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АНГЛИЙСКИЙ ЯЗЫК

**Некоторые трудности перевода
с английского на русский язык
литературы по специальности
«Охрана окружающей среды»**

Учебно-методическое пособие

**Санкт-Петербург
2017**

МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РОССИЙСКОЙ ФЕДЕРАЦИИ

**ФЕДЕРАЛЬНОЕ ГОСУДАРСТВЕННОЕ БЮДЖЕТНОЕ ОБРАЗОВАТЕЛЬНОЕ
УЧРЕЖДЕНИЕ ВЫСШЕГО ПРОФЕССИОНАЛЬНОГО ОБРАЗОВАНИЯ**

**«САНКТ-ПЕТЕРБУРГСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ
ПРОМЫШЛЕННЫХ ТЕХНОЛОГИЙ И ДИЗАЙНА»**

ВЫСШАЯ ШКОЛА ТЕХНОЛОГИИ И ЭНЕРГЕТИКИ

В.В. КИРИЛЛОВА, Т.В. ЛИОРЕНЦЕВИЧ, А.М. ЗНАМЕНСКАЯ

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Пособие содержит грамматические таблицы, охватывающие основные грамматические правила и упражнения для усвоения.

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ПРЕДИСЛОВИЕ

Настоящее учебно-методическое пособие предназначено для студентов института технологии, обучающихся по направлениям подготовки 20.03.01 «Техносферная безопасность» и 18.03.02 «Энерго- и ресурсосберегающие процессы в химической технологии, нефтехимии и биотехнологии», имеет целью развитие навыков чтения и перевода специальной литературы.

Пособие посвящено повторению и освоению наиболее распространённых грамматических структур, встречающихся в литературе по охране окружающей среды и вызывающих трудность при переводе. Рассматриваемые грамматические структуры представлены в виде таблиц. Особенности их перевода связаны с морфологической характеристикой и синтаксической функцией. Упражнения построены на лексике по специальности, состоят из предложений, заимствованных из соответствующей литературы.

Прилагаемый словарь содержит слова, встречающиеся в упражнениях в их контекстуальном значении, и облегчает работу над переводом.

Таблица 1

Времена глагола в действительном залоге

Время		Утвердительная форма	Вопросительная форма	Отрицательная форма
Simple	Present (настоящее)	I ask. – Я спрашиваю. He (she) asks. – Он (она) спрашивает. We (you, they) ask. – Мы (вы, они) спрашивают.	Do I ask? Does he (she) ask? Do we (you, they) ask?	I do not ask. He (she) does not ask. We (you, they) do not ask.
	Past (прошедшее)	I asked. – Я спросил. He (she) asked. – Он (она) спросил(а). We (you, they) asked. – Мы (вы, они) спросили.	Did I ask? Did he (she) ask? Did we (you, they) ask?	I did not ask. He (she) did not ask. We (you, they) did not ask.
	Future (будущее)	I shall ask. – Я спрошу. He (she) will ask. – Он (она) спросит. We shall ask. – Мы спросим. You (they) will ask. – Вы спросите (они спросят).	Shall I ask? Will he (she) ask? Shall we ask? Will you (they) ask?	I shall not ask. He (she) will not ask. We shall not ask. You (they) will not ask.

Продолжение табл. 1

Время		Утвердительная форма	Вопросительная форма	Отрицательная форма
Continuous	Present (настоящее)	I am asking. – Я спрашиваю. He (she) is asking. – Он (она) спрашивает. We (you, they) are asking. – Мы (вы, они) спрашиваем (-ете, -ют).	Am I asking? Is he (she) asking? Are we (you, they) asking?	I am not asking. He (she) is not asking. We (you, they) are not asking.
	Past (прошедшее)	I was asking. – Я спрашивал. He (she) was asking. – Он (она) спрашивал(а). We (you, they) were asking. – Мы (вы, они) спрашивали.	Was I asking? Was he (she) asking? Were we (you, they) asking?	I was not asking. He (she) was not asking. We (you, they) were not asking.
	Future (будущее)	I shall be asking. – Я спрошу (буду спрашивать). He (she) will be asking. – Он (она) спросит (будет спрашивать). We shall be asking. – Мы спросим (будем спрашивать). You (they) will be asking. – Вы (они) спросят (будут спрашивать).	Shall I be asking? Will he be asking? Shall we be asking? Will you (they) be asking?	I shall not be asking. He (she) will not be asking. We shall not be asking. You (they) will not be asking.

Окончание табл. 1

Время		Утвердительная форма	Вопросительная форма	Отрицательная форма
Perfect	Present (настоящее)	<p>I have asked. – Я спросил.</p> <p>He (she) has asked. – Он (она) спросила.</p> <p>We (you, they) have asked. – Мы (вы, они) спросили.</p>	<p>Have I asked?</p> <p>Has he (she) asked?</p> <p>Have we (you, they) asked?</p>	<p>I have not asked.</p> <p>He (she) has not asked.</p> <p>We (you, they) have not asked.</p>
	Past (прошедшее)	<p>I had asked. – Я спросил.</p> <p>He (she) had asked. – Он (она) спросила.</p> <p>We (you, they) had asked. – Мы (вы, они) спросили</p>	<p>Had I asked?</p> <p>Had he (she) asked?</p> <p>Had we (you, they) asked?</p>	<p>I had not asked.</p> <p>He (she) had not asked.</p> <p>We (you, they) had not asked.</p>
	Future (будущее)	<p>I shall have asked. – Я спрошу.</p> <p>He (she) will have asked. – Он (она) спросит.</p> <p>We shall have asked. – Мы спросим.</p> <p>You (they) will have asked. – Вы (они) спросите.</p>	<p>Shall I have asked?</p> <p>Will he (she) have asked?</p> <p>Shall we have asked?</p> <p>Will you (they) have asked?</p>	<p>I shall not have asked.</p> <p>He (she) will not have asked.</p> <p>We shall not have asked.</p> <p>You (they) will not have asked.</p>

Упражнение 1

Вспомните три основные формы некоторых неправильных глаголов.

to be – was, were – been – быть, являться

to become – became – become – становиться

to begin – began – begun – начинать

to come – came – come – приходить

to do – did – done – делать

to fall – fell – fallen – падать

to find – found – found – находить

to fly – flew – flown – летать

to get – got – got – получать

to give – gave – given – давать

to go – went – gone – идти, уходить

to grow – grew – grown – расти

to have – had – had – иметь

to hold – held – held – вешать, держать

to learn – learnt – learnt – учиться, узнавать

to leave – left – left – оставлять, уходить

to lose – lost – lost – терять

to make – made – made – делать

to say – said – said – сказать

to see – saw – seen – видеть

to show – showed – shown – показывать

to speak – spoke – spoken – говорить

to take – took – taken – брать

to tell – told – told – сказать, говорить

to think – thought – thought – думать

Упражнение 2

Поставьте глаголы в скобках в Present Simple. Предложения переведите.

- 1) Our Higher school (to train) qualified engineers capable to operate the most complicated up-to-date technological processes.
- 2) The first-year students (to have) lectures, classes and (work) in the laboratories.
- 3) The students (to take) notes at the lectures as it will help them to read up for their examinations.
- 4) The natural resources (to be) under increasing pressure which (to constitute) a threat to public health and development.
- 5) Nation industrialized economy (to require) large quantities of water.
- 6) The engineer closely (to examine) the results of the operation.
- 7) Men can transform the natural resources so that they (to loose) all resemblance to their original forms.
- 8) The biosphere are complex system (to possess) enormous possibilities for self-regulation.

Упражнение 3

Поставьте глаголы в скобках в Past Simple. Предложения переведите.

- 1) Last year I (to graduate) from the secondary school and I (to enter) the Higher school of technology and power engineering.
- 2) I (to get) interested in Mathematics when I (to be) at secondary school.
- 3) Yesterday it (to take) me an hour to get to our Higher school. I (not to miss) the first lecture and (to arrive) in time.
- 4) In the second half of the nineteenth century the rapid growth of the cities in the Baltic Sea region (to begin) to deteriorate the urban sanitation conditions.
- 5) During the last 100 years we (to drain) thousands of square kilometers of wetland, thus speeding up the water cycle.

- 6) It (to be) necessary to build sewer systems which (to remove) all the impurities from the cities.
- 7) The pollution of the environment, the destruction of ecosystems (to reach) threatening proportions.
- 8) Precise and highly sensitive apparatus (to study) mineral resources in the world.

Упражнение 4

Поставьте глаголы в скобках в Future Simple. Переведите предложения.

- 1) My elder sister (to graduate) from the university next year. The speciality (to be) engineer economist.
- 2) We (to have) our exams in January and then we (to have) vacations.
- 3) Tomorrow the lecture on Chemistry (to begin) at 9.30.
- 4) The immense temperature contrast between the land and the slowly cooling ocean (to result) in coastal hurricanes.
- 5) While there (to be) a sharp fall in the lower layers of the atmosphere the polluted atmosphere as a whole (to become) more heated than now.
- 6) The growing international literature on environmental history and the local material (to provide) good sources for work on environmental history.
- 7) Our country (to apply) the most modern technique of prospecting for natural deposits on a wide scale.
- 8) In this case any toxic material (to pass) through the reactor undiluted and (to kill) biological culture in the reactor.

Упражнение 5

Поставьте глаголы в скобках в Present Continuous или Past Continuous. Учтите, что времена этой группы показывают длительность действия как процесса. Переведите предложения.

- 1) Electronics (to become) increasingly important in all branches of production.
- 2) The Russian scientists (to solve) successfully important problems in Mathematics, Chemistry, Electronics, Medicine and Biology.

- 3) During the flight the astronauts (to observe) the Earth and the sky.
- 4) During the work on this discovery the scientist observed that a small electric current (to flow). He rightly concluded that some electrons (to move) through the vacuum.
- 5) Oxygen delignification and modified cooking (to grow) in importance. 28% of the Kraft pulp in Canada is now produced by oxygen delignification.
- 6) Hydrogen engineering (to develop) by constructing high capacity stations integrated into river systems known as cascades.
- 7) Let us suppose now that a small current (to flow) along a thick metal conductor.
- 8) The spacecraft (to circle) the globe when the newspapers all over the world began to comment its flight.

