Exhaust Gas Cleaning Systems

Description

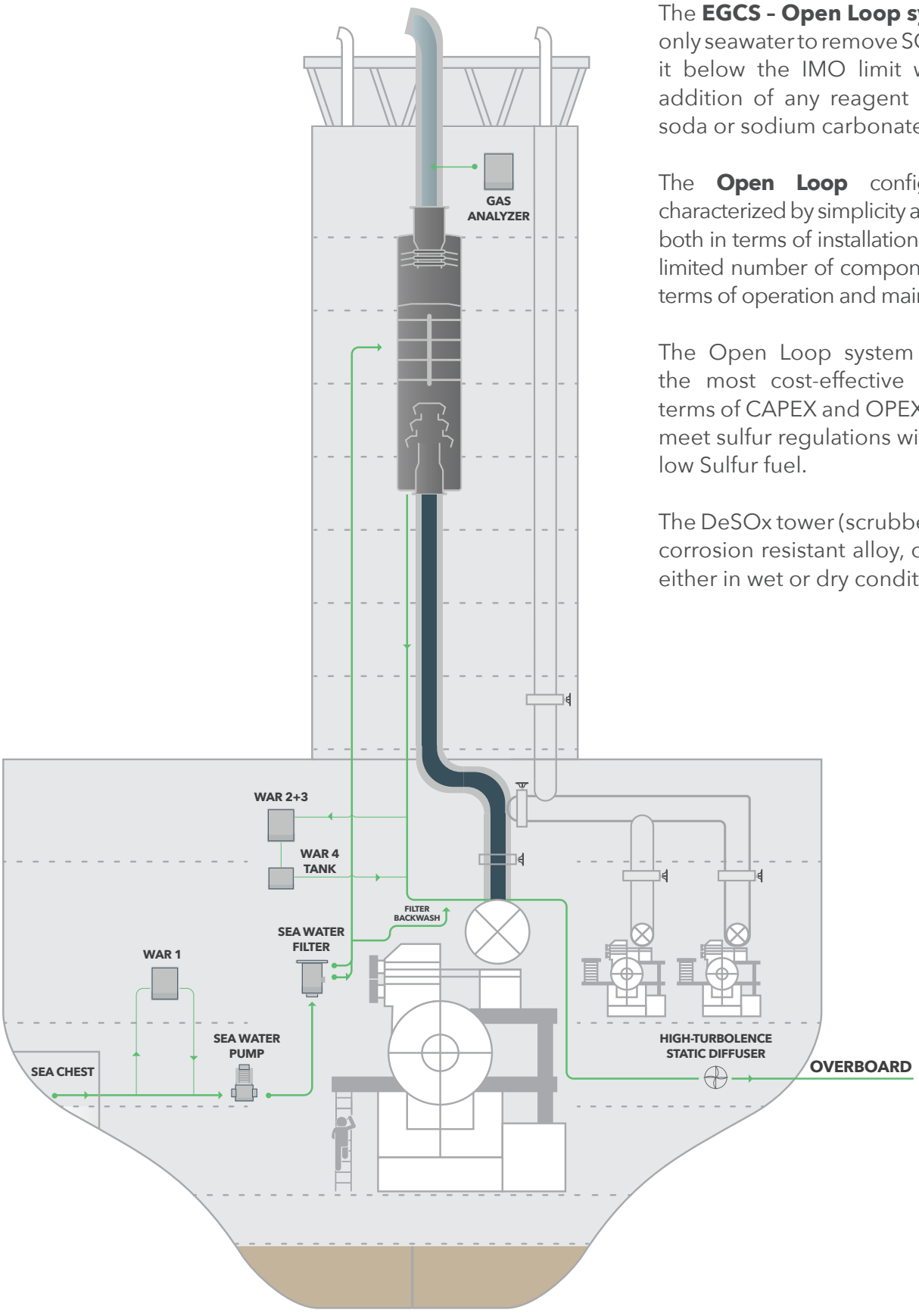
Ecospray specializes in the **design, supply, and installation of exhaust gas cleaning systems (EGCSs)** for the removal of sulfur dioxide (SO_2) from ship exhaust gases.

