



# Surveying the offshore scene

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We look into the increasing importance of geophysical and geotechnical pre surveys in the offshore wind market. MMT is a Marine survey company that is leading the way in this specialist area.

**PES:** Welcome back to PES Wind magazine. Thanks for talking with us. For the benefit of our new readers would you like to begin by explaining a little about the background of MMT and the importance of the wind industry to you?

**Nils Ingvarson and Ola Arvidslund:** MMT is a Marine survey company that has been around for over 40 years and for the past 25 years we have grown from a one boat company to a large fleet of operational platforms performing various type of survey operations to the Renewable, marine cable and Oil and gas sector. As for Offshore wind farms, MMT started with the geophysical and geotechnical pre surveys in the late 90s mainly in Danish and Swedish sectors. We have since then increased our operations and extended them to also perform these

type of surveys in the UK and Germany primarily. During 2008 to 2010 the increased awareness of UXO (Unexploded Ordnance) made the UXO survey a requirement for these surveys. The UXO survey has also a phase with inspection and excavation to identify any magnetic and acoustic target picked up during the survey. This has also added to the volume of work and also required the use of larger Offshore vessels with Work class ROV capabilities.

This has for the past 6 years been in line with the platforms used by MMT and therefore is a one of the major segments that MMT is operating in.

**PES:** We see that offshore wind is experiencing continued growth in the market, is this having a knock on effect

on MMT?

**NI & OA:** Well we see that the need and possibility to continue to develop the survey methods used for Offshore wind farm surveys still is relevant to pursue. We see that the market increase regionally as well and we see an increase in the global efforts to pursue power from Offshore wind farms.

**PES:** How have the HSE regulations changed and what impact has this had on you and in turn your customers?

**NI & OA:** MMT is certified according to ISO 9001 (since 2007), ISO 14001 (since 2009) and the Work environment system OHSAS 18001 (since 2011). MMT is used to comply with high requirements, both internally and externally, from legal and/or client demands. What we can see the last years, is an



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increased awareness and compliance of national legislation, e.g. work environmental/HSE legislation in that area we are working in. When MMT are working within territorial waters, we shall, in addition to the flag state legislation, also obey the national (territorial waters) legislation on board the vessel. This is nowadays more highlighted in the clients ITT documentation and better followed up. However, it is still a challenge for us and our competitors to ensure that we have the legal documentation, know how to gather the right practical knowledge and implement on the vessels.

**PES:** Have you found any crossovers or points to be taken from other sectors of the offshore industry?

**NI & OA:** MMT have several of work areas, e.g. environmental-, bathymetry- cable- and oil & gas industry, all with different HSE requirements. Back in the years, the Wind farm requirements were not very strict or stringent, but nowadays we can see that most of the Health and Safety requirements are similar for most areas. Maybe you can see more requirements for control of the fauna in the Wind industry, i.e. more focus on Mammal observers, (MMO) and Passive Acoustic Monitoring (PAM). The Wind industry also have their specific Global Wind Organisation (GWO) Safety course requirements, however, since MMT never enter the actual windmill safety zone, but perform inspection and survey adjacent to the structures, MMT personnel do not require this type of certificate.

**PES:** How important is training to you as a company in view of these stringent health and safety regulations?

**NI & OA:** HSE training is crucial and very important for the company, all MMT offshore personnel shall have both health & fitness certificate and a basic safety course before going offshore. However, several of the MMT managers have also performed these courses, all to make sure that they are kept up to date with procedures, workflows etc.

**PES:** We have been hearing about your highly technical equipment and vessels, please can you tell us something about these?

**NI & OA:** The setup is a mix of inhouse vessels, long term charter vessels and project specific vessels when required. Obviously we believe that a good understanding and handling of the vessel are important factors for a successful operation. So this a one of the main focus areas when fine tuning and optimising the operations. MMT also believes that the higher resolution obtained, the better the results can be optimised for presenting the purpose of the surveys, this is certainly true for the Oil and gas segment but also in the Renewable sector. As for front line innovation within MMT we are part of the





design and development of the Surveyor ROVs (SROV). A large ROV designed to be a sensor carrier and with the capability to move as fast as 8 knots in operation. The initial main purpose of the SROV was the aim to reduce the pipeline inspection survey time significantly and as this developed the survey sensors also had to be developed to match the speeds. As a result, this not only worked but now also add survey possibilities with the SROV in the Renewable segments as well. MMT now have 2 SROVs and with that as a base we are continuing to improve the sensors and thus the survey capabilities.

**PES: We note you offer both geophysical and geotechnical surveys, we would like to know what these entail.**

**NI & OA:** The geophysical part includes the typical MBES, SSS, SBP and Magnetometer but we also include UHRS 2D seismic surveys and various set up for UXO surveys, Cable tracking and Depth of burial surveys. These operations can be performed as towed/hull mounted equipment from smaller vessels and ROV

based from larger offshore vessels, especially efficient from the SROVs. Geotechnical operations are typically CPTs 5-10 tonnes but also heavier equipment. Various sort of corers Vibrocorer, piston corer 3-6 metres core operated down to depth of 1000 metres.

**PES: We know that finding and clearing UXOs is an important part of your work. How often do you come across these and what are the dangers involved?**

**NI & OA:** The amount of UXO job has increased the last 5 years, and so have our experience and safety approach. MMT home-ground are the North Sea and the Baltic Sea, which still is one of the most mined areas in the world. So yes, we are quite used to 'encounter' mines, or at least with our geophysical instruments and ROV based visually inspections. In these UXO job, we hire a sub-contractor for the identification and potential EOD work, all work shall have a specific risk assessment and operational procedure.

**PES: Health and safety are at the top of**

**your priority list, how do you ensure this in the sometimes hazardous conditions you have to work in?**

**NI & OA:** Stick to the procedure, do your risk assessments and always wear your PPE. One example is chemical bombs, which were dumped in the Baltic after the second world war. These dump areas are well known for us, but some of the content have been spread out, outside the charted area and since it's more than 60 years ago, some of the bombs have started to rust, and the contents starts to leak. The content, e.g. mustard gas, can still be lethal and this is nothing you want to get stuck to your equipment and up on deck. MMT have performed specific risk assessment and procedures for operations adjacent to these areas and have specific chemical PPE boxes on board all vessels, all according to HELCOM. In addition to this, the vessel's hospital has been extra equipped with auto injections with atropine, all to be safe in case of a contamination.

**PES: Where do you operate and where are the key markets for MMT and are there are any areas, geographically speaking, that you would like to break in to?**

**NI & OA:** MMT operates mainly in Europe (North Sea, UK, Baltic Sea, English channel) the Mediterranean and the Black Sea. With this we are looking on what is happening in further developments of the offshore renewable sector. We see there are developments both in the Mediterranean, Asia and the North America

**PES: What is the single biggest challenge facing the market today?**

**NI & OA:** There are many but one of the biggest, from a survey perspective, is the challenge in the initial phases when survey activities may not be considered as important as they are (and later turn out to be). So to allow for proper survey activities and budget for them is really important. This part has developed the past 5 years and hopefully it continues.

**PES: Looking ahead into 2018 and beyond, what trends and/or changes are you anticipating in the market and why?**

**NI & OA:** There are currently an increased number of companies getting into the UXO survey and inspection market and it will be important ensure the high quality requirement for the surveys, There are possibilities for improving the progress of inspections with sim ops with two ROVs for faster handling of inspection work. The aim to improve the UXO surveys will continue. MMT are of course hoping that the SROVs high speed high resolution capabilities prove to be very useful also for the Renewable sector. It is also likely that the development of floating wind farms will increase.

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