BAB A30 NORTH BYPASS BAD OEYNHAUSEN, STRUCTURES 4 AND 29
In order to complete the BAB 30 at Bad Oeynhausen and cross the Werre a striking bridge construction was erected at the eastern and western end of the bypass. The two structures 4 and 29 are designed as cable-stayed bridges using a composite construction method with a main span of 68 m and 83 m, respectively across the river Werre. The total length of 308.95 m of structure 4 is considerably higher than that of structure 29 with a length of 152.85 m.

Due to the common design concept, however, both constructions have a similar appearance despite the differences in their boundary conditions.

Both lanes are accommodated on separate superstructures. The superstructures consist of two trapezoid steel girders each which, combined with the road deck made of reinforced concrete, serve as composite girder. The main girders made of structural steel are also connected to trapezoid transversal girders for cable anchorage.

For both structures, the supporting structure is anchored via 6 pylons both in the structure axis and next to the superstructures. For structure 4 the two lanes are anchored via 2 cable planes each with the two central cable planes being anchored to joint center pylons. Structure 29 has 3 cable planes. The three cable planes support joint transversal girders connecting the two superstructures.

For tensioning bars locked coil ropes were used. The rope diameters of structure 4 and the outer cable planes of structure 29 are 140 m. The ropes of the intermediate cable plane of structure 29 have a diameter of 154 mm.

Both bridges are outstanding examples of the efficiency of structural steel as construction material and blend in perfectly with their surroundings.

**Facts & Figures:**

<table>
<thead>
<tr>
<th>Steel weight:</th>
<th>5,665 t</th>
<th>Construction:</th>
<th>Cable-stayed bridge with composite deck</th>
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</thead>
<tbody>
<tr>
<td>Length BW 4 / BW 29:</td>
<td>308.85 m / 152.85 m</td>
<td>Customer:</td>
<td>LSB Nordrheinwestfalén</td>
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<tr>
<td>Width BW 4 / BW 29:</td>
<td>33.30 m / 31.83 m</td>
<td>Construction period:</td>
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<td>Steel quality:</td>
<td>S355M, S460 N/NL</td>
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</tbody>
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