

The Enhanced Fuel Switch (EFS) module is the further development of the well-known MAN fuel oil module. It is especially designed to comply with most stringent existing and potential future emission regulations.

### **Benefits at a glance**

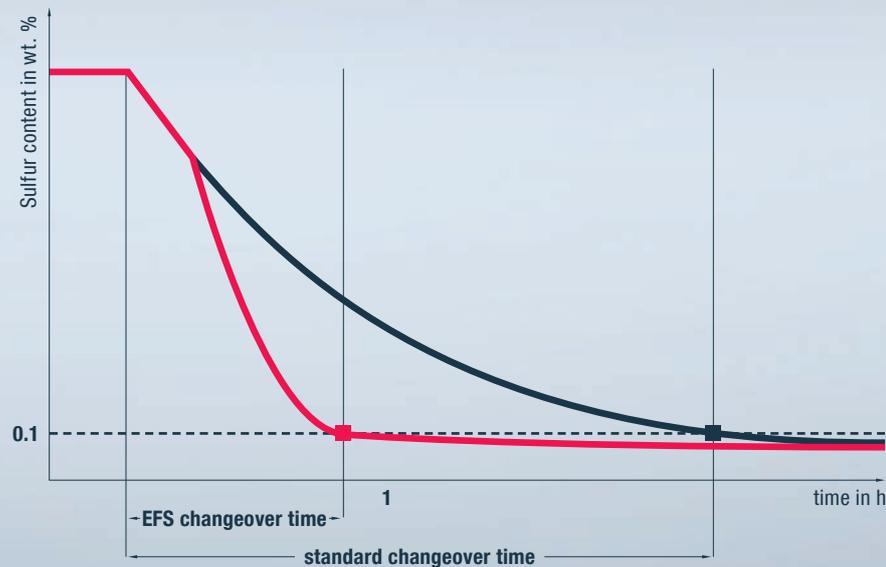
- Changeover in less than one hour
- Reduces fuel costs
- No loss of propulsion power
- Fully automated changeover and self-monitoring
- Does not depend on engine load and bunkered fuel
- Feedback of successful changeover

# MAN EFS

## Schematic world map of Emission Control Areas (ECA)



## Changeover time vs. sulfur content



The EFS module enables a quick and automated changeover from heavy fuel oil to a fuel oil with a low sulfur content before entering an Emission Control Area (ECA). With this module the ship operator does not have to calculate when to start the process because the changeover has a fixed time and it is independent of the actual engine load and bunkered fuel.

Heavy fuel oil is replaced by diesel oil after a defined cooling phase, while complying with all engine operating parameters. This patented process enables a changeover in less time.

- User knows exactly when to change from heavy fuel oil to diesel oil
- Ship can run longer with cheaper fuel
- Reliable and safe engine operation