Упражнение 6

Поставьте глаголы в скобках в Present Perfect. Учтите, что это время употребляется для выражения действия, которое закончилось уже к данному моменту, но еще связано с настоящим. Эта связь часто поддерживается словами never – никогда, already – уже, since – начиная с, lately – недавно, this year (month, week) – в этом году (месяце, на этой неделе) и т.д. Переведите предложения.

- 1) This year I (to enter) the Higher school of technology and power engineering.
- 2) Recently they (to solve) some important problems in the field of artificial radioactivity.
- 3) This method (to find) universal recognition and application in a short period of time.
- 4) Science (to solve) recently many important problems and will solve still more important in the future.
- 5) They (to complete) already their investigation.
- 6) Interest in biomass feedstocks (to grow) significantly in the recent past.

7) These cities contain most of the people who (to suffer) from the pollution of the Baltic Sea.

8) Since 2010 these countries (to develop) many installations to prevent water pollution.

Упражнение 7

Поставьте глаголы в скобках в Past Perfect. Учтите, что это время употребляется для выражения действия в прошлом, которое совершилось ранее другого действия в прошлом. Переведите предложения.

- 1) My friend told me, that he (to see) already the new film.
- 2) When he came to the laboratory they (to finish) already their experiment.
- 3) By the end of the last year he (to collect) some information about the modern discoveries in the field of biology.
- 4) After Beckerel (to make) a great number of experiments he discovered the phenomenon of radioactivity.
- 5) In 1898 the Curies discovered a new substance which they (to receive) during their experiments. They found that it was much more active.
- 6) The author stated that the authorities of the plant (to use) newer treatment operations of water and (to improve) the efficiency of conventional processes.
- 7) The mill (to use) many purifying operations before the wastewaters were discharged in the environment.

Упражнение 8

Поставьте глаголы в скобках в нужном времени. Переведите предложения.

- 1) Every day he (to attend) lectures on Chemistry.
- 2) Yesterday they (not to work) in the laboratory because there was no electricity.
- 3) He (to pass) his examinations well and now he (to rest).
- 4) They (to get) good results which helped them in their work.

- 5) The natural purification of hydrological cycle (to proceed) for more slowly than it does now.
- 6) Future water supplies (to rely) more heavily or reuse and recycle.
- 7) In our time the problem of domestic waste disposal (to acquire) a global nature.
- 8) The most effective method of waste disposal (to be) to utilize it, in other words, to process it industrially.

Страдательный (пассивный) залог

В действительном залоге глагол выражает действие, которое совершает подлежащее.

The student writes the letter. Студент пишет письмо.

В страдательном залоге глагол выражает действие, которое совершается над подлежащим,
(которое подлежащее испытывает).

The letter is written by the student. Письмо написано студентом.

He is given a book. Ему дают книгу.

Страдательный залог образуется из вспомогательного глагола to be в соответствующем времени, числе и лице
+ Participle II (причастие прошедшего времени) спрягаемого глагола.

to be written.

Если после глагола в пассиве есть дополнение с предлогом by, with, то оно указывает, кем или чем производится
действие.

The water is polluted by the chemicals. Вода загрязнена химикатами.

Продолжение табл. 2

Способы перевода	Пример	Перевод
3. Сочетанием глагола «быть» с кратким страдательным причастием с суффиксами -н- или -т-. Глагол «быть» в настоящем времени опускается.	<p>The problem of waste utilization is created by the growth of population.</p> <p>are created</p> <p>was created</p> <p>were created</p> <p>has been created</p> <p>have been created</p> <p>shall/will be created</p> <p>will be created</p>	<p>Проблема утилизации отходов создана ростом населения.</p> <p>созданы</p> <p>была создана</p> <p>были созданы</p> <p>была создана</p> <p>были созданы</p> <p>будет создана</p> <p>будут созданы</p>
4. Глаголом на -ся в соответствующем времени, лице и числе.	The water is purified by bacteria.	Вода очищается бактериями.
5. Глаголом действительного залога в 3 лице множественного числа, в неопределённо-личном предложении.	<p>The wastes are burned at the plant.</p> <p>was burned</p> <p>will be burned</p>	<p>Отходы сжигают на заводе.</p> <p>сжигали</p> <p>будут сжигать</p>

Окончание табл. 2

Правила и способы перевода	Пример	Перевод
<p>4. Глаголы с относящимся к ним предлогом, которые переводятся также глаголами с предлогом:</p> <p>to depend on – зависеть от to insist on – настаивать на to look at – смотреть на to rely on – опираться на to speak of (about) – говорить о to refer to – ссылаться на, называть to deal with – иметь дело с и др.</p> <p>переводятся глаголами в неопределённо-личной форме, причём соответствующий русский предлог ставится перед английским подлежащим.</p>	<p>The problem is much spoken about.</p>	<p>Об этой проблеме много говорят.</p>
<p>5. Глаголы без предлогов, которые переводятся глаголами с предлогом:</p> <p>to affect – влиять на to answer – отвечать на to influence – влиять на to follow – следовать за и др.</p> <p>переводятся глаголами в активном залоге или неопределённо-личной форме, причём соответствующий русский предлог ставится перед английским подлежащим.</p>	<p>The letter was answered immediately.</p>	<p>На письмо ответили немедленно.</p>

Упражнение 1

Переведите предложения, учитывая, что глаголы стоят в пассивном залоге.

- 1) He acknowledged that the river was highly contaminated.
- 2) Severe damage can be inflicted by military operation on the ocean.
- 3) The changes were followed by lowering color and permanganate number and the results are shown in fig.6.
- 4) Oxygen delignification of softwood is now practiced at 11 sites in Canada.
- 5) New mills are generally being designed to meet more stringent future standards.
- 6) Fish habitats are most often affected by a reduction of dissolved oxygen or by toxic substances in the water.
- 7) Many schemes are being used and proposed to promote the construction of treatment plants.
- 8) The ability of water to dissolve oxygen is inversely related to the temperature and is also influenced by salinity.
- 9) Recently more and more attention has been focused on the problem of preserving the environment.
- 10) The countryside has also been affected by the large scale use of insecticides.
- 11) The conventional activated sludge system contains a tank for wastewater aeration which is followed by a secondary settle and solids recycle line.
- 12) Wastewater flow is also affected by the characteristics of the area being served.

Упражнение 2

Переведите предложения, учитывая, что глагол в них может стоять в активном и пассивном залоге.

- 1) The interruptions or instabilities were observed as a result of the changes in fuel gas.
- 2) The construction materials are usually unaffected by the new design, except in the first stage.
- 3) In Canada the number of bleach plants practicing substantial substitution of chlorine dioxide increased.
- 4) In many cases, sewage is treated in sewage plants before it is pumped back into lakes, rivers, seas.
- 5) The material oxidable with permanganate was almost unaffected by a non-microbial aeration.
- 6) Because the chlorination stage in bleach plant has been modified over a period of several years, mill personnel could monitor the effects of changes.
- 7) The interaction between individual components and dissolved mineral present in receiving waters can greatly influence the toxicity of wastes.
- 8) The plant will be fined thousands of dollars until it constructs necessary wastewater treatment facilities.
- 9) Due to local permission, the plant will be fully enclosed in a steel-sided building.
- 10) The gas turbine will be purchased both to increase output and improve the heat rate of the station.
- 11) We also know that sewage contains many nutrients that are presently being wasted.
- 12) The taste and odor of drinking water are adversely affected by the substances of industrial origin.
- 13) The German chemist Justus von Liebig provided the scientific bases of the use of sewage as fertilizers in agriculture.
- 14) The extent of degradation which the organics of the bleaching effluents undergo in the recipient has been studied in an aquatic model system.

Таблица 3

Модальные глаголы

Модальные глаголы и их эквиваленты	Значение	Времена		
		Present	Past	Future
can to be able to	могу, умею	can work am (is, are) able to work – могу /может /умеет работать	could work was (were) able to work – мог /умел работать	— shall (will) be able to work – сможет / сумеет работать
may to be allowed to	могу, можно, разрешено	may work am (is, are) allowed to work – могу/ можно/ разрешено работать	might work was (were) allowed to work – мог / было разрешено работать	— shall (will) be allowed to work – смогу / будет можно работать
must to have to	должен, надо, нужно	must work have (has) to work – дол- жен / приходится работать	— had to work – дол- жен был работать	— shall (will) have to work – должен буду работать
to be to	должен, предстоит, (обусловлено заранее намеченным планом)	am (is, are) to work – дол- жен работать	was (were) to work – должен был рабо- тать	—
should + инфинитив без “to”	должен, должен бы, следует, следовало бы (наставление)	This equipment should be handled carefully. – С этим оборудованием следует обращаться осторожно.		
ought to	должен, следует (со- вет, моральный долг)	The results of this experiment ought to be checked. Результат этого эксперимента надо проверить.		

Упражнения

- 1) Stock loads at the wastewater treatment plant can be avoided by means of equalization basin.
- 2) The plant may be required to provide pretreatment to eliminate corrosive or toxic materials.
- 3) Industrialized countries must give serious attention to the problem of water pollution.
- 4) Hot water should be used for the wire cleaning showers.
- 5) In our highly industrialized country, we may be able to afford, at the present time, to lose the nutrients of sewage.
- 6) The oxygen concentration in the reactor is to be at least 2 mg/l.
- 7) Man should carefully study the impact of his activity on various components of the surrounding nature.
- 8) An equalization or storage basin for the treated wastewater has to be used where industrial demand varies.
- 9) The total quantity and concentration of pollutants in the discharge should be controlled by the regulator.
- 10) The first and second stages of washing are to have downflow towers, the third and fourth stages – upflow towers.
- 11) Land on which industrial activities had been situated could be polluted.
- 12) The pump delivered 0-10 gal/hr at a maximum pressure and was able to withstand the closing and corrosion associated with pumping sewage.
- 13) Although incoming raw water is frequently treated to remove suspended material, other types of pollution may be more dangerous. For example, dissolved organic substances can adversely affect a wide range of industrial uses.
- 14) The researcher has to get information about exact locations where industrial establishments dumped oil.

- 15) The gasifier should be fluidized with either steam or recirculated product gas.
- 16) The biomass has to be converted to a form that can be utilized in special power generation systems.
- 17) Detergents may be troublesome particularly where waters are to be discharged into turbulent streams.
- 18) The heat in the hot product gas is able to be utilized to preheat char burner combustion air.
- 19) It should be mentioned that worldwide about $\frac{3}{4}$ of all current population growth is urban.

Таблица 4

Глагол “to be”

Функция в предложении и значения	Примеры	Перевод
1. Смысловой глагол « быть », « являться », « находиться ».	Soil erosion is the destruction of soil by water and wind.	Эрозия почвы означает разрушение почвы водой и ветром.
2. Вспомогательный глагол для образования сложных глагольных форм (группа времен Continuous, страдательный залог). Самостоятельно не переводится.	The chemicals are polluting the water. The article was published last year.	Химикаты загрязняют воду. Статья была опубликована в прошлом году.
3. Модальный глагол (в сочетании с инфинитивом с частицей “to”) со значением долженствования.	The man is to preserve nature. Their aim is to preserve nature.	Человек должен сохранять природу. Его цель заключается в том, чтобы сохранять природу.
4. Конструкция “ there be ” играет в предложении роль сказуемого и переводится « есть », « имеется », « существует ».	There are many methods of cleaning the wastewater.	Существует много методов очистки сточных вод.

Упражнения

- 1) The replacement of fossil fuels is an urgent task in many cities.
- 2) A periodic testing is required to ensure that the treated effluent is within specified limits.
- 3) Phase 2 facility construction is to be completed by the next year.
- 4) A primary effluent control system for the kraft mill was in full operation and next year similar facilities for the newsprint mill will be completed.
- 5) The main aim is to provide concrete local studies and examples of urban socio-ecology for local needs.
- 6) Storage at a low temperature 4° is perhaps the best way to preserve most samples until the next day.
- 7) External treatment is usually by means of sedimentation to remove suspended solids.
- 8) Water pollution is defined as any change in the condition of water which is detrimental to some beneficial use.
- 9) The purpose of sampling and analysis is to show the peak load concentration.
- 10) A temporary solution was to contain the spent liquor and dump it in an approved area at the sea.
- 11) The aim of wastewater treatment plant is to remove off pollutants from the wastewater.
- 12) The usual goals of sludge treatment are to reduce the volume of material needing disposal and to change it to a less offensive form.
- 13) Dissolved solids are important mainly where wastewaters are to be re-used after treatment.
- 14) The aim is to preserve environmental quality for the benefit of present inhabitants and future generations.

- 15) The speed of the belt is to be regulated by the variable speed control of the drive roll.
- 16) Where wastewater is to be used as make-up in cooling towers, salts and nutrients may cause serious difficulties.
- 17) The aim of this paper is to provide information which is useful to developing countries where new wastewater facilities are to be introduced.
- 18) Where wastewaters are to be discharged into relatively clean bodies of water, the nutrients may enrich such waters to great extent.
- 19) Where industrial wastewaters are to be discharged into the community system, it is necessary to determine whether these wastewaters would damage the collection system of the treatment plants.
- 20) Color is important only when the dilution factor in the receiving water is low and light penetration is affected significantly and has an impact on plant growth in the water system.

Таблица 5

Глагол “to have”

Функция в предложении и значение	Примеры	Перевод
1. Смысловой глагол « иметь »	The plant has a good recovery system.	Завод имеет хороший регенерационный котел.
2. Вспомогательный глагол для образования сложных форм глагола (группа времен Perfect). Самостоятельно не переводится.	The invention has made people’s work easier.	Изобретение облегчило труд людей.
3. Модальный глагол (в сочетании с инфинитивом с частицей “to”) со значением долженствования.	The operation has to modify the solution.	Операция должна изменить раствор.

Упражнения

- 1) The gas turbine operates at a compression ratio of 7/1 and has a maximum power rating of 200 kW.
- 2) While towns and cities have become larger and uglier and more densely populated, the rural areas have lost most of their population owing to the need of fewer workers in agriculture.
- 3) Earth scientists have to work toward developing and ever fuller understanding of the earth environment.
- 4) Legislation based on a realistic assessment of how industrial discharges impact on the environment have already been more effective in controlling pollution.
- 5) The motor car has brought mobility to million of people but at the same time it has polluted the atmosphere with exhaust fumes.
- 6) Information on environmental problem is not always written down in documents, but has instead to be collected through the use of oral sources.
- 7) The legal definition of pollution has varied around the world.
- 8) We have to interpret the past to understand the present situation of our environment in order to develop a competence for future action.
- 9) The treatment of sewage always has big expenses from the view point of the treating plant alone.
- 10) The effluent has to be appropriately diluted, so that oxygen depletion during the test does not exceed more than 70-75% depletion.
- 11) The characteristics of wastewater are broadly classified into physical, chemical and biological according to the type of measurement test that has to be performed.
- 12) The inhabitants and political decision makers have to understand their responsibility in improving the state of the ocean.
- 13) Sewage treatment plants have to be constructed.

- 14) Perhaps the single most effective stratagem for reducing inplant losses has been to recycle and reuse mill process water.
- 15) Only a small amount of solution has to be pumped through the tubing leading to the holiday tank.
- 16) The pretreatment must be introduced in order to reduce the charges that the mill has to pay to the community for handling the wastes.
- 17) An explanation of the causes and effects of different changes in the nature has to be accompanied by analysis of the impact of political and economic events on the environment.
- 18) Wars and preparation for them such as tests of new types of armaments are having a tremendous destructive effect on the natural environment.
- 19) Our research and innovation over the years has given us the strength and expertise to contribute to the forest industry's development.
- 20) The objective in managing raw wastewaters is to maintain sufficient dissolved oxygen, so that anaerobic conditions have to be prevented.

Таблица 6

Степени сравнения прилагательных и наречий

Положительная степень	Сравнительная степень	Превосходная степень
1. Односложные прилагательные		
long – длинный	longer – длиннее	the longest – самый длинный
2. Многосложные прилагательные		
important – важный	more important – более важный less important – менее важный	the most important – самый важный the least important – наименее важный
Сравнительные союзы		
than – чем: You are older than me. – Ты старше меня . (Ты старше, чем я .) as...as... – такой же... как... not so...as... – не такой... как... the...the... – чем..., тем...: The more, the better – чем больше, тем лучше .		
3. Исключения		
good хороший } well хорошо } bad плохой } badly плохо } much } many } много little – маленький, мало	better – лучше worse – хуже more – больше less – меньше	the best – самый лучший, лучше всего the worst – хуже всех, хуже всего the most – наибольший, больше всего the least – наименьший, меньше всего

Most перед существительным – «большинство», «большая часть»: most of the students – большинство студентов.

Упражнения

- 1) One of the hottest fields in chemical science is environmental chemistry.
- 2) The richest countries consume 80% of all goods and services.
- 3) Most developed countries consume more resources than they can regenerate.
- 4) The pollution grew worse due to expanding industrialization and urbanization.
- 5) The coastal waters represent the most important part of Baltic Sea for urban inhabitants.
- 6) The more water using fixtures available in the home, the larger will be the wastewater flow per capita.
- 7) The most significant factor in determining wastewater quantity is the water supply system.
- 8) The environmental history today is one of the fastest growing new research fields of history.
- 9) Most grades of pulp are bleached to high brightness.
- 10) The higher the degree of treatment, the less the chlorine demand of the effluent.
- 11) Higher chemical costs are more than offset by steam savings and increased yields.
- 12) The plant began to incorporate the latest pollution abatement in its first kraft mill.
- 13) We live in the period of the greatest extinction of plant and animal species since the extinction of the dinosaurs millions years ago.
- 14) The best method that was found for screenings is by incineration.
- 15) The further the concentration of the oxygen is away from saturation, the higher is the driving force for absorption.
- 16) Water covers about $\frac{2}{3}$ of the Earth surface. But most is too salty for use. Water crisis is one of the most worrying problems for the new millennium.

- 17) The need to give greater priority to sewage than in the past is now clear because of the importance of wastewater collection, treatment and disposal.
- 18) Although the overall kappa factor is higher and the bleaching efficiency is lower for oxygen delignification, the cost of bleaching is lower.
- 19) The total solids entering sewage treatment plant from domestic wastes are less than one half of the total solids in industrial wastes.
- 20) In 2015 all of the bleach plants in Canada practiced greater than 50 % substitution of chlorine dioxide.

Таблица 7

Многофункциональное слово “one”

Функция, значение	Примеры	Перевод
1. Числительное «один», «одна», «одно».	This power plant is one of the oldest.	Эта электростанция – одна из старейших.
2. Формальное подлежащее в неопределенно-личных предложениях, самостоятельно не переводится.	One knows (известно) One believes (считают) One can (можно) expect One must (нужно) expect One may (можно) expect } that this mill obtains good profits.	Известно, Считают, Можно ожидать, Нужно ожидать, Можно ожидать, } что этот завод получает хорошую прибыль.
3. Слово-заменитель. Переводится тем существительным, которое заменяет или опускается в переводе.	The new way of transporting fuel differs from the old one .	Новый путь перевозки топлива отличается от старого (пути).

Упражнения

- 1) There are many advantages of using this method, the main ones are its cost and efficiency.
- 2) The question of pollution abatement is still another one and will not be discussed here.
- 3) Alum is one of the most widely used chemicals in paper industry.
- 4) The volume of sewage for agriculture is one of central aspects of this discussion.
- 5) One must know all the properties of this substance.
- 6) They study organic processes and inorganic ones.
- 7) In many cases the environmental problem has become a dominant one in relation to many others.
- 8) One of the promising technologies is advanced biomass gasification.
- 9) One may expect that this substance dissolves easily in water.
- 10) The problems of turning the material production from a purely technical and social elements into a biosocial one.
- 11) Sodium is the only one of alkali metals which is used industrially in large quantities.
- 12) Today one person in five across the world has no access to safe drinking water.
- 13) Today in Canada one uses substantial substitution of chlorine dioxide in the first stage of bleaching of paper.
- 14) In many cases the environmental problem has become a dominant one between the others.
- 15) The ecological problem which is also very much a social one, is one of the pressing problems of our days.
- 16) One of four mammal species and one of eight bird species face a high risk of extinction in the near future.

- 17) An alcohol plant for production of ethyl alcohol was followed by one to produce the flavouring chemical vanillin by alkaline oxidation of lignin.
- 18) The majority of Western ideologists regard the ecological problem as one of the insoluble global problems of our time.
- 19) In contrast of the previous extinctions of species, which were due to the change of climate and sea level, the last one has begun because of mis-use of the earth's resources.
- 20) A gradual increase in temperature will transform fertile regions into arid ones, raise level of water in the ocean and produce a flooding of coastal lands.

