



Concrete moves...



OSLO  
June 7 - June 8 2018



Concrete contribution to  
a changing world

**ERMCO**  
EUROPEAN READY MIXED CONCRETE ORGANIZATION

## **SHELL DESIGN, MORE EFFICIENT UTILIZATION OF CONCRETE FOR NEW APPLICATIONS AS FLOATING CITIES**

**T.O.Olsen<sup>(1)</sup>**

(1) Dr.techn.Olav Olsen, 1325 Lysaker, NOR

### **Abstract**

The world will see an increased activity in the sea; for food, resources, energy, recreation and other reasons. Fortunately, well-designed and well-built concrete structures are robust and sustainable in the marine environment. Also fortunately, we have the experience to make well-designed and well-built marine concrete structures. Some marine concrete structures are permanently floating, some are not. However, most likely the latter ones were afloat during construction. The aspect of weight for floating structures is essential, poorly designed structures will not float. There are many beauties of the sea; two important beauties for marine structures are buoyancy provided by the water and being able to transport on/in the water. The heaviest object ever moved by man displaced 1.5 mill.tons.

**Keywords:** Buoyancy, design, construction, marine environment