These systems enable vessels to continue using high-sulfur fuels while meeting the IMO emission limits, representing also the **first step of onboard carbon capture system**.

A wide range of EGCS is available to meet all DeSOx needs to turn your fleet green:

- **Open Loop and Hybrid**
- **Carbon Capture ready**
- **Inline and U-Type configuration**
- **From 1750 to 5600 mm in diameter**
- **From 5 to 70 MW rated engines power**

The EGCS Open Loop system



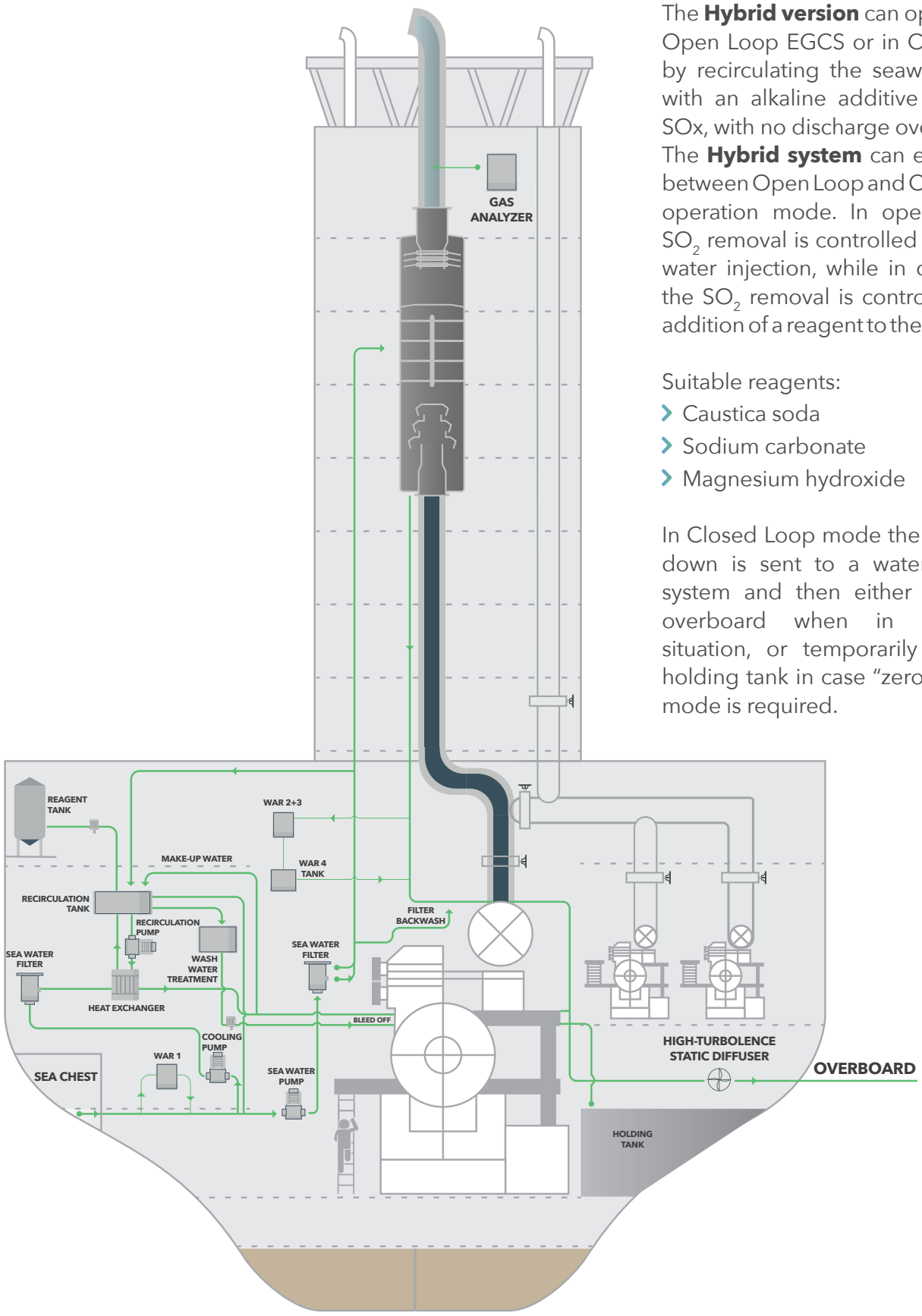
The **EGCS – Open Loop system** uses only seawater to remove SOx bringing it below the IMO limit without the addition of any reagent like caustic soda or sodium carbonate.

