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Кафедра английского языка № 1

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# ТЕХНОЛОГИЯ И ОБОРУДОВАНИЕ ЮВЕЛИРНОГО ПРОИЗВОДСТВА

## Пособие по практическому курсу научно-технического перевода

Минск 2006

Министерство образования Республики Беларусь

Белорусский национальный технический университет

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## Пособие по практическому курсу научно-технического перевода для студентов приборостроительного факультета

Минск 2006

УДК 82.2(075.8)
ББК 81.2 АНГЛ
С 13

РЕЦЕНЗЕНТЫ:
О.И. Моисеенко, С. А. Хоменко

**Савицкая Т. В.**
С 13 Технология и оборудование ювелирного производства: пособие по практическому курсу научно-технического перевода для студентов приборостроительного факультета / Т. В. Савицкая, Д. Ю. Комиссарова. – Мн,; БНТУ , 2006. – 88 с.

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Пособие предназначено для обучения переводу научно-технической литературы с английского языка на русский студентов приборостроительного факультета, специальности «Технология и оборудование ювелирного производства»

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# Предисловие.

Данное пособие является практическим пособием по обучению переводу научно – технической литературы с английского языка на русский студентов приборо – строительного факультета, по специальность “Технология и оборудование ювелирного производства”. Пособие рассчитано на 36 часов.

Цель пособия --- развить умение анализировать различные элементы текста и правильно переводить американскую и английскую научно – техническую литературу по специальности, а также привить навыки аннотирования и реферирования текстов.

Учебное пособие состоит из 2 частей и поурочного словаря. Часть I поделена на 9 уроков (Units 1-9). Каждый урок включает 2 учебных текста с разработками.

Текстовой материал представлен аутентичными текстами, содержащими информацию по технологии и оборудованию ювелирного производства.

Упражнения, включенные в уроки, отражают лексические и грамматические особенности перевода. В систему лексических упражнений входят упражнения на перевод терминологической лексики, многозначных слов, многофункциональных слов. Упражнения на словообразование ставят целью научить студента переводить слова, в состав которых входят префиксы и суффиксы, часто встречающееся в научно – технической литературе.

В систему грамматических упражнений входят упражнения на перевод страдательного залога, инфинитива и инфинитивных конструкций, причастия и причастных оборотов, герундия и герундиальных конструкций, эмфатических конструкций и др.

К части I дан поурочный словарь, составленный из наиболее трудной лексики текстового материала. Слова, данные в словаре, выделены в текстах жирным шрифтом.

В часть II включены 9 текстов из оригинальных журналов по специальности. Эти тексты рассчитаны на развитие навыков работы с политехническим и отраслевым (по данной узкой специальности) словарем.

# Part I

## Unit 1

***Лексические особенности перевода.***

- ***Перевод интернациональных и псевдоинтернациональных слов.***
- ***Перевод многофункциональных слов as,only.***
- ***Перевод существительных с суффиксами*** *– ition, -ion, -ance, -ence, -* ***ment и прилагательных с суффиксами*** *–ive, -al.*

***Грамматические особенности перевода.***

- ***Перевод эмфатических конструкций.***

***Практика перевода.***

- ***Текст IA.*** *Precious stones.*
- ***Текст IБ.*** *Pearls.*

**Лексические особенности перевода.**

**I. Прочтите следующие интернациональные слова вслух и, определите их значение.**

| | | | |
|---|---|---|---|
| coral | [ˈkor(ə)l] | ornamental | [o:nəˈmentl] |
| agate | [ǽgət] | synthetic | [sinˈθetik] |
| opal | [ˈoup(ə)l] | laboratory | [ləˈborətəri] |
| malachite | [ˈmæləkait] | chemical | [ˈkemik(ə)l] |
| sapphire | [ˈsæfaiə] | composition | [kompə'ziʃ(ə)n] |
| trophy | [tˈrofi] | sort | [so:t] |
| symbol | [ˈsimb(ə)l] | material | [məˈtiəriəl] |
| class | [kla:s] | expert | [ˈekspə:t] |
| natural | [ˈnætʃr(ə)l] | imitation | [imiˈteiʃn] |
| version | [ˈvə:ʃ( ə)n] | plastic | [pˈlæstik] |
| electrolysis | [ilekˈtrolisis] | standard | [sˈtændəd] |
| organic | [o:ˈgænik] | mineral | [ˈmin(ə)r(ə)l] |
| ordinary | [ˈo:dnri] | center | [ˈsentə] |

**II. Переведите следующие псевдоинтернациональные слова, выбирая правильный ответ из ряда значений справа.**

| | |
|---|---|
| accurate | точный, аккуратный |
| actual | действительный, актуальный |
| bullion | слиток (золота или серебра), бульон |
| data | данные, дата |
| decoration | знак отличия, украшение, декорация |
| Dutch | голландский, датский |
| fabric | ткань, фабрика |
| fraction | дробь, фракция |
| list | список, лист |
| prospect | перспектива, проспект |
| receipt [ riˈsi:t] | квитанция, чек ( из магазина), рецепт |
| resin | смола, резина |

## III. Определите интернациональные и псевдоинтернациональные слова и переведите их.

Topaz, brilliant, corundum, amethyst, aquamarine, credit, element, process, primitive, application, temperature, original, mechanical, figure, film, photographic, optical, lenses, metal, mark, popular, decade, combination, platinum, result, proportion, effective, reaction, manufacture, costume, bronze, palladium, public, design, instrument, information, accurately, company, idea, model, documentation, solid.

## IV. Переведите следующие предложения, содержащие интернациональные и псевдоинтернациональные слова, на русский язык.

1. Besides natural gemstones there are synthetic ones made by men in laboratories and factories.
2. Mineral crystals, just as human families and breeds of animals, have certain characteristics.
3. Many of our gem minerals belong to this group, including emerald, beryl, tourmaline, quarts, and the corundum gems, ruby and sapphire.
4. Mineral crystals are presently classified into six systems.
5. Louis de Berquen, Belgium, is credited with the first symmetrical cutting of diamonds in 1475.

6. Together with the development of the telescope, microscope and other optical devices, the so-called "brilliant" cut was developed by Vincente Peruzzi of Venice.
7. The purity of gold used in jewelry is usually indicated by a mark placed on it by the manufacturer.
8. Some gems have been worn by famous figures of history.
9. Archimedes used this method in ancient Greece to determine whether or not his ruler's crown was made of pure gold.
10. Costume jewelry and the use of cheaper materials such as silver, stainless steel and titanium has increased the popularity of jewelry wear.

## V. Переведите следующие предложения, учитывая значения слова as.

1) **так как, поскольку** - союз
2) **по мере того, как** – союз
3) **как** - наречие

1. **As** the time passed, demand for goldsmiths didn't decrease.
2. At present there are several metals which are known **as** noble ones.
3. The gold alloy of which this ring is made can be relied on **as** it is of high quality.
4. **As** this gold statuette is hollow, it is not heavy at all.
5. **As** the jeweler is here, we will ask him to check the fineness of this gold bracelet.
6. **As** an expert you must know all properties of these gems.
7. **As** clothing came along jewelry proved useful for holding it together.
8. Fashions in jewelry do not change so rapidly **as** fashions in dress or automobiles, but they can originate in the same way.
9. Queen Victoria popularized jet and opals, the former **as** a mourning stone when her husband Albert died, and the opals when she gave them **as** wedding presents to her daughters.
10. **As** it has been explained, gems cannot be identified by either color or nomenclature.

## VI. Переведите следующие предложения, учитывая значения слова only.

1) **только** – наречие
2) **единственный** – прилагательное
3) **но** – противительный союз

1. **Only** sixty to seventy types of precious stones are used in jewelry making.
2. The **only** thing that could help them was time.
3. They were prepared to do it, **only** they were never asked.
4. The remarkable properties of platinum have been appreciated **only** in recent years.

5. Though it happens rarely nowadays, in dangerous past eras, more than one king and queen had to leave lands and castles with **only** the things they could carry.

**VII. Проанализируйте и переведите на русский язык следующие существительные, образованные от глаголов с помощью суффиксов.**

**- ition:** composition, definition, competition**,** addition

**- ion:** simulation, imitation

**- ance**: appearance, resemblance, assistance

**- ence:** difference, dependence, existence

**- ment:** advertisement, equipment, improvement

**VIII. Проанализируйте и переведите на русский язык следующие прилагательные, образованные от существительных с помощью суффиксов.**

**- ive:** attractive, protective, imitative, detective, effective, active

**- al:** natural, physical, experimental, mathematical

**Грамматические особенности перевода.**

**IX. Переведите на русский язык следующие предложения, содержащие эмфатические словосочетания <u>as much as</u> – целый и <u>as early as</u> – уже.**

1. Some primitive men and women wore jewelry **as early as** a million years ago.
2. I have been wearing this silver bracelet for **as much as** five years.
3. In addition to imitation stones made in America **as much as** $ 14.000.000 worth are imported every year.
4. The names of most of the well–known gems were established **as early as** when mineralogy wasn't a science yet.
5. The composition of this silver alloy has been discussed **as much as** three times.

**X. Переведите на русский язык следующие предложения, содержащие эмфатическое слово <u>do ( does, did )</u> – действительно, на самом деле, все же, ведь. Постарайтесь правильно передать усиление при**

**переводе.**

1. Gem diamonds **do** have man–made competitors of sort in synthetic rutile, a titanium dioxide material, and in strontium titanate.
2. This necklace **does** cost a fortune, you'd better forget about it!
3. I **do** trust this jeweler – nobody will do this job better.
4. Last year this designer **did** experiment with new gold colours.
5. Many people **do** find comfort in the beauty of precious stones.

**Практика перевода.**

**I. Переведите текст, обращая внимание на лексические и грамматические особенности перевода.**

**Текст IA**

**Precious stones**

**Jewelry** making is one of the oldest of arts. As early as a million years ago, before they felt the need of clothing, some primitive men and women wore jewelry because it made them more attractive to their fellows, especially to possible mates, and they believed it protected them from **peril**. As clothing came along, jewelry proved useful for holding it together. As the ancients found and combined **precious** stones and precious metals, jewelry became a very convenient form of capital. It could be used to buy almost anything in almost any land. Jewelry also became an **insignia** of **fraternity**, a **badge** of **rank**, a trophy for the victor, a symbol of authority and, most important of all, the supreme **token** of love and **esteem.**

Stones used in modern jewelry fall into three classes. The first, oldest, and most important are the natural **gemstones** created by heat and pressure or **sedimentation** in the earth and mined there from, usually with considerable difficulty. The four most valuable of these, the **diamond**, ruby, **emerald**, and sapphire, are considered precious stones. Others attractive enough for jewelry are known as semi-precious or ornamental stones. Of twelve hundred well-defined mineral **species**, only sixty to seventy **qualify**. Some of these are rarely seen and, when very attractive, **rival** precious stones in value but many are abundant and low-priced.

Next there are synthetic gemstones made by men in laboratories and factories. These synthetics, made in America only since World War II, not only have the colour and **appearance** of their natural **counterparts** but are of the same chemical composition. All precious stones have been synthesized but no diamonds of gem quality have been made. Gem diamonds do have man-made **competitors** of sorts in synthetic **rutile**, a titanium dioxide material, and in strontium titanate. These are so soft that they are detected easily, but some other synthetics, the newest man-made emeralds, for example, can be identified only by an expert with scientific equipment. The development of synthetics has not reduced natural stone

values. In some cases, the prices have **advanced**.

Last, there are the pure imitations - usually of glass or plastic material - which have only a superficial **resemblance** to natural stones. They are usually advertised as "simulated" versions of what they **purport** to represent. Glass beads of this sort made up most of the $24 worth of **trinkets** that the Dutch traded to the Canarsie Indians for Manhattan. In addition to those made in America, as much $14.000.000 worth are imported every year.

## II. Выполните письменный перевод текста.

### Текст IБ

### Pearls

Pearls organic rather than mineral gems have three **corresponding** classifications. Most valuable and ranking with precious stones in worth, are the natural or oriental pearls, found since ancient times in some types of oysters but not the ordinary edible variety (the inclusions of these are not pearls). Next in value are cultured pearls. These are also grown in pearl oysters, principally in Japan, but the center is a man-inserted **bead**, which may have only a few outer layers of the natural pearl nacre. Finally, there are vast quantities of imitation pearls made of glass, plastics, and fish-scale **lacquer.**

## III. Сравните свой перевод с приведенным ниже вариантом перевода. Найдите недостатки и ошибки в данном варианте перевода?

Жемчужины – органические скорее чем минеральные драгоценные камни – имеют три соответствующие классификации. Самые ценные и стоящие в одном ряду с драгоценными камнями по ценности - это натуральные или восточные жемчужины, находимые в некоторых типах устриц, но не ординарной съедобной разновидности (включения в эти устрицы не являются жемчужинами). Следующими по ценности являются культурные жемчужины. Эти также выращиваются в жемчужных устрицах, в основном в Японии, но центром является вставленная человеком бусина, которая может иметь только несколько внешних слоев натурального жемчужного перламутра. Наконец, существуют большие количества имитационных жемчужин, сделанных из стекла, пластика и рыбьей чешуи.

## Unit 2

*Лексические особенности перевода.*

- ***Перевод многозначных слов с учётом контекста.***
- ***Перевод двучленных словосочетаний (существительное + существительное).***
- ***Перевод глаголов с суффиксами -ize, -en, префиксами re-, over- и наречий с суффиксом -ly.***

*Грамматические особенности перевода.*

- ***Перевод предложений страдательного залога.***

*Практика перевода.*

- ***Текст 2А. Gold and Silver – the noble King and Queen.***
- ***Текст 2Б. Other Precious Metals.***

**Лексические особенности перевода.**

I. **Переведите следующие словосочетания на русский язык, выбирая правильное значение многозначных слов при помощи узкого контекста.**

1. precious stones, precious knowledge, precious memories, precious coward
2. the treatment of precious metals, a new treatment of cancer, the treatment of a subject
3. to stretch metals, to stretch every nerve, to stretch a rope across the room
4. pure state, Church and state, the state of Texas
5. to pound stones, to pound the piano, to pound sugar
6. to break a window, to break a stick, to break silence
7. hard metals, a hard blow, hard work, a hard heart, hard muscles, a hard rider, hard radiation
8. a noble metal, a noble man, a noble gas
9. my uncle's family, the mineral family, a man of no family

II. **Переведите предложения, учитывая изменение значения слов в зависимости от контекста.**

1. draw

   The cart drew slowly along the road. An ounce of gold can be drawn into a wire more than 40 miles long. The accident drew a big crowd. He has just drawn a big sum of money from the bank.

2. destroy

   Heat doesn't destroy gold. Just look what you've done! The dress is destroyed! I can't prove anything as the documents have been destroyed by that fire.

3. break

   The rope broke and he fell to the ground. Precious metals can be hammered into thin sheets without breaking. Ten minutes later the storm broke. A cry broke from her lips.

4. stretch

   The bird stretched its neck. Gold can be stretched under pressure into thin wire. This forest stretches for miles. You shouldn't stretch your privileges.

5. overlook

   From our house we can overlook the whole port. Pure platinum has been known at least since the sixteenth century, but miners long overlooked it. We overlooked her when we sent our invitations.

**III. Переведите предложения, выбрав правильные вариантное соответствие при переводе. Обратите внимание на то, что многозначные слова являются разными частями речи.**

1. The use of enhanced emeralds and rubies in jewelry production will amount to a higher and higher percent.
2. In South Africa there is a great amount of diamonds.
3. Yellow golds are alloys of gold with silver and copper.
4. To get white gold it is necessary to alloy gold with nickel.
5. Nothing and nobody can alloy the pleasure I feel.
6. In the middle of the room there was a table with a high polish.
7. He lacks polish.
8. Most precious stones polish beautifully.
9. She is polishing up her English in London.
10. This diamond mine is known all over the world.
11. Nearly all the gold ever mined is still in existence today.
12. In the battle of Stalingrad his tank hit a mine.
13. The cruiser was mined and sank.

14. As a result of his experiments a new method of testing gold was developed.
15. Tarnish on the surface of silver results from contact with sulphur compounds in the air.
16. Tarnish is a dark layer built up on the surface of silver.
17. The son tarnished his own reputation and his father's good name.
18. White gold doesn't tarnish.
19. Smog can also cause a tarnish on some gold alloys.
20. This emerald is the cause of all our troubles.

