

# Integrated quality control in offshore wind



Global Davit

PES caught up with Wim Keen, CSO of STEEL INSPECT. He was happy to tell us about the services the company provides to the offshore wind energy sector and gave an introduction to their unique total quality concept, Q7, which is used to manage the quality of complete offshore wind EPCI projects.

**PES:** Hi Wim, welcome to PES Wind, it's great to have this opportunity to talk with you. Would you like to begin by telling us something about the background of Steel Inspect and how Steel Inspect currently serves the offshore wind energy sector?

**Wim Keen:** Steel Inspect was founded in 2006 by Maik Rienecker. He gained wide experience in worldwide EPCI powerplant construction projects, which he capitalized on to found STEEL INSPECT. Our aim is to serve the construction sector, by capitalizing on his knowledge on how to manage large construction projects, so that they are completed with optimal quality and within best time frames.

Since 2011 STEEL INSPECT has served the offshore wind sector, helping large offshore wind farm projects to be completed to the highest standard. Projects in the offshore wind energy sector are large and complex, often with multiple suppliers and production sites. This calls for a lot of coordination and expertise. We use our expertise and experience to make sure these projects come out as planned and within budgets and time frames promised to our clients.

**PES:** We know you work in a variety of sectors,

so how important is the wind and offshore renewables business to STEEL INSPECT?

**WK:** The offshore wind energy sector is extremely important for us. Currently it generates more than a 3<sup>rd</sup> of our annual turnover.

Looking over the last 10 years our experience within the offshore wind industry is based on around 20 projects. The more recent ones include Wikinger, Merkur Offshore, Hohe See, Moray East, Danish Kriegers Flak and the brand new Kaskasi project.

**PES:** You currently provide several different services to the offshore wind industry, we would like to know more, can you expand on these?

**WK:** We secure quality in EPCI offshore wind projects, serving not only wind farm developers, but also EPCI contractors. Our core competence lies not only in quality assurance and quality control in the ongoing production of any kind of steel for offshore wind farms: foundations, transition pieces and substations, but also in ahead planning of quality, quality documentation, selection of suppliers, and also in the securing of quality in transport and installation (T&I) and commissioning.



Wim Keen

**PES:** We would like to hear more about the Q7 concept?

**WK:** The Q7 concept is a holistic quality assurance concept for complete EPCI offshore wind farm construction projects. Used when applying to manage an offshore wind farm project from start to finish: with a self-managed and self-installed team, from design up until and including hand



The main added value is the holistic approach of integrated project quality control & time supervision throughout all project implementation phases to efficiently reduce costs on quality and to improve time awareness!

over to operations, which covers procurement, manufacturing, documentation, transport and installation, commissioning and handover.

**PES:** What makes STEEL INSPECT 's solutions stand out from the competition, what are the benefits to the end user?

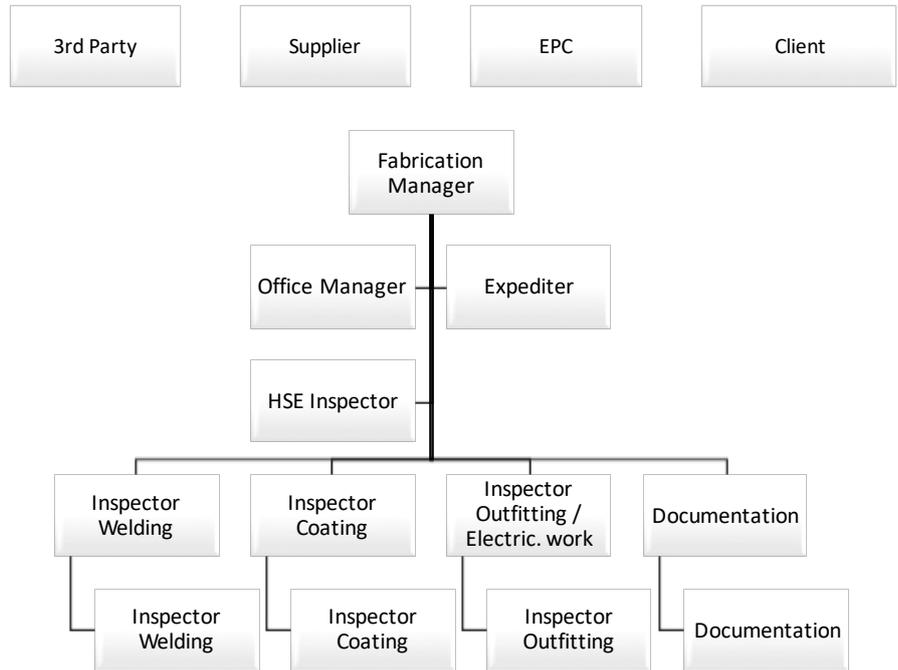
**WK:** We approach the topic of quality holistically and proactively by forward planning, ahead of quality control.

