

# ICCP Systems for yachts



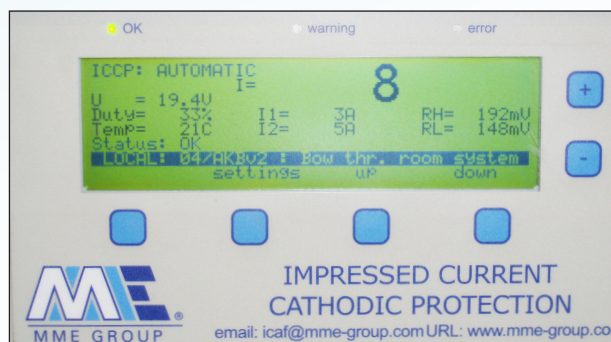
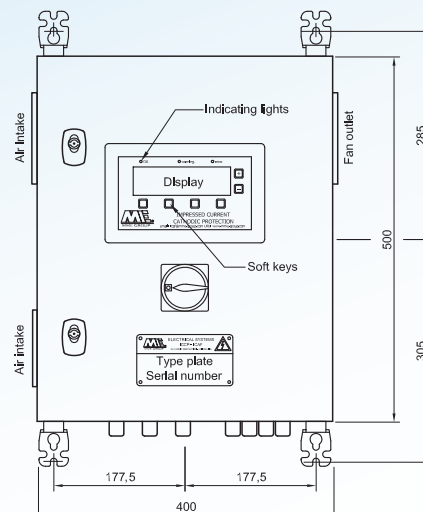
## ICCP50A – Corrosion protection for steel hulls

The prevention and monitoring of corrosion on steel hulled yachts and trawlers by means of Impressed Current Cathodic Protection (ICCP) are part of the core competences of MME Group.

The ICCP50A system uses the latest technology to protect yachts with steel hulls for lengths up to 50 meters against corrosion and exists of the following components:

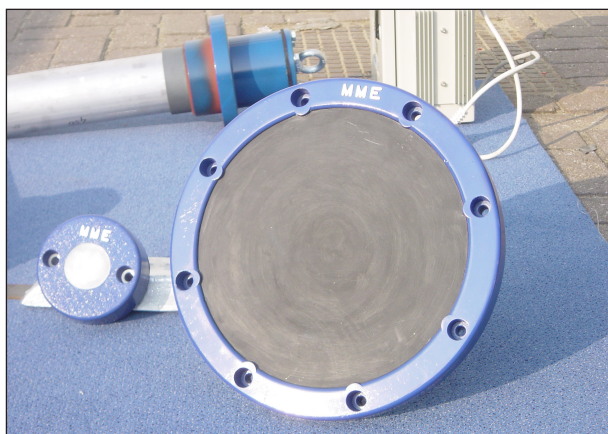
- A compact control panel, high frequency controlled, max. output 50Amps, 230VAC input, 1 phase 50/60Hz, max. 24VDC output
- Flush mounted impressed current anodes (2x) and Flush mounted reference cells (2x) – for a better hydro dynamic performance
- Shaft Grounding system(s) suitable for various shaft diameter to drain any current send out by the ICCP systems and/ or the sacrificial anodes
- Rudder bonding cable(s) to drain any current

The current to the anodes is constantly monitored and adjusted automatically to provide the most optimal level of protection at all times, this contrary to the conventional sacrificial anodes where the level of protection cannot be easily verified and thus can be insufficient to prevent corrosion.



### Advantages:

- Anode lifetime of 15 years – unlike sacrificial anodes
- Always the right level of protection, the system compensates for coating damage
- Flush mounted anodes – smooth hull profile/ higher speed/ fuel savings
- Hull protection can be monitored at all times
- Reduced maintenance costs
- The option to monitor and adjust the settings through internet
- Automatic operation, requires minimal attention and demands only a little on crew time.
- Control panel measures only 400mm x 500mm x 200mm



Pilotschip MDV by Hoekman Shipbuilding



# ICAF Systems for yachts



## MAGIC2 – Marine Growth Prevention System for Steel and Aluminium hulls

**The MAGIC2 system eliminates blockages in seawater engine cooling systems caused by marine growth such as mussels and barnacles and has been designed for larger luxury yachts with a number of seawater inlets.**

Marine growth in sea chests, box coolers and seawater piping systems is a potential threat for the performance and condition of your ship or installation. Blockages caused by barnacles and mussels are expensive and time consuming to remove and can have serious consequences. Engines will run at abnormally high temperatures, resulting in unnecessary increased fuel consumption and lower performance.

To combat this risk the MME Impressed Current Anti-Fouling (ICAF) was developed. Once installed it provides low maintenance and continuous (dual) protection against most hard and soft foulings as well as corrosion.

The MAGIC2 utilizes an impressed current, employing steel cathodes and sacrificial copper anodes which are connected electrically to a compact control power unit. The system generates mainly copper ions by electrolysis in seawater, these ions will flow through the system creating an environment which prevents micro-organisms to settle.

The effectiveness of the fouling prevention mainly depends upon the conditions of the water and its flow. Because the latest MME Marine Growth Prevention System (MGPS) can communicate with pumps, PC and Vessel Management Systems, it offers an intelligent solution for fouling and corrosion problems that occur in (cooling) water systems.



courtesy of Oceanco



### Key Benefits of the MME ICAF System:

- Efficient operation of cooling water (and, if applicable, fire fighting system)
- Dual action function; anti-fouling prevention and corrosion protection
- Easy to install at retrofit or during new-construction
- Easy to maintain as of automatic operation
- Cost effective, elimination of pipework cleaning
- Several ranges to suit vessels of every size
- Better protection against fouling because of regular boost

