

THE EXPERT OF WELDED STEEL STRUCTURES



# Mesekon Oy

Better ergonomics and adjustability  
with Kemppi X8 MIG Welder

2017

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## Advanced welding in Southwest Finland

Founded in 1994, **Mesekon** is a contract manufacturer and manufacturing technology consultant for leading export companies in the technology industries. The company's key strengths are welding expertise and machine manufacturing. Its customers include manufacturers of engines and turbines, offshore and shipbuilding equipment, pulp and paper machines, lifting and handling equipment, and mining, quarrying and construction machinery. The company has altogether 50 employees in Turku and Mynämäki, Finland.

Mesekon constantly develops the design and manufacturability of its main products: components and complete assemblies for offshore equipment, marine scrubbers and manlift booms. Compared to its competitors, Mesekon stands out with excellent production quality, keeping up with the latest development of welding processes and equipment, investing in own development and utilizing new production methods.

Carrying out projects that contain demanding industrial welding means constantly encountering new materials. Mesekon tackles this challenge by working in close cooperation with its welding equipment supplier.

## A multitude of materials

Development Manager, IWE **Tero Nättiaho** says that the company's 35 welders face an exceptionally wide range of materials.



"The huge spectrum of materials offers the biggest challenge for us. We use a lot of different structural steels, high and ultrahigh-strength steels, as well as highly alloyed steels," says Nättiaho. "In structural steels productivity is everything, while in high-strength steels its low heat input. In highly alloyed stainless steels, controlling the weld pool is essential, because due to its poor fluidity, the detachment of the droplet and the weld pool control must be much more precise than with so-called ordinary stainless steels."

There are about 1000 standards to comply with. They regulate, among others, quality, personnel qualifications, traceability of materials and correctness of welding parameters. The requirements for tracking and repeatability are particularly stringent in the offshore projects, which are within the range of the NORSOK standard.

"Each project is different, which makes project management really challenging and important, as we can never do the same thing that we did the last time. We always have to start from scratch. In a sense, it is also a positive challenge, as it always gives us room to develop our work and to do things better," Nättiaho describes.

## Hand in hand

Competition in the current market situation is extremely hard. Mesekon strives to stand out with excellent productivity and high quality, where good documentation management and the ability to qualify welding to different standardization systems are essential. The company's expertise in processing very different materials and the flexibility it provides are good additional advantages.

In terms of its partners, Mesekon requires a good price-quality relationship, smooth cooperation and commitment. "Cooperation with Kemppi is really good: we get personal support if needed and we have been able to collaborate with their laboratory on the welding of the most demanding materials. For example, for the welding of the challenging duplex and super duplex steels, they helped us develop welding programs that have been really beneficial. And Kemppi's welding machines are the cutting edge of the industry", Nättiaho says.



"The materials that we use are becoming more and more demanding in order to follow the increasing customer requirements. We strive to meet this challenge by exploring new welding programs with Kemppi and developing our quality management and monitoring. We are also considering the WeldEye software for utilizing the digital welding procedure specifications."

Mesekon's MIG/MAG and TIG welding equipment are all made by Kemppi. Machines have been purchased when needed, usually investing in the latest technology. Plasma welding and the SAW process are also in use. "We are following the one-stop shop approach for welding machines, as it makes life easier. For example, if we have a problem, there is only one number to call. Even the consumable storage will remain a sensible size," says Nättiaho.

"The quality of the welding equipment was the most important factor in selecting our supplier. However, we also considered the availability of spare parts and after-sales service. In addition, Kemppi has helped us to react quickly to new materials in problem situations. We constantly face

new materials and always have to find a solution for them very quickly - and that's exactly how Kemppi has helped us. There are many practical examples of this, and right now we have a similar ongoing project."

Nättiaho expects more features and even more usability and durability from the new equipment. "It is expensive when men stand without work because a machine has broken down."

## Piloting the X8 MIG Welder

Production Manager, IWE **Juha Sundell** says that welders have found Kemppi's equipment good and easy to use, and they have given positive feedback. In spring 2017, Mesekon got Kemppi's new X8 MIG Welder for pilot use at their workshop.



"We expected that the new welder would beat the previous generations, and actually they have made a big leap forward with it. They have put a lot of effort in usability - and many features have been completely rethought," Sundell says. "Its wireless user interface, Control Pad, is a particularly good novelty, as it reduces the need for the welder to crawl from inside welding piece to the welding machine and back to make adjustments. The Control Pad enhances comfort and ergonomics and ensures that the necessary adjustments will actually be made. Changing the wire spool has also been made easier."

Nättiaho appreciates the improvements made in the welding properties. "The increased data transfer rate allows better control over the detachment of a droplet. Better adjustability also improves quality control as the quality of welding improves as well. Likewise, digital welding procedure specifications will help to ensure repeatability," he says. "The Control Pad is the future and a step to the right direction: It is a natural and effortless tool and user interface for our new young employees, and it surely will lower the threshold for this generation into the industry."

The pilot use of the equipment brings some extra workload, but provides an opportunity to try and develop the latest technologies for the new materials. "We're pretty innovative, and yes, we challenge Kemppi pretty hard too."

## I will never part with my Control Pad!

Welder **Aapo Kallio** has been using the X8 MIG Welder for a couple of months - with positive experiences. "For once, the designers have been listening to the welders and asked us for suggestions for improvement. For example, the wire feeder now has enough space to allow the fingers to fit in. Also the cables give a smarter and more durable feel than before, and their new locking system seems better as well," says Kallio.



"With X8 MIG Welder I have mainly welded alloy 31, duplex and super duplex, which are quite difficult materials to weld. The X8 MIG Welder handles them well, but it would of course be nice to try how the machine would work with any regular stainless steel. And the Control Pad is a great tool. Since having it, I have felt no need to make any adjustments on the wire feeder's panel. And I really don't want to go back to the old system."

The key strengths of the X8 MIG Welder are the good usability and the easy set up, Kallio says. "If you know how to use an old Kemppi machine, then you will instantly know how to use this new one as well. The logic is the same, although the new machine has clearer and better user interface. And with the Control Pad, there's no need for squatting in front of the welding machine - you can just grab it and bring it to where you work, even inside the weld structure – and do there the adjustments needed from there."

"The welding gun has also been developed further. Led light is a good addition because the level of workplace lighting varies. Also, the new welding gun has a pistol grip handle readily attached, which makes working much easier," says Kallio.

