



## REPAIR CASE: TANK BULKHEAD

### DEFINITION OF A DAMAGE

**Fuel leakage** appeared between water ballast and heavy fuel tanks. The ship needed a fast repair service without losing the unnecessary time for replacing the plating. COMPA Repairs team was asked to assess the damage and recommend a suitable, **cost-effective repair solution** to prevent the leakage.

Prior to the repair process, our team made of engineers and composite specialists investigated the damage parameters and then devised the repair plan using **eCOMPA software**.

### PREPARATION

**Surface preparation** – a proper surface preparation consists of mechanical and chemical treatments. It is mandatory to remove the remains of rust and coating and then to treat the surface to the appropriate roughness level. The surface preparation is essential to ensure good bonding between the steel surface and composite patch.

**Preparation of materials** – cutting the carbon and glass fibres to exact measures and careful mixing of resin and catalyst in the appropriate ratio are needed before the start of the patch application process.

### PATCH APPLICATION

**Application of fibres** – multiple carbon and glass fibre layers mixed with the epoxy resin were placed onto the damaged plating. The cured resin permanently bonded the fibres to the plating, creating a strong and fully solid composite patch.

### RESULTS

The repair was completed in record time without any setbacks. Following the repair, the tank was quickly brought back into the service, demonstrating the **cost and time efficiency** of COMPA Repairs.



CONDITION  
BEFORE REPAIR



SURFACE  
PREPARATION



APPLICATION OF  
GLASS FIBRES



APPLICATION OF  
CARBON FIBRES