Таблица 8

Многофункциональные слова “that”, “those” и “this”, “these”

Функция и значение	Примеры	Перевод
1. Указательное местоимение «тот», «те».	Those methods are used in manufacturing process.	Эти (те) методы используются в производственном процессе.
2. СловозамениТЕЛЬ. Переводится тем существительным, которое заменяет. Иногда опускается при переводе.	The efficiency of the old apparatus is low compared with that of the new device.	Производительность старого прибора низкая по сравнению с производительностью нового устройства.
3. “that” – союзное слово «который».	The device that was installed in our laboratory is efficient.	Устройство, которое было установлено в нашей лаборатории, эффективно.
4. “that” – союз «что», «чтобы».	One can say that this machine is the most useful.	Можно сказать, что эта машина - самая нужная.
“this”, “these”		
1. Указательное местоимение «этот», «эти».	These systems will be installed in our mill.	Эти системы будут установлены на нашем заводе.
2. “These” – они, заменитель существительного.	The elements of the periodic group IA are called “the alkali metals”. These are alive in having a single electron on the outmost shell.	Элементы периодической группы IA называются «щелочными металлами». Они сходны с тем, что имеют по одному электрону на внешней оболочке.

Упражнения

1. The liquid was mixed with water at a concentration 20 times stronger than that used for sterilization of food processing plants.
2. This system is of course very incomplete compared with that in a natural recipient.
3. NaOH in excess of that required for the extraction stages is added to the bleach plant filters prior to reuse on the brown stock washer.
4. After the aeration, the four spent liquors were characterized in a manner similar to that adopted for the fresh liquors.
5. In most industrial wastewaters, data can be obtained that show the relation between waste load and industrial output.
6. The productivity per unit of the working population in the USA is three times greater than that of Colombian workers.
7. The suspended solids are those removed in filtration through a standardized line medium.
8. It may be claimed that the state of the Baltic Sea is one of the most important common environmental problems for the countries in Northern Europe.
9. The suspended solids can be classified on a basis of their settleability. Those that are settleable should be removed in sedimentation tanks.
10. Advanced biomass gasification changes the way that biomass residuals are used in the generation of steam and power.
11. An average American's environment impact is 30 to 50 times that of average citizen of a developing country, as India.
12. The cost of the necessary processing of the wastewater must be less than that of treating alternative supplies.
13. One of the most pressing problems facing the mill was that of effluent color.
14. The specific facilities may be substantially higher than those previously constructed.

15. The kappa factor for the high consumption bleach plant is greater than that of low consumption plants.

16. The BOD of the effluent is not to reduce the oxygen level in the receiving water below that necessary to enable the best use of them.

17. Chemistry lies in the centre of our efforts to produce new material, that make our lives safer and easier to produce new sources of energy that are nonpolluting and to control many diseases that threaten us.

18. It is obvious that heavier industrial use of the available water must be accompanied by greater treatment to ensure that level of toxic chemicals do not accumulate and become harmful.

19. Settleable solids are those which settle under necessary conditions within one hour under the influence of gravity.

20. Now mills are beginning to use chemical oxygen demand to measure those chemicals that consume chlorine dioxides in the first stage of bleaching.

Таблица 9

Многофункциональное слово “it”

Функция, значение	Примеры	Перевод
1. Личное местоимение «он», «она», «оно» (заменяет неодушевленное существительное).	A new method of pollution abatement of water is worked out at our mill. It gives a water of better quality.	Новый метод уменьшения загрязнения воды разработан на нашем заводе. Он дает воду лучшего качества.
2. Указательное местоимение «это» (заменяет предыдущее предложение).	The temperature is rising slowly. It means that...	Температура поднимается медленно. Это означает, что...
3. Формальное подлежащее безличного предложения. Самостоятельно не переводится.	It is common practice It is essential It is impossible It is important It is expected } to use this method.	Обычно принято Существенно важно Невозможно Важно Ожидается } использовать этот метод (использование этого метода).
4. Формальное дополнение после некоторых глаголов. Самостоятельно не переводится.	The method makes it possible to obtain good productivity.	Метод делает возможным получить хорошую производительность.
5. Часть выделительной конструкции “ it is...that (which) ”. Переводится «именно», «это» и т.д. (См. табл. 8).	It is in our laboratory that the new method was worked out. It was not until 1950 that the new equipment entered into practice.	Именно в нашей лаборатории был разработан новый метод. Только в 1950 году новое оборудование вошло в употребление.

Упражнения

1. The suspended solids content is important because it determines the sludge handling requirements of the plant. Those for dewatering and drying the sludge as well as for the final disposal.
2. It is at the end of the 19th century that the rapid growth and modernization of the towns transformed the traditional social water problems to modern environmental ones.
3. During the recent decades the urban watercourses have become considerably cleaner and today it is again possible to swim.
4. It is only recently that the problem of environmental history of pollution and protection of the seas and oceans has begun to be extracted.
5. The BOD is a measure of the organic matter present in wastewaters. It is determined by measuring the amount of oxygen absorbed by a sample of the wastewater under prescribed conditions.
6. It is to be expected that load distribution is influenced by the relative temperature of pond water and wastewater.
7. It is what we do with knowledge that really matters.
8. The COD is a measure of the strength of wastewater. It is a measure of the oxidation requirement of a sample under prescribed conditions.
9. Until recently it has been thought that bleaching shives are followed by high chlorine residual.
10. The earth is not undestructable, but highly vulnerable and delicately balanced system, it can easily be damaged.
11. It must be stressed that the application of BOD data is not simple and knowledge of the behavior of the receiving water is necessary.
12. It is from soil, water, rocks and air that come all materials that support our bodies and build our civilization.
13. The degree of man's mastery over the earth is dependent on his understanding of it.

14. It is becoming increasingly clear that man cannot and must not use his tremendous power so carelessly.
15. The Baltic sea is an especially sensitive sea because it is a semi-enclosed body of water that receives many pollutants from surrounding countries.
16. It was in 1960s that sewage treatment works were constructed on a more massive scale in Western countries.
17. It is the growing use of artificial fertilizers that has increased the problem of pollution of environment.

Таблица 10

Причастия

Вид причастия	Функция в предложении и перевод		
	часть сказуемого	определение	обстоятельство
1. Participle I Active voice solving writing	<p>He is solving a problem. Он решает задачу.</p> <p>(Для образования времен группы Continuous. Самостоятельно не переводится).</p>	<p>The engineer solving this problem works hard. Инженер, решающий эту задачу, много работает.</p> <p>We tested the device showing the disturbances. Мы проверили прибор, показавший нарушения в работе.</p> <p>(Причастие на -щий, -вший).</p>	<p>(When, while) solving the problem he read many books. Решая задачу, он прочитал много книг.</p> <p>(Деепричастие на -а, -я).</p>
2. Participle I Passive voice being solved being written	<p>The problem is being solved. Задача решается.</p> <p>(Для образования группы времен Continuous пассивного залога. Самостоятельно не переводится).</p>	<p>The problem being solved was difficult. Решаемая задача была трудной.</p> <p>(Причастие на -емый, -имый).</p>	<p>(While) being solved, the problem offered some unexpected aspects. Когда ее решали (при решении), задача представила некоторые неожиданные стороны.</p> <p>(Придаточное обстоятельство с предлогом).</p>

Вид причастия	Функция в предложении и перевод		
	часть сказуемого	определение	обстоятельство
3. Participle II Passive voice solved written	1) He has solved the problem. Он решил задачу. (Для образования времен Perfect. Самостоятельно не переводится). 2) The problem is solved . Задача решена. (Для образования пассивного залога. Самостоятельно не переводится).	The problem solved turned out to be fundamental. Решённая задача оказалась фундаментальной. The problem discussed yesterday is very important. Проблема, обсуждавшаяся вчера, очень важна. (Причастие на -щийся, -мый, -ный, -тый, -вшийся).	If solved , the problem will offer numerous consequences. Если ее решить , задача будет иметь многочисленные последствия. (Обстоятельственное придаточное предложение).
4. Perfect Participle active voice having solved having written	—	—	Having solved the problem he left the classroom. Решив задачу, он ушел из класса. (Деепричастие на -ив, -ав).
5. Perfect Participle Passive voice having been solved having been written	—	—	Having been solved , the problem offered some unexpected consequences. После того как задача была решена , обнаружились некоторые ее неожиданные следствия. (Придаточное обстоятельственное предложение).

Упражнения

1. The amounts of grease normally found in wastewater are not troublesome.
2. The increasing regulation will force secondary treatment to become standard procedure.
3. The press section has one suction press followed by two grooved press.
4. For every ton of wood processed 90-95% is converted to pulp.
5. Dissolved solids are the solids in the filtrate obtained after removal of the suspended solids.
6. The area covered by sea ice is decreasing.
7. The world's natural underground reservoirs are diminishing rapidly.
8. The most important factor influencing the quality of water is the nature of wastes reaching water sources.
9. The vacuum is controlled by a single system consisting of two vacuum pumps connected in parallel.
10. The two plants combined reduced the BOD by 25% largely through the removal of hexose sugars by fermentation process.
11. When used, these chemical substances should be added to the sample bottle, so that all the composite is preserved as soon as collected.
12. Renovation of Bleach Plant "A" results in a substantial saving in steam and water consumed and a decrease in effluent produced.
13. The typical first stage of chlorine dioxide bleaching is operated at low consistency reflecting the transition from chlorine to chlorine dioxide.
14. Wastewater collection and disposal comprise a necessary investment in the capital that is required for the activities associated with a healthy economy.
15. When biomass is used as a feedstock for the production of power or fuels it can meet energy needs while offering an advantage over other sources of fuel.
16. The washed pulp leaving the washer at 14% consistency is re-slurred with water and stored in another tank.

17. Urban areas export their wastes and pollutants affecting environmental conditions far from the cities themselves.

18. The washers are now operating satisfactorily, processing approximately 280 t. of pulp per day.

19. The liquors from the filter is very high in BOD and when returned to the treatment plant reduces the capacity of the secondary system.

