MODULE 2

PODCAST:
HYDROGEN IN TRANSIT: FUTURE STORAGE AND TRANSPORTATION SOLUTIONS

QUIZ

Below, you will find multiple-choice test questions designed to reinforce your understanding of the podcast "Hydrogen on the Move: Storage and Transport of the Future." Please select the single most accurate answer. Best of luck!

Question 1: Which type of hydrogen tank is the most technologically advanced, lightweight, and most frequently utilized in contemporary hydrogen-powered vehicles?

A. Type I
B. Type II
C. Type III
D. Type IV

Question 2: What temperature is necessary to condense hydrogen into liquid form (LH2)?

A. Approximately -183°C
B. Approximately -253°C
C. Approximately 0°C
D. Approximately -78°C

Question 3: What is the term for the phenomenon of ongoing, gradual evaporation of liquid hydrogen from cryogenic tanks, despite the presence of insulation?

A. Cryogenic Boil
B. Evaporation Loss
C. Boil-off
D. Phase Transition

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Question 4: Which hydrogen storage technology (compressed or liquid) requires significantly more energy in the preparation process for storage?

A. Compressed hydrogen
B. Liquid hydrogen
C. Both are equally energy-intensive
D. Neither requires substantial energy inputs

Question 5: Which international agreement governs the secure transportation of hazardous materials, including hydrogen, by road in Europe?

A. ISO 14001
B. IMDG Code
C. ADR
D. SOLAS Convention

Question 6: Which mode of hydrogen transport (road, rail, sea) is the most economically and logistically efficient for the transportation of substantial quantities over extensive global distances?

A. Road transportation
B. Rail transportation
C. Maritime transportation
D. All are equally efficient for global distances

Question 7: What is the primary advantage of storing hydrogen in liquid form (LH2) as opposed to compressed hydrogen regarding spatial efficiency?

A. Reduced storage pressure
B. No requirement for specialized tanks
C. Significantly higher volumetric energy density
D. Simplified tank filling

Question 8: Which of the following factors holds the greatest significance when determining a specific type of tank and method for hydrogen transportation?

A. Cost of tank acquisition
B. Preferred color for transport vehicles
C. Necessary capacity, application (mobile/stationary), distance, and budget
D. Brand of equipment manufacturer

Question 9: The transportation of hydrogen in the form of ammonia (NH3) or MCH (methylcyclohexane) exemplifies hydrogen transport as:

A. Compressed hydrogen gas
B. Liquid hydrogen
C. Hydrogen as a chemical carrier
D. Hydrogen transported via pipeline

Question 10: Which of the following represents an example of an operating cost (OPEX) within a hydrogen logistics system?

A. Expense of constructing a warehouse
B. Acquisition of a fleet of transport tanks
C. Energy expenditure for compressing or liquefying hydrogen
D. Fee for obtaining an operational license

ANSWER KEY

1.D / 2.B / 3.C / 4.B / 5.C / 6.C / 7.C / 8.C / 9.C / 10.C /

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