Team B

Water purification

Our project is an interdisciplinary project. So we have formed two teams. Team A will work on generation of electricity and Team B on water purification.

Objective:

- Our plan is to utilize the energy of the exhaust gas to produce electricity and pure water.
- If our plan is feasible then we will work with petrol/diesel engine first. If the outcomes are satisfactory then we will work on biogas engine.
- We have not thought of installing this in a vehicle but to put up a separate unit with engine a key component.

Approach:

In our ITSP project we are looking first to use electrical heaters as a source of hot air as getting a petrol/diesel engine doesn't seem feasible at the

moment. We will use the hot air to rotate the turbo which is also connected to dynamo. Then hot gases are passed through a steam generator where most of their heat is extracted. Then the steam is condensed to get pure water with the help of coolant. The heated coolant is then used to heat water in a separate compartment. The heated water is then fed to steam generator.

Broad Vision:

If we are successful with our model in generating appreciable amount of pure water and electricity then we will try to implement our model with a real petrol/diesel vehicle engine as the source of the exhaust gases/hot air which is our original objective.

Components Required:

- Engine/hot air blower
- Dynamo
- Turbo
- Ceramics
- Metal Pipes
- Coolants

Expected cost: ₹30,000