



# Bilfinger Engineering & Consultancy's strategic collaboration with TKF

Ensuring long-lasting success in manufacturing



## Project scope

This greenfield engineering project focuses on expanding TKF's subsea cable production operations. Bilfinger Engineering & Consultancy conducted a feasibility study to evaluate expansion options, assessing various potential locations before selecting Eemshaven as the optimal site. The factory is designed to accommodate machines extending up to 260 meters, structures reaching 40 meters in height with a diameter of 26 meters, and foundations supporting installations weighing up to one million kilograms.

**Client:** Twentsche Kabelfabriek (TKF)

**Location:** Eemshaven, The Netherlands

**Market:** Manufacturing, specifically subsea cable production

**Factory size:** around 28.000 m<sup>2</sup>.

**Number of process units:** 17 Cable length: 1,200 km per year

**Cable capacity:** Up to 132 kV

## Key highlights

- Successful site selection and permits acquisition: Eemshaven was selected as the optimal location after assessing multiple options based on logistics, infrastructure, and regulatory feasibility. Obtaining the permits on time was critical for keeping the project on schedule.
- Meticulous engineering to design a state-of-the-art factory: Engineers focused on optimizing the layout for efficient production flow and safety. Advanced digital modeling and simulations helped refine the design, ensuring seamless integration of machinery and infrastructure. Sustainability and energy efficiency were also key considerations in the design process.
- Incorporation of massive machinery and structures within the facility: The factory was built to house equipment up to 260 meters long, structures reaching 40 meters in height, and foundations supporting installations weighing up to one million kilograms. The facility's design ensures smooth operations while maintaining safety and structural integrity.

## Services provided:

- Feasibility Study
- Permitting Support
- Site Development
- Preparation of fire prevention plan
- Conceptual Design
- Basic Engineering
- Detailed design for mechanical, civil and structural scope using Plant3D and Revit
- Coordination of contractors and defining specifications for several installations
- Coordination of equipment suppliers and package units



### **Bilfinger's involvement**

Bilfinger Engineering & Consultancy conducted a feasibility study before TKF selected the site. Their involvement spans the entire initial phase, including site selection, permits acquisition, coordination of the plant's positioning and layout, and execution of detailed engineering for the factory's design.

### **Seamless collaboration**

The partnership between TKF and Bilfinger Engineering & Consultancy thrives on mutual trust and shared goals. With approximately 10 different parties working simultaneously, Bilfinger Engineering & Consultancy played a pivotal role in managing information flow, fostering shared insights, and promoting collective problem-solving. Thanks to strong coordination and communication, the project successfully met key milestones despite a tight timeline.

### **Teaming up with the client**

Bilfinger Engineering & Consultancy and TKF brought together highly experienced professionals who worked in close coordination. Short lines of communication allowed for rapid decision-making, minimizing delays and ensuring that challenges were addressed proactively. Their combined expertise enabled a smooth integration of technical and strategic elements throughout the project. With tight deadlines and complex requirements, strong collaboration was essential to maintaining momentum. Their shared commitment to excellence ensured that quality was never compromised despite the fast-paced environment.

The partnership between Bilfinger Engineering & Consultancy and TKF demonstrates how engineering innovation and strategic foresight drive project success.

### **Added value**

- Expert guidance in site selection and permits: Bilfinger Engineering & Consultancy's expertise ensured a thorough assessment of potential locations, leading to the optimal site selection while streamlining the complex permitting process.
- Seamless project coordination: With multiple stakeholders involved, Bilfinger Engineering & Consultancy played a key role in managing workflows, ensuring clear communication, and aligning all parties toward common goals.
- Risk inventarisation, register and mitigation: Early identification of challenges allowed proactive solutions, preventing costly delays and ensuring a smooth transition from planning to execution.

### **Enhanced efficiency**

The project showcases the limitless possibilities that collective effort and the pursuit of innovation can unlock in today's rapidly evolving technological landscape. The factory's design prioritizes seamless workflow integration, minimizing downtime and maximizing productivity.

Advanced digital simulations and engineering optimizations ensure smooth operations, reducing inefficiencies and production bottlenecks. Smart automation and process optimization contribute to higher output with lower operational costs.