The **Open Loop** configuration is characterized by simplicity and flexibility both in terms of installation, thanks to a limited number of components, and in terms of operation and maintenance.

The Open Loop system represents the most cost-effective solution in terms of CAPEX and OPEX in order to meet sulfur regulations without using low Sulfur fuel.

The DeSOx tower (scrubber), made in corrosion resistant alloy, can operate either in wet or dry conditions.

The EGCS Hybrid system



The **Hybrid version** can operate as an Open Loop EGCS or in Closed Loop by recirculating the seawater added with an alkaline additive to remove SOx, with no discharge overboard.
The **Hybrid system** can easily switch between Open Loop and Closed-Loop operation mode. In open-loop, the SO_2 removal is controlled only by sea water injection, while in closed loop the SO_2 removal is controlled by the addition of a reagent to the wash water.

Suitable reagents:

- Caustica soda
- Sodium carbonate
- Magnesium hydroxide

In Closed Loop mode the water blow down is sent to a water treatment system and then either discharged overboard when in compliance situation, or temporarily sent to a holding tank in case "zero-discharge" mode is required.

Inline

Maximum nominal power	Tower size	Tower diameter (D)	Tower height (H)	Avg. El. Power consumption
MW	-	*mm*	*mm*	*kW*
6	**1750**	1.750	8.000	
8	**2000**	2.000	9.800	110
9	**2100**	2.100	8.400	125
10	**2200**	2.200	10.200	140
12	**2400**	2.400	10.500	175
14	**2600**	2.600	10.800	210
16	**2800**	2.800	11.000	255
18	**3000**	3.000	11.200	290
20	**3200**	3.200	11.500	300
23	**3400**	3.400	11.000	345
26	**3600**	3.600	11.500	390

U-Type

Maximum nominal power	Tower size	Tower diameter (D)	Tower height (H)	Tower width (W)	Dry weight	Avg. El. Power consumption
MW	-	*mm*	*mm*	*mm*	*Kg*	*kW*
6	**1800**	1.800	8.370	8.370	8.000	90
8	**2000**	2.000	9.260	9.260	9.800	110
10	**2200**	2.200	8.900	8.900	8.400	125
12	**2400**	2.400	9.200	9.200	10.200	140
14	**2600**	2.600	8.900	8.900	10.500	175
16	**2800**	2.800	7.700	7.700	10.800	210
16	**3000**	3.000	8.250	8.250	11.000	255
20	**3200**	3.200	8.800	8.800	11.200	290
23	**3400**	3.400	9.340	9.340	11.500	300
26	**3600**	3.600	9.860	9.860	11.000	345
33	**4000**	4.000	10.800	10.800	11.500	390
39	**4300**	4.300	11.600	8.600	24.600	565
48	**4600**	4.600	12.500	9.200	28.100	695
58	**5000**	5.000	13.500	10.100	34.200	840
70	**5600**	5.600	15.000	11.400	40.900	1.050

Note: not binding weights and dimensions.