20. The sequence involves the use of a sodium hypochlorite first stage followed by a mild caustic extraction stage.

Независимый причастный оборот

Примеры	Перевод
1. <i>The problem being difficult, they worked hard.</i>	Так как задача была трудная, они работали много.
2. <i>The experiment being carried out, he cannot leave the laboratory.</i>	Так как (когда) эксперимент идет, он не может уйти из лаборатории.
3. <i>With the results being different, the scientists had to repeat their experiments.</i>	Так как (поскольку) результаты были разными, ученые должны были повторить эксперимент.
4. He read two articles on this subject, <i>the latter being more interesting.</i>	Он прочитал две статьи на эту тему, причём последняя была более интересная.
<p>Оборот образуется разными причастиями; имеет самостоятельное подлежащее, отличающееся от подлежащего главного предложения; причастие переводится личной глагольной формой; оборот отделяется запятой. Если независимый причастный оборот находится в начале предложения, то перевод начинается с союзов «так как», «если» или «когда». Если независимый причастный оборот находится в конце предложения, (т.е. после запятой), то перевод начинается со слов «причём», «при этом», «и», «а».</p>	

Упражнения

- 1) Solid concentration being often below 5%, large volumes of sludges must be handled.
- 2) Activated sludges being very bulky, large volumes may be handled.
- 3) The total solids in a water sample is the residue on evaporation of the sample at 103-105°C, any low boiling compounds in the water being lost during this test.
- 4) Tastes and odors being the result of organic matter, minerals, specific compounds, such compounds become a nuisance at very low concentration.
- 5) The water-use cycle is a closed loop, water being conserved on our planet.
- 6) Future industrial growth will be restricted largely to region having adequate water supply, industry being the largest user of water.
- 7) Technology in water treatment field evolving rapidly, the profound knowledge of fundamentals will permit to adapt more rapidly to new process.
- 8) More chlorine atoms than sodium atoms being used for treating the pulp, sodium hydroxide must be added to avoid depleting the cycle of sodium.
- 9) The fermentor was emptied into small five gal.-containers, the yeast being separated in a centrifuge.
- 10) Effluents neutralization requirements being decreased, the amount of acid resulting from chlorination is decreased too.
- 11) Aeration helped mixing, its primary function being to increase the dissolved oxygen in the sewage yeast solution.
- 12) Chlorine dioxide providing the necessary oxidizing power for bleaching, fewer chlorine atoms are introduced and less purchased caustic soda is necessary.

- 13) The existing Kraft mill being adapted to closed-cycle process, these reductions in discharges will be even greater.
- 14) Over-chlorination resulting in severe degradation of the pulp strength, control of chlorine dosage is particularly important.
- 15) The suspended solids are classified as fixed and volatiles, the latter being the organic material.
- 16) Most solids above 10 microns can be removed by filtration and sedimentation, those below 1 micron in size requiring more advanced separation process.
- 17) Biological assimilation take place over a period of days and weeks, it rate depending on the nature of the waste, the water temperature and the concentration of oxygen.
- 18) Industrial wastes having a broader nature range of characteristics than domestic wastes, they are treated by a wider variety of processing schemes.
- 19) Most contaminants in waste-water being present in low concentration, the treatment processes must be able to function effectively with dilute streams.
- 20) Clarification and sedimentation occurring in any sedimentation basin, both functions should be considered in the design.

Таблица 12

Герундий

Функция в предложении	Примеры	Перевод
1. Подлежащее	Removing the impurities from the water is a very important problem.	Удаление (удалять) примеси из воды – очень важная проблема. (Инфинитив, существительное).
2. Часть сказуемого	The main task is avoiding the pollution of water.	Главная задача – избегать загрязнения воды. (Существительное, инфинитив).
3. Прямое дополнение	The production requires utilising a new method.	Производство требует использования (использовать) новый метод) нового метода. (Инфинитив, существительное)
4. Определение (обычно с предлогом of, for после существительного)	The property of influencing the pollution is studied carefully.	Свойство влиять на загрязнение изучается тщательно. (Инфинитив)
5. обстоятельство (обычно с предлогами: in – при, в то время как, on (upon) – по, после, after – после, before – перед, by – творит. падеж, instead of – вместо того чтобы, for – для и т.д.	The operator examined the machine without diminishing its speed.	Оператор осмотрел машину без замедления (не замедляя ее скорость) ее скорости. (Существительное, деепричастие).

Упражнения

1. The undesirable effect of pollution makes using renewable energy sources.
2. By increasing the acidity of surface waters acid rain can kill fish and other fresh water life.
3. Recycling this effluent to the recovery boiler is not feasible because of extremely high sodium chloride load.
4. The combination of hot and cold water is used for washing on the brown stock decker and dilution in the repulper screw.
5. Making the filtrate alkaline suppresses chloride corrosion of stainless steel.
6. Activated sludge systems are well suited to handling dilute wastewaters such as domestic sewage which contain both soluble and suspended organic matter.
7. Thickening of dilute sludges can achieve significant reductions in volume.
8. The wastewater load in an industrial plant often can be reduced by recirculating slightly less polluting chemicals or processes and recovering selected contaminants as by-products or for reuse.
9. The many types of solids standards for the wastewater prevent sludge blankets from being deposited and minimize the carbon sources for bacteria in the stream.
10. We have to meet the needs of an increasing world population by irrigating more of the unproductive areas and fulfilling the demands for an even greater industrial output.
11. The stock enters a surge chest for further dilution with filtrate and then, on being pumped out, is diluted with chlorination filtrate.
12. The proof test of the sterilization unit consisted of inoculating treated sewage in a nutrient medium and then incubating for 48 hours.

- 13.The discharge of effluents from the cellulose industry has successively decreased in Sweden. This has been achieved by closing down old sulfite mills and improving the efficiency of pulp washing.
- 14.These objectives can be achieved without adversely affecting pulp quality or significantly changing overall chemical consumption.
- 15.It is necessary to balance the requirements of growing population with the necessity of conserving earth's resources.
- 16.Improved fiber retention and better in-plant utilization of raw materials are effective means of reducing or controlling mill discharges.
- 17.Operating with optimized consumption of chemicals can provide bleaching cost advantage.
- 18.Switching to biomass resources would provide a way to reduce overall CO₂ emission by cutting back on the use of fossil fuels.
- 19.The Kappa number for conventionally delignified pulps is 17,5 on entering the bleach plant.
- 20.On leaving the primary settlers the waste water enters one end of a rectangular tank along with the recycled sludge.

Таблица 13

Инфинитив

Функция в предложении	Примеры	Перевод
1. Подлежащее	To overcome pollution problem is necessary.	Решить три распылителя необходимо для эффективной работы топки. (Инфинитив, существительное).
2. Часть сказуемого: а) После глагола-связки “is” с существительными “aim”, “purpose”, “idea” и т.д. б) После модального глагола to be+to, to have+to и др.	а) Their aim is to improve the ways of solving the environmental problems. б) You have to improve the ways of solving the environmental problems.	а) Их цель – (состоит в том, чтобы) улучшить способы решения экологических проблем. (Инфинитив). б) Вы должны улучшить способы решения экологических проблем.
3. Дополнение	The operator prefers to use the new system.	Оператор предпочитает использовать (использование) новую систему. (Инфинитив, существительное).
4. Определение	а) They have the possibility to use this system; б) The new equipment to be used in our laboratory has just arrived; в) He was the first to begin this experiment.	а) У них есть возможность использовать эту систему. (Инфинитив, существительное). б) Новое оборудование, которое должно быть (будет) использовано в нашей лаборатории, только что прибыло. (Определительное придаточное предложение со сказуемым, выражающим действие, которое должно быть или будет совершено). в) Он первым начал этот эксперимент.
5. обстоятельство	To protect the environment, you must have good knowledge of it.	Чтобы защитить окружающую среду , вы должны хорошо ее знать. (Инфинитив с союзами чтобы, для того чтобы).

Упражнения

1. To solve the filtration problem, a special process has been developed.
2. To solve the filtration problem means to use elevated temperature for cooking.
3. It may help economists to learn to use the resources more effectively and to conserve them in order to assure continued use in future.
4. It is necessary to know the quality of the raw wastewater to be expected at the treatment plant.
5. Secondary wastewater treatment generally involves a biological process to remove organic matter through biochemical oxidation.
6. The program included a system to increase the recovery of waste sulphate liquor and an installation to evaporate and incinerate the waste stream.
7. An additional requirement to be satisfied by waste water for industrial use is that the quality should not be highly variable.
8. Existing bleach plants can be renovated to decrease effluent volume and to take advantage of steam and water savings.
9. The design of wastewater collection and treatment facility is a function of the quantity of wastewater to be handled.
10. The salt recovery system is designed to handle 500 gr/m of white liquor to recover 4500 lb. of salt per hour.
11. To preserve the environment of our planet development and industrial growth in the world must be sustainable.
12. To eliminate spill discharging from the mill the company has installed an elaborate system consisting of three underground collection tanks.
13. The high temperature, high pressure steam is expanded through a steam turbine to produce electric power.
14. Criteria are the scientific requirements which a water source must meet in order to support a designated use.

- 15.To comply with effluent standards the wastewater must be purified to it discharge.
- 16.It is the first bleached Kraft pulp mill to recycle and recover all bleach plant filtrate.
- 17.Activated carbon can be employed either in granular or powdered state to effect complete treatment of wastewater.
- 18.To properly design and build many facilities for chemical pulp mills, the engineers analyze the existing process systems.
- 19.The specific methods to be included were: chemical clarification, dual media filtration and carbon absorption.
- 20.A ten points program was established in 2000 to investigate a number of sludge disposal alternatives.

Таблица 14

Инфинитивные обороты. I. Сложное подлежащее

Примеры			Перевод	
			Переводится двумя способами: 1. Простым предложением с вводным словом, соответствующим сказуемому английского предложения.	
Heat	is known is likely is certain is found is reported is assumed is considered is expected appears seems proved	to be a form of energy.	Известно, Вероятно, Несомненно, Обнаружено, Сообщают, Допускается, Считается, Ожидается, Оказывается, Кажется, Доказано,	что тепло – это форма энергии.
(2)	(1)	(3)	(1),	(2) (3)
			2. Дополнительным придаточным предложением с союзами «что», «чтобы», «как». Инфинитив переводится личной глагольной формой.	
Heat is known to be a form of energy. (2) (1) (3)			Тепло, как известно, является формой энергии. (2) (1) (3)	

Инфинитивные обороты. II. Сложное дополнение

Примеры	Перевод
1. They want (like) <i>the plan to be fulfilled</i> . 2. * They see (hear) <i>the engineer leave the room</i> . 3. * They order, allow (let), cause, force (make) <i>this fuel to arrive (arrive) immediately</i> .	1. Они хотят, чтобы план был выполнен. 2. Они видят (слышат), что инженер уходит из комнаты. 3. Они приказывают (позволяют, заставляют), чтобы это топливо прибыло немедленно.
* После глаголов чувственного восприятия (see, hear, feel и т. д.), а также глаголов let, make, have используется инфинитив без частицы "to".	Переводится придаточным предложением с союзами «что», «чтобы», «как». Инфинитив переводится личной глагольной формой.

