

Our Agency Product - Scrubber

Operating Concepts of Scrubber System



1. Open loop

The open loop system uses naturally alkaline sea water to neutralize the sulphur oxides in the exhaust gas. Sea water is supplied from sea chest, pumped through the scrubber tower and distributed to spray nozzles. The used water in compliance with the discharge regulations will then be discharged overboard.

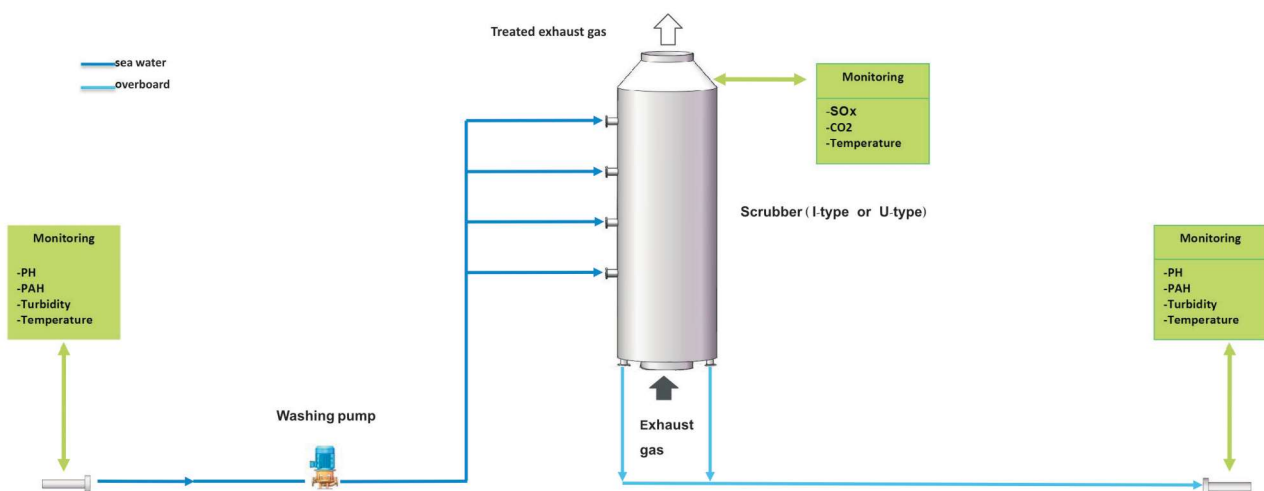
2. Closed-loop

The closed-loop system uses sea water or fresh water in combination with alkaline desulfurating agent to scrub the exhaust gas. The washed water will be cleaned by the water treatment unit whereby the residues are collected to be recycled at shore based facilities and the treated effluent will be discharged overboard in compliance with regulation limits.

3. Hybrid System

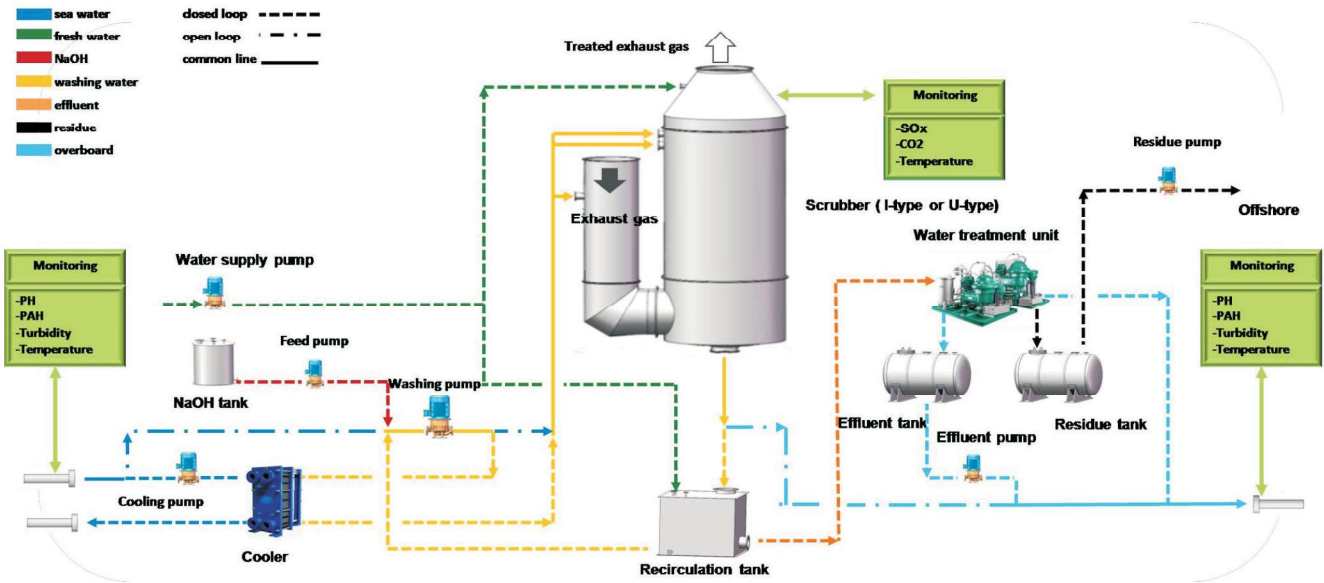
The hybrid system integrates both open loop and closed-loop, which is optional depending on different emission and wash water limits in different sailing areas.

Open Loop



Our Agency Product - Scrubber

Closed-loop + Hybrid System



Scrubber Types



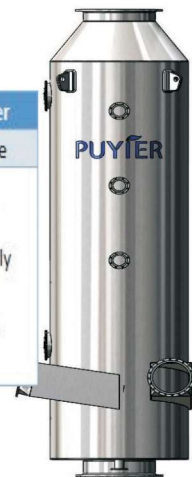
U-type scrubber

I-type scrubber



Recommendations regarding the scrubber type:

Vessel type	Container vessel	Bulk carrier	Tanker
Recommendation	U-type/I-type	U-type	U-type
Remarks	<p>1 The adoption of U-type may cause certain sacrifice of containers, but it has higher security and reliability.</p> <p>2. We recommend U-type as the prior option, while if the damage of container-sacrifice is too large, then the I-type may outdo.</p>	<p>The scrubber could be installed at the back of funnel hatch, so generally there would be none or little container sacrifice.</p>	



Our Agency Product - GRE Piping

Pipelines System Major Products

The available dimension for pipe and fitting: 25~1,100mm (1"~44")



NON - CONDUCTIVE GRE PIPE



CONDUCTIVE GRE PIPE



Technical Parameter

Product Range:	25~1100mm(1"~44")
Pressure Rating:	10bar—50bar
Temperature Range:	93°C/200°F
Specific Gravity:	1.8-2.2
Poisson's ratio:	0.38
Flow Characteristics:	150
Conductive Pipe System:	Non-Conductive and Conductive version
Inner Corrosion Barrier:	20 mil , 0.5mm resin rich liner 0.5mm
Fire-resistance:	L3 by IMO A.753(18) and Jet Fire by OTI 95634
Joint methods:	Flanged Joint , Straight socket, Double Orings Joint , Straub Coupling , Taped Jointetc.

Our Agency Product - GRE Piping

GRE FITTING FACILITY

Semi-auto winding lines * 11

Product Range:

1" ~ 18" (DN25 – DN450)

Capacity: 35,000EA/ Year

20" ~44" (DN500 – DN1,100)

Capacity: 5,000EA/ Year

Categories:

Flange; Elbow; TEE

Reducer; Coupling;

Expansion Coupling;

Saddle etc

Dimension control in prefabrication process

