Case Study 35: Gass-og Pusteservice AS (gas and breathing services) - Norway

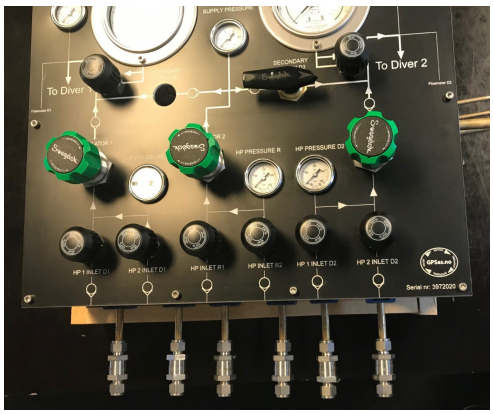
By selecting Tungum® tubing for gas and oxygen lines, Gass-og Pusteservice can decrease the size of panels and offer a small, compact package that can be transported anywhere with ease.

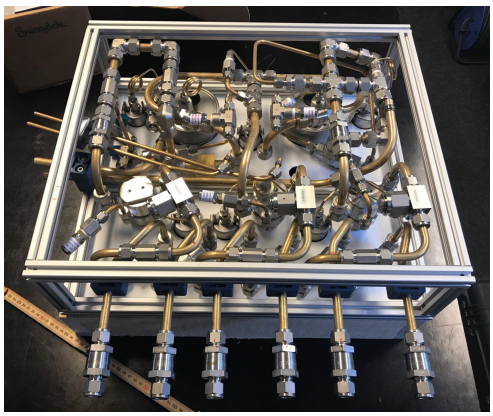
Services

Gas & Breathing Services is a supplier of diving equipment, breathing air systems, compressors, and equipment to air systems for sports diving, smoke diving, work diving, and aviation. Over the years they have worked with 316 stainless steel as well as other alloy tube related to the systems and equipment they supply and service. For several years now, Tungum tube has been used on various gas lines including oxygen and is preferred due to its' longevity and ease of manipulation. Tungum has become the end users' tube of choice and Gas & Breathing Services continues to find applications that can benefit from using Tungum.

Working with Tungum

Tungum is a high-strength brass alloy with excellent ductility. Compared to 316SS, Tungum has similar UTS mechanical properties which allow for the exact same pressures given the allowable stresses per ASME are identical at room temperature. The difference in Tungum is the yield strength is 10,000 to 14,000 psi less than 316SS which means Tungum plastically deforms under less force and therefore is more easily manipulated. This difference means that Tungum is easier to work with and can be easily manipulated into smaller areas resulting in less occupied space. Michael Hansson, Technical Manager of Gass-og Pusteservice in Norway comments: "one of the benefits of Tungum is in the installation and how easy it bends. Certainly, this is more noticeable in the larger sizes".





The Result

Tungum tube is used is all the dive panels offered by Gas & Breathing Services. The most recent application is a 2-Diver panel with Pneumo depth monitoring. The Panel includes 3hp regulator, 2hp lines to each regulator with 300 bar inlet pressure supplied by 10mm X 1.5mm Tungum tube. The regulator has the capability of reducing the pressure to 10-20 bar via 12mm X 1mm Tungum tube. All gauges use 1/8" tube while the Pneumo systems use 6mm X 1mm and operate at maximum 7 bar, both with Tungum tube.

For more information on using Tungum tube on you dive project or any other application, please go to our website at www.t2alloys.com.

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