Упражнение 1

1. The material seems to be resistant.
2. The treatment facility is expected to start in August.
3. The operation is believed to be the world's first operation of a gas turbine on 100% biomass derived gas.
4. Removal dewatering and burial of slug have been found to be the most practical and economic method of disposal.
5. The world's population is likely to be significantly older with the medium age.
6. Two of every three species of plants and animals are estimated to be in decline.
7. Unchecked consumption and rapid population growth are likely to overwhelm technological improvement in affecting the environment.
8. The very high level of air pollution of Eastern Europe is known to have caused serious health problems.
9. Water is likely to become a growing competition between nations.
10. Unburned hydrocarbon fragments help to form smog and are believed to be carcinogenic.
11. Proper water management has been shown to be essential of an upward spiral of improved health and social and economic development.
12. From the beginning an employee is taught to equate environmental protection with production and safety.
13. Because of the high inorganic content of the waste the oxidative fluidized bed process was considered to be the most successful.
14. The production of yeast from one-celled organism in waste seems to be one way to get a useful by-product.
15. Chlorine dioxide has been found to protect pulp viscosity not only at normal chlorine dosages, but to at even greater extent.

16. Individual wastes are more likely to contain toxic and non-biodegradable components that require physical and chemical instead of biological treatment.
17. We know the average global surface temperatures to have risen by 0,6°C in the last 140 years.
18. The government announced new proposals to struggle against deforestation.
19. Scientists believe the ocean to have become slightly more acidic over the last century.
20. The scientists say their research show present day warning to be exceptional.
21. It could take much longer than expected for the ozone “hole” over Antarctica to repair itself.

Таблица 15

Бессоюзные придаточные предложения

Вид предложения	Примеры	Перевод
1. Дополнительное придаточное предложение	That means <i>he can begin to control the operation.</i>	Это означает, <i>что он может начать управление процессом.</i>
2. Определительное придаточное предложение	Low consumption of energy is one of the advantages <i>this device is known by.</i>	Низкое потребление энергии – одно из преимуществ, <i>которыми характеризуется это устройство.</i>
3. Условное придаточное предложение с инверсией с глаголами were, had, could, should	<i>Were one electron removed,</i> a positive charge would be left.	<i>Если бы один электрон был удален,</i> остался бы положительный заряд.

Упражнения

1. The kind of energy we are most familiar with is mechanical energy.
2. This was one of the questions we tried to answer in a recent study of activated carbon technology.
3. Experiments show biochemical oxidation is a slow process and complete breakdown may take up to 100 days.
4. The more material wealth people create, the more they realize the biosphere is changing as a result of productive activity.
5. Millions of people were driven out of home and from the plots they filled.
6. Should an epidemic occur, it could spread equally easy through other media that water.
7. Carbon dioxide comes in large quantities from fossil fuels burnt to provide the energy we need to run our home, transport etc.
8. The benefits the biomass gasification offers to users improved environmental characteristics and reduced capital investment.
9. If properly carried out the 5 days BOD test gives a good indication of the effect an effluent has on the oxygen balance of any receiving water.
- 10.If the greenhouse gases were not present, all of the heat the Earth radiates would be lost into space.
- 11.Lowered activated carbon: what is its future? This was one of the questions we tried to answer in our study.
- 12.The main difficulty they faced in construction was having to put this new process into existing plant.
- 13.The mill is convinced it has achieved pollution free mill by recycling bleach plant effluent, removing salt from the white liquor and eliminating external treatment facilities.
- 14.Could the modern pulp and paper mills minimize losses from the process and treat mill effluents efficiently, their impact on the environment would be minimal.

15. In many of the cases the scientist will have to consider the magnitude of velocity is of importance.
16. When the point of force is applied at moves, work is done.
17. The major categories of water pollution the pulp and paper industry suffers the most are effluents, solids, oxygen demand, toxicity and color.
18. The five days BOD test gives a good indication of the effect an effluent has on the oxygen balance of any natural receiving water.
19. Everybody knows the mechanical and electrical inventions physics has given us are applications of physical principles.
20. The physical state of a body is dependent on the temperature and the pressure it is subjected to.
21. Could these obstacles be removed economically, non sulfurous alkali pulping could be adopted by the industry in a short period of time.
22. Were the surface of the Earth uniform, there would be three parallel zones of precipitation higher than the average.
23. Should the task be difficult, he would help you.
24. Should the machine be equipped with new rolls, its efficiency would be greater.
25. Should they use the necessary instruments, the measurements would be always correct.

Таблица 16

Типы условных предложений

Реальные условия	Не вполне реальные условия	Нереальные условия
1. Союзные (с союзами if – если, provided (that), providing (that), supposing (that), on condition (that) – при условии что)		
<p>If he goes to bed early, he will get up early. Если он ляжет спать рано, то и встанет рано.</p> <p>Времена: после союза – Present Simple, в главном – Future Simple.</p>	<p>If he went to bed early in summer, he would get up early. Если бы он ложился спать рано летом, то и вставал бы рано.</p> <p>Времена: после союза – Past Simple, в главном – Would + Infinitive</p>	<p>If he had gone to bed early yesterday, he would have got up early. Если бы он лег спать рано вчера, то и встал бы рано.</p> <p>Времена: после союза – Past Perfect, в главном – Would + have + Participle II.</p>
2. Бессоюзные (с инверсией – в начале предложения: had, were, could, should)		
	<p>Could he swim well, he would take part in the competition. Если бы он хорошо плавал, то принял бы участие в соревновании.</p>	

Упражнения

1. If water reuse is to be widely practiced, the nitrogen, phosphorus and dissolved solids will have to be removed.
2. Protection against viscosity loss will apply at higher temperature, provided the pulp is not overchlorinated.
3. If all the chlorination filtrate were recycled to brown stock washing, calcium, insoluble in black liquor, would rapidly accumulate in the filtrate.
4. Unless the company introduced a new waste disposal system to incinerate bark wood room debris, its abatement program would not be more successful.
5. The factor of safety would be added, if the sewage were heated to 250°F for 30 minutes.
6. Provided the sewage were heated in the reservoir prior to the settling process, some solid organic nutrients could be dissolved.
7. The heat losses would be minimized, provided the outside of pressure vessel were insulated with one of thick fiberglasses.
8. Unless a batch fermentation process were used, it would not minimize the complexity of the pilot system.
9. If newer treatment operation improved the efficiency of conventional process, the current water pollution standards were satisfied.
10. If special practical tests could be used, we would know whether or not a waste or waste component was toxic.
11. Provided we were able to know what “once living” people have done in the past in this very location, we could understand our present environmental situation.
12. If the main purpose of the operation were to produce an effluent stream with low suspended solids, the vessel should be called a clarifier.

- 13.If the growth and harvesting of genetically enhanced biomass crops for fuel and chemical production is realized, it can contribute to the economic growth of an area.
- 14.Wastewater collection enjoys a higher priority than wastewater treatment because the community health is improved even if the collected wastewater is discharged untreated into a receiving stream or the ocean.
- 15.Provided the engineer analyzed the existing process system with the aim of reducing mill wastes as much as possible, they would design and build proper facilities for chemical pulp mills at the lowest cost.
16. If the biomass gas treatment facilities have stood alone, the char burner heat would have been utilized for high pressure steam production.

СЛОВАРЬ

Сокращения: части речи

сокращение	означает	перевод
a (adj)	adjective	имя прилагательное
adv	adverb	наречие
cj (conj)	conjunction	союз
n	noun	имя существительное
part	participle	причастие
pl	plural	множественное число
prep	preposition	предлог
pron	pronoun	местоимение
v	verb	глагол

Слово	Транскрипция	Перевод
Ability	[ə'biləti]	Способность
Access	['ækses]	Доступ
According to	[ə'kɔ:diŋ tu:]	Согласно
Acknowledge	[ək'nɒlɪdʒ]	Признавать
Acquire	[ə'kwaɪə(r)]	Приобретать
Add	[æd]	Добавлять
Advanced	[əd'vɑ:ns t]	Передовой
Adversely	['ædvɜ:sli]	Обратно
Affect	[ə'fekt]	Влиять
Alum	['æl.əm]	Квасцы
Amount	[ə'maʊnt]	Количество
Application	[,æplɪ'keɪʃn]	Применение
Apply	[ə'plai]	Применять
Area	['eəriə]	Область, площадь
Arid	['ær.ɪd]	Засушливый
Artificial	[,ɑ:trɪ'fiʃl]	Искусственный
Assessment	[ə'ses.mənt]	Оценка
Associate	[ə'səʊʃieɪt]	Связывать
Attention	[ə'tenʃn]	Внимание
To give a	[tu: gɪv eɪ]	Обратить внимание
Available	[ə'veɪləbl]	Имеющийся, доступный
Avoid	[ə'vɔɪd]	Избегать
Basin	['beɪ.sən]	Бассейн, отстойник
Equalization basin	[,i:kwəlaɪ'zeɪʃən 'beɪsn]	Уравнительный бассейн

Storage basin	['stɔ:ɹɪdʒ 'beɪsn]	Бассейн для хранения
Batch	[bætʃ]	Партия
Batch Fermentation	[bætʃ ,fɜ:mən'teɪʃən]	Прерывная ферментация
Become-became-become	[bɪ'kʌm]	Становится
Bed	[bed]	Слой
Behavior	[bɪ'heɪ.vjər]	Поведение
Believe	[bɪ'li:v]	Верить
Belt	[belt]	Ремень
Beneficial	[,ben.ɪ'fɪʃ.əl]	Полезный
Blanket	['blæŋ.kɪt]	Одеяло, покров
Bleach	[bli:tʃ]	Отделка , отбеливать
Body	['bɒdi]	Тело
Body of water	['bɒdi ɒv 'wɔ:tə]	Водоем
Boil	[bɔɪl]	Кипеть , кипятить
Brightness	['braɪtnɪs]	Яркость
Broadly	['brɔ:dlɪ]	Широко, в целом
Bulky	['bʌl.kɪ]	Громоздкий
Burial	['ber.i.əl]	Захоронение
Burn	[bɜ:n]	Сгорать
By-product	['baɪ ,prəd.əkt]	Побочный продукт
Capacity	[kə'pæsəti]	Производительность, мощность, емкость
Change	[tʃeɪndʒ]	Изменение, изменять
Char	[tʃɑ:r]	Древесный уголь
Charges	[tʃɑ:dʒ]	Плата
Chest	[tʃest]	Бассейн
Chlorination		Хлорирование
Chlorine	['klɔ:.ri:n]	Хлор
Circle	['sɜ:kl]	Круг, летать вокруг
Clarification	[,klær.ɪ.fɪ'keɪ.ʃən]	Осветление
Closely	['kləʊs.li]	Тщательно
Closing	['kləʊ.zɪŋ]	Заккрытие
Collect	[kə'lekt]	Собирать
Color	['kʌl.ər]	Цвет
Combination	[,kɒmbɪ'neɪʃn]	Соединение
Community	[kə'mju:nəti]	Селение
Complete	[kəm'pli:t]	Закончить
Composite	['kɒm.pə.zɪt]	Состав, смесь
Component	[kəm'pəʊ.nənt]	Компонент
Comply	[kəm'plaɪ]	Согласоваться, подчиняться
Comprise	[kəm'praɪz]	Включать

Conclude	[kən'klu:d]	Сделать вывод
Consistency	[kən'sis.tən.si]	Концентрация
Constitute	['kɒn.stɪ.tju:t]	Составлять
Consume	[kən'sju:m]	Потреблять
Contain	[kən'teɪn]	Содержать
Contaminant	[kən'tæm.ɪ.nənt]	Загрязняющее вещество
Contaminate	[kən'tæm.ɪ.neɪt]	Заражать
Content	['kɒntent]	Содержание
Continued	[kən'tɪn.ju:d]	Непрерывный
Contribute	[kən'trɪbju:t]	Способствовать
Conventional	[kən'venʃənəl]	Обычный
Cooking	['kʊkɪŋ]	Варка
Convert	[kən'vɜ:t]	Превращать
Cool	[ku:l]	Охлаждаться
Cost	[kɒst]	Стоимость
Costal	['kɒs.təl]	Прибрежный
Cover	['kʌvə(r)]	Покрывать
Countryside	['kʌntrɪsaɪd]	Загородная местность
Current	['kʌrənt]	Поток
Cut	[kʌt]	Резать
Cut back	[kʌt bæk]	Повторить, обратиться
Damage	['dæmɪdʒ]	Ущерб
Debris	['deb.ri:]	Мусор, остатки
Decker	[dekə]	Сгуститель
Decline	[dɪ'klaɪn]	Упадок
Deforestation	[di: fɒr.ɪ'steɪ.ʃən]	Вырубка леса
Degradable	[dɪ'greɪdəbl]	Разлагаемый
Deliver	[dɪ'lɪvə(r)]	Подавать
Demand	[dɪ'mɑ:nd]	Спрос ,способность, просить
Dense	[dens]	Плотный
Deplete	[dɪ'pli:t]	Истощать, очищать
Depletion	[dɪ'pli:ʃən]	Истощение, очищение
Deposit	[dɪ'pɒzɪt]	Осаждаться
Deposits	[dɪ'pɒz.ɪt]	Залежи
Design	[dɪ'zaɪn]	Проект, чертеж , проек- тировать, предназначать
Designate	['dez.ɪg.neɪt]	Обозначать
Destruction	[dɪ'strʌkʃn]	Разрушение
Detergent	[dɪ'tɜ:.dʒənt]	Дезинфицирующее средство
Deteriorate	[dɪ'tɪə.ri.ə.reɪt]	Ухудшать
Determine	[dɪ'tɜ:mɪn]	Определять

Detrimental	[,det.rɪ'men.təl]	Вредный
Dewatering		Обезвоживание
Dilute	[daɪ'lu:t]	Растворять, разводить, разбавленный
Discharge	[dɪs'tʃɑ:dʒ]	Разгружать
Discharging	[dɪs'tʃɑ:dʒ]	Разгрузка, выброс
Discover	[dɪ'sklʌvə(r)]	Открыть
Disposal	[dɪ'spəʊ.zəl]	Очистка, удаление
Dissolve	[dɪ'zɒlv]	Растворять
Drain	[dreɪn]	Осушать
Drive	[draɪv]	Двигаться, вести
Drying	['draɪɪŋ]	Сушка
Due	[dju:]	Благодаря
To be due to	[tu: bi: dju: tu:]	Объясняться
Dump	[dʌmp]	Свалка, сбрасывать
Efficiency	[ɪ'fɪʃ.ən.si]	Эффективность
Effluent	['ef.lu.ənt]	Сток
Elevated	['el.ɪ.veɪ.tɪd]	Повышенный
Eliminate	[ɪ'lim.ɪ.neɪt]	Удалить
Emission	[ɪ'mɪʃ.ən]	Выброс
Empty	['empti]	Опорожнять, выливать
Enclose	[ɪn'kləʊz]	Закрыть
Engineering	[,endʒɪ'nɪərɪŋ]	Техника
Enjoy	[ɪn'dʒɔɪ]	Пользоваться чем-либо
Enrich	[ɪn'ritʃ]	Обогащать
Ensure	[ɪn'ʃʊə(r)]	Обеспечить
Environment	[ɪn'vaɪrənmənt]	Окружающая среда
Equate	[ɪ'kwert]	Равнять, уравнивать
Estimate	['estɪmət]	Оценивать
Evaporate	[ɪ'væp.ər.eɪt]	Испарять
Event	[ɪ'vent]	Событие
Evolve	[ɪ'vɒlv]	Развиваться
Exceed	[ɪk'si:d]	Превышать
Except	[ɪk'sept]	Кроме
Expand	[ɪk'spænd]	Расширять(ся)
Expect	[ɪk'spekt]	Ожидать
Expand	[ɪk'spænd]	Расширять(ся)
Expense	[ɪk'spens]	Расход
Extent	[ɪk'stent]	Степень
Extinction	[ɪk'stɪŋk.ʃən]	Вымирание
Extraction	[ɪk'stræk.ʃən]	Выделение, удаление
Face	[feɪs]	Стоять перед чем-либо
Facility	[fə'sɪləti]	Устройство, оборудова-

		ние
Fall	[fɔ:l]	Падение
Feasible	['fi:.zə.bəl]	Возможный
Feedstock	['fi:dstɒk]	Исходное сырье
Fertile	['fɜ:.taɪl]	Плодородный
Fertilizer	['fɜ:.tɪ.laɪ.zər]	Удобрение
Fiberglass	['faɪ.bəˌɡlɑ:s]	Стекловолокно
Field	[fi:ld]	Область
Finger	['fɪŋɡə(r)]	Рисунок
Filtrate	['fil.treɪt]	Фильтрат
Find	[faɪnd]	Найти
Fine	[faɪn]	Оштрафовать
Fixed	[fɪkst]	Застойчивый, неподвижный
Fixtures	['fɪks.tʃər]	Приборы
Flavoring	['fleɪ.vər]	Пахучий
Flight	[flaɪt]	Полёт
Flooding	['flʌd.ɪŋ]	Затопление
Flour	['flaʊə(r)]	Течь
Fluid	['flu:ɪd]	Жидкость
Fuel	['fju:əl]	Топливо
Fulfill	['fju:əl]	Выполнять
Fume	[fju:m]	Дым
Gasifier	['ɡæsɪfaɪər]	Газификатор
Goal	[ɡəʊl]	Цель
Grade	[greɪd]	Сорт
Gravity	['ɡrævɪ.ti]	Сила тяжести
Grease	[gri:s]	Жир
Goods	[ɡʊdz]	Товары
Grow	[grəʊ]	Расти
Growth		Рост
Habitat	['hæb.ɪ.tæt]	Место распространения
Handling	['hænd.lɪŋ]	Обработка, обращение с чем-либо
Health	[helθ]	Здоровье
hold	[həʊld]	Держать, вмещать
Hydrogen	['haɪ.dri.dʒən]	Водород
Immense	[ɪ'mens]	Огромный
Impact	['ɪmpækt]	Воздействий
Impurities	[ɪm'pjʊə.rɪ.ti]	Примеси, загрязнения
Incinerate	[ɪn'sɪn.ər.eɪt]	Сжигать
Incineration	[ɪnsɪnə'reɪʃən]	Сжигание
Incorporate	[ɪn'kɔ:.pər.eɪt]	Включать

Increase	[ɪn'kri:s]	Увеличивать(ся)
Incubate	['ɪŋ.kjʊ.beɪt]	Выдерживать
Inflict	[ɪn'flɪkt]	Нанести (удар)
Inhabitant	[ɪn'hæb.ɪ.tənt]	Житель
Inoculate	[ɪ'nɒk.jʊ.leɪt]	Впускать
Insecticide	[ɪn'sek.tɪ.səɪd]	Инсектицид
Instead	[ɪn'sted]	Вместо (чего-либо)
Interaction	[,ɪn.tə'ræk.ʃən]	Взаимодействие
Intergrate		Составлять целое
Interruption	[,ɪntə'rʌpʃn]	Перерыв, прерывание
Introduce	[,ɪntrə'dju:s]	Вводить
Inversely	[ɪn'vɜ:s]	Обратно
Involve	[ɪn'vɒlv]	Включать
Irrigate	['ɪr.ɪ.geɪt]	Орошать
Lattes	['læteɪz]	Последний
Layer	['leɪə(r)]	Слой
Learn	[lɜ:n]	Научить(ся)
Legislation	[,ledʒ.ɪ'sleɪ.ʃən]	Законодательство
Liquor	['lɪk.ər]	Жидкость; щёлок
Load	[læʊd]	Нагрузка
Lose-lost-lost	[lu:z]	Терять
Loup		Цепь
Low	[læʊ]	Низкий
Lower	['ləʊ.ər]	Понижать
Majority	[mə'dʒɔrəti]	Большинство
Maker	['meɪ.kər]	Принимающий решение, руководитель
Make-up	['meɪk.ʌp]	Дополнение
Mammal	['mæm.əl]	Млекопитающее
Mastery	['mɑ:stər.i]	Владение, господство
Mean	[mi:n]	Означать
Means	[mi:nz]	Средство
Measure	['meʒə(r)]	Измерять
Meet-met-met	[mi:t]	Встретить
Mention	['menʃn]	Упомянуть
Misuse	[,mɪs'ju:z]	Неправильное использование
Move	[mu:v]	Двигать(ся)
Need	[ni:d]	Потребность, нуждаться
Nuisance	['nju:.səns]	Вред
Number	['nʌmbə(r)]	Число
Nutrient	['nju:.tri.ənt]	Питательное вещество
Objective	[əb'dʒektɪv]	Цель

