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### **FLEET ENVIRONMENTAL FOOTPRINT:**

#### **ADVANCED TECHNOLOGY IN THE CRUISE INDUSTRY**

Cruise tourism enables tourists to experience various destinations and enjoy relaxation in a “floating hotel”. This sphere of international tourism is becoming more popular all over the world.

Meanwhile, ecologists keep sounding the alarm, because they believe, that large ships are among the main sources of pollution today. This fact is proved by the study initiated by the “European Transport and Environment Federation” (T&E), which is based on data of non-governmental organizations. According to one of the reports, the volume of emissions from cruise ships of only one tour operator—the Carnival Corporation —in 2017 was ten times more than from 260 million European cars. The main reason of statistics is the type of fuel, which pollutes the atmosphere with sulphur and nitrogen oxides. Although, some cruise supporters think it’s totally fake and misleading. Since 1999 ships in the Mediterranean region have been obliged to use low sulphur combustibles [1, 2].

The paper aims at highlighting advanced technology in the cruise industry.

Recently MSC cruise company has become the world’s first global cruise line to go carbon neutral [4].

It strives to implement advanced environmental technology that will allow for zero-emissions ship operations. Becoming carbon neutral is achieved by calculating a carbon footprint and reducing it to zero through a combination of in-house

efficiency measures. Moreover, a cruise line invests in ship-shore power technology while in port and use power saving technology onboard its ships.

Executive managers of the company focus their attention on technological innovations since 2003 to ensure the highest environmentally performing. Due to their strength, energy and investments the line is planning to achieve a fleet-wide 29% reduction in carbon intensity (rate) by 2024 and 40% reduction by 2030 [2, 4].

One more innovation deals with the “old ironing”, which allows the ship to plug directly into the ports electrical supply rather than keep their generators running.

Seventeen liners of the company are equipped for cleaner emissions with Exhaust Gas Cleaning Systems. Among other impressive achievements of the fleet environmental footprint are the following outcomes:

- ✓ compliance with the strictest current and new maritime regulations;
- ✓ usage of liquified natural gas (LNG);
- ✓ usage of renewable sources of energy;
- ✓ development of a carbon offset portfolio [4];
- ✓ protection and restoration of ocean and coastal habitats;
- ✓ investment in ecological projects;
- ✓ support of the UN sustainable development goals;
- ✓ support the next-generation technologies [3].

To sum up, most of the cruise companies have a long history of maritime heritage. They are interested in positive fleet environmental footprint and promote advanced technology in the cruise industry to support the UN sustainable development goals and meet the needs of the world’s population.

## REFERENCES

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