



Sustainability Questions

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Description

Ethical questions concerning sustainability of light weight electric cars from the case study "Ethical Issues in the Design of Ultra-Lightweight Vehicles."

Body

These are the questions that correspond to the sustainability portion of the ethics case study:

1. Are engineers ethically obligated to consider sustainability in their designs? Why or why not?
2. Defining sustainability is the first critical step in developing a plan for a sustainable product. This definition is not ethically neutral because such a determination implies a choice to include some aspects of sustainability, while ultimately rejecting others. Discuss the ethical dilemmas that could be faced by designers of lightweight cars attempting to define automobile sustainability.
3. Some elements of sustainability can be difficult to combine, for example lightweight materials are difficult to recycle or electric cars are very heavy but do not pollute the atmosphere. In your opinion do you think sustainable cars are feasible? Why or why not?
4. In the United States, there are no laws mandating that car manufacturers recycle any portion of automobiles, yet 97% of cars that reach their end of useful life are recycled and in general, 75% of the materials in these cars are

recyclable. Recycled steel is very profitable in the United States, and in general, landfill costs are much lower in the U.S. than in Europe. Should the United States move in the direction that requires manufacturers make all cars 95% recyclable? Why or why not?

Notes

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Case Study / Scenario

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Public Health and Safety

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Discipline(s)

Engineering

Mechanical Engineering