

## Dubai – Building boom in Arabia

# The Lagoons: a Super Project built with Superior Tools

The sheikdom on the Persian Gulf is developing into the Pearl of the Orient. More than anything, tourism is expected to have a long-term beneficial impact on its economic future. The goal is to entice 15 million tourists a year to this balmy world on the Gulf by 2015. That is triple the number of tourists that visit the Gulf today. Vast numbers of mega-projects are being worked on with unbridled enthusiasm. Evidence of the building boom is everywhere. One sixth of all the cranes being used in the world today, are currently in use in Dubai. We have seen pictures of them already, the architectural giants in Dubai: the three «Palms» and «The World», giant island worlds built in the ocean, which have been developed at an unprecedented expense. Or the «Burj al Arab», the one and only seven-star hotel in the world. Or the «Burj Dubai», which, when completed, will be the tallest building in the world at 818 metres high. In this small desert state, another extremely ambitious site is being built, «The Lagoons».

### A demanding task

The Lagoons is a system of artificial islands, lakes and channels connected to Dubai Creek. In order to prevent valuable water from trickling away into the desert sand, the entire installation is welded together with plastic sealing tracks. Doing this work is both complex and demand-



*A small section of the enormous installation. On the left in the background is the «Burj Dubai».*

ing, not only because of the extreme heat during the day. Responsibility for laying the HDPE sealing tracks was given to the Dubai company BMC Gulf. BMC Gulf has been instructed to seal off the approximately one-million-square-metre area within six months.



*The gigantic water system, linked by bridges, in map form.*



*Even under extreme conditions, the reliable ASTRO provides perfect weld quality.*

**Speed decides**

There is no doubt that meeting this goal depends on the capability of the equipment being used. When it came to choosing automatic welding machines, BMC Gulf placed their trust in the Swiss technology provided by Leister Process Technologies. The hot-wedge welding machines used, not only brave the extreme outdoor temperatures, they work more economically and continuously than all of their competitors. At welding speeds of up to 5m/min., the ASTRO welds twice as fast as other products, making it one of the fastest hot-wedge welding machine in the world. On certain days in Dubai, the ASTROs produce an unbelievable output of 27,000 square metres a day

**Impressive performance**

In addition to the high welding capacity and the perfect quality of the welding seams, BMC Gulf were particularly impressed with the simple handling characteristics of the

ASTRO. Digital readouts of temperature, speed and supply voltage allow all of the relevant parameters to be checked easily at any time. The infinitely variable welding pressure adjustment allows the pressure to be precisely matched to the material. The sturdy construction of the ASTRO provides welding pressures up to 1,500 N (150 kg). Materials up to 3 mm thick can be joined with ease. It is hardly surprising, that BMC Gulf was more than happy with the performance of the Leister welding machines.



*The ASTRO welds the HD-PE sealing tracks at a speed of up to 5 m/min.*

**One-stop shopping**

In addition to the ASTRO hot wedge welding machines, BMC Gulf has been using Leister hot air hand tools, automatic welding machines and handheld welding extruders for a long time. They now have the advantage of being able to obtain all of the equipment for welding plastic sealing tracks from one supplier. This means that Leister can



*The TRIAC is also used for tacking of plastic covers.*



*The WELDPLAST S4 whilst joining the plastic sealing tracks to the shore boarding.*

provide the customer with comprehensive service and support. The tried and tested TRIAC hot air hand tool is used in Dubai to tack on the plastic covers over the attachment bolts. Then the Leister handheld extruders are used to weld the application seams on the covers. The innovative handheld extruders WELDPLAST S4 and FUSION 3 are used for connecting the beds of the HD-PE



*The injector needle is used to check the integrity of the (perfectly) welded seam.*

tracks with the vertical shoreline boarding. They allow neat and economical welding of the connections with an output of up to 4 kg/h of extrudate.

### **A fascinating installation**

The Lagoons is being built primarily for affluent buyers from the West. Not only villas, but hotels and company headquarters for investors mainly from abroad, are being planned. The patron in this case, as in most large-scale projects in Dubai, is Sheik Mohammed bin Rashid al Maktoum. Once this fascinating water installation has been completed there will be little visual evidence of the engineering and expense involved in the completion of this project. However BMC Gulf will be able to boast that they made a significant contribution to the project with the help of equipment from Leister.



*A fascinating artificial world: the model gives an impression of the scale of «The Lagoons».*

### **Statement by Farhan Faridooni, CEO of Sama Dubai:**

*We are proud of our first project in Dubai. The Lagoons impresses with its unique advantages. It is one of the first in Dubai which has dedicated itself to environmental principles and implemented them consistently. The develop-*

*ment of this enormous area was undertaken with close collaboration with various local and international organizations, among them the World Wide Fund for Nature (WWF).*

**Object:** «The Lagoons», Dubai  
**Material:** 1.2 km<sup>2</sup> HD-PE, 1.5 mm  
**Weld seam length:** approx. 170 km

**Purchaser:** Sama Dubai  
**Installer company:** BMC Gulf LLC  
**Equipment supplier:** Leister Process Technologies

**Author:** Christophe von Arx, Leister Process Technologies  
**Photos:** Roland von Ah, Leister Process Technologies



®

**Headquarters:**

Leister Process Technologies  
Galileostrasse 10  
6056 Kaegiswil/Switzerland

phone: +41 41 662 74 74  
fax: +41 41 662 74 16  
leister@leister.com

[www.leister.com](http://www.leister.com)

Leister Process Technologies is an **ISO 9001:2000** certified company.

.

•

.

Our close worldwide network of more than 120 Sales and Service Centres in more than 60 countries.