

## ROOF CONSTRUCTION EASTERN GRANDSTAND FOOTBALL STADIUM MILLERNTOR Hamburg (Germany)

### NEW BUILDING

**Client:** Fußball-Club FC St. Pauli, Hamburg

**Architects:** Ar.te.plan GmbH, Dortmund

**Contractor and client:** Walter Hellmich GmbH, Dinslaken

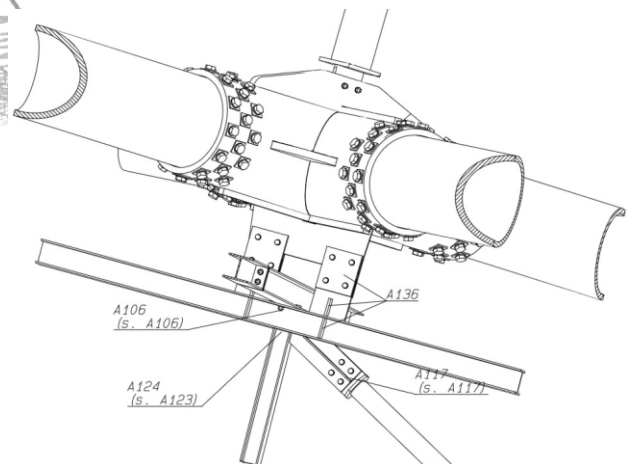
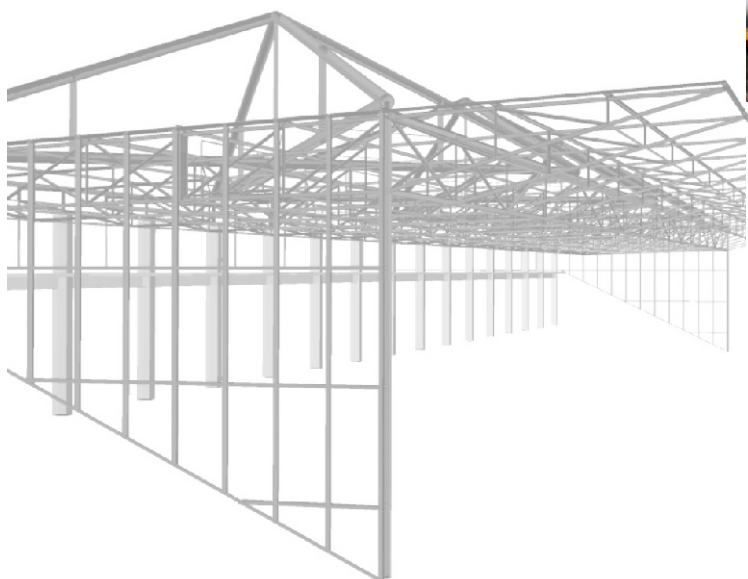
**Steel structure:** Peters Stahlbau GmbH, Itterbeck

**Our services:** For the east stand covering  
Structural design  
Establishing the basis  
Preliminary design  
Final design  
Approval documentation  
Execution drawings  
Vibration analysis

**Brief description:** This roof covers the eastern end of the stadium over the seating and standing area for 8,350 people

- column-free covering of an area of approx. 120 m x 37 m using a steel structure
- innovative main supporting structure using four pyramids with circular steel hollow sections
- newly developed load bearing structure called "antimetric torsional structure"
- main truss girder spanning 120 m suspended torsional structure
- secondary supporting structure with truss girders spanning approx. 25 m and cantilevering by over 11 m
- entire construction uses extremely filigree double-T sections and round pipes taking advantage of the ductile load reserves
- construction using prefabricated, welded subsystems connected on site using high-tensile bolts

**Completion:** 2014



Pictures / Illustrations: Professor Pfeifer and Partner Part GmbH, Peters Stahlbau GmbH