As I explained earlier, by applying the Q7 concept we cover all phases of an EPCI project, from design all the way up to and including the handover, with the same team. By overseeing the whole project with the same team, early intervention is possible. Thus, preventing eventual setbacks to the project further down the line.

Furthermore, our staff has experience gained from multiple offshore wind projects, which they use to benefit our clients: from experience they know what quality bottlenecks can occur during a project and will proactively anticipate that to prevent these holdups.

As just one example we are able to cover the necessary organisation in a fabrication workshop based on a considerable QA/QC knowledge and experience, as well as on ability to lead such an organisation on behalf of a client who contracted the supplier.

**PES:** How important is health and safety to you as a company, do you have a regular training program for your employees?



**WK:** Health and safety of our staff is our top priority. We are certified according to SSC and SCP and comply with all high industrial safety standards. Staff that go offshore have all the valid GWO certificates. We regularly carry out training for our staff and send them on third party safety courses, like fall protection training. We strictly monitor the validity of all safety certificates of our staff and have regular safety update courses.

**PES:** We would be interested to know where

**your main markets are and if these have changed over the years and if there is a geographical area you would particularly like to break into?**

**WK:** Europe is the birthplace of offshore wind. This is where most of our projects and clients are based.

We are seeing a growing demand for our services in Asia, in upcoming markets like Taiwan, South-Korea, Vietnam where there is a high need for our expertise in setting up



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quality systems and training for offshore wind EPCI projects.

We have anticipated this demand by opening an office in Kaohsiung, Taiwan. Additionally, we have a branch office in Abu Dhabi, United Arab Emirates from where we serve clients in the Gulf region. Our Abu Dhabi office managed the Moray East project at Lamprell's Sharjah facility. We carried out the quality control on 45 wind turbine jacket foundations and 3 substation foundations. Our scope was quality control for welding and coating. We successfully completed this project recently. We are studying future markets like Japan and North America. With our worldwide set up we can quickly anticipate any impending local needs.

**PES:** Can you give an example of a project you were involved in and what the benefit to your client was?

**WK:** The latest project Danish Kriegers Flak (DKF) for Vattenfall must be mentioned. Here we started with:

Q1 Review of quality plans, fabrication and inspection schedules at supplier locations

Q2 Fabrication monitoring and process inspections for MPs and TPS

Q3 Check and verification of final fabrication documentation

Q4 Transport and load out inspections of MPs and TPs.

Currently we are still busy with fabrication supervision and process monitoring i.e.: manufacturing, welding, coating for the DKF towers.

Another added value for our clients is know-how transfer throughout all the execution phases, qualified and experienced manpower, having the right mindset and last but not least, optimised costs.

Our next project starting in November will be the Hollandse Kust Zuid (HKZ) Project also for Vattenfall.

**PES:** How has the current coronavirus situation impacted on your business? How do you see this developing over the next 6-12 months?

**WK:** The trend in offshore wind goes toward international projects with multinational sites where specialized staff is required at different sites in different countries. Due to the corona virus our clients ask for local experts, who live in the country where the

work is to be executed to their requests.

**PES:** What do you think will be the greatest opportunities and the greatest challenges, for the wind industry in general and Steel Inspect in particular, over the next few years, and where do you see yourselves in 5 years' time?

**WK:** The good thing in these Covid-19 times is that investment in offshore wind energy is unbroken and projects proceed. As political leaders around the world have stated, renewable energy is a way to fight the corona crisis, offshore wind will continue to grow worldwide. As we are very experienced in wind energy and have a worldwide set up, we will accompany this growth with our expertise and specialized staff.

In 5 years from now we will have served not only clients in Europe who have built offshore wind farms, but also clients in Asia and North America, for whom we will not only have been able to set up quality standards towards their supply chain, but also to secure quality throughout their projects - be it in production or installation of their components.

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

Keen on media productions