can tell the pupils to write short letters to each other, so each person has a reader. You can get them to practice different vocabulary with pairs such as the following – Lungs writing to their Smoker or A Waterfall writing to its River. The next activity is connected with tapering dialogues. All the pupils work in pairs, with each pupil using a separate sheet of paper. They start with seven-word utterances and end with one-word ones, at each stage swapping their papers. Of course, the exercise can be done the other way round, starting with one word utterances and going up to seven The number-of-words rule forces the pupils to explore what they know of the structure of the language. Sometimes it is recommended that teachers should make a wide use of SMARTBOARD as a means of forming a complex visual-tactile working environment for the pupil [1]. For example, pupil creates a graphic image, incorporates it into a word processor, and completes an illustrated story that can be printed out or posted to the Internet. Or teacher shows a video clip downloaded from the Internet and uses it for vocabulary generation, grammar study, speaking practice and follow-up writing assignments. One of them can be creating either an «Up and Down» or a «Diamond Poem» related to the video clip they just saw. Another is doing further research on some aspect of the film and producing a product that moves the class ahead in their understanding of the issues presented in the movie. Enjoy watching your pupils begin to actually write in English to say something to another human being. Enjoy the way this sort of contagious process helps you to relax and enjoy your class. As practice shows, the application of modern technologies enriches the content of the educational process, increases pupils' motivation to learn English and promotes a close cooperation between the teacher and pupils [2].

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ПОГРАНИЧНЫЙ СЛОЙ ВЯЗКОЙ ЖИДКОСТИ

Несмелова И.К., Першина Е.Ю.

Комсомольский-на-Амуре государственный технический университет, Комсомольск-на-Амуре, e-mail: irish-ka_4211@mail.ru

By consideration of the general problem of viscous liquid dynamics (item 32) it was noted that its effective decision is possible at movement of bodies (a liquid flow) with Reynolds numbers when viscosity of liquid is small, and its speed is rather great. In this case influence of viscosity forces as numerous experiments show considerably affects only in the relative thin layer of liquid adjacent to a surface of a body and called an interface, and also in rather small area behind a body, called a concomitant stream or a hydrodynamic trace. Out of an interface and a concomitant stream the influence of viscosity forces in comparison with inertia and pressure forces is so little that it is possible to neglect them and, considering liquid is nonviscous to determine such important characteristics of a stream, as pressure and speeds by formulas of nonviscous liquid dynamics.

However, the interface subtlety doesn't at all mean that forces of viscosity operating from a layer on a body are very small. Speed of a current of liquid across an interface significantly changes: it is equal in points of a body surface to zero owing to a boundary condition of «sticking of particles», and on border of a layer is almost identical with a speed of an external stream of the nonviscous liquid which is flowing round a body. Therefore, the speed gradient on a normal to a body surface in each its point can be rather great. But then the tangent tensions operating on a surface of a body have to be rather great, and their resultant is friction force.

The liquid current in an interface can be both as laminar and turbulent. Crossing of the current from laminar to the turbulent happens as at liquid movement in a pipe by reaching Reynolds number to critical value. This value significantly depends on the sizes of a body and for ship hulls have an order 10^6. It can be reached at some distance from a front end of a body, then a liquid current in an interface located in fore part of a ship will be laminar; then rather narrow transitional zone with the stream transformed in turbulent follows. In back end of a body the current in an interface will be turbulent. Existence of various modes of a current and transitional zone complicate research and calculation of an interface and power impact of a viscous liquid on a body moving in it, in particular, the vessel hull.

ПОСТРОЕНИЕ МОДЕЛИ ПОЛЁТА КОСМИЧЕСКОГО АППАРАТА

Фирсов С.В., Першина Е.Ю.

Комсомольский-на-Амуре государственный технический университет, Комсомольск-на-Амуре, e-mail: firsov.s@mail.ru

In this paper we consider the construction and the solution of mathematical model of the spacecraft control with the help of a set of jet engines, as well as the working out the software product, which will carry out necessary calculations in accordance with the initial data and visualize the process.

This work can be divided into several stages. The first one is to consider the influence of the engine on the kinematic characteristics of these spacecraft. That is exactly how the motor runs depending on their settings, such as location, direction and how power thrust will affect the movement and rotation of the spacecraft. On the other hand, what force and moment will create a running engine?

The purpose of the second stage is to make a mathematical model that describes the behavior of a spacecraft in a certain period of time. That is, compile by the laws of the displacement and rotation of the body depending on the operating engine.

In the third stage we consider the problem of constructing an optimal trajectory of the spacecraft as a function of available resources, and the initial and final flight data. That is what engines, when and how much to work out, how would the spacecraft change its initial position, orientation in space and the speed of movement and rotation in their final results. And we will need to find an optimal solution for three cases:

1) the most rapid attainment of final parameters;

2) the lowest fuel consumption;

3) the lowest fuel consumption at the earliest possible achievement of final parameters.

The fourth and last stage consists in designing and creating software which will be implemented, building model, and also rendering the flight of the vehicle and its engine. That is when you make the initial data on the spacecraft and initial and final parameters of the system, the software should make a plan to enable or disable certain engines that have a spacecraft, depending on the model chosen to optimize the flight and come from the initial to the final state in some way.