Observe	[əb'zɜ:v]	Наблюдать
Obtain	[əb'teɪn]	Получать
Occur	[ə'kɜ:(r)]	Происходить
Odor	['əʊ.dər]	Запах
Offensive	[ə'fensɪv]	Вредный
Offset	[,ɒf'set]	Возмещать
Origin	['ɒrɪdʒɪn]	Происхождение
Overwhelm	[,əʊ.və'welɪn]	Переполюнять
Owing to	['əʊɪŋ tu:]	Благодаря
Oxidation	['ɒk.sɪ.daɪz]	Окисление
Oxygen	['ɒk.sɪ.dʒən]	Кислород
Pass	[pɑ:s]	Проходить
Perform	[pə'fɔ:m]	Выполнять
Permission	[pə'mɪʃn]	Разрешение
Permit	[pə'mɪt]	Позволять
Plant	[plɑ:nt]	Растение; завод, цех
Plot	[plɒt]	Участок (земли)
Possess	[pə'zes]	Обладать
Powdered	['paʊ.dəd]	Распылённый
Power	['paʊə(r)]	Сила, энергия
Precise	[pri'saɪs]	Точный
Preserve	[pri'zɜ:v]	Предохранять, сохра- нять
Press	[pres]	Пресс; прессовать
Suction press	['sʌkʃən pres]	Обсасывающий пресс
Grooved press	[gru:vd pres]	Рифлёный пресс
Pressure	['preʃə]	Давление
Pretreatment		Предварительная обра- ботка
Prevent	[pri'vent]	Предупредить
Previous	['pri:vɪəs]	Предыдущий
Prior to	['praɪə tu:]	До
Proceed	[pri'si:d]	Продолжать, приступать к чему-либо
Process	['prəʊses]	Обрабатывать; процесс
Processing	['prəʊ.ses]	Обработка
Profound	[prə'faʊnd]	Глубокий
Promote	[prə'məʊt]	Распространять
Property	['prɒpəti]	Свойство
Prospect	['prɒspekt]	Исследовать
Provide	[prə'vaɪd]	Обеспечить
Pulp	[ɪlp]	Бумажная масса, цел- люлоза

Pump	[ˈpʌmp]	Качать, откачивать; насос
Purchase	[ˈpɜ:tʃəs]	Купить
Purity	[ˈpjʊə.rɪ.ti]	Очищать
Quality	[ˈkwɒləti]	Качество
Quantity	[ˈkwɒntəti]	Количество
Rapid	[ˈræpɪd]	Быстрый
Rate	[reɪt]	Скорость, норма
Rating	[ˈreɪ.tɪŋ]	Оценка, положение
Raw	[rəʊ]	Сырой
Reach	[ri:tʃ]	Достигать
Read up for	[ri:d ʌp fɔː]	Готовиться к
Receive	[riˈsi:v]	Принимать, получать
Recipient	[riˈsɪp.i.ənt]	Приемник
Recognition	[ˌrekəgˈnɪʃn]	Признание
Recover	[riˈkʌvə(r)]	Улавливать; восстанавливать
Rectangular	[rekˈtæŋ.gjʊ.lər]	Прямоугольный
Reduce	[riˈdju:s]	Сокращать
Reduction	[riˈdʌkʃn]	Сокращение, уменьшение
Reflect	[riˈflekt]	Отражать
Regard	[riˈgɑ:d]	Рассматривать
Regenerate	[riˈdʒen.ər.eɪt]	Воспроизвести
Relate	[riˈleɪt]	Связывать
Relation	[riˈleɪʃn]	Связь
Rely	[riˈlaɪ]	Опира́ться (на)
Removal	[riˈmu:vl]	Удаление
Remove	[riˈmu:v]	Удалять
Require	[riˈkwaɪə(r)]	Требовать
Requirement	[riˈkwaɪəmənt]	Требование
Represent	[ˌreprɪˈzent]	Представлять
Repulper	[ˌriːˈpʌlpə]	Повторный разбиватель
Resemblance	[riˈzem.bləns]	Сходство
Residual	[riˈzɪd.ju.əl]	Осадок
Residue	[ˈrez.ɪ.djuː]	Осадок
Responsibility	[riˌspɒnsəˈbɪləti]	Ответственный
Rest	[rest]	Отдыхать; отдых
Restrict	[riˈstrikt]	Ограничить
Result	[riˈzʌlt]	Результат
Result in	[riˈzʌlt ɪn]	Привести к чему-либо
Result from	[riˈzʌlt frɒm]	Исходить из чего-либо
Retention	[riˈten.ʃən]	Удержание

Roll	[rəʊl]	Вал
Drive roll	[draɪv rəʊl]	Ведущий вал
Sample	['sɑ:mpl]	Образец
Sampling	['sɑ:m.pl]	Взятие пробы
Salinity	['seɪ.laɪn]	Солёность, содержание соли
Scale	[skeɪl]	Масштаб
Screening	['skri:nɪŋ]	Отсев, просеивание
Screw	[skru:]	Винт
Sedimentation	[,sedɪmənt'eɪʃən]	Осаждение
Sensitive	['sensətɪv]	Чувствительный
Sequence	['si:.kwəns]	Последовательность
Settle	['setl]	Осаждение
Settleability	[,setlə'bɪləti]	Осаждаемость
Settler	['set.lər]	Отстойник
Sew	[səʊ]	Осушать
Sewage	['su:.ɪdʒ]	Сточная вода
Sewerage	['suə.rɪdʒ]	Канализация
Sewer	[suər]	Коллектор, сточная труба
Shower	['ʃaʊə(r)]	Спрыск
Wire cleaning shower	['waɪə 'kli:nɪŋ 'ʃaʊə]	Спрыск для очистки сетки
Shire	[ʃaɪər]	Костра
Side	[saɪd]	Сторона
Significant	[sɪɡ'nɪfɪkənt]	Значительный
Significantly	[sɪɡ'nɪfɪkəntli]	Значительно
Similar	['sɪmələ(r)]	Подобный
Slow	[sləʊ]	Медленный
Sludge	[slʌdʒ]	Отстой, ил, грязь
Slug	[slʌɡ]	Слежавшийся брак
Softwood	['sɒft.wʊd]	Древесина мягких пород, хвойная древесина
Solid	['sɒlɪd]	Твёрдое вещество
Solve	[sɒlv]	Решать
Solution	[sə'lju:ʃn]	Раствор; решение
Source	[sɔ:s]	Источник
Spacecraft	['speɪs.krɑ:ft]	Космический корабль
Speed up	[spi:d]	Ускорять
Spent	[spent]	Отработанный
Spill	[spɪl]	Пробка, затычка
State	[steɪt]	Констатировать, установить; состояние

Steel	[sti:l]	Сталь
Stainless steel	['steɪnlɪs sti:l]	Нержавеющая сталь
Stock	[stɒk]	Масса
Stream	[stri:m]	Поток
Strength	[strenθ]	Крепость
Stringent	['strɪn.dʒənt]	Строгий
Struggle	['strʌgl]	Бороться
Substance	['sʌbstəns]	Вещество
Substantial	[səb'stænʃl]	Существенный
Substitution	[,sʌb.stɪ'tju:ʃən]	Замена
Sutor		Испытывать
Suit	[su:t]	Быть пригодным
Supply	[sə'plai]	Снабжение
Support	[sə'pɔ:t]	Поддерживать
Suppose	[sə'pəʊz]	Предполагать
Suppress	[sə'pres]	Подавлять
Surround	[sə'raʊnd]	Окружать
Suspended	[sə'spend]	Во взвешенном состоянии
Sustainable	[sə'steɪ.nə.bəl]	Выдержанный, контролируемый
System	['sɪstəm]	Система
Tank	[tæŋk]	Бассейн
Taste	[teɪst]	Вкус
Test	[test]	Тест, испытание
Proof test	[pru:f test]	Проверочное испытание
Thickening	['θɪk.ən]	Сгущение
Threat	[θret]	Угроза
Threaten	['θreɪn]	Угрожать
Till	[tɪl]	Возделывать землю
Tower	['taʊə(r)]	Башня
Down-flow tower	[daʊn-fləʊ 'taʊə]	Отдельная башня с направлением потока сверху вниз
Up flow tower	[ʌp fləʊ 'taʊə]	Отдельная башня с направлением потока снизу вверх
Transition	[træn'zɪʃ.ən]	Переход
Treat	[tri:t]	Отрабатывать
Treatment	['tri:tment]	Отработка
Troublesome		Вредный
Turn	[tɜ:n]	Повернуть
Ugly	['ʌgli]	Уродливый

Undergo	[,ʌn.də'gəʊ]	Подвергаться
Underground	[,ʌndə'graʊnd]	Подземный
Unit	['ju:nɪt]	Единица; установка
Up-to-date	['ʌptə'deɪt]	Современный
Vary	['veəri]	Меняться, колебаться
Volatile	['vɒl.ə.taɪl]	Летучий
Vulnerable	['vʌl.nərə.ə.bl]	Уязвимый
Wasker		Промывной аппарат
Watercourse		Водосток, русло
Work	[wɜ:k]	Работа, завод
Warning	['wɔ:nɪŋ]	Потепление
Waste	[weɪst]	Отходы
Wastewater	['weɪst,wɔ:tə]	Отработанная вода, сточные воды
Wire	['waɪə(r)]	Сетка
Withstand	[wɪð'stænd]	Выносить, претерпевать
Worry	['wɒri]	Беспокоить, тревожить
Yeast	[ji:st]	Дрожжи
Yield	[ji:ld]	Выход продукции

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литературы по специальности
«Охрана окружающей среды»**

Учебно-методическое пособие

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