**THE ENGINE**

The word engine originally meant any ingenious device, and came from the eek word ingenious, clever. Any kind of vehicle must be able to move. The ability to move demands power. A machine that produces mechanical power or energy is led an engine or a power plant.

Engines present one of the most interesting groups of problems considered in the engineering field. One of the main problems is receiving the maximum possible power or thrust for minimum weight. The weight is included in the factor called the weight/power ratio, which may be defined as the weight in pounds per horse power output.

Another important problem is that of fuel. Both in the past and today the designers work at the problem of getting lower specific fuel consumption. Specific fuel consumption is obtained by dividing the weight of the fuel burned per hour by the horse power developed.

Another possible problem considered in any engine is its flexibility. Flexibility is the ability of the engine to run smoothly and perform properly at all speeds and through all variations of atmospheric conditions.

One more important problem worked at by the designers is the engine reliability. The engine is to have a long life, with maximum of time between overhaul periods. In some cases the problem of balance is one of the main. Balance has several possible meanings but the principle factor is freedom from vibration. Besides any engine must be started easily and carry its full load in a few minutes. There are gasoline engines, diesel engines, gas turbines, steam engines, jet engines and rocket engines. Each of them has certain advantages and disadvantages over other forms of power plants.

 **Переведите и письменно ответьте на вопросы по тексту**.

1. What did the word "engine" originally mean?
2. What machine is called an engine or a power plant?
3. What is one of the main problems engines present?
4. What is the weight\power ratio?
5. What is flexibility of the engine?
6. Do the designers work at the engine reliability?
7. What engines do you know?