What is claimed is:

1. An air lubrication system for ships adapted to reduce frictional resistance applied to a hull of a ship during navigation of the ship, the air lubrication system comprising:

multiple air chambers disposed on a ship bottom; and

a main supply line adapted to supply compressed air to the multiple air chambers,

wherein at least part of scavenge air to be supplied to a main engine is supplied to the multiple air chambers,

further comprising:

an air compressor disposed on the main supply line upstream of a connection point of a scavenge air bypass line to the main supply line and generating compressed air; and

a first valve disposed between the air compressor and the connection point of the scavenge air bypass line to the main supply line,

wherein the ship is provided with a turbocharger compressing suctioned air using an emission gas discharged from the main engine and a scavenge air supply line connecting the turbocharger to the main engine to supply the compressed air as scavenge air of the main engine, and further comprises the scavenge air bypass line branched off of the scavenge air supply line and connected to the main supply line,

wherein when the amount of the scavenge air supplied to the main supply line through the scavenge air bypass line is small or when pressure of air supplied to the multiple air chambers is low, the air compressor is operated and the first valve is open to provide a sufficient amount of the compressed air to mix with the scavenge air to form a stream of air, and the stream of air is applied to the multiple air chambers through the main supply line.

2. The air lubrication system for ships according to claim 1, further comprising:

an air cooler disposed on the main supply line and cooling the air supplied to the multiple air chambers,

wherein the scavenge air bypass line is disposed upstream of the cooler on the main supply line.

3. The air lubrication system for ships according to claim 1, wherein the scavenge air supply line is provided with a cooler cooling the air compressed through the turbocharger and a scavenge air receiver disposed downstream of the cooler and storing the scavenge air,

the scavenge air bypass line being branched between the cooler and the scavenge air receiver.

4. The air lubrication system for ships according to claim 1, further comprising:

a scavenge valve disposed on the scavenge air bypass line and controlling supply of the scavenge air to the main supply line.

5. The air lubrication system for ships according to claim 4, wherein the scavenge valve is controlled to be shut off in an IMO Nox Tier III Mode or under low load conditions of the main engine.

6. The air lubrication system for ships according to claim 1, further comprising:

an overboard discharge line branched off of the main supply line and adapted to discharge the compressed air from the ship instead of supplying the compressed air to the multiple air chambers; and

a blow-off valve disposed on the overboard discharge line.