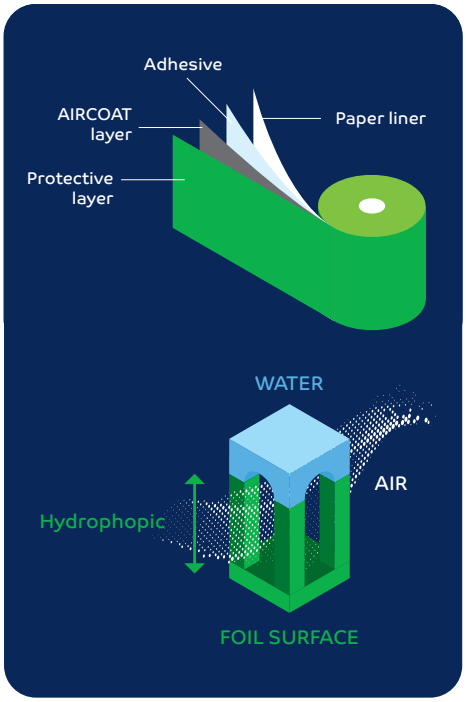
# MATLA FIELD TEST AND BIOFOULING RESULTS

## FIELD TEST OVERVIEW

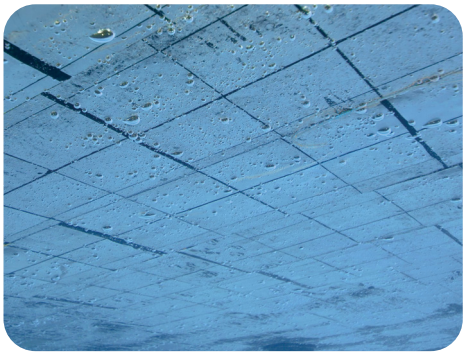
June 2021

1. **AIRCOAT application on a boat** was carried out in June 2021 in Malta.
2. The **AIRCOAT foil** was used on the port side of the vessel while the starboard side was coated with a **control foil.**
3. The vessel was in the Mediterranean Sea for **120 days.**
4. **Photos and videos** of samples were taken and later studies using imaging processing software to analyse the layer.
5. Samples were then studied for **fouling diversity** and then for **cleanability.**




## KEY RESULTS

1. First **successful application** of the AIRCOAT foil on a real world vessel.
2. The **deployment of the AIRCOAT foil on a boat** was successfully demonstrated. Stable adhesion of the foil on the boat was demonstrated.
3. **Air layer stability over days** was successfully demonstrated on a vessel's hull under real navigation conditions.
4. The **air layer remained largely intact** throughout the boat tour.
5. **No fouling** was observed **as long as the air layer was intact.**



Silvery air layer visible on hull.

Team applying AIRCOAT foil

**WATCH THE SHORT EXPERIMENT DOCUMENTARY**

## FIELD TEST RESULTS

### PERFORMANCE UNDER REAL WORLD CONDITIONS:

1. A **full air layer was observed** upon contact with water.
2. Air layer was intact after navigating **for 30 min at 3 knots.**
3. **Photos and video of the intact air layer on the boat** underwater were taken, documenting full air layer **coverage.**
4. Fouling was observed after air layer loss on the boat during long-term experiments in the field.

### AIR LAYER DURABILITY

1. Tests confirmed observation that **smaller structures hold a more stable air layer**, and thus longer air layer retention capabilities.
2. Demonstration of air layer durability on boat tour.
3. **In lab experiment, increased rotational speed reduced the durability** of the air layer, though the cause of air loss remains unclear.

### FOULING GROWTH INHIBITION AND ATTACHMENT STRENGTH

1. Successful prevention of microfouling by the underwater air layer was demonstrated
2. Fouling release properties were achieved and demonstrated for the first time with an air-retaining foil, key for future non-toxic fouling prevention.

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