

OG INNOVATION

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OFFSHORE ENERGY SPECIAL

ADIPEC 2023: POST SHOW REPORT

EXCLUSIVE INTERVIEW:
HEAT TRACING & TANK
HEATING

WAR AGAIN IN THE
MIDDLE EAST: HOW
WILL IT EFFECT
ENERGY PRICES



Pioneering Heat Tracing and Tank Heating Solutions in the Oil and Gas Sector

In the dynamic realm of the oil and gas sector, innovation and efficiency are paramount. QMax Industries, a trailblazer in the field of steam tracing and tank heating, has been making waves since its inception in 2010. Founded by Tom Perry in Charlotte, North Carolina, the company has emerged as a global leader, pushing the boundaries of heat transfer engineering. Join us as we delve into the intricacies of steam tracing, the benefits it offers to clients, and the unparalleled expertise that has positioned QMax at the forefront of the heat tracing and tank heating industries.

OGI: Could you start by explaining QMax Industries' credentials and experience in terms of your products and services for the oil and gas sector? Could you tell our readers the breadth of your experience, how long the company has been active, and its reach?

QMax: QMax Industries, LLC was founded in 2010 by Tom Perry in Charlotte, North Carolina. Tom put his engineering background to work by putting together a full collection of steam tracing systems, starting with the flagship QMax FTS. This product offers an innovative solution for critical, high heat steam tracing applications. FTS was quickly followed by additional innovative steam tracing products, electric heat tracing products, equipment heating jackets, and industry-changing tank heating solutions like QMax QFin and QMax MakoFin. The QMax name is derived from the letter "Q" as the engineering symbol for heat transfer and Max = maximum.

QMax Industries has focused on steam tracing

innovation more than any company in the industry. This focus and the outstanding product performance has made QMax a leader in the heat tracing and tank heating industries.

QMax works worldwide and has worked on projects in almost all major industrial areas of the world.

Tom Perry has been in the heat tracing and tank heating business since 2000 and is the leading expert in steam tracing systems. He is a Mechanical Engineer from Clarkson University in Upstate NY and has spent his career in the field of Industrial Process Heating holding several patents in the field of heat transfer.

OGI: Could you explain to our readers what Steam Tracing is?

QMax: Steam Tracing is heating process equipment (normally in pipe) with an external heat source in the form of a "tracer" using steam inside the tracer. Steam tracing