**IV. Переведите следующие словосочетания (существительное + существительное) на русский язык.**

A. Образец: gold alloy

золото ↓

чего? ← сплав

золота

Русский вариант: сплав золота

1. gold purity
2. body salt
3. immortality symbol
4. silver surface
5. diamond weight
6. surphur compound
7. metal nobility
8. iron addition
9. treasure island
10. ruby colour

B. Образец: jewelry silver

ювелирные изделия ↓

какое ← серебро

ювелирное (для ювелирных изделий)

Русский вариант: ювелирное серебро или серебро для ювелирных изделий

1. karat rating
2. bottom number
3. silver colour
4. gold bracelet
5. top number
6. nickel silver
7. finger ring
8. jewelry objects
9. test acids
10. corundum crack

V. **Проанализируйте и переведите следующие глаголы, образованные от существительных или прилагательных с помощью суффиксов либо префиксов.**

-ize: oxidize, crystallize, organize, magnetize, characterize

-en: darken, whiten, brighten, harden, widen, lighten

re-: remelt, reproduce, reconstruct, rehammer, remake

over-: overlook, overheat, overcool, overload, overvalue

**Грамматические особенности перевода.**

VI. **Выберите правильный вариант перевода группы сказуемого.**

1. ... has been paid attention to …
   - на ... обращают внимание
   - на ... обратили внимание
   - на ... обратят внимание

2. ... will be put an end to …
   - ... положили конец
   - ... кладут конец
   - ... положат конец

3. ... was lost sight of …
   - ... исчезал из виду ...
   - ... исчез из виду ...
   - ... исчезает из виду ...

4. … is being called upon …
   - ... призывают ...
   - ... призывают
   - (в данный момент) ...
   - ... призовут...

5. ... have been taken care of …
   - о ... позаботятся ...
   - о ... позаботились ...
   - о ... заботятся ...

VII. **Переведите на русский язык следующие предложения со сказуемыми в страдательном залоге.**

1. An unusual design of this gold pendant is being discussed by the visitors. 2. Dyes are commonly applied to porous gems to improve their color. 3. The precious metals, like the precious stones, have been credited with magical powers. 4. The value of a gemstone and its setting is determined by several factors. 5. This collection of gems had been made long before I was born. 6. The beauty of Carol's face has been increased with these wonderful diamond earrings. 7. Gold, the glamorous yellow metal, was discovered by man many centuries ago. 8. Through the centuries silver has been used to produce or decorate almost any article one can name. 9. When aluminum was first introduced it was very expensive. 10. Peridots have been called Evening emeralds and green garnets have been known as Uralian emeralds and Olivines.

VIII. **Переведите предложения на русский язык, обращая внимание на сказуемое в страдательном залоге с послелогами.**

1. The properties of this new silver alloy were spoken about at the last conference.
2. New electronic devices for jewelry production are dealt with in this article.
3. At last an agreement on the price of the diamond was arrived at.
4. His remarks about the quality of the necklace were taken no notice of.
5. This famous jeweler is often referred to.
6. Soon the boat carrying emeralds and rubies was lost sight of.
7. Where is the expert? – He's just been sent for.
8. This method of testing gold is highly relied upon.

**Практика перевода.**

**I. Переведите текст, обращая внимание на лексические и грамматические особенности перевода.**

## Текст 2А

## Gold and Silver - The Noble King and Queen

Gold and silver have long been considered as the king and queen of metals, for good reason. No other member of the mineral family can be compared with these two metals in nobility.

A noble metal is one that doesn't oxidize or corrode easily. Gold is the most noble of all metals. It is resistant to air, water, salt, and most acids. Heat does not destroy gold, allowing it to be melted and remelted. Nearly all the gold ever mined is still in existence today, in one form or another. Silver is second only to gold in its nobility.

Metal that is hammered into thin sheets without crumbling or breaking is called malleable. Ductile metals are stretched under pressure into thin wires without breaking. Gold is the most malleable and ductile of all metals, silver the second. Gold can be pounded into sheets less than four millionths of an inch thick. An ounce of gold can be drawn into a wire more than 40 miles long.

Malleable and ductile metals are soft and easy to work with. Gold and silver in their pure states, however, are too soft for making objects that will last. Therefore, other metals are frequently combined (alloyed) with both gold and silver to make them harder.

Silver alloys usually retain their silver color. The color of gold varies with the kind and amount of other metals combined with it. Red golds contain silver, copper, and zinc. Pink gold contains no zinc. Yellow golds contain more silver and less copper than red golds. Green golds may contain cadmium and zinc. Blue gold is produced by addition of iron to an alloy.

White gold was formerly an alloy of gold and silver. Silver is well known for its tarnish. Tarnish is a dark layer built up on the surface of silver, resulting from contact with sulphur compounds in the air. Some body chemicals may also cause tarnish. It does not destroy the underlying silver and may be polished off (although sometimes not easily!).

When gold darkens skin, it is usually due to body salts interacting with the copper or silver in a gold alloy. Smog can also cause a tarnish on some gold alloys that will rub off on the skin.

White gold today is usually a gold and nickel alloy. It may also contain palladium, manganese, or tin, and does not tarnish. Nu-gold, Merlin's Gold, and jewelers' bronze are alloys of copper and zinc. They contain no gold.

Early civilizations associated gold with the sun and considered it masculine. They regarded silver as feminine and linked it with the moon. Gold has been long prized as a symbol of life and immortality. The whiteness of silver symbolizes purity for many.

**II. Выполните письменный перевод текста.**

## Текст 2Б

## Other Precious Metals

Heavier and more valuable than gold is platinum, a metal whose **remarkable** properties have been **appreciated** only in recent decades. While a platinum alloy was found in an Egyptian tomb dating from 700 B.C. and the pure metal has been known at least since the sixteenth century, miners long **overlooked** it.

Usually found along with platinum are other heavy metals that belong to the same group. These are iridium, osmium, ruthenium, rhodium, and palladium. The specific gravity of gold is 19.3 while that of platinum is 21.43; osmium, with 22.5, is the heaviest metal known, as well as the hardest.

Like gold, pure platinum is too soft for use in jewelry, and usually it is alloyed with iridium. The 10-per cent alloy, known as "hard platinum," is used for fine jewelry and, because its whiteness makes an ideal **setting** for diamonds, it is preferred to all other metals for this purpose.

Palladium, though described as a "white" metal, is actually more like **shimmering** pearl-gray satin and its color makes an ideal **complement** to diamonds or colored stones. Because of its lightness it is **particularly** suited for large ear clips **currently** so **fashionable**. Frequently palladium is combined with yellow gold in **wedding** and **engagement rings**.

**III. Сравните свой перевод текста с предложенным ниже вариантом перевода. Найдите недостатки и ошибки в данном варианте перевода.**

Тяжелее и ценнее золота является платина, металл, чьи замечательные свойства были оценены только в недавних декадах. В то время как платиновый сплав был найден в египетской могиле, датируемой из 700-го года до н.э., а чистый металл был известен по крайней мере с 16-го века, шахтёры долго не замечали его.

Обычно находили вместе с платиной другие тяжёлые металлы, что принадлежат к одинаковой группе. Это иридий, осмий, рутений, родий и палладий. Удельный вес золота—19,3, в то время как платины – 21,43.

Осмий, с 22,5, известен как самый тяжёлый металл, а так же самый трудный.

Похожая на золото, чистая платина слишком мягкая для использования в ювелирном деле и сплавляется с иридием. 10-процентный сплав, известный как «трудная платина», используется для хороших ювелирных изделий и, потому что его белизна делает идеальную оправу для бриллиантов, его предпочитают всем другим металлам для этой цели.

Палладий, хотя описанный как «белый» металл, в действительности больше похож на мерцающий жемчужно-серый сатин, и его цвет делает идеальное дополнение к бриллиантам и цветным камням. Из-за своей мягкости он особенно подходит для больших ушных клипсов, в настоящее время таких модных. Часто палладий комбинируется с желтым золотом в свадебных и обручальных кольцах.

## Unit 3

*Лексические особенности перевода.*

- ***Перевод терминов типа:***
  - ***прилагательное + существительное;***
  - ***причастие I, II + существительное;***
  - ***цепочка существительных.***
- ***Перевод словосочетаний.***
- ***Перевод многофункциональных слов that, which.***
- ***Перевод слов, образованных с помощью суффиксов либо префиксов.***

*Грамматические особенности перевода.*

- ***Перевод модальных глаголов.***

*Практика перевода.*

- ***Текст 3А. The Purity of Gold and Silver.***
- ***Текст 3Б. Measurement of jewels.***

**Лексические особенности перевода.**

**I. Переведите следующие терминологические сочетания, состоящие из прилагательного и существительного, на русский язык. Обратите внимание на выбор значения прилагательного в зависимости от лексического значения существительного.**

Пример: right decision – верное решение, но right angle – прямой угол

| | |
|---|---|
| base metal | hollow item |
| solid gold | pure gold |
| hard metal | fine silver |
| soft mineral | metric carat |
| thin sheet | clear liquid |
| synthetic counterpart | nitric acid |

**II. Переведите следующие терминологические сочетания состоящие из причастия I и существительного.**

| | |
|---|---|
| varying amount | opening roof |
| melting mixture | detonating gas |
| remaining solution | indicating mark |

**III. Выберите правильный перевод терминологических сочетаний, выраженных причастием II и существительным.**

| | |
|---|---|
| 1. rolled gold | а) прокатное золото;<br>б) катаемое золото;<br>в) золото, накатанное на металл; |
| 2. beaten silver | а) побитое серебро;<br>б) листовое серебро<br>в) пробитое серебро; |
| 3. pounded diamond | а) мелкий алмаз;<br>б) дробленый алмаз;<br>в) дробящийся алмаз; |

**IV. Переведите на русский язык следующие терминологические сочетания. Запомните, что предложное и соответствующее ему беспредложное словосочетание переводятся одинаково.**

Пример: the amount of coin silver = the coin silver amount =
количество
1 2 3 2 3 1
монетного серебра

| | |
|---|---|
| weight of gold objects | = gold objects weight |
| a layer of silver alloy | = a silver alloy layer |
| hardness of standard metal | = standard metal hardness |
| usage of jewelry silver | = jewelry silver usage |
| classification of crystal systems | = crystal systems classification |
| identification of precious stones | = precious stones identification |

**V. Выберите оптимально правильный вариант перевода.**

1. 10 millionths of an inch thick
   a) 10 миллионных дюймовой толщины
   b) 10 миллионных дюйма толщины
   c) толщиной в 10 миллионных дюйма
2. to be made completely from 14 karat gold
   d) быть сделанным полностью из 14 каратов золота
   e) полностью быть сделанным из золота в 14 каратов
   f) делать полностью из золота в 14 каратов
3. a solution containing gold
   g) растворосодержащее золото
   h) раствор, содержащий золото
   i) раствор, содержащийся в золоте
4. used more in Europe than it is in the USA
   j) используемый больше в Европе, чем он есть в США

k) используемый больше в Европе, чем в США
l) используемый больше в Европе, чем это есть в США

5. to be sold by size rather than carat weight
m) продавать размером скорее, чем каратовым весом
n) продаваться по размеру скорее, чем по каратовому весу
o) продавать по размеру, нежели по весу в каратах

## VI. Переведите следующие словосочетания на русский язык.

to contain 18 parts of gold;
to be 18 parts gold and 10 parts other metal;
to express as a fraction;
to be deposited on another metal;
to be measured in grains;
to be expressed “0,75 carat“.

## VII. Переведите предложения на русский язык, обращая внимание на разные значения слова that.

1) **(э)тот**, **(э)та**, **(э)то** – указательное местоимение
2) **то**, **что**; - союз
3) **который** (**-ая**, **-ое**) – относительное местоимение
4) **не переводится**, **либо переводится ранее стоящим существительным**, **которое оно заменяет** – слово заместитель

1. The advantage of this method is **that** it has been tested.
2. His mother believes **that** there will be no problem with buying wedding rings.
3. Show me **that** gold bracelet, please.
4. **That’s** just what I was going to say about the necklace.
5. It’s a problem **that** needs to be discussed in detail.
6. The content of gold in this alloy is much higher than **that** in yellow gold.
7. Gems **that** have been worn by famous figures of history are much more expensive than the same kind of stones without such associations.
8. Some synthetic diamonds are so soft **that** they are detected easily.
9. **That** is simple enough, but there are some things to be understood.
10. It means **that** a gem softer than quartz will lose it’s polish and become dull after cleaning.

## VIII. Переведите предложения на русский язык, обращая внимание на разные значения which.

1) **который** – относительное местоимение
2) **что** – относительное местоимение в функции подлежащего в придаточном предложении

1. The method approximates the purity of a gold alloy, **which** makes the next step a little easier.
2. Ask any jeweler to list the gemstones with **which** they prefer to work, and sapphires and rubies will be the first.
3. In addition to colour, brilliance and transparency, there is also the "fashioning", **which** means the skill and artistry with which a gem has been cut, polished and mounted.
4. Feldspar, of **which** moonstone is the best known gem, is 6 on the scale.
5. Evaporation of a liquid leaves a vacant area in **which** crystals have room to grow.

**IX. Проанализируйте и переведите следующие существительные, образованные с помощью суффиксов.**

**-ness:** fineness, whiteness, hardness, completeness, thinness, thickness, toughness, effectiveness
**-age:** percentage, passage, usage, voltage, breakage, coverage

**X. Проанализируйте и переведите следующие слова, образованные от слов с противоположным значением с помощью префиксов.**

**de**-: decompose, deoxidize, deformation
**im**-: impossible, impractical, immeasurable, imperfect
**dis**-: disadvantage, discharge, disability
**un**-: unaffected, unobtrusive, unlimited

**Грамматические особенности перевода.**

**XI. Переведите предложения, содержащие модальные глаголы. Постарайтесь правильно передать модальность при переводе.**

**A.** 1. Any woman **can** attract attention with a single, well designed piece of jewelry.
2. Some men collect gems, although they **may** wear little or no jewelry.
3. Colour in gems **may** be due either to the combination of elements that make up the gem or it may be caused by certain foreign matter or impurities.
4. A crystal not of gem quality **may** weigh a ton or it may be so minute it **can** be seen only under a microscope.
5. Using a file or scraper, remove any plating that **might** be on the piece of gold.
6. Alloys that are more pure than 80% or less pure than 20% **cannot** be accurately measured through this method and will require technical analysis for accuracy.

**Б.** 1. Hardness **is not to** be confused with toughness, which is resistance to breakage.
2. The largest stones of nearly every category **have to** be broken up before they **can** be used for gem purposes. Even the famous Cullinan Diamond **had to** be cut down to make it suitable for jewelry.
3. The crystal systems **must** be used in conjunction with other factors.
4. Diamond cutter don't **have to** do such work any more.
5. Jewelers **should** also examine how the stone has been shaped.
6. A jeweler **must** take care not to overheat corundum.

**XII. Переведите следующие предложения, обращая внимание на перевод модальных глаголов, за которыми следует перфектный инфинитив.**

1. You **may have seen** an old movie where a diamond cutter is clearing a large, valuable diamond crystal.
2. Although this description dates from the 12th century, most of the described techniques **must have been** still **employed** in the late middle ages.
3. The shop assistant **could have misrepresented** this gold-filled wire as solid gold.
4. I **should have shown** this chain to my customer to illustrate that gold-filled jewelry can stand the test of time.
5. Some medieval books written by the monk Theophilus, who himself **must have been well-trained** in the craft of metalworking, give detailed accounts on the tools and equipment used for the goldsmith's work.
6. This **may have prevented** your jewelry pieces from being scratched.

**Практика перевода.**

**I. Выполните полный перевод текста, обращая внимание на лексические и грамматические особенности перевода.**

**Текст 3А**

**The Purity of Gold and Silver**

The purity of gold used in jewelry is usually indicated by a mark placed on it by the manufacturer in **conformity** with Government **regulations.** The carat in Europe and the karat in the United States measures the degree of **fineness.**

Karats are based on the number 24. The **rating** is a **fraction**, with 24 always as the **denominator** (bottom number). The amount of gold is the **numerator** (top

number). Pure gold is 24/24 gold. We traditionally drop the bottom number, so that pure gold, or 100% gold, is called 24 karat gold.

Except for the making of gold leaf, in which the metal may be hammered into sheets as thin as one-three-hundredths of an inch, pure gold is too soft for most jewelry **purposes**. Combinations of copper, silver, and zinc are generally added for hardness. A 22-karat gold, however, is popular for **wedding rings**, especially in European countries. This alloy is composed of twenty-two parts of pure gold with one and a half parts of copper and one-half part of silver. Other popular and largely standard grades are the 18-, 14-, 12-, and 10-karat **grades**, all of which may be termed "karat gold."

Gold that is 18 karat should be a gold alloy containing 18 parts of gold to six parts of other metal. Fourteen karat gold, which is 14 parts gold and 10 parts other metal, is the most popular gold in the U.S.A. Alloys containing less than 10 karats of gold cannot be **legally** sold as gold in the U.S.A.

The term **solid** gold does not mean pure gold. Solid gold means only that the item is not **hollow**. The karat rating tells how much gold is in the object.

One or more thin sheets of gold applied under heat and pressure may be added to the surfaces of other metals. The result is called **rolled gold plate** or, if the gold composes more than one-twentieth of the weight of the metal in the article, it is termed gold-filled. This development brought attractive jewelry within the **means** of many who could not **previously afford** it.

Again, the karat rating tells how much gold the item contains. For example, 14K GF means a layer of 14 karat gold has been **bonded** to another metal. The item itself is not made completely from 14 karat gold.

Gold may also be applied to a **base** metal by **electroplating**. In this process, the metal to be plated is **immersed** in a **solution** containing gold This is **decomposed** by the passage of an electric current and the gold collects on the surface of the base metal. Gold plate can be detected by **nicking** the surface. The purity of gold can be learned by comparing its reaction to nitric acid or aqua regia with the reactions of **sample needles** of known karat.

The layer of gold alloy must be at least seven millionths of an inch (or 175 microns) thick. If the layer is thinner, it must be called gold **wash**. A layer of gold alloy more than 10 millionths of an inch thick may be called heavy gold electroplate.

The weight of gold alloy in objects is often expressed as a fraction. Thus, describing something as one-tenth (1/10) I4K means that one-tenth (or 10%) of the total weight is 14 karat gold.

The purity of silver is expressed as a percentage.

**Sterling** silver is an alloy containing 92.5 parts of silver and 7.5 parts of other metal. It is also called 92.5 percent silver or 925 fineness. Although copper is the standard metal used in sterling silver, other metals may be used as well.

Jewelry silver, used more in Europe than it is in the United States, is often 800 fineness, which means that it is an alloy of 80% silver and 20% other metal, usually copper.

German silver, or nickel silver, contains no silver. It is an alloy of copper,

nickel and zinc. German silver is also known as white copper.

## II. Выполните письменный перевод текста.

### Текст 3Б

### Measurement of jewels

The usual unit of measurement of jewels is the metric carat, a term **derived** from the **carob**, a small oriential bean. Though once of different meaning in various countries, the carat is now largely standard. In the principal countries the carat is now equal to 200 milligrams or two-tenths of a gram. The metric carat was adopted by the United States in 1913. It is a very decided improvement over the old system. By the metric system, a stone weighing three-fourths of a carat is expressed ".75 carat."

In addition to being the unit weight for the diamond, the carat is the measure for most precious and so-called semi-precious stones and their synthetic **counterparts**, but there are some exceptions. These include lapis lazuli, coral, **turquoise**, and, in some cases, agate, opal, and malachite which are sold by size rather than carat weight. Standard sizes are 12 x 18 or 8 x 11 millimeters. These are known as **calibre** stones.

Some pearls are sold by the carat but the usual measurement for them is the **grain**. This is a twentieth of a gram; hence four pearl grains equal one carat. Diamonds are sometimes measured in grains.

## III. Сравните свой перевод с приведенным ниже вариантом перевода. Найдите недостатки и ошибки в данном варианте перевода.

Обычная единица измерения драгоценностей – метрический карат, термин произошел от “кароб”, маленького восточного боба. Хотя однажды разного значения в разных странах, карат сейчас в большей мере стандарт. В принципиальных странах карат сейчас равен 200 мг или 2/10 г. Метрический карат был адаптирован США в 1913 г. Это очень решительное улучшение над старой системой. По метрической системе камень, весящий s карата, выражается 0,75 карата.

В добавление к весовому измерению для алмаза, карат – измерение для большинства драгоценных и так называемых полудрагоценных камней и их синтетических двойников, но есть исключения. Эти включают лазурит, коралл, бирюзу и, в некоторых случаях агат, опал и малахит, которые продаются по размеру скорее, чему по каратовому весу. Стандартные размеры – 12х18 или 8х11 мм. Эти известны как калиброванные камни.

Некоторые жемчужины продаются по каратам, но обычное измерение для них – гран. Это 1/20 грамма; следовательно, четыре жемчужных грана равны 1 карату. Алмазы иногда  измеряются в гранах.

## Unit 4

***Лексические особенности перевода.***

- ***Перевод терминов.***
- ***Перевод многозначных слов в зависимости от контекста.***
- ***Перевод разных значений служебных слов because, because of.***
- ***Перевод прилагательных с суффиксом -able и префиксом -re.***

***Грамматические особенности перевода.***

- ***Перевод инфинитива с различными функциями в предложении.***

***Практика перевода.***

- ***Текст 4А. Working techniques of the past.***
- ***Текст 4Б. The working of gems and pearls.***

**Лексические особенности перевода.**

**I. Проанализируйте и переведите на русский язык следующие терминологические сочетания.**

А. copper alloy
silver or gold leaf
rosette and lozenge shapes
a mercury amalgam
metal sheet
metal pins
a metal die
a relief motif
a tin solder
a wax channel
necklace strings

Б. kneaded clay
melted gold or silver
a heated object
a gilded jewel
polished amber
an applied amalgam
evaporated mercury
rubbed and polished gems
cast jewels
pierced pearls

В. medieval working procedures
reusable, open moulds
a hard solder of copper
a silver core of the jewel
a brilliant and radiating technique
a separate craft

**II.Выберите оптимально правильный вариант перевода.**

| | |
|---|---|
| the lost wax technique | а) техника потерянного воска;<br>б) потерянная восковая техника;<br>в) метод литья с помощью удаления воска. |
| the clay mould | а) глиняное лекало;<br>б) глиняный шаблон;<br>в) форма из глины. |
| metal dies of copper alloy | а) металлические матрицы медного сплава;<br>б) металл погибает из-за медного сплава;<br>в) металлические матрицы из медного сплава. |
| dress fittings sewn onto clothing | а) детали одежды, нашитые на одежду;<br>б) платьевые детали, нашитые на одежду;<br>в) нашитые детали одежды. |

**III. Переведите следующие предложения, обращая внимание на разное значение выделенных слов в зависимости от контекста.**

1. The finest **pieces** in his collection are these two emeralds. 2. Do you know all **pieces** in chess? 3. She had nothing more than a **piece** of bread all day. 4. These **pieces** of advice were no good. 5. Jesus Christ was sold for thirty **pieces** of silver. 6. The jewels were usually **cast** into shape with the lost wax technique. 7. She **cast** a look at Victoria's ruby brooch. 8. The latest facts **cast** upon disappearance of this collection of gems. 9. Actors for the parts have already been **cast**. 10. When the whole was **fired**, the clay hardened, and the wax ran though the channels. 11. The house has been **fired** by his enemies. 12. The terrorists wanted to **fire** a mine. 13. Forest **fires** have become quite frequent lately. 14. Gems were cut into **planes** to give them radiating effect. 15. **Planes** are as safe as any other kind of transport. 16. An eagle is **planning** on widespread motionless wings. 17. Yesterday in the workshop we were taught to work with a **plane**. 18. The orbital **plane** of this planet is large enough.

**IV. Переведите следующие предложения на русский язык, обращая внимание на разные значения служебных слов.**

1) **because –** потолку что, так как, поскольку (союз);
2) **because of –** из-за (предлог);

1. Gems and jewelry may enjoy a rarity value for various reasons: **because** they are scarce; **because** they are of unusual size; **because** of remarkable craftsmanship involved**; because of** special romantic or historical association.

2. **Because of** the diamond's hardness, diamond- cutting presents special problems.
3. Square- cut gems usually have fewer facets **because** they are not made with faceted corners.
4. **Because of** their small size, jewels were usually cast into shape with the lost wax technique.
5. **Because** our sense of temperature is not very reliable temperature measurements of our body must be made with accurate thermometers.

**V. Проанализируйте и переведите на русский язык следующие прилагательные, образованные:**

а) от глаголов с помощью суффикса -able;
б) от прилагательных с помощью префикса re-;

а) **-able**: considerable, valuable, measurable, desirable, achievable, usable, constructable, presentable
б) **re-**: reusable, reconstructable, representable

**Грамматические особенности перевода.**

**VI. Выберите правильный перевод предложений с инфинитивом.**

| | |
|---|---|
| 1. Археологи счастливы, что нашли столько золотых предметов во время раскопок. | а) The archaeologists are happy to find so many golden objects during excavations.<br>б) The archeologists are happy to have found so many golden objects during excavations. |
| 2. Ювелиры не любят, когда их беспокоят во время работы. | a) Jewelers don' t like to disturb people during their work.<br>б) Jewelers don' t like to be disturbed during their work. |
| 3. Для того чтобы сделать драгоценное украшение из другого металла, нужно было покрыть его серебром или золотом. | a) To make the jewel out of some other kind of metal, it was necessary to cover it with silver or gold.<br>б) To be made of some other kind of metal the jewel had to be covered with silver or gold. |

**VII. Переведите следующие предложения, обращая внимание на инфинитив в различных функциях.**

1. In old times they used special vessels **to separate** gold from silver.
2. If a man has a talent for design and craft work, he can even make at home jewelry **to be worn** by his family with pride.
3. **To break up** this precious stone is not an easy task.
4. It is not possible **to identify** gems by either color or nomenclature.
5. **To make** the jewel out of some other kind of metal and to cover it with silver or gold leaf is a cheaper alternative.
6. First an amalgam of mercury and gold was applied to the parts of the jewel to be **gilded**.
7. It requires a lot of attention **to analyze** archaeological evidence correctly.
8. Monasteries always had a great demand for goldsmiths **to provide** the gold and silver objects necessary for church service.
9. This method of gold testing is good enough **to achieve** reliable results.
10. The work shops of goldsmiths were situated in busy areas, so as **to be** in the main line of traffic.
11. **To understand** working techniques of the past needs close examination of surviving pieces.
12. The ancient Egyptians buried their kings in gold, to guarantee their arrival in the after-world.

**Практика перевода.**

**I. Выполните полный перевод текста, обращая внимание на лексические и грамматические особенности перевода.**

**Текст 4А**

**Working techniques of the past**

Archaeological **evidence** provides some information on medieval working procedures. **Sites** with **traces** of the process of parting base metal from precious or gold from silver are sometimes found during excavations. Working tools and equipment, for example, **hammers**, **moulds**, **crucibles** and the special vessels to separate gold from silver have also come to light. The workshops themselves rarely leave traces, as they were usually found within houses. To understand working techniques of the past one should closely examine the **surviving** pieces, as well as analyze their content. Because of their small size, jewels were usually **cast** into shape with the *cire perdue* or lost **wax** techniques. In this process, the shape of future jewel was formed in wax, with wax channels added, then covered with **kneaded** clay. When the whole was fired, the clay hardened, and the wax ran out through the channels. The melted gold or silver was **poured** into the form through some channels, while other channels allowed the air to leave. In the end the clay **mould** was broken and the joints were filed away. To produce numerous items, reusable, open moulds (consisting of several pieces of metal) were employed. To create a three-dimensional shape of pieces beating from the back (repousse

technique) was employed. To prepare decoration, such as **brooches** or **dress fittings sewn** onto clothing, metal **dies** of copper alloy were used. A metal sheet was laid over the relief motifs of the die and covered with a piece of **lead**. When the lead was struck with a hammer, the sheet in between took on the shape of the die below. Dies and moulds were often used by the same workshop for a considerable period of time.

The different parts of jewelry were often joined by **riveting** or **soldering** (this latter done either at temperature below 250C$^{o}$ with a tin **solder** or over 700C$^{o}$ with a hard solder of copper alloyed with gold or silver). The surface was also often decorated with techniques such as **embossing** and **engraving** .

A cheaper alternative was to make the jewel out of some other kind of metal and cover it with silver or gold leaf. The process by which this was achieved is called **mercury gilding**. First an amalgam of mercury and gold was applied to the parts of jewel to be gilded, then the object was heated and the mercury evoparated, leaving just the gold or silver, which was **burnished** at the end with a rabbit' s foot.

The silver or gold **core** of the jewel was often further enriched by applications made of the same material.

## II. Выполните письменный перевод текста.

### Текст 4Б

### The working of gems and pearls

The working of gems and pearls also required a special technique. In the early and high Middle Ages, gems were usually used as gems en **cabochon**, rubbed and polished until they gained a radiant, shiny, and smooth surface. In the later Middle Ages, gems were also cut into planes to give them a brilliant and radiating effect. Simple patterns of diamond cutting, such as the **oblong, rosette**, and **lozenge** shapes, developed by the fifteenth century. The cutting of stones gradually became a separate **craft** to be done by jewelers and not the goldsmiths themselves. In medieval representation of goldsmith's workshops, the goldsmith is shown in possession of large quantities of already cut stones, probably acquired from the jeweler. Pearls, gained from fresh-water **mussels**, were **pierced** and used for necklace strings or sewn onto textiles for decoration. When applied to jewels, they were **mounted** on metal pins the end of which was **sealed** with a drop of gold. Highly polished **amber** and **jet** was also used for decoration. The natural shapes of corals and pearls were often exploited in the design of jewels, especially from sixteenth century **onwards.**

## III. Сравните свой перевод с приведенным ниже вариантом перевода. Найдите недостатки и ошибки в данном варианте перевода.

Обработка драгоценных камней и жемчужин также требовала специальной техники. В начале и середине средних веков драгоценные камни обычно использовались как нераненые драгоценные камни, натирались и

полировались, пока они не приобретали радужную, сияющую и гладкую поверхность. В конце средних веков драгоценные камни также разрезали на плоскости, чтобы придать им сверкающий и радужный эффект. Простые модели резки алмазов, такие как продолговатые, в форме розетки и ромбовидные формы появились в 15 в. Резка камней постепенно стала отдельным ремеслом для ювелиров, а не для золотых дел мастеров. В поздних средневековых представлениях золотых дел мастерских мастер показан во владении больших количеств уже разрезанных камней, возможно, полученных от ювелира. Жемчужины, полученные из пресноводных раковин, прокалывались и использовались для ожерельевых нитей или нашивались на текстиль для украшения. Наложенные на драгоценные камни, они монтировались на металлические булавки, конец которых запечатывался каплей золота. Высоко отполированный янтарь и черный янтарь также использовался для украшения. Натуральные формы кораллов и жемчужин часто эксплуатировались в дизайне драгоценностей, особенно с 16 века и далее.

## Unit 5

***Лексические особенности перевода.***

- ***Перевод многозначных слов в контексте.***
- ***Перевод словосочетаний.***
- ***Перевод терминов типа существительное + причастие II + существительное.***
- ***Перевод прилагательных с суффиксами*** *-ous, -y,* ***-ic и существительных с суффиксами*** *-ity, -ancy, -ency.*

***Грамматические особенности перевода.***

- ***Перевод оборота*** *Complex Object.*
- ***Перевод "the" в роли сопоставительного союза в конструкциях типа the more … the better.***

***Практика перевода.***

- ***Текст 5А.*** *Precious Stones Properties.*
- ***Текст 5Б.*** *Fraud in Jewelry.*

**Лексические особенности перевода**

**I. Переведите следующие словосочетания на русский язык, выбирая правильное значение многозначных слов при помощи узкого контекста.**

1. **Dull** light, **dull** colour, a **dull** book, a **dull** man, **dull** goods.
2. **Vivid** colouring, **vivid** interest, **vivid** imagination, a **vivid** reflection in the water.
3. The **fire** of a stone, a **fire** in the forest, the **fire** in the oven.
4. The **appearance** of the surface, a noble **appearance**, the sun's **appearance**.
5. The **manufacture** of doublets, large-scale **manufacture**, **manufacture** of false information.
6. A **genuine** diamond, **genuine** sympathy, a **genuine** Rubens, **genuine** wool, a bull-dog of **genuine** breed.
7. A **common** form of fraud, **common** interests, **common** possessions, the **common** fraction, **common** decoration.
8. A **foreign** word, **foreign** matter, **foreign** policy, **foreign** relations.

**II. Переведите предложения, выбрав правильное вариантное**

**соответствие при переводе. Обратите внимание на то, что многозначные слова являются разными частями речи.**

1. Diamonds are, as everyone knows, the **hardest** known material. And, as one can add, the **hardest** to get. Old habits die **hard**.
2. People often want gems which have been worn by famous **figures** of history. For the details see **figure** 1 on page 32. A golden **figure** of a deer stood on the mantelpiece. How do you **figure** it to yourself?
3. The intensity in gems **means** the amount of colour, whether vivid or dull. E-mail is an important **means** of communication. All technical **means** will be perfect in future.
4. Diamonds, of course, **hold** first place in brilliancy. He has a great **hold** over his young brother. Keep a tight **hold** upon yourself! This box **holds** all her jewels. The liberals **held** office at that time.
5. The **characteristic** luster of a diamond is called adamantine. This machine-tool has very good operating **characteristics**. Do you know the general **characteristics** of corundum?
6. Gold has gone up in **value**. I **value** your opinion very highly. The diamond necklace was **valued** at 100.000 dollars.

## III. Выберете правильный перевод.

| | |
|---|---|
| 1. …reflected from both the interior and exterior surfaces of the stone, … | а) отраженный от обеих внутренних и наружных поверхностей камня;<br>б) отраженный как от внутренней, так и от наружной поверхности камня;<br>в) отраженный от обеих внутренних и от наружной поверхности камня. |
| 2. The fire of a stone means “dispersion” of white light. | а) Огонь камня означает дисперсию белого света.<br>б) Каменный камин означает дисперсию белого света.<br>в) Свечение камня происходит из-за рассеивания белого света. |
| 3. Turquoise is completely opaque, yet considered quite beautiful. | а) Бирюза полностью матовая, еще она считается совершенно прекрасной.<br>б) Бирюза абсолютно непрозрачна, и |

все же считается довольно красивой.

в) Бирюза полностью непрозрачна,
но еще считается прекрасной.

**IV. Проанализируйте и переведите на русский язык следующие словосочетания.**

А. a great Fifth Avenue store
a modest side-street shop
an additional association value
spectrum colours
rainbow colours
star ruby(sapphire)
jewelry wear

Б. a colourless stone
a very rare white stone
a slight blue tint
the chromatic colours
a vast subject
of orange to yellow hues
valuable gems
a genuine stone
apparent size
the “false doublet”

В. the cleaned and dried stone
assembled stones
the so-called “doublets” and “triplets”
cemented layers
fused layers

**V. Переведите следующие предложные словосочетания, в том числе и терминологические, на русский язык.**

a matter of personal taste

the amount of colour

variations of hues

a combination of all the chromatic colours

the surface of a stone

the characteristic luster of a diamond

fineness of the polish

the index of refraction

a variety of ruby

the manufacture of doublets

**VI. Переведите следующие терминологические сочетания, выраженные существ. + причастие II + существ.**

Пример: **laser drilled stones** —камни, просверленные лазером

garnet-topped doublets

heat treated rubies and sapphires

corundum set jewelry

film coated sapphire

glass-filled fractures

diffusion-treated stones

**VII. Проанализируйте и переведите на русский язык следующие прилагательные, образованные от существительных с помощью суффиксов.**

**-ous:** resinous,dangerous
**-y:** pearly,waxy,glassy,silky,rainy,windy
**-ic:** metallic, realistic, atomic, electronic

**VIII. Проанализируйте и переведите на русский язык следующие существительные, образованные от прилагательных с помощью суффиксов.**

**-ity:** durability,rarity,popularity,intensity,activity,elasticity,electricity
**-ancy:** brilliancy, constancy
**-ency:** transparency, efficiency

**Грамматические особенности перевода.**

**IX. Проанализируйте и переведите следующие предложения, обращая внимание на перевод Complex Object.**

1. Primitive people believed **jewelry to protect** them from peril.
2. Some authorities consider **one hundred and fifty hues to have** a million different variations in tints.

3. Experts consider **colour to determine** the beauty as well as the popularity of all gems.
4. Transparency in a gem allows **light to pass** perfectly.
5. Most women believe **earrings to enhance** the beauty of their faces.
6. In dangerous past eras jewels enabled many **monarchs to raise** armies **and regain** their thrones.
7. Our firm wants **a purchaser to know** what he is buying.
8. Some red stones are given names which make **the** uninformed **buyer consider** them a variety of ruby.
9. Translucency in gems lets **light pass** but diffuses it.
10. In our more than 20 years practice job as jewelers, we're seen such **incidents happen** too frequently.

## X. Переведите следующие предложения с Complex Object, где инфинитив выражен пассивной формой.

1. The expert allowed this **method** of gold testing **to be used**.
2. They believed **the value** of the whole crystal **to be doubled** by the proper cutting of facets (small plane surfaces).
3. They want **artificers** who cut, polish and engrave precious stones other than the diamond **to be termed** lapidaries.
4. She found both **the rings to be stolen**.
5. My husband wants **his wedding ring to be engraved** with my name.
6. When you put your hand into your pocket or purse, it can cause a finger ring **stone to be smacked** against keys, lipstick or pocket knives.
7. In the past, many jewelers believed **sapphires and rubies to be cut** this way.

## XI. Переведите следующие предложения с "the … the" в роли сопоставительного союза "чем … тем".

Пример: **The more** we read, **the more** we know. — **Чем больше** мы читаем, **тем больше** мы знаем.

1. **The better** a stone resists abrasion, **the more** practical it is for jewelry wear.
2. **The harder** the stone, **the higher** its value.
3. **The more** carefully the jeweler works, **the less** mistakes he makes.

4. **The larger** the precious stone is, **the more** light it gathers and **the more** brilliant it is.
5. **The harder** the gem, **the more** confidence jewelers have in it.
6. **The more** transparent an emerald is, **the more** beautiful it is considered.

**Практика перевода.**

I. **Переведите текст, обращая внимание на лексические и грамматические особенности перевода.**

**Текст 5А**

Precious Stones Properties

Whether a gem comes from a great Fifth Avenue store or a modest side-street shop, experts believe the intrinsic value of a stone and its settings to depend on four varying factors. These are: beauty and splendor; durability and hardness; rarity, fashion. For some pieces there is an additional association value. People often want gems which were worn by famous figures of history. These gems sell for more than the same kind of stones without such associations.

Beauty in gems, as in everything else, is "in the eyes of the beholder", or a matter of personal taste. But traditionally there are five factors upon which a gem's beauty is dependent. These are color; luster; brilliancy; fire; and, in most but not all cases, transparency.

Aside from diamonds, in which the colorless stone, or the very rare white stone with a slight blue tint, is generally preferred, experts consider color to determine the beauty as well as popularity of all gems. Color in itself is a vast subject, but as applied to gems, the chromatic colors – red, orange, yellow, green, and blue – may be described as having the attributes of hue, tone, and intensity. Hue refers to the color, such as red or green; the tone or tint may be light or dark; and the intensity means the amount of color, whether vivid or dull. For example, the gem topaz may be of orange to yellow hues, be light or dark in tints of these hues, and of varying intensity. Variations in hues range from the rich brilliant red and green of rubies and kunzite, while some stones such as the black opal may have a combination of all the chromatic hues. Some authorities consider one hundred and fifty hues to have a million different variations in tints or tones

*Luster* in gems refers to the appearance of the surface of a stone as affected by or dependent upon reflected light. The characteristic luster of a diamond is called *adamantine,* and is descriptive of its hardness. The luster of a ruby is described as *silky,* while that of amethyst and some other quartz stones are *vitreous* or glassy. Other types of gem luster are *pearly, metallic, resinous,* and *waxy.* Luster, which also might be called texture, is a much better way of identifying gemstones than color.

*Brilliancy* in gems is dependent on the amount of light that reaches the eye, reflected from both the interior and exterior surfaces of the stone, and depends

upon several factors: transparency; the kind and degree of luster; fineness of the polish. Hard gemstones, as a rule, take a finer polish than softer stones and when the index of refraction is high, these are more brilliant. Diamonds, of course, hold first place in brilliancy.

*Fire* refers to the flashes of spectrum colors seen in gemstones, particularly in diamonds. The fire of a stone means "dispersion" or the breaking up of white light into rainbow colors. The term is frequently misused in describing the *play of color* seen in opals.

*Transparency* in a gem means one which allows light to pass perfectly or through which bodies can be seen. The more transparent emeralds, rubies, and aquamarines are, the more beautiful they are considered. *Translucency* in a gem lets light pass but diffuses it so that objects beyond cannot be clearly distinguished. Some people have a preference for translucent gems, such as moonstones, star rubies, and star sapphires.

*Durability,* the second important requirement of a gem refers mainly to hardness. The better a stone resists abrasion and retains its luster, the more practical it is for jewelry wear and, generally, the harder the stone, the higher its value. Diamonds are, as everyone knows, the hardest known material. And "the hardest to get".

## II. Выполните письменный перевод текста.

### Текст 5Б
### Fraud in Jewelry

The most common form of fraud in jewelry is the sale of cheap stones under names closely resembling those of valuable gems. Some red stones, for instance, are given names, which make the uninformed buyer consider them a variety of ruby. Red garnets are sold for example, under such names as American ruby, Arizona ruby, Montana ruby, or Cape ruby.

A less common form of fraud (or merely artifice, if the purchaser is informed) is found in "assembled" stones. Among these are the so-called "doublets" and "triplets"- These are made by the cementing or fusing together of two or three layers of material to create what appears to be one stone Considerable ingenuity has gone into the manufacture of doublets of which there are several varieties. One type, sometimes called the "true doublet", involves the joining of two genuine stones to increase apparent size. Another – the "false doublet" – may be a genuine stone backed by a larger piece of less valuable material – sometimes just glass. Garnet-topped doublets are probably commonest of all. The garnets give wearing qualities and may be so thin that their color does not show. They can be any color; blue, green, white, etc.

## III. Сравните свой перевод с приведенным ниже вариантом перевода. Найдите недостатки и ошибки в данном варианте перевода.

## Подделки в ювелирных изделиях

Наиболее общей формой подделки в драгоценных изделиях является продажа дешевых камней под именами, тесно напоминающими ценные камни. Некоторым красным камням, например, дают имена, которые заставляют не информированного покупателя рассматривать их вариантом рубина. Красные гранаты продаются, например, под такими именами как американский рубин, аризонский рубин, монтановский рубин, кэйпский рубин.

Менее общая форма подделки (или просто "выдумка", если покупатель информирован) находится в "смонтированных" камнях. Среди этих есть так называемые "дублеты" и "триплеты". Они делаются цементированием или сплавлением вместе двух или трех слоев материала, чтобы создать один камень. Значительное мастерство пошло на изготовление дублетов, которых существует несколько разновидностей. Один тип, иногда называемый "правдивый" дублет, вовлекает соединение двух настоящих камней, чтобы увеличить видимый размер. Другой – "лживый дублет" – может быть настоящим камнем, поддерживаемым большим куском менее ценного материала – иногда просто стекла. Дублеты, покрытые гранатом, возможно – наиболее общие из всех. Гранаты дают качества носки и могут быть такими тонкими, что их цвет не показывается. Они могут быть любого цвета: голубого, зеленого, белого, и т.д.

# Unit 6

Лексические особенности перевода.
- Перевод терминов (существительное + существительное)
- Перевод многозначных слов
- Перевод существительных с суффиксами –er, -or
- Перевод многофункционального слова "one"
- Перевод псевдоинтернациональных слов.

Грамматические особенности перевода.
- Перевод предложений с конструкцией "Complex Subject"

Практика перевода.
- Текст 6А. Hardness of Precious Stones.
- Текст 6Б. Crystals.

## Лексические особенности перевода.

***I. Проанализируйте и переведите следующие словосочетания (существительное + существительное) на русский язык.***

***Образец****: the wheel invention*
***изобретение***
***чего?***
***колеса***
***Перевод: изобретение колеса.***

1. metal content
2. acid solution
3. alloy sample
4. ice cube
5. cleavage plane
6. silicon addition
7. temperature change
8. surface scratch.

***II. Проанализируйте и переведите следующие предложения, выбрав правильное вариантное соответствие при переводе. Обратите внимание на то, что многозначные слова являются разными частями речи.***

1. Nearly all natural rubies and sapphires are treated by heat.
2. Statics treats bodies in equilibrium.
3. I don't like the way he treats his son.
4. Crystals can be formed when a fluid, containing the mineral in solution, dries up or evaporates.
5. The matter can exist in three forms: solid, gas and liquid.
6. The weight of a diamond is often expressed in points – 100 points to the carat.
7. A "10-pointer" would be a stone that weighed a tenth of a carat.
8. Sophisticated equipment is used in a precious metal laboratory to determine

content and purity values with great precision.
9. If some concentrations of colour rest near the corundum's surface, the modification might actually remove colour and reduce the stone's value.
10. This picture is of no value because it is not original.
11. We value this scientist for his discovery.

*III.* ***Проанализируйте и переведите следующие слова с суффиксами*** *–er, -or.*

Consumer, master, worker, operator, editor, collector, inventor, generator, distributor, dealer, purchaser, artificer, cutter, teacher.

*IV.* ***Проанализируйте и переведите следующие предложения, обращая внимание на слово "one".***

*one –* ***числительное – один, одна, одно***
*one –* ***формальное подлежащее (перед личной формой глагола) – не переводится***
*one's –* ***местоимение – свой, своя, своё***
*one* ***(перед модальными глаголами) – не переводится***
*one (ones) –* ***слово-заменитель – переводится или словом, которое заменяет, или не переводится совсем.***

1. One must know the characteristics of gemstones.
2. Hardness is one of the most misunderstood properties of gemstones.
3. Each of the minerals, according to the Moh's scale can be scratched by the one above it and will scratch the ones below it.
4. As one knows, the names of most of the well-known gems were established long before mineralogy became a science.
5. Gold, the glamorous yellow metal, was one of the earliest discovered by man.

*V.* ***Переведите следующие псевдоинтернациональные слова на русский язык, пользуясь словарем.***

aggressive, application, balance, conductor, control, credit, critical, dramatic, element, figure, practical, primitive, public, solid.

## Грамматические особенности перевода.

*VI.* ***Проанализируйте и переведите следующие предложения, содержащие конструкцию*** *Complex Subject.*

1. Hardness is known to be one of the most misunderstood properties of gemstones.
2. During World War I white gold is said to become popular for diamond settings.
3. The precious metals and the precious stones are stated to have been credited

with magical powers.

4. Sapphires and rubies are certain to be the gemstones with which jewelers prefer to work.
5. Corundum proves to offer a comfortable " safety zone" for most manufacturing operations.
6. Heat treating is Known to cause some structural changes in the stones.
7. All elements, added to standard gold-silver-copper alloys are considered to be "additions".
8. Only a few elements appeared to be useful additions for modifying carat gold alloys without detrimentally changing other relevant properties.

*VII.* ***Выберите правильный вариант перевода выделенной части предложения.***

1. Synthetic gemstones are known to be made by men in laboratories and factories.
   а) создавали б) создаются
2. Remarkable properties of platinum appear to have been appreciated only in recent decades.
   а) оцениваются б) оценили
3. Ornaments made of silver are reported to have been found in grave mounds dating back to both the Bronze and Iron Ages.
   а) были найдены б) будут найдены
4. Jewellers are said to be employing many less valuable metals and many kinds of colourful plastic materials in the manufacture of costume jewellery nowadays.
   а) используют б) используются
5. Aluminium proves to have become an important costume jewellery material.
   а) станет б) стал

*VIII.* ***Проанализируйте и переведите следующие предложения, содержащие инфинитив и конструкции*** *«Complex Subject»* ***и*** *«Complex Object»***.**

1. Hardness is known to be the property by which gemstones are identified.
2. Minerals of the same hardness are unlikely to scratch each other.
3. Everybody knows synthetic gemstones to possess the same hardness as natural gems.
4. In order to illustrate gemstones properties Friedrich Mohs arranged a scale of hardness.
5. In order to manufacture imitation stones one should use plastic materials or special types of glass.
6. We assume the Mohs' scale to indicate the rank of hardness.

**Практика перевода**

Text 6A

***I. Переведите текст, обращая внимание на лексические и грамматические особенности перевода.***

**Hardness of Precious Stones**

Hardness is defined by the mineralogist as the power of scratching or the power of resisting scratching, and it is known to be one property by which gemstones and imitations may be positively identified. Friedrich F. Mohs, an Austrian scientist, in 1822 arranged a scale of hardness, giving to the diamond the value of 10. All other minerals have lower numbers and each will scratch any other with the same or a lesser number. Tungsten carbide, not a jewel at all, is 9 plus on the scale. This is a synthetic cutting material developed in Europe by Krupp and in America by General Electric. The corundum gem, ruby and sapphire are considered to be considerably softer than diamonds. They are next among the precious stones with a rating of 9. Topaz is 8. Quartz, one of the most common and widely distributed of all minerals, is 7. Feldspar, of which moonstone is the best known gem, is 6 on the scale. Apatite, a transparent calcium phosphate, rarely cut into gems, is 5. Fluorite, or fluorspar, used for carving small ornaments such as figurines, lamp bases, and snuff bottles, is 4 in rank. At the soft end of the scale are calcite, sometimes dyed and sold as onyx marble, Mexican onyx, or Brazilian onyx, 3; gypsum, used in making plaster of paris, 2; and talc, a soft soapy material easily carved but best known to man as the dust sold as talcum powder, 1. Approximations of hardness may be made thus: gems up to 2½ on the Mohs' scale can be scratched with the finger nail; those up to 3 with a penny coin; those to 5½ with a piece of window glass; those to 6 with a knife blade; and those to 6½ with a steel file. There is apt to be considerable misunderstanding about the Mohs' scale for it indicates the rank of hardness but not the amount of hardness. The difference between 9 and 10, for example, is greater than the difference between 9 and 1. Most of the gems used in jewelry appear to have a hardness of more than 6. Synthetic gems have the same hardness as natural gems and hence offer the same resistance to scratching. This, of course, cannot be said for simulated or imitation stones. These are said to be usually manufactured from plastic materials or special types of glass, referred to as hard mass or strass, after Josef Strass, its Viennese inventor, and they are stated to be so soft that exposed surfaces quickly become scratched, nicked or dull appearing.

***II. Переведите следующий отрывок текста на русский язык, используя словарь.***

**Crystals**

The material or body formed by a chemical element or compound that, in ideal solid form, is bounded by plane surfaces symmetrically arranged is a crystal.

Crystals may be produced by melted or liquid mineral substances solidifying in the earth, or they can be formed when a fluid, containing the mineral in solution, dries up or evaporates. Evaporation of a liquid leaves a vacant area in which crystals have ample room to grow, while the molten minerals, when cooling, either expand or contract with great force and compress the crystals, reducing their size

and welding them together. A crystal not of gem quality may weigh a ton or it may be so minute it can be seen only under a microscope.
The most interesting feature of growing minerals is that each has certain characteristics and follows certain laws. Quartz crystals, for example, may be short and thick, or they may be long and slender; some may grow free in the form of double pyramids, while others may grow like spikes from a mass of rock. Regardless of variations, however, quartz molecules are always arranged in one definite way, and this is true of all the other mineral crystals.

## Unit 7

Лексические особенности перевода.
- Перевод интернациональных и псевдоинтернациональных слов
- Перевод слов с суффиксами и префиксами
- Перевод словосочетаний «both … and» и «in addition to»

Грамматические особенности перевода.
- Перевод причастий и причастной конструкции "Absolute Participial Construction"
- Перевод эмфатической конструкции It is/was … that; It is/was … who (whom)…

Практика перевода.
- Текст 7А. What does durability of precious stones depend on?
- Текст 7Б. Some words about testing gems.

### Лексические особенности перевода.

***I. Переведите следующие интернациональные и псевдоинтернациональные слова на русский язык.***
chemical, mass, crystal, alcohol, carat, automobile, tendency, gem, enthusiasm, familiar, list, era, clay, army, esthetic, category, mineralogy, science, accuracy, meeting, symbol, authority, metal, group, planet, substance.

***II. Переведите следующие предложения, содержащие интернациональные и псевдоинтернациональные слова, на русский язык.***
1. An English chemist and physicist, William Hyde Wollaston, isolated palladium in 1803 and named it in honor of the planetoid Pallas which had been discovered the previous year by one of his friends.
2. Before gem cutting became mechanical, natural gem minerals were smoothed or rounded off by crude methods.
3. In addition to being the unit weight for the diamond, the carat is the measure for most precious and so-called semi-precious stone and their synthetic counterparts, but there are some exceptions.
4. The ancient and popular names of gems lack the precision and accuracy of those given by the scientists but usually are so much more poetic that the public prefers them.

5. The material or body formed by a chemical element or compound that, in ideal solid form, is bounded by plane surfaces symmetrically arranged is a crystal.
6. All elements which are added to standard gold-silver-copper alloys are considered as "additions", independent of their concentration.
7. Many fine instruments have been perfected for testing gems and particularly, for grading diamonds.

***III. Проанализируйте и переведите следующие слова, обращая внимание на суффиксы и префиксы существительных и прилагательных.***
Difficulty, energy, brilliancy, transparency, translucency, sensitivity, rarity, intensity, impurity, durability, requirement, measurement, development, judgment, treatment, fineness, hardness, whiteness, lightness, brightness, attraction, description, standardization, evaporation, identification.
Reconstruction, reformation, reproduction, reform, coexistence, coauthor, cooperation, misunderstanding, misfortune, misapplication, mispronunciation, disagreement, disadvantage, disappearance, disbalance, disconnection, impossibility, impracticability, impurity, imprisonment, impatience.
Precious, fibrous, dangerous, numerous, homogeneous, colourless, motionless, powerless, harmless, rainless, beautiful, colourful, successful, useful, powerful, considerable, valuable, fashionable, fusible, sensible, well-designed, cultured, reflected, simulated, assembled.
Unscrupulous, unknown, unhappy, uncomfortable, unimportant, insecure, inexpensive, inexhaustible, independent, indirect, irregular, irradiated, irrational, irresponsible, impure, impossible, improper, immoral, immeasurable, dissimilar, disobedient, disgraceful, disappointing, disjunct.

***IV. Переведите следующие предложения, содержащие производные слова.***
1. Alloy modifications can confer not only advantages but also disadvantages.
2. Principally, yellow gold alloys based on gold-silver-copper should not need deoxidizing if melted and cast under proper conditions.
3. Of course, additions like zinc or silicon will reduce copper oxide with the formation of their much more stable oxides.
4. To minimize the risk of parting formation, jewelers should be especially careful when faced with jobs that may require excessive pressure.
5. A jeweler, who recuts a gem to fit a specific setting might do more harm than good.
6. When held to the tongue or cheek, glass will become warm almost at once while the crystallized gems will remain cold for some time.
7. In time a purple gold tends to discolour and to lose its brilliance.
8. The danger of zinc loss is lowered with low zinc concentration, use of a reduced pressure atmosphere and a reduced melt superheat.

***V. Проанализируйте и переведите следующие предложения, содержащие словосочетания "both … and" и "in addition to".***
a) both … and – двойной союз – как … так

и … и

both – местоимение – оба

1. They are both good jewelers.
2. Both sapphires and rubies are the gemstones with which any jeweler prefers to work.
3. Green golds may contain both cadmium and zinc.
4. Both precious metals and precious stones have been credited with magical powers.
5. Simulated stones are usually manufactured from both plastic materials and special types of glass.

б) in addition to – кроме (того), в дополнение, к тому же

1. In addition to five major factors upon which a gem's beauty is dependent, there is also the "fashioning", which means the skill and artistry with which a gem has been cut, polished and mounted.
2. White gold in addition to hard platinum is used for diamond settings.

**Грамматические особенности перевода.**

*VI.* ***Проанализируйте и переведите предложения на русский язык, обращая внимание на независимый причастный оборот.***

1. Like gold, pure platinum is too soft for use in jewelry, it being alloyed with iridium.
2. White gold of 18-carat can be made with a minimum amount of copper, it having satisfactory working qualities.
3. Palladium, though described as a "white" metal, is actually more like shimmering pearl-gray, satin, its colour making an ideal complement to diamonds or coloured stones.
4. Corundum having been damaged by the sudden temperature change, large cracks and spider-web-like fissures appeared on the surface.
5. Gold, copper, zinc and nickel being alloyed together, white gold is made.
6. Standard yellow gold alloys can be used for many production processes, they being called "all-purpose" alloys.
7. The carat in Europe and the karat in the U.S. measures the degree of fineness, with 24-karat representing pure gold.

*VII.* ***Проанализируйте и переведите предложения на русский язык, обращая внимание на причастие.***

1. Metals, used in the metal smith's workshop can be divided into two groups.
2. When working with sapphires and rubies, jewelers must be aware of the various treatments used to enhance corundum.
3. Any abrasive applied with an excessive amount of force can damage a ruby or sapphire.
4. Colour is a vast subject, but as applied to gems the chromatic colours-red, orange, yellow, green, and blue – may be described as having the attributes of hue, tone and intensity.

5. Being largely a development of the International Nickel Company, palladium possesses most of the attributes of platinum, but in addition is lighter, cheaper, and more fusible.
6. Once formed, zinc oxide is difficult to remove from the melt.
7. Zinc can be alloyed into gold and gold jewellery alloys to a limited extent not changing the microstructure.
8. When being subjected to high temperature, aluminium loses its strength.
9. The amount of heat generated depended on the quality of the fuel used.
10. The channel linking the two seas is being built now.
11. Having obtained the necessary results they stopped their experimental work.
12. Having waited for him for half an hour they went home.
13. Having been explained the rule I could solve this problem.
14. When studying elements Mendeleev found that they could be divided into nine groups.
15. When burnt coal produces heat.
16. When translated his article on chemistry was sent to the International Chemical Congress.

*VIII.* ***Проанализируйте и переведите предложения, обращая внимание на Усилительную конструкцию.***
It is (was) … that; It is (was) … who (whom) …
1. It was Friedrich F. Mohs, who arranged a scale of hardness.
2. It is the metric carat that is the usual unit of measurement of jewels.
3. It is a lapidary who cuts, polishes and engraves precious stones other than the diamond, as well as the semi-precious stones.
4. It was white gold that became popular for diamond settings during World War I.
5. It was in 1869 that Mendeleyev published his Periodic Table.
6. It is a 22-carat gold that is popular for wedding rings, especially in European countries.

## Практика перевода

### Text 7A

***I. Переведите текст, обращая внимание на лексические и грамматические особенности перевода.***

**What does durability of precious stones depend on?**

There are several other factors besides hardness concerned with durability. These are cleavage, toughness, friability or the tendency to crumble, resistance to chemical action, color changes, and cracking. Diamond, hard as it is, can be readily shattered if hit in certain ways, for it possesses perfect cleavage in four directions. On the other hand, jade, being comparatively soft, consists of an interwoven mass of fibrous crystals and is so tough that it is extremely difficult to break. Pearls may lose their luster if constantly exposed to acid body perspiration or the alcohol in perfume, many opals being extremely friable.

Most precious and semi-precious stones, however, are so durable that they literally never wear out. Necklaces buried with Egyptian Pharoahs have been dug up as bftght and colorful as when they were made forty centuries ago. Gold and silver jewelry may be melted and converted into other items, but the harder stones, once cut, usually preserve their identity and are almost never destroyed. The emeralds that graced Cleopatra are probably in existence somewhere in the world today.

Gems and jewelry may enjoy a rarity value for various reasons: because they are scarce; because they are of unusual size; because of remarkable craftsmanship involved; because of special romantic or historical association. Gems and jewelry are not bought the way other commodities are. In most cases an increase in the size of a stone means a much more than arithmetical proportionate increase in its value.

Fashions in gems and jewelry do not change nearly so rapidly as fashions in dress or autombiles but they can originate in much the same way. Some famous person champions a special gem and publicists vie with each other in presenting the "news."

The values of the traditional precious gems are usually little affected, they being sometimes enhanced by the enthusiasm of devotees to a particular stone.

The prodigal expenditure of Catherine the Great of Russia and her admirers for emeralds, for example, greatly increased the price of emeralds all over the world during her reign. Queen Victoria similarly popularized jet and opals, the former as a mourning stone when her husband Albert died, and the opals when she gave them as wedding presents to her daughters.

The quality of portability is the very essence of jewelry. Though it happens rarely today, in dangerous past eras, more than one king and queen have had to abandon lands, castles, and bullion, to flee with only the things they could carry. Their jewels, easily carried and marketable in any land, often saved their lives and sometimes gave them the means of raising armies and regaining their thrones.

From an esthetic standpoint, the very smallness of jewels is an attraction. The largest stones of nearly every category have to be broken up before they can be used for gem purposes. Even the famous Cullinan Diamond had to be cut down to make it suitable for jewelry

The names of most of the well-known gems were established long before mineralogy became a science. They are so well established that no one wishes to rename them with more scientific descriptions. Agate comes from the Greek language, as do diamond, emerald, and beryl. Garnet and ruby are both Latin names. Jade is a Spanish word, quartz is German. Opal and sapphire can be traced to Sanskrit and turquoise is French. Amber is Arabic. Names ending in "ite" identify minerals that have been recognized since mineralogy became a science.

*II.* ***Переведите следующий отрывок текста на русский язык, используя словарь.***

**Some words about testing gems.**

Among the methods used to identify a gem, there is a safe and often precise one. It is the measurement of the specific gravity, or the ratio of the weight of a gem to an equal amount of pure water. Archimedes used this method in ancient Greece to

determine whether or not his ruler's crown was made of pure gold. Gems are weighed first in air and then in water, and the ratio between the two is compared with an established table of figures. For example, the specific gravity of the diamond is 3.5, meaning that a cubic inch of diamond weighs three and a half times as much as a cubic inch of water and the similar-appearing, but less valuable, zircon is 4.7. A yellow chrysoberyl has a specific gravity of 3.8, and a yellow sapphire that of 4. This test cannot be used when the stone is set but an equally harmless and even more convenient means of identifying certain gems is to study the way in which they transmit and refract rays of light. Many fine instruments have been perfected for testing gems and particularly, for grading diamonds Special X-ray and spectrographic equipment may also be employed. With these tests and scientific instruments now available, positive identification of any stone can be made.

As every gem and piece of jewelry has its own microscopic peculiarities, micro-photographs made when the item is finished will afterward serve to identify it in the same way that fingerprints identify a person. Special 10 and 30-power cameras are available for this purpose.

# Unit 8

Лексические особенности перевода.
- Перевод терминов.
- Перевод многозначных слов.
- Перевод слов с суффиксами и префиксами.
- Перевод словосочетания “as well as”.
- Перевод слова “for”.

Грамматические особенности перевода.
- Перевод герундия и герундиальной конструкции.

Практика перевода.
- Текст 8А. Working of precious stones.
- Текст 8Б. Silver.

## Лексические особенности перевода.

***I. Проанализируйте и переведите следующие терминологические словосочетания, состоящие из прилагательного и существительного, на русский язык.***

1. modern jewelry
2. natural gemstones
3. scientific description
4. assembled stones
5. chemical element

6. crystallized compounds
7. precise method
8. specific gravity
9. spectrographic equipment
10. optical lenses
11. artificial illumination
12. ideal setting

***II. Проанализируйте и переведите следующие терминологические словосочетания на русский язык.***

1. combination of elements
2. the appearance of the surface of a stone
3. the amount of light
4. the play of colour
5. form of fraud in jewellry
6. progress toward the standartization of gem names
7. angles and lengths of inclination of a set of axes of references
8. crystal of gem quality
9. in honor of the scientist
10. a pound weight of silver
11. the manufacture of costume jewelry
12. a complement to gemstones

***III. Проанализируйте и переведите предложения, обращая внимание на изменение значения слов в зависимости от контекста.***

1. heat

I'm suffering from the heat. There is no need to heat the substance. In England plenty of houses are heated with coal.

2. film

A new film is shown in the club. There was some thin film on the surface.

3. cut

Glass is usually cut with a diamond. The company has cut the workforce by half. The region is cut into two parts by the river. There was a deep cut on his hand.

4. flat

They have just moved into a new comfortable flat. In Asia one can see many houses with flat roofs.

***IV. Проанализируйте и переведите следующие слова, обращая внимание на суффиксы и префиксы глаголов и на суффиксы наречий.***

synthesize, minimize, oxidize, crystallize, characterize; estimate, indicate, separate, formulate, evaporate; lighten, brighten, strengthen, widen, whiten; purify, justify, solidify, simplify, intensify.

reproduce, reform, reestablish, rewrite, rebuild, discolour, disclose, disagree, disappear, displace; unfreeze, unload, unpack, unlimit, unwrap; mishandle, mistake, misuse, misunderstand, mistranslate; undergo, underline, undertake,

understand, undervalue.
horizontally, effectively, systematically, gradually, artificially, principally, positively, considerably, comparatively, literally, cautiously, carefully, properly, possibly, safely, generally.

***V. Проанализируйте и переведите предложения, обращая внимание на словосочетания "as well as" и "as well".***

as well as – а также (и)
as well – также (обычно в конце предложения)

1. The category of white metals includes pure silver, silver alloys. White golds as well as platinum, platinum group metals and their alloys.
2. The beauty as well as the popularity of almost all gems depends largely upon colour.
3. Synthetic gems as well as natural gems offer the same resistance to scratching.
4. A 22-karat gold is composed of twenty-two parts of pure gold, one and a half parts of copper, one –half part of silver as well.
5. Phosphorous and boron can be used as a real deoxidizer as well.
6. Zink influences the color and improves the castability as well.

***VI. Проанализируйте и переведите предложения, обращая внимание на слово "for".***

for – союз, так как, потому что
for – предлог 1) для; 2) за , ради; 3) в течение (указывает длительность)

1. There is considerable misunderstanding about the Mohs' scale for it indicates the rank of hardness but not the amount of hardness.
2. Some pearls are sold by the carat, but the usual measurement for them is the grain.
3. Silver was discovered very early, for Egyptian stone decorations of about 2500 B.C. depict the process of working with silver.
4. Originally, silver was used for money by weight.
5. They have been testing this device for two hours.

## Грамматические особенности перевода.

***VII. Проанализируйте и переведите следующие предложения на русский язык, обращая внимание на герундий.***

1. It is important to carefully consider the concentration of acids for testing.
2. By taking even a small amount of care, jewelers can prevent a broken or damaged stone.
3. Jewellers should think twice before recutting a sapphire or ruby.
4. They may begin ignoring potential problems, such as the effects of heat.
5. Optimising the alloys for the particular manufacturing process is possible by use of other alloying additions.
6. Silicon is a very effective element for improving casting properties.
7. She is against being sent to this faraway place.

8. They insisted on reconsidering this question.
9. Science requires experimenting.

*VIII.* ***Проанализируйте и переведите предложения, содержащие герундиальный оборот, на русский язык.***

1. We know of the beauty of gemstones depending on many factors.
2. Their having sold this rare gemstone caused a great surprise.
3. The carat being used to measure most precious and semi-precious stones is well known to each jeweler.
4. We know of its (special X-ray and spectrographic equipment) being successfully used for testing gems.
5. Louis de Berquen's merit consists in his having introduced the first symmetrical cutting of facets on diamonds.
6. After its having been heated greenish beryl will become a beautiful blue.
7. Platinum differs from gold because of its being heavier and more valuable.
8. In spite of its being too soft for use in jewelry, platinum alloyed with iridium, is used for fine jewelry.

## Практика перевода

## Text 8A

***I. Переведите текст, обращая внимание на лексические и грамматические особенности перевода.***

### Working of precious stones

Very few stones are beautiful in their natural form and most stones become valuable only after they have been enhanced and in many instances, actually created — by judicious cutting and polishing. It frequently happens that just a tiny portion of the gem crystal as discovered in the earth will be transparent, flawless, and of good color. Even when the whole crystal is of gem quality, its value may usually be doubled by the proper cutting of facets (small plane surfaces) to reflect more effectively the gem's color, fire, and brilliancy. Formerly, gems were cut with the idea of preserving as much as possible of the stone, but in recent years they have been cut chiefly for beauty and fire. The process is exacting and the cost is high.

Artificers who cut, polish, and engrave precious stones other than the diamond, as well as the semi-precious stones, are termed lapidaries. Because of the diamond's extreme hardness, many times that of the next stone on the scale of hardness, diamond-cutting presents special problems, and diamond cutters comprise a highly trained and highly respected aristocracy.

The cutting and carving of gems probably was done first in ancient Babylon several thousand years before Christ. At that time and until very recent years, engraved gems were much used for seals, making possible a unique and personal identification on important letters and documents. Engraving upon gemstones was

practiced at a very early date in almost every country except Japan. Cameos (gems carved in relief) and intaglios (gems with designs incised) have long been cut so accurately that even small faces represented have been easily recognizable. Some of this work is still done by hand but more and more is being done with small lathes equipped with suitable tools. Some skilled workers can cut cameos accurately from a photograph.

Louis de Berquen, of Bruges, Belgium, is credited with the first symmetrical cutting of facets on diamonds about 1475. Facets had been cut earlier in France and Italy, but not systematically and in some cases only to eliminate flaws. The first symmetrical faceting was the table cut. This consisted simply of smoothing the opposite points of an octahedron crystal to make a table and culet. Next came the rose cut. This involved a flat base and a circular or oval top usually cut into 12 to 32 triangular facets. Some small stones are still cut in this fashion.

Coincident with the development of the telescope, microscope, and other optical devices in the middle of the seventeenth century, the so-called "brilliant" cut was developed by Vincente Peruzzi of Venice. This was gradually developed and has now come to mean to jewelers a fiery round stone with 58 facets. This is also the standard number of facets for the marquise (boat-shaped cut) and the emerald (oblong cut). Square-cut gems usually have fewer facets because they are not made with faceted corners.

Each rough stone is studied individually before the type of cut is chosen. Within the past few years several firms in the United States have publicized, under certain trade names, the cutting of diamonds with numerous additional facets and sometimes with Especially polished girdle.

***II. Переведите следующий отрывок текста на русский язык, используя словарь.***

**Silver**

Silver, while the least expensive of the four precious metals used in jewelry, is probably the most popular of all for, in addition to being within the means of almost everyone, its beauty, durability, and malleability almost equal that of gold. Through the centuries silver has been used to produce or decorate almost any article one can name. Ornaments made of the metal have been found in grave mounds dating back to both the Bronze and Iron Ages. Bowls and beakers of silver were used as far back as 1000 B.C.

The scarcity of silver, and the value set on it as an ornament, paved the way for its use as money. Originally it was used for money by weight. In the Old Testament times, for instance, the shekel was not a coin but a weight; and in Saxon days and long afterward, the standard measure of value in England was a pound weight of silver.

Among the qualities of silver that make it valuable for jewelry are its comparatively low melting point — 961 centigrade as compared to 1,063 centigrade for gold; its resistance to acids, in which it is second only to gold; its ability to take a high polish; and most important, the ease with which it can be

worked.

# Unit 9

- Реферативный и Аннотационный перевод.
- Пример реферативного перевода
- Пример аннотационного перевода
- Упражнения

Реферативный и Аннотационный перевод.

**Реферативный перевод.**

Название "реферативный" происходит от слова "реферат". Реферат – это краткое изложение сущности какого-либо вопроса. Реферативный перевод – это полный письменный перевод заранее отобранных частей оригинала, составляющих связный текст.

Работа над реферативным переводом состоит из следующих этапов:

1) Знакомство с оригиналом, внимательное чтение всего текста.
2) Разметка текста с помощью скобок для исключения его второстепенных частей и повторений (исключаемые части текста берутся в скобки).
3) Чтение оригинала без исключенных частей.
4) Полный письменный перевод выбранной части оригинала, которая должна представлять собой связный текст.

Если в оригинале есть чертежи, рисунки, то необходимо выбрать наиболее важные и объяснить их в переводе.

**Пример реферативного перевода**

Gems treatment for altering colour

Gems may be treated to alter their color permanently or temporarily. In the case of the transparent and more valuable types, heat treatment or radiation with X-rays or gamma-rays is sometimes employed. Diamonds can be turned green and other colors by radiation. Yellow or yellowish-brown topazes may be turned pink by heating. [The most popular of the zircons is artificially produced by heating the yellow-brown stones from Indo-China to

**Обработка драгоценных камней для изменения цвета**

Драгоценные камни могут подвергаться обработке для изменения цвета надолго или временно. В случае с прозрачными и более ценными видами камней, иногда применяется обработка теплом либо рентгеновскими или

make them colorless and white or steely blue. The colorless zircon closely resembles the more valuable diamond. Greenish beryl can often be heated to a beautiful blue. Heat treatment sometimes lightens darker gems of the corundum class.]

X-ray bombardment of white or pinkish sapphires has been known to turn them a brilliant amber color. [Other X-ray-effected color changes include: white topaz to brown-purple; pink topaz to orange-brown; aquamarine beryl to light green; yellow or white scapolite to amethyst-purple and lilac kunzite to green. According to 1947 studies by Dr. Frederick H. Pough, then of the American Museum of Natural History, and T. H. Rogers of the Machlett Laboratories, Springdale, Connecticut] most of these X-ray effects last indefinitely if the stones are kept in the dark at room temperature, but sunlight or heat restores the original color.

A blue tinge may be imparted to colorless or pale stones by depositing a thin fluoride film on their surfaces. [The process is an outgrowth of the application of such films to photographic and optical lenses during World War II to reduce reflection.] Aquamarines, diamonds, and zircons have been thus treated. The film may be detected by studying the suspected stone in either strong daylight or bright artificial illumination.

Dyes are commonly applied to porous gems to improve their color. Among the stones treated in this way are agate, opal, jasper, chalcedony, and the turquoise. There is nothing ethically wrong in dyeing or heating stones to improve their appearance, or in creating an entirely synthetic or artificial stone, as long as the finished product is not represented as something else to the purchaser. [The Federal Trade Commission requires that irradiated diamonds be so labeled.]

гамма-лучами. Цвет алмазов можно изменить на зеленый или на другие цвета под воздействием облучения. Желтые или желтовато-коричневые топазы можно превратить в розовые посредством нагревания. Известно, что бомбардировка рентгеновскими лучами белых или розоватых сапфиров придает им яркий желтый цвет. В большинстве случаев результаты воздействия рентгеновского луча длятся неограниченно, если камни хранятся в темноте при комнатной температуре, но солнечный свет или тепло возвращают им первоначальный цвет.

Бесцветным или тусклым камням можно придать голубой оттенок накладывая на их поверхности тонкую фтористую пленку. Таким образом обрабатываются аквамарины, алмазы и цирконы. Пленку можно обнаружить, рассматривая подозрительный камень или при дневном свете, или при ярком искусственном освещении.

Красители обычно применяются к пористым камням для улучшения их цвета. В числе камней, обрабатываемых таким способом, можно назвать агат, опал, яшму, халцедон и бирюзу. Ничего неэтичного нет в том, чтобы окрашивать или нагревать камни для улучшения их внешнего вида, или в

том, чтобы создать полностью синтетический или искусственный камень, пока готовое изделие не представлено покупателю как что-нибудь другое.

***I. Выполните реферативный перевод следующего текста, соблюдая требования, предъявляемые к данному виду перевода.***

**Treating Corundum Well**

When working with sapphires and rubies, jewelers also must be aware of the various treatments used to enhance corundum. While not all such treatments will pose a threat, some may-and the smart jeweler will be on the lookout for them.

First, nearly all natural rubies and sapphires are heat treated. While the devices used to accomplish this may vary-they can range from crude metal buckets to sophisticated computer-controlled furnaces-the purpose remains the same: to improve a stone's color or clarity through heating and subsequent cooling in a controlled environment. The specific temperature, environment (either oxygen rich or oxygen depleted), and length of treatment all depend on which of those goals is being sought, as well as on the condition of the original stones.

Heat treating is usually a benign method of improving corundum's appearance, but it will cause some structural changes. During treatment, voids and other inclusions in the stones will expand and contract at different rates from the surrounding corundum, and this can often cause cracks in the stones. Consequently, many heat-treated sapphires and rubies have "exploded"

crystals. These crystals are usually contained within the stones and are non-damaging.

Most often such damage is the result of finishing process with files. Since this tool is tough enough (and usually used with enough impact) to damage diamonds, it is even more capable of scratching and abrading corundum. Jewelers should always take care not to hit the stone with a file edge. In fact, since one face of the file will always rest against the stone, the teeth on this face should be ground away. This practice greatly reduces the occurrence of abraded facet junctions and scratched stones.

File isn't the only danger lurking in the finishing process; diamond abrasives also pose a significant threat. Since diamond is harder than corundum, these abrasives need only a little pressure to cause an ugly surface scratch. Given that more and more diamond-impregnated burrs, discs, and wheels seem to be entering the industry of late, jewelers must always note the type of abrasive that is being used. This is especially true of pre-charged wheels and sanding disks. Keeping a sapphire or ruby safe may be as simple as reading a product label.

Of course, any abrasive applied with an excessive amount of force can damage a ruby or sapphire. In the end, it all comes down to care, and to respecting the limits

of the stone. If they keep that in mind, jewelers will be better able to keep their sapphires and rubies-as well as their reputations-intact.

## Аннотационный перевод

Аннотационный перевод – это вид технического перевода, заключающийся в составлении аннотации оригинала на другом языке. Аннотация специальной статьи или книги – это краткая характеристика оригинала, излагающая его содержание в виде перечня основных вопросов и иногда дающая критическую оценку.

При составлении аннотации на статью или книгу на иностранном языке нужно проделать следующие операции:

1) выписать название статьи на языке оригинала (можно в скобках), фамилию и инициалы автора, название журнала или книги, место издания и издательство на иностранном языке, а также год, месяц, число, номер периодического издания, страницы (вводная часть).
2) дать очень краткое изложение содержания статьи (описательная часть).
3) подытожить изложение автора первоисточника; при необходимости привести ссылки на количество иллюстраций и библиографию (заключительная часть).

### Пример аннотационного перевода описательной части

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## Аннотация

The text. Gems treatment for altering colour

В данной статье рассматриваются способы изменения цвета драгоценных камней (Gems treatment for altering colour). Изложены результаты применения каждого способа в отдельных группах драгоценных камней. Рассматривается этическая сторона применения способов улучшения внешнего вида драгоценных камней.

Статья рассчитана как на специалистов, работающих в области технологии и оборудования ювелирного производства, так и на широкий круг читателей.

***I. Выполните аннотационный перевод следующего текста, соблюдая требования, предъявляемые к данному виду перевода.***

IV. The crystal systems

There are certain peculiarities in mineral crystals, just as in human families, breeds of animals, or species of plants and flowers. Such oddities as Siamese twins, double-headed freaks, double bodies with one head, triplets, quadruplets, quintuplets, and so on, are also found in the mineral world, and these all add to the difficulty of identification. Fortunately, the mineralogists have cleared up the confusion to some degree with their discovery that all known variations of crystals can be grouped into thirty-two classes. These in turn they have grouped into six systems, known as the crystal systems, determined by the relative angles and lengths of inclination of a set of axes of references called "Crystallographic axes."

The six systems into which mineral crystals are presently classified may be listed as follows:

1. The Cubic System: This group alone of the crystallized compounds has single refraction. It has three axes of equal length, meeting each other at right angles, as is the case with a perfect cube. Many gems belong in this system, one of the commonest being garnet. Others are spinel, lapis lazuli, and diamond.
2. The Tetragonal System: This is best described as a variant of the cubic. It has three axes all at right angles to one another, but one axis is either longer or shorter than the other two, which are of equal length. Like all the succeeding Systems, gems of this system are doubly refracting. Zircon and rutile are examples.
3. The Hexagonal System: This-is much like the tetragonal, except that instead of two equal axes placed horizontally, we have three, and these must be 60 degrees apart instead of 90. Many of our gem minerals belong to this group, including emerald, beryl, tourmaline, quartz, and the corundum gems, ruby and sapphire.
4. The Orthorhombic System: This is also like the cubic with its three axes at right angles, but it is a drawn-out, squashed-in cube making the three axes unequal in length. Usually these crystals are placed so that the longest axis is vertical and the shortest comes toward us. Chrysoberyl, topaz, and peridot belong to this system.
5. The Monoclinic System: As the name indicates, one of the three axes is no

longer at right angles to the others, but is inclined as if the corner of the orthorhombic block had been pressed down' Kunzite, jade, and feldspar gems are among the monoclinic system crystals.

6. The Triclinic System: Crystals of this system have three axes all of unequal length and all inclined at oblique angles. Not many gem minerals fall in this group, turquoise and feldspar oligoclase being the best examples.

## *Part II*

### *Text1.*

# A piece of history.

Both monastic and secular goldsmiths worked in workshops. The famous Benedictine abbey of St. Albans in Hertfordshire, England - where Matthew Paris, historian, illuminator, and goldsmith, was a monk in the thirteenth century - had a goldsmiths' workshop from the twelfth century. Although monasteries always had a great demand for goldsmiths to provide the gold and silver objects necessary for church service, not aii of them had workshops. It seems that only the larger ones did, and even those sometimes employed outsiders for goldsmiths' work.

Secular goldsmiths worked either in courts or in urban workshops. The largest cities in Europe, especially London and Paris, had a growing number of goldsmiths from the twelfth century. Their shops were situated in busy areas, often on bridges, so as to be in the main line of traffic.

The description, dating from the 12th c. and written by Alexander of Neckhan, an Englishman who taught in Paris (1157-1217), describes the actual procedure of the goldsmiths' work in detail:

*The goldsmiths should have a furnace with a hole at the top so that the smoke can get out. One hand should govern the bellows with light pressure and with the greatest care so that the air pressed through the nozzle may blow upon the coals and feed the fire. Let him have an anvil of extreme hardness on which the iron or gold may be laid and softened and may take the required form. The metal can be stretched and pulled with the tongs and the hammer. There should also be a hammer for making gold leaf, as well as sheet of silver, tin, brass, iron or copper. The goldsmith must have a very sharp chisel with which he can engrave figures of many kinds on amber, hard stone, marble, emerald, sapphire and pearl. He should have a touchstone for testing, and for distinguishing steel from iron. He must also have a rabbit's foot for smoothing, polishing and wiping the surface of gold and silver. The small particles of metal /should be collected in a leather apron. He must have small pottery vessels and cruets, and a toothed saw and file for gold as well as gold and stiver wire with which broken objects can be mended or properly constructed. He must also be good at engraving as well as at has relief, at casting as well as at hammering. His apprentice must have a waxed*

*table, or the one covered with clay, for portraying little flowers and drawing in various ways. He must know how to distingish pure gold from latten and copper.*

*Text2.*

# Metal Under Fire

Enameling on fine gold or fine silver has obvious advantages: these elements do not generate oxides that can interfere with enamel adhesion. Base metal additions, which form alloys of gold and silver, complicate matters. For example, copper oxide prevents enamel adhesion and also results in color problems. Worse yet are the complications that arise when enameling precious metal jewelry alloys that contain zinc, which may be present in both karat gold and deox sterling silver alloys.

White gold alloys may or may not contain zinc. There are three main families of white goJd: the first comprises gold-silver-copper-zinc, the second uses palladium as the primary bleaching agent, and the third uses nickel. For enameling puiposes, the first family can be treated in a similar fashion to the low karat yellow gold alloys. The palladium alloys do not require the presence of zinc, although this does not mean an alloy manufacturer will automatically omit the element. There is also potential for oxidation with alloys that contain copper, including gold / copper / palladium and gold / copper / silver/ palladium alloys. (Some palladium/ white gold alloys do omit copper and consist of just gold, silver, and palladium.)

The nickel alloys usually include zinc-typically up to about six percent-for several reasons. Zinc bleaches gold and increases the malleability and ductility of the alloy during cold working operations, such as rolling and drawing. It can also act as a deoxidizer if the alloy is used for investment casting. While reducing the zinc content will improve enameling results as well as inhibit fire cracking, which can be a major problem with these alloys, it compromises the alloy's color and ductility[1].

Sterling silver alloys, another popular choice for enameling, typically include copper and sometimes zinc, which is used as a deoxidizer. (Deox sterling alloys may also contain germanium, which can cause problems during enameling because of its low melting point.) In addition to the potential complications associated with enameling on zinc-containing metals, sterling can be contaminated with trace amounts of the elements selenium and tellurium, which occur naturally in silver ore.

Considering the above complications, it's essential to discuss alloy content with your metal supplier when choosing a karat gold or silver alloy for enameling. Find out how much zinc is in the composition. If possible, choose alloys that are either zinc-free or contain very low zinc concentrations, typically less than 2 percent. Alloys containing higher zinc concentrations can be successfully enameled, but they require more care in the preparation stages. Precious metal alloys containing up to 10 percent zinc have been successfully enameled, particularly if opaque enamels are used, but they are not recommended if you are aiming for repeatable results.

*Text3.*

# Testing Precious Metals and Their Alloys

Metals commonly used in the metalsmith's studio can be divided into two groups. Colored metals would include pure gold, most gold alloys, copper, and non-precious alloys such as brass or bronze. The category of white metals includes pure silver, silver alloys, white gold, platinum, platinum group metals and their alloys; white non-precious metals such as tin, lead or cadmium and their alloys.

The purpose of precious metal testing is to determine, first, whether a given sample is precious or base, and, second, to determine what proportion of an alloy is precious. Sophisticated equipment is used in a precious metal laboratory to determine content and purity values with great precision, but our attention here is given to methods a working goldsmith can use in the studio to determine metal content to a practical degree of accuracy.

The first step is to determine whether the alloy *in* question contains any gold at all. To do this, select an unobtrusive spot on the object and use a file or scraper to remove any plating that might be on the piece. Using the glass stopper or a small plastic rod, apply a drop of nitric acid to the scratch and observe the reaction. If there is no apparent change, the piece is probably solid gold. A green streak on an otherwise unaffected surface indicates a gold plated object made of base metal. If the entire area subjected to acid turns green, the piece consists entirely of base metal.

To determine the relative proportion of gold in an alloy, rub the exposed area (where any possible plating has been removed) along a touchstone to create a streak roughly 5 mm wide and 20 mm long. Dab this golden streak with concentrated nitric acid (the Au 585 testing acid) and after waiting about 5 seconds, check the reaction. Where exposed to nitric acid, gold is not attacked, but silver is converted to gray-colored silver nitrate AgNO3 and copper reacts to become to greenish copper nitrate Cu(NO3)2.

Because this test is effective only on alloys that contain over 50% gold, the test must be repeated on another place in the streak with diluted nitric acid (the Au 333 testing acid). This is particularly indicated when the first test colored the streak brown or dissolved it altogether.

If the gold content is less than 50% (Au 500) the additional metals that make up the alloy are dissolved while the undissolved gold is left behind as a brown residue. If the alloy doesn't contain any gold, the components are completely converted to nitrates., a reaction that is usually accompanied by active bubbling of the acid. Because copper is almost always a significant component of colored alloys, the remaining solution usually takes on the blue-green color of cupric nitrate. This test is used if an alloy has reacted like a non-precious alloy in the streak test (creates a green or blue green reaction) and yet is still suspected of having a small gold content.

*Text4.*

# As good as gold

Designers throughout the world are experimenting with new and exciting gold colours and textures.

Facing competition from other less precious materials, gold is mounting a bold and sparkling revival in overseas fashions - and the results are stunning. Strong lines, big hoop designs, and jewellery 'that moves' in pink, yellow, white, as well as the chic and exquisite black, blue and green gold dominate the leading international styles.

While Australian manufacturers and importers tend to adapt the fashions seen on the European catwalks and tone them down to suit the Australian market, there is a growing mood suggesting Australian consumers are becoming more willing to explore with their jewellery.

"Australians are definitely becoming more daring," says Aram Atakliyan from ABJ manufacturers. "They're wearing Baroque styles, unusual shapes ... I've made so many unusual items this year because people want something different. That's an encouraging thing, for people to wear something different." Ina Barry *from* Ina Barry Jeweller)[7] agrees that consumers are becoming more adventurous with gold jewellery. Where they previously chose white metals and clean, simple designs, they're now less afraid of colour. People used to prefer "tasteful" jewellery, but now they're more passionate about it "They're celebrating it and are happy to have it noticed," she says.

Similar to overseas trends, although not new to Australian stores, this year two-and three- tone gold pieces are moving quickly in bangles, rings, chains, and earrings. White and pink, yellow and pink, and yellow and white are also becoming popular.

Roz Scanlan from RJ Scanlan believes that two-tone jewellery will be around for a long time. "People wear both white gold and yellow gold pieces, so the two-tone matches all the jewellery- that they own." She also believes that the popularity of two-tone watches has increased people's willingness to wear different coloured gold pieces simultaneously.

While Australians are currently responding well to the emergence of white gold and two-tone, yellow gold is still extremely popular among consumers. "Rose has slowed, we're still selling the majority in yellow gold, then two colours, then white gold," Atakliyan says. "Shiny gold is the best seller."

Barry has noticed that multi-tone pieces are popular, but are slightly past their use-by date. She believes that yellow and rose gold are becoming more popular. "Last year was very white, now there's more yellow and quite a lot of rose," she says. In fact, Barry has created her own gold alloy that isn't just straight yellow gold, it offers a rose-coloured hue.

Australia's reluctance to fully embrace multi-tone items could be due to the additional cost it can attract. Multi-tone rings and bangles present additional problems for manufacturers in their creation, as the various colours need to be treated differently to gain their finished look.

*Text5.*

# HARDNESS AND WEARABILITY

There is an old saying that, if you hit a diamond with a hammer, it will shatter into a dozen pieces. If you hit a piece of quartz with a hammer it will split in two. Hit a piece of jade with a hammer and it will ring like a bell!

Hardness is one of the most misunderstood properties of gemstones. That's because the word has been given a specific and limited meaning by the scientific community. This definition varies considerably from the way it is used by the general public.

By scientific definition, hardness is "the ability to resist scratching" and nothing more. Ask most people and they will tell you that feathers are soft and glass is hard. In the world of gemology though, glass is fairly soft. It can be easily scratched by a majority of what we consider to be hard substances.

Just because a gem is hard does not mean it will wear we!l. There are a number of factors that effect how well a gem will wear. One of the most important is cleavage.

Technically, cleavage has to do with how strongly the molecules bind to each other.It is much like the grain of wood. You can easily split a piece of wood along the grain, but going across the grain is much more difficult.

Many gems have "cleavage planes." Cleavage planes are not the same in all minerals. They are defined as "perfect, good, fair or poor," depending on how easily the mineral will separate along the plane.

You may have seen an old movie where a diamond cutter is sweating over cleaving a large, valuable diamond crystal. Cautiously he places the chisel on the crystal, then he gives it a brisk and carefully measured blow. If he does it right, he has two perfect pieces mat can be cut into fabulous gems. If he errs, the thing will shatter!

Diamond cutters don't have to do this any more, however it is an excellent example of cleavage. Diamond is the hardest substance in nature, but it will break if struck properly by a piece of steel, which is only 5 or 6 in hardness.

Another very important consideration of a gem's durability is how it is worn. Ring stones are subjected to considerable abuse. The simple activity of reaching into one's pocket or purse can cause a ring stone to be smacked against keys, lipstick or pocket knives. When you consider all the other things we do with our hands, this mounts up quickly.

While rings are the most popular way to wear a gem, those worn on other parts of our body don't get anywhere near the abuse a ring stone will. If you want a sensitive gemstone. consider having it mounted in a pendant, brooch or earrings.

There are other factors besides the ones we have already covered. Some are stones brittle, meaning they chip easily. Others, like opal are "heat sensitive." (In truth, opals don't mind heat, it is a sudden change in temperature that upsets them.) Many soft and porous gems, like pearls and turquoise, are effected by chemicals. And the list goes on...

So, in gemology, hardness alone is not a measure of durability. Several factors have to be considered together to determine how well a gem will wear.

## Text 6

# The Mass Finishing of Gold Jewelry

## All that glitters is gold

Design dictates buyer's choices when gold jewelry is purchased and the quality of the pieces certainly plays an important part as well. Not to be overlooked, However, as gold jewelry is ready to go to market, shoppers, regardless of price range, are attracted by the glitter of gold.

Several years ago, a foreign manufacturer faced the problem of how to best finish a jewelry piece made from thin-walled 14KT gold tubing. The final pieces were fabricated from wrought strip stock and the finish was of only fair quality. The geometry of the piece made hand polishing difficult. A two step Mass Finishing process was developed that completely eliminated hand polishing and resulted in a lovely surface finish. Scrap percentage was almost entirely eliminated.

Mass Finishing has become one of the most useful tools in jewelry manufacturing while, at the same time, it may be the least understood and, in many cases, appears to be covered by a shroud of mystery. Jewelry manufacturers, who have taken the time to learn the fundamentals of Mass Finishing and put it to work in their daily operations, have found that the results are:

1. Significant reduction in labor costs inherent in grinding and/,or hand polishing
2. Dramatic increase in consistent quality
3. Reduced precious alloy loss of fine gold
4. Increased productivity with existing workforce

Should you be utilizing Mass Finishing? If you are a fine jewelry manufacturer who has one (or perhaps many more) person(s) sitting at the bench and hand polishing all day, think of the labor incentive work involved in finishing a cast item after sprue removal. A bench worker may spend, on average, three hours each day on finishing operations such as sanding, cutting and glossing. The hourly wage that worker is paid can be greatly reduced by employing Mass Finishing. In addition, Mass Finishing equipment never is away from your facility because of sickness and never even takes a lunch break! Your customer is not interested in how much it may have cost you to finish the jewelry item because expensive hand labor adds no value to the finished piece.

The most basic Mass Finishing system can be installed for approximately US $2,500 and that would include supplies needed for one year. The wages that a manufacturer pays the workers to finish his goods can be reduced by over fifty percent and most manufacturers will see payback on their equipment investment in less than one year. Your operation, even if it is a one man shop with limited production, can greatly benefit by using small laboratory type equipment and system that is available for less than US $500. Jewelry manufacturers, who use sheet stock or stampings that are of truly superior quality, may be one of the very few producers that do not have a need for Mass Finishing.

Focus in on what you want to achieve. Arm yourself with a clearer understanding of Mass Finishing. establish those standard operating procedures that successful jewelry makers have already put into place. The decision making process on how to best finish your goods begins with knowing what your customers truly want, what they are willing to pay for and then ensure that your manufacturing costs do not price you out of what has become an increasingly competitive market.

## Text 7

Mass Finishing Equipment

Proper selection of that equipment is vital and the following describes equipment currently in use to enable jewelry makers to decide what may be best for their operation.

THE TUMBLING MACHINE (or Barrel) is the oldest type of Mass Finishing unit still in use. The mass (jewelry pieces and media) within the tumbler or barrel rotates within an octagonal chamber to the top of an incline, tumbles back down and then starts all over again. This machine has severe limitations in that it requires an extremely long time cycle and yields only a low quality surface finish. There is no liquid flowthrough capability and this is considered a serious draw-back. The tumbling machine is adequate for finishing flat pieces that may tend to nest together in other types of equipment and for small lots that need a quick burnishing without regard to quality.

VIBRATORY BOWL MACHINES were introduced about twenty years ago and remain the most popular, effective and cost saving machines. Features include low maintenance cost, a flow-through system for liquid compounds and a high quality of jewelry pieces in relationship to the total mass in the bowl. Any product that lends itself to Mass Finishing (with the exception of very light flat pieces) can be processed very successfully in a vibratory bowl unit. Several of the reasons that this method remains the most cost effective are the ratios of quantity per load, labor time spent unloading the unit and the relatively low initial and maintenance cost. It also lends itself extremely well to processing chain type jewelry.

HIGH ENERGY DISC MACHINES (Centrifugal disc) combine the three dimensional action of the vibratory bowl machine with the reduced processing time of centrifugal force units. This machine permits the combination of flow-through and high energy. Major benefit is that it reduces process time. One of the negatives incumbent in high energy disc machines is that its design can present maintenance problems and that, coupled with its high initial cost, results in a much higher price per piece to Mass Finish.

ROLL BURNISHING MACHINES are relatively new to Mass Finishing and offer a much faster process and are adaptable to a flow-through system. The machine's unique unloading system requires less than one minute to unload the work pieces and the operator never has to handle the media. This machines cannot process very fine jewelry items and does not work well for chain.

MAGNETIC PIN MACHINES (Magnetic polishers) will burnish the nooks and crannies, those hard to reach areas of jewelry items. Very fine pins or needles combine with a COMPOUND MIX TO ACCOMPLISH THE TASK. This machine gives an excellent burnished finish. To achieve a truly high quality surface finish, pieces must usually be subjected to additional operations in other types of equipment. The drawbacks of magnetic pin machines are that they yield a poor quality surface finish on smooth surface areas and cannot be adapted to any type of flow-through system.

Selection of equipment

Manufacturers must factor in the initial cost of Mass Finish equipment in order to make the proper choice. Visualize, if you will, your friend who drives to his destination in an expensive luxury vehicle while you travel to the same point in a moderately priced automobile. He may arrive ahead of you and have traveled in better style while you arrive at the same point for far less money spent. Mass Finishing can be accomplished by using a number of vehicles, but one must always consider the up-front and maintenance cost and guard against spending too much money that results in a higher finishing cost per piece.

## Text 8

Benefits of Mass Finishing

Mass Finishing need not be a lengthy process. Many manufacturers think that, if the finishing process requires more than eight hours, it is not for them. Consider that the equipment not only operates during a normal eight hour work day but the fact that the final stages of finishing can be accomplished by the equipment after the workers have left the factory. Wet processing is done during the daytime while the final dry process is performed in the evening. When the workers arrive in the morning, the finishing process has been completed.

Mass Finishing saves far more than money. One European manufacturer wanted to have his skilled workers handle more tasks each day instead of increasing his work staff. His solution was to have vibratory machines rough cut the jewelry pieces. This process freed up his employees enabling them to stone set or perform more skilled tasks instead of only sanding and polishing. Making the change to Mass Finishing resulted in higher productivity without the need to employ or train additional workers. Manufacturers of fine jewelry must always consider the loss of precious metal encountered in finishing jewelry.

A typical gold ring arrives in the hand polishing department, after the sprue has been removed and that sprue area has been surface ground. When the ring is finally finished, an average of five to ten percent of precious gold may be on the floor with some on the workbench as fine dust that may or may not be recovered. A typical ring processed through a Mass Finishing operation loses only one to two percent of the total alloy and is completely captured within the aqueous flow-through fluid.

A major consideration for many jewelry producers and one that continues to grow is the handling of waste water generated by a wet finishing process. There are now small compact systems that, when coupled with one-step chemistry, render most metals easily recoverable or harmless. An important feature of this new technology is that chemistry efficiency permits continuous use of the same water resulting in a sound, ecologically friendly system.

Mass Finishing procedures will always be governed by the anticipated retail price of the final product and the value that the customer demands for money spent. In the case of a pair of gold earrings set with diamonds and sold in an upmarket retail store, the castings would probably be subjected to Mass Finishing with hand polishing in the final stage. That same style earring, cast in gold alloy with imitation stones and sold at a far lower price through a large retail chain, forces a manufacturer to take a different approach. Possibly, a three stage Mass Finishing process with no hand polishing could be acceptable. Were that same pair of earrings produced in a low karat gold alloy, without stones and aimed at consumers who arc extremely price conscious, a simple burnishing operation may be sufficient to enhance the brightness of the Surface and still contain cost.

## Text 9

### The Power to Create

As the queen's goldsmith and jeweller, freeman of the City of London and the most recent prime warden of the Worshipful Company of Goldsmiths- Stuart Devlin is not used to people calling him crazy.

But that is what happened when the Australian-born designer, who has been described as the world's greatest living goldsmith, splashed out more than £100,000 on his first computer-aided design (Cad) system. The investment made him the first leading designer to use Cad so extensively.

It was a bold move because, at the top end of the art world, computer technology is viewed with some distrust. What may be fine for designing, say, an excavator arm is not quite "the done thing" for a specially commissioned work that might cost thousands of pounds.

But Mr. Devin, whose design office is a roomful of high-tech equipment in some old Sussex stables, has embraced the new approach enthusiastically, and says it has transformed the way he works. Besides, he quips. "I decided it was a way to keep the rising stars from snapping at my heels".

Craftsmen, he says, should be looking for tools that bring "the greatest power to their elbow". Rather than feel they must always maintain methods used in the past. And he is keen to see student designers encouraged to use the technology more, "if an old guy like me can master it, think what they will be able to achieve," says Mr. Devlin, who was 66 yesterday.

The former teacher of art and design, who began his career in Australia before moving to London in 1965, has always been interested in technology. Through the 1980s, he monitored developments in Cad technology until it reached a point where it could help him.

He admits that incorporating computer technology into his design work was hard at first. He felt awkward attending training sessions with people 30 years younger than him at Intergraph's UK base in Swindon. He soon found however, that his understanding and experience of using three dimensions in his work gave him an advantage. Subsequently, his insights into how to exploit the technology have been made available in Intergraph user groups, benefiting more conventional designers in engineering and other industries.

Mr. Devlin has used the technology to develop his designs in everything from intricate gold jewellery to instruments for keyhole surgery. His latest major project - designing 24 commemorative coins for the Athens Olympics - illustrates the way Cad can speed up the design process, allowing on-screen modifications to be made easily and quickly when working to tight schedules for a customer on the other side of the world.

The biggest revolution, however, has come in the relationship with the workshop where the piece is to be produced. Previously, even with detailed drawings for the craftsman, they would not have all the information needed to make the piece accurately, and it would emerge no more than 75 percent correct. Now, Mr. Devlin does have some quibbles about Cad: "It is still difficult to use", he says, "although it is advancing in leaps and bounds".

Mr. Devlin's latest idea is for an instant prototyping machine which could be hooked up to his Cad system to produce a real version of a design in 30 minutes -compared with three days for a fully finished model from modern rapid prototyping machines. "I'm 99 percent sure that I can do it", he says. "In fact, I've designed it on the computer".

# Vocabulary

## Unit 1

| | |
|---|---|
| abundant, a | обильный, изобильный |
| advance, v | возрастать |
| appearance, n | внешний вид |
| badge, n | знак различия; значок, эмблема |
| bead , n | бусина |
| competitor ,n | соперник, конкурент |
| counterpart, n | двойник, дубликат |
| correspond,v | соответствовать |
| diamond, n | алмаз, бриллиант |
| esteem, n | уважение |
| emerald, n | изумруд |
| fraternity, n | братство |
| gem, n | драгоценный камень, самоцвет, драгоценность |
| insignia, n | знаки отличия |
| lacquer, n | лак, политура, глазурь |
| jewelry, n | ювелирные изделия, драгоценности |
| oriental, adj | яркий, блестящий, настоящий (о камнях) |
| peril, n | опасность, риск |
| precious, a | драгоценный |
| purport ,v | подразумевать, означать |
| resemblance, n | сходство |
| rival, v | соперничать |
| rutile, n | рутил |
| scale, n | чешуя |
| sedimentation, n | осаждение |
| solid, adj | твердый, солидный |
| superficial, a | поверхностный, неглубокий |
| token, n | символ , знак |
| trinket, n | безделушка, дешевое украшение, брелок |

## Unit 2

| | |
|---|---|
| acid, n | кислота |
| appreciate, v | ценить |
| complement, n | дополнение, дополняющее до нормы количество |
| contain, v | содержать |
| crumble, v | крошиться |
| currently, adv | в настоящее время |
| draw (drew, drawn), v | тянуть(ся), тащить(ся); расплющивать, ковать; привлекать |
| ductile, adj | ковкий, тягучий |

| | |
|---|---|
| feminine, adj | женский |
| fashionable, adj | модный |
| formerly, adv | прежде, раньше |
| hammer, v | ковать с помощью молота |
| immortality, n | бессмертие |
| malleable, adj | деформируемый в холодном состоянии, ковкий |
| masculine, adj | мужской |
| mine, v | добывать; минировать |
| miner, n | шахтёр |
| noble, adj | благородный |
| overlook, v | не заметить; игнорировать, пренебрегать; смотреть сверху на (что-л.) |
| oxidize, v | окислять |
| ounce, n | унция=31,1 граммов |
| particularly, adv | особенно |
| polish, v | полировать, шлифовать |
| polish off, v | убирать шлифовкой |
| pound, v | толочь, молоть |
| prize, v | высоко ценить, оценивать |
| pure, adj | чистый |
| ring, n | кольцо |
| wedding ring | свадебное кольцо |
| engagement ring | обручальное кольцо |
| rub, v | тереть |
| rub off, v | стереть, вытереть |
| regard, v | рассматривать, считать |
| remarkable, adj | замечательный, удивительный |
| resistant, adj | стойкий |
| retain, v | сохранять |
| setting, n | оправа |
| shimmer, v | мерцать, блестеть |
| stretch, v | вытягивать, растягивать; простираться; превышать |
| surpass, v | превосходить |
| **tarnish, n, v** | **налёт, потускнение; тускнеть** |
| underlying, adj | лежащий (под чем-л.) |

## Unit 3

| | |
|---|---|
| afford, v | позволять себе |
| base, adj | неблагородный, окисляющийся |
| bond, v | связывать, соединять, скреплять |
| calibre = caliber, n | калибр, размер, размах |
| conformity, n | соответствие |
| counterpart, n | двойник, дубликат |

| | |
|---|---|
| decompose, v | расщеплять, разлагаться |
| denominator, n | знаменатель |
| deposit, v | наносить, намывать, отлагать |
| derive, v | происходить |
| electroplate, v | наносить гальваническим способом |
| gold wash | тонкий слой золота |
| grade, n | сорт, качество |
| grain, n | гранула, крупинка, зерно;<br>гран (ед.измерения = 64,8 млг) |
| feldspar, n | полевой шпат |
| fineness, n | чистота, точность, проба |
| fraction, n | дробь |
| hollow, a | полый |
| immerse, v | погружать |
| largely, adj | в большей мере, в широком масштабе |
| lapis lazuli, n | ляпис-лазурь, лазурит |
| means, n | средства |
| nick, v | делать вмятины |
| numerator, n | числитель |
| plate, n | лист, полоса |
| percentage, n | часть, доля |
| previously, adj | ранее |
| purpose, n | цель |
| rating, n | расчетная величина, оценка, определение стоимости, маркировка |
| regulations, n | правила, устав, инструкция |
| roll,v, n | катать, вал, ролик |
| sample needle | пробирная игла |
| solid, adj | твердый, сплошной, цельный, неполый |
| solution, n | раствор |
| sterling, adj | установленной пробы (о серебре) |
| turquoise, n | бирюза |

Unit 4

| | |
|---|---|
| alloy, n, v | сплав, сплавлять |
| amber, n | янтарь |
| brooch, n | брошь |
| burnish, v | чистить, полировать, отшлифовывать |
| cabochon, n | неограненный драгоценный камень |
| cast, (cast, cast),v | отливать |
| craft, n | ремесло |
| core, n | сердцевина |
| crucible, n | плавильный тигель |
| die, n | штамп, матрица |

| | |
|---|---|
| dress fittings | детали одежды |
| engraving, n | гравирование |
| embossing, n | чеканка, выдавливание |
| employ, v | использовать |
| evaporate, v | выпаривать |
| evidence, n | свидетельство |
| gild, v | золотить |
| gilding, n | золочение, позолота |
| jet, n | гагат, черный янтарь |
| knead, v | месить |
| lead,n | свинец |
| lozenge, n | ромб, ромбовидная фигура |
| mercury, n | ртуть |
| mould, n | форма, лекало, шаблон |

## Unit 5

| | |
|---|---|
| affect, v | воздействовать, влиять |
| apparent, adj | видимый, кажущийся |
| artifice, n | (удачная) выдумка |
| assemble, v | монтировать, собирать |
| attribute, n | отличительная черта, качество, свойство |
| back, v | поддерживать |
| beholder, n | очевидец, наблюдатель |
| brilliancy, n | яркость, блеск |
| distinguish, v | различать |
| dull, adj | неяркий, тусклый; тупой |
| durability, n | износостойкость |
| fire, n | свечение; огонь; пожар |
| flash, n | вспышка |
| fraud, n | обман, мошенничество,подделка |
| garnet, n | гранат |
| genuine, adj | подлинный, настоящий, искренний |
| hue, n | оттенок |
| index, n | индекс, указатель |
| index of refraction | показатель преломления |
| ingenuity, n | мастерство, искусность |
| intrinsic, adj | истинный, действительный |
| manufacture, n | изготовление; производство; фабрикация |
| matter, n | дело, вопрос; вещество; материя |
| merely, adv | просто; единственно |
| luster, n | блеск, глянец, лоск |
| range, v (from) | колебаться в пределах… |
| rarity, n | редкость; редкое явление, раритет |
| setting, n | оправа |

| | |
|---|---|
| silky, adj | шелковый |
| splendor, n | сверкание, блеск |
| store, n | магазин |
| texture, n | структура; текстура |
| tint, n,v | тон, светлый цвет, оттенять |
| top, v | покрывать (сверху) |
| translucency, n | полупрозрачность |
| transparence, n | прозрачность |
| vivid, adj | яркий; чёткий, ясный |
| vitreous, adj | стекловидный |
| wearing, n | носка; износ |
| wearing quality | износостойкость |

## Unit 6

amount (n) – количество; сумма, итог
ample (adj) –обильный; достаточный
arrange (v) – приводить в порядок, классифицировать
approximation (n) – приближение; приблизительная сумма
carve (v) – резать, вырезать; гравировать
compound (n) – смесь; состав, соединение
compress (v) – сжимать; сдавливать
contract (v) – сжимать(ся); сокращать(ся)
distribute (v) – распределять; распространять
dry (up) (v) –высушивать; высыхать
dull (adj) – тупой, неотточенный; тусклый
dye (v) – красить, окрашивать; окрашиваться
expand (v) – расширять(ся); увеличивать(ся) в объеме
evaporate (v) – испарять(ся); выпаривать
file (n) – напильник
hardness (n) – твердость; крепость
identify (v) – опознавать; выяснять
identification (n) – выяснение; опознание
indicate (v) – показывать, указывать
melt (v) – плавить(ся), растапливать(ся)
minute (adj) – мелкий, мельчайший; незначительный
nick (v) – шлицевать, прорезать шлицы; разрезать
ornament (n) – украшение, орнамент
property (n) – свойство, качество
rank (n) – степень
resist (v) – сопротивляться; оказывать сопротивление
resistance (n) – сопротивление
scale (n) – шкала, градация
scratch (v) – царапать(ся); оцарапать

solidify (v) – твердеть, застывать
solution (n) – раствор; растворение
spike (n) – шип; острый выступ; острие
surface (n) – поверхность
value (n) – ценность; стоимость; величина, значение
weld (v) – сваривать(ся)

## Unit 7

abandon (v) – покидать, оставлять
acid (n), (adj) – кислота; кислый, едкий, кислотный
champion (v) – защищать; бороться за что-л.
chrysoberyl (n) – мин. хризоберилл
cleavage (n) – расщепление; раскалывание
crack (n, v) – трещина; щель; расселина; давать трещину, трескаться; раскалывать(ся); расщеплять
craftsmanship (n) - мастерство
crumble (v) – крошиться; осыпаться; обваливаться
devotee (n) – приверженец; человек, всецело преданный какому-л. делу
enhance (v) –увеличивать, усиливать
essence (n) – сущность, существо
expenditure (n) – трата, расход
fibrous (adj) – волокнистый, жилистый
flee (v) – бежать, спасаться бегством
friability (n) – хрупкость, ломкость
garnet (n) – мин. гранат
gravity (n) – тяжесть; сила тяжести; тяготение
identity (n) – тождественность, идентичность; подлинность
jade (n) – мин. жадеит
jet (n) – мин. гагат, черный янтарь
mourn (n) – оплакивать; печалиться, горевать, скорбеть
necklace (n) - ожерелье
originate (v) – брать начало, происходить, возникать
perspiration (n) –пот, испарина
portability (n) – портативность
prodigal (adj) – расточительный; щедрый
rarity (n) – редкость; антикварная вещь
refract (v) – преломлять (лучи)
scarce (adj) – скудный; редкий, редко встречающийся
scarcity (n) – недостаток, нехватка; дефицит; редкость
shatter(v) – разбить(ся) вдребезги; раздробить
toughness (n) – жесткость; прочность; крепость
vie (v) - соперничать
wear out (v) – изнашивать(ся); истощать(ся); состарить; изнурить

# Unit 8

aristocracy (n) - аристократия
beaker (n) – кубок, чаша; мензурка
bowl (n) – кубок, чаша; чашка; ваза
cameo (n) - камея
circular (adj) – круглый; круговой; дуговой
coincident (adj) – совпадающий, соответствующий
credit (v) - приписывать
cut (v) – шлифовать, - гранить
cutter (n) – режущий инструмент; фреза; резец; резчик (по дереву, камню)
device (n) – устройство; приспособление; механизм
double (v) – удваивать(ся); сдваивать
eliminate (v) – устранять; исключать; уничтожать
engrave (v) – гравировать; резать (по камню, дереву, металлу)
facet (n) – грань; фаска; фацет
fiery (adj) – огненный, пламенный, горящий
flaw (n) – трещина, щель, порок; пятно, недостаток
flawless (adj) – без изъяна, безупречный
girdle (n) – обойма, кольцо; пояс
grave (n) - могила
incise (v) – делать разрез; надрезать; вырезать; насекать, гравировать
intaglio (n) – инталия, глубоко вырезанное изображение на отшлифованном камне или металле
judicious (adj) – здравомыслящий, рассудительный
lapidary (n) – гранильщик драгоценных камней
lathe (n) – токарный станок
malleability (n) – ковкость; тягучесть
marquise (n) - маркиза
mound (n) – насыпь; холм; курган; могильный холм
oblong (adj, n) – продолговатый; удлиненный, продолговатая фигура, продолговатый предмет
octahedron (n) – восьмигранник, октаэдр
relief (n) – рельеф; рельефность; четкость, контраст
rough (adj) – необработанный; шероховатый, неровный; грубый; крупнозернистый.
seal (n) – печать; клеймо; знак, доказательство
tiny (adj) – очень маленький, крошечный
tool (n) – инструмент; резец; станок
work (v) - обрабатывать

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# Содержание