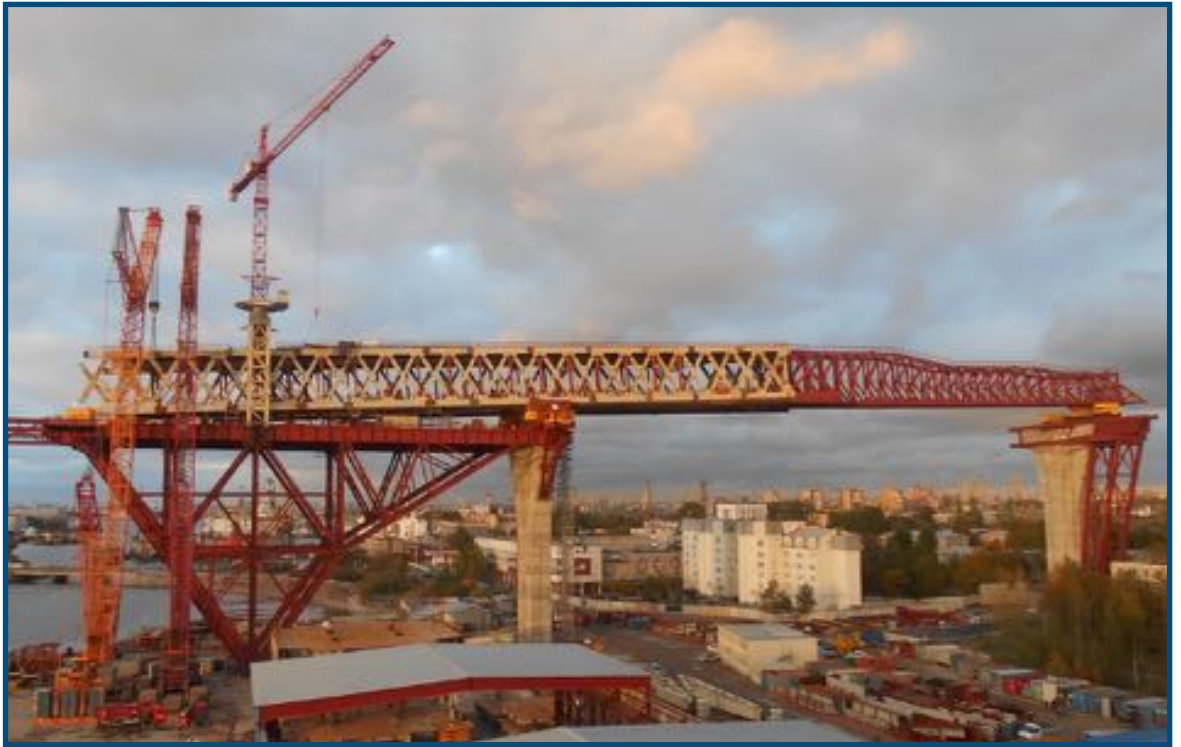
# Auxiliary Structures



## Bridge Deck Installation

Using the bespoke erection of the auxiliary structures, the main bridge deck installation by incremental launching can be realised. The erection required 550 workers over 18 months amassing a total of 1.9 million working hours in climatic conditions of  $-20^{\circ}\text{C}$  and wind speeds up to 80 km/hr.

SECTION 2 in pictures:





# Bridge Deck Installation

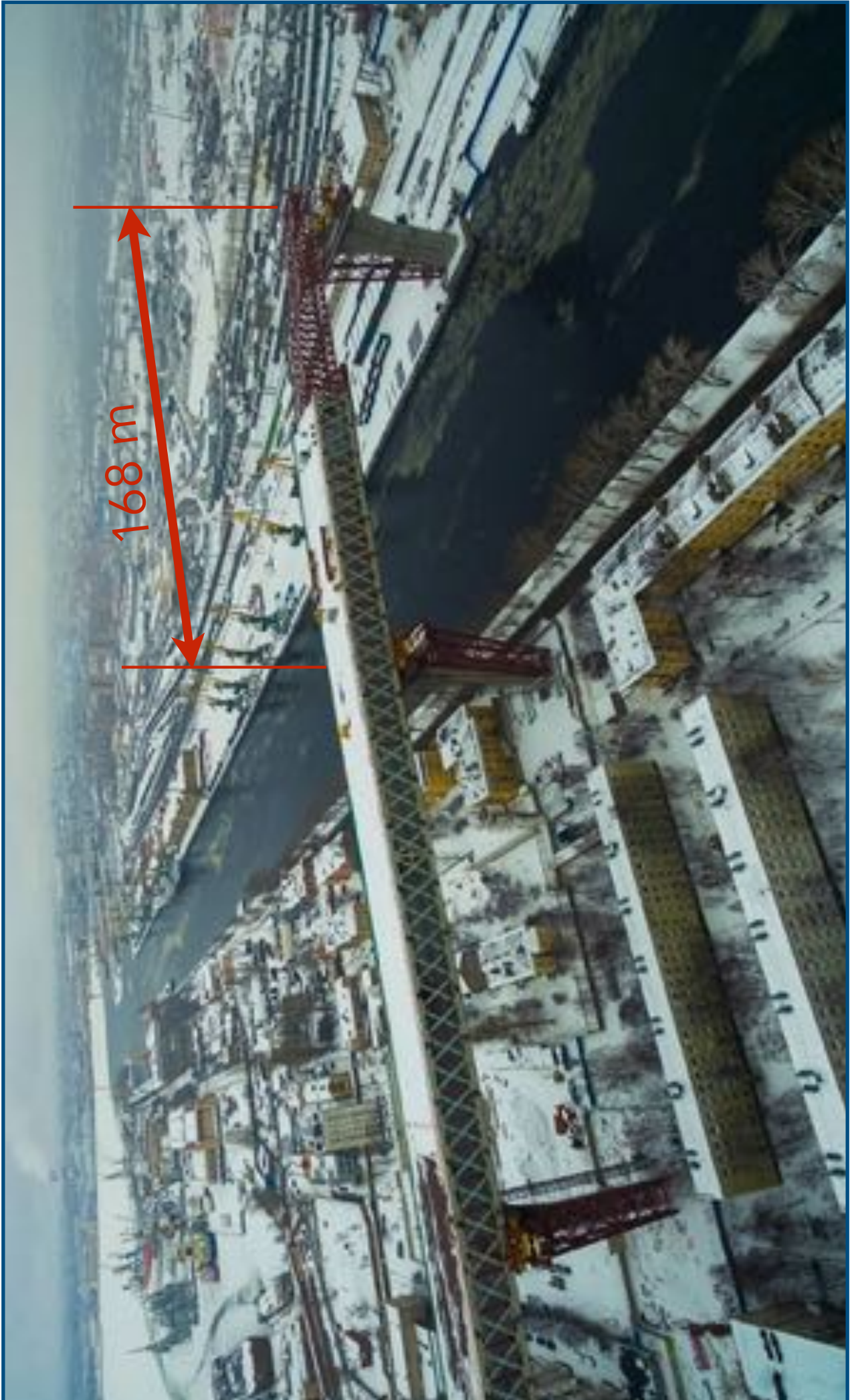


**Heavy lifting**

**Erection of double deck segments of 19m x 24m x 12m weighing 600 tonnes**



# Bridge Deck Installation



# Bridge Deck Installation

## Bridge Deck Installation

The erection of Section 3 required 300 workers over 14 months amassing a total of 850,000 working hours in climatic conditions of -20°C and wind speeds up to 80 km/hr.

SECTION 3 in pictures:



# Bridge Deck Installation



# Bridge Deck Installation



Completed bridges on time and in budget





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