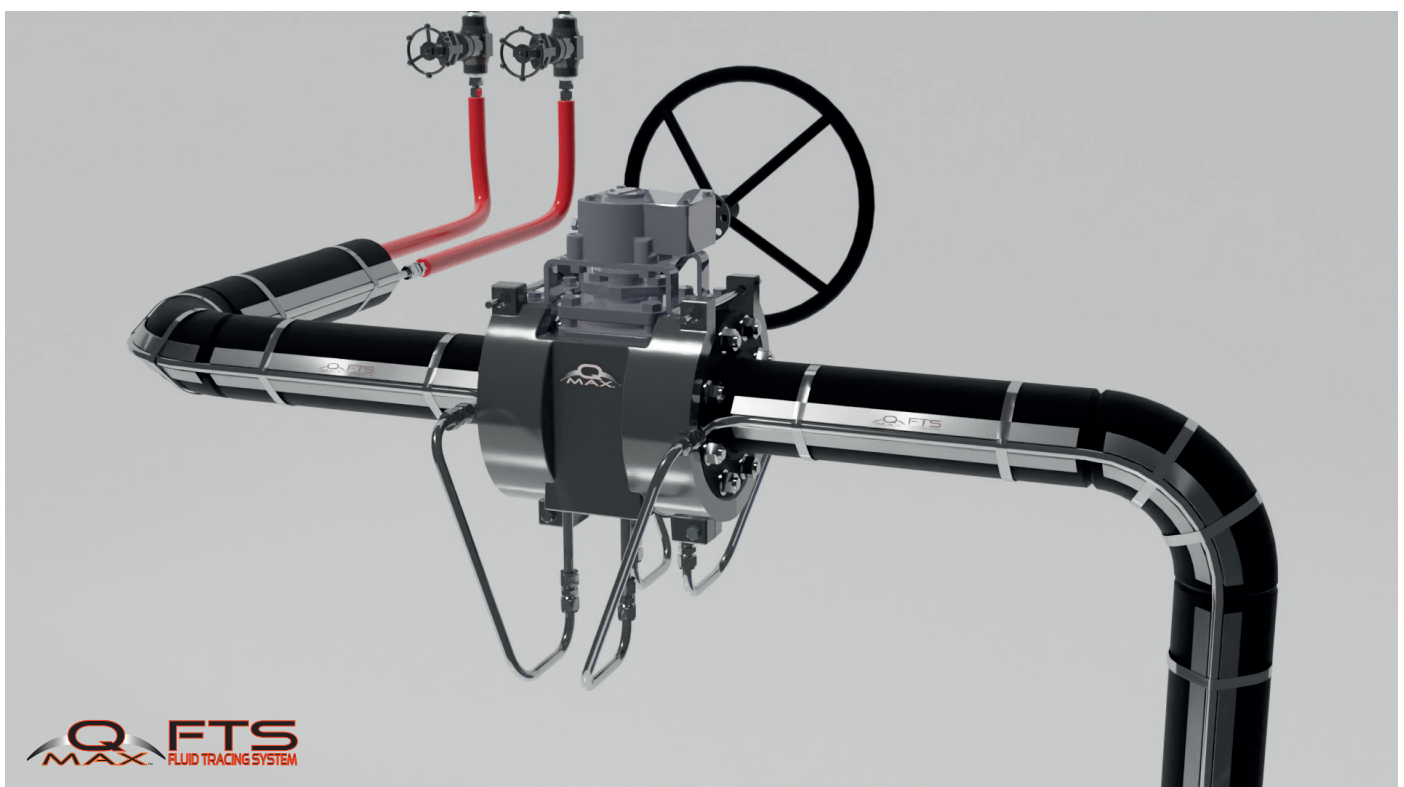
Tom Perry, founder of QMax Industries,



is used to heat trace a process pipe or tank to increase and/or maintain process temperature within the equipment. Steam is a high-quality energy source. It is also a very highly efficient secondary energy source. Because there is so much energy stored in steam, when it condenses, a very large amount of energy is released and transferred into the process to heat it.

Other forms of heat tracing include Hot Oil Tracing, Water or Water/Glycol Tracing, and Electric Tracing.

OGI: What are the benefits of Steam Tracing to your clients?



QMax Pipe Tracing & Equipment Jacketing.

QMax: Steam tracing is the most highly efficient form of heat tracing when considering the full conversion of a BTU of potential energy (a BTU of Natural Gas for example) to a BTU of usable energy. By contrast, electric tracing begins with electricity that has already lost as much as half of its value during transmission from a power plant.

Steam tracing truly maximizes heat transfer when used in conjunction with aluminum enhancers like QMax FTS. Steam Tracing is normally an ideal source of energy when quick heat-up of the process lines is a main objective. Heating an asphalt header at a railroad offloading spur is a good example of a process line that requires rapid heat-up.

OGI: Let's talk about Tank Heating. When are these solutions applied?

QMax: Tank heating solutions are required when fluid processes inside tanks need to be stored at higher temperatures to maintain a particular viscosity. When process temperatures heat or cool out of the acceptable limits, processes can freeze, become viscous, or overheat. If the process does not flow properly, it can affect other processes up and down stream. Additionally, in industries dealing with corrosive substances, tank heating solutions serve to prevent the buildup of corrosive agents on the inner walls of tanks.

QMax systems are designed to maintain specific process temperatures or to provide rapid heat-up inside tanks, vessels, and other containers. Options include using internal tank heating or external tank heating. QMax offers a wide variety of heating (or cooling) options to help guide engineers to the right solution, based on a balance of technical and business considerations. Many QMax tank heating systems use standard pipes or tubes as the carrier for the heating medium and use highly conductive aluminum to rapidly transfer the heat into the process.

OGI: When would a client need a rapid heat-up, and why?

QMax: There are many reasons why a client would need rapid heat-up of a process inside of a tank or vessel. One reason may be to cause or control a reaction, in which case, generally fully jacketed vessels are used. Another example



of rapid heat-up is a process demand that cannot be accomplished with a traditional heat exchanger. If the process inside a vessel must be heated to a certain temperature and then maintained to replace heat that is lost naturally, then an internal or external heating system is used. There are many types of heating systems, both internal and external, using many types of energy sources.

OGI: How do QMax's complete Steam Tracing systems work?

QMax: QMax designs complete Steam Tracing systems which hold value for the long term. The systems are designed to provide the most energy savings and greatest operating efficiency. QMax makes it convenient and simple by designing, specifying, and supplying all the component parts such as steam supply and condensate return manifolds which serve to reduce steam piping and infrastructure costs. This can prevent excessive piping which tends to drive up costs related to fabrication, labor, steam leaks, and maintenance. Additional system components are fully designed and supplied, such as stainless-steel tubing, preinsulated tubing, heat transfer compound, and of course the FTS aluminum channel. QMax can provide installation drawings/instructions and absolutely stands behind the integrity of the designed solutions.

OGI: Finally, could you enlighten our readers of a case study where you helped a client with

your solutions?

QMax: One of our key customers, Eastman Chemical, has been using our systems for over a decade in many of their facilities around the world. In Kingsport, TN in particular, they had used other forms of heating for piping and vessels. The engineers at Eastman recognized the benefits of QMax FTS, our premier offering, for steam tracing various chemical pipelines. This example is from May 2014:

"We chose the QMax (FTS) system as a pilot for some early applications to see how it would work about four years ago," said Robert Hager (now retired), manager of special projects for Eastman Chemical in Kingsport, Tenn. "Ever since then, we've used it exclusively when applying steam heat to process piping. The design is quick to install, has fewer connections (than carbon steel tracing), transfers heat well and can be used on any heat transfer fluid including oils at high temperatures"... "If you need more heat transfer capacity than plain tubing on pipe can offer and you're not using the QMax system, you're spending too much. The QMax system improves several fundamental design issues other systems have, creating an excellent system and a lot less work."

Through continuous innovation and a desire to simplify, QMax works to help its customers maximize process efficiency and minimize plant downtime.

OGI: Thank you. •

If you would like to know more about the topics discussed in this article, or would like to know more about QMax's solutions please contact them:

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