

«Turbotsan» creates boats entirely from plastic

Boat-building with Leister

Successful implementation of a business idea.

Turkey is a sea-faring nation with a millennium of ship-building behind it. In a nondescript industrial building, typical of the more prosperous areas of Istanbul, innovative products have been created for the past five years: «Turbotsan» has been building boats made entirely from plastic. The original idea came to Burcin Yaslan, the owner of «Turbotsan», thanks to his exposure to inflatable Zodiac boats. He wanted his boat design to be sturdier than the German originals. The question, however, was which tools to use to weld the plastic and how could the critical weld quality be achieved? He who seeks shall find: Burcin Yaslan came across Tokgöz-Makina, and subsequently discovered the perfect tools for his application from Leister, which he could use to turn his dreams into reality. Leister sales partner for Turkey, Mahzar Tokgöz, carried out welding trials with Burcin Yaslan and introduced him to Leister's innovative extrusion welding technology. Following this introduction to Leister, the first boat was successfully fabricated and floated.

From simple boats to all the fixtures and fittings.

Burcin Yaslan and his 20 person team now produce about 40 boats a year. They create strong and sturdy working boats with a modern, innovative design. The boats are able to cope with the high seas in all weather, and have been certified accordingly. Orders come from various users including a number of coastguards and the boats have proven their ability to deliver in the harshest of operating conditions. The boats are fabricated in a range of shapes and sizes, from small open cockpits to 18-metre boats



Boat underside with blunt-welded and extruded parts

with cabins and lower decks. Depending on the customer's wishes, the boats can be supplied with complete engines and fittings or without. The designs are constantly being optimized and the range of models expanded based on input from customers. «Turbotsan» plans to expand its production facilities to meet the growing demands of its customers.

Based on solid bonds.

Various types of plastics have been making inroads into the boat-building sector. «Turbotsan» boats are made



Agile plastic boat from «Turbotsan» for the coastguard

from PE (Polyethylene). A frame built from PE pipe creates the basic skeleton of the boat. The frame is then welded to a number of PE plates to form the solid hull. The hull system is welded exclusively using Leister hand-held extruders. To ensure that the resulting hollow spaces do not take on water in the event of a leak, they are filled with foamed EPS (expanded polystyrene). The result is a sturdy, long-lasting, lightweight and agile boat that is undistinguishable from a conventionally-manufactured boat.

Full Leister range in use.

UV-stabilized PE plates and pipes with thicknesses ranging from 10 mm to 50 mm are the primary materials of construction. The pipes are joined together using butt welding methods. The high number of extruder weld seams in these joints calls for a cost-effective production process with exceptional welding quality. These demanding requirements have been met head-on by the reliable hand-held extruders from Leister. The welded seams between the pipe frame and the hull construction are joined with Leister's most



Extruding with the handy WELDPLAST S2



Hand-held extruder in use on a detail

powerful hand-held extruder, the WELDPLAST S4, which can produce up to 4 kg of extrudate an hour. The many small joints are welded with the FUSION 3C or the new WELDPLAST S2; in hard-to-reach areas, the compact FUSION 2 is used. The hand-held TRIAC S hot air tool is the tool of choice for attaching the plates and expanding the captain's cabin and lower deck.

Reliable equipment and on-site service.

Burcin Yaslan is delighted with the high weld quality, con-



Draw welding with the TRIAC S

Requirements more than satisfied.

Burcin Yaslan's innovative product, like his time, is very much in demand. That is why he can rarely spare the time to attend the launch of each of his boats. However, when he is able to attend, the sight of each launch fills him with pride. He knows that each of his boats will exceed the demands

required of them in terms of quality and safety – in part, thanks to the use of reliable tools from Leister. Through his partnership with Leister, Burcin Yaslan was able to achieve his dream – building leading-edge plastic boats for markets around the world.



Fully-welded plastic boats made from PE for carrying passengers...



...and for fishermen

Customer: Turbotsan, Burcin Yaslan, Istanbul, Turkey, www.turbotsan.com
Sales partner: Tokgöz Makina Tesisat Sanayi Ve Ticaret A.S., Istanbul, Turkey, www.tokgozmakina.com.tr
Tool supplier: Leister Process Technologies, www.leister.com

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WELDPLAST S2



FUSION 2



WELDPLAST S4



FUSION 3C



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