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**ОГСЭ.03 Иностранный язык**

для специальности среднего профессионального образования

**15.02.09 «Аддитивные технологии»**

(на базе основного общего образования)

Срок получения СПО по ППССЗ – 3 года 10 месяцев

базовая подготовка

**Практическое занятие № 32**

**Тема: Инструкции, руководства.** Техника безопасности.

Трудности перевода: Сложное подлежащее.

**Цель**:

* закрепление и систематизация теоретических знаний по лексической и грамматическим темам;
* совершенствование навыков чтения и понимания текстов профессиональной направленности.

***Прочитайте текст и выполните задания после него.***

**SAFETY ENGINEERING**

Accidents to people in industrial enterprises are called industrial injury. They occur when workers have not acquired the requisite for skill and lack the necessary experience in handling tools and equipment. Accidents are also caused through neglect of safety rules and regulations in the factories and training workshops.

The purpose of safety engineering is to prevent accidents and to create such conditions of work in industry which will ensure maximum productivity of labour.

When taking up new duties or when first going to work at any industrial enterprise each worker is obliged to acquaint him thoroughly with, and to master the safety instructions.

**Задание 1. Ответьте на вопросы к тексту**

1. How are the accidents to people in industrial enterprises called?
2. When do the accidents to people occur?
3. What must one do to prevent accidents?
4. What is the purpose of safety engineering?
5. What is a worker obliged to do when taking up new duties?

**Задание 2. Прочитайте текст и переведите письменно 1 и 2 абзацы.**

**Задание 3. Найдите соответствия английских и русских предложений**

|  |  |
| --- | --- |
| **a)**   1. Wear safety boots! 2. Don’t enter! 3. Don’t use a mobile phone here. 4. Emergency exit this way! 5. Be careful. Dangerous liquid! 6. Don’t touch! 7. Wear safety goggles in the area! 8. Don’t park here! 9. Be careful! Explosive material! 10. Don’t switch on! 11. Danger of an electric shock! 12. Don’t smoke here! 13. Wear a hard hat! 14. Watch out! Danger! | **b)**  a) Руками не трогать!  b) Парковка запрещена!  c) Осторожно! Взрывоопасные вещества. d) Не курить!  e) Не включать!  f) Осторожно! Высокое напряжение! g) Надеть обувь!  h) Запасной выход!  i) Осторожно! Опасно!  j) Отключить мобильные телефоны!  k) Не входить!  l) Для безопасности оденьте очки!  m) Осторожно! Опасные растворы! n) Надеть каску! |

**Задание 4. Заполните пропуски словами, данными справа**

|  |  |
| --- | --- |
| 1) These ear protectors must be carried everywhere in the 1\_\_\_\_\_\_\_ hangar. 2) These 2\_\_\_\_\_\_\_ must be lubricated every day. 3) Drivers are required to check the 3\_\_\_\_\_\_\_, lights, tyres, and water before a long car journey. 4) Apprentices must always wear 4\_\_\_\_\_\_\_ in the workshop. | a) overalls  b) gears  c) brakes  d) aircrafts |

**Задание 5. Переведите предложения, обращая внимание на перевод «Сложного подлежащего» (См. таблицу ниже).**

1. Light is proved to travel in straight lines.
2. Popov is known to be the inventor of radio in Russia.
3. Faraday is believed to be a great English physicist.
4. He is believed to be a very talented person.
5. Forging processes are expected to be performed at various temperatures.
6. This device is sure to have changed the world.

**Практическое занятие № 33**

**Тема: Особенности перевода текстов технической направленности** Многофункциональные обрабатывающие станки по металлу.

Особенности перевода грамматических конструкций и терминов.

**Цель**:

* закрепление и систематизация теоретических знаний по лексическим и грамматическим темам;
* совершенствование навыков перевода и понимания текстов профессиональной направленности.

**Прочитайте текст и выполните задание.**

The family-run WEILER Group took over Kunzmann Maschinenbau GmbH almost exactly two years ago. First founded over a hundred years ago, the manufacturer of universal, milling and drilling machines and machining centers has continued to operate as an independent company and has also maintained all existing jobs. The company is clearly set for the future in terms of technology, too - as demonstrated by the newly launched BA 1100 vertical machining center.

This is a modern vertical machining centre for universal use in the series production of small to medium-sized batches.

Highly versatile and easy to use, the latest Kunzmann innovation delivers a generous work area despite its surprisingly compact dimensions. As its name suggests, the BA 1100 supports a travel distance of 1,100 millimeters on the x-axis and 650 millimeters on the z-axis. At 750 millimeters, the y-axis offers the greatest flexibility available so far for machining centers in the 1000 class. Thanks to its modular design, the different variations of the BA 1100 can easily be adjusted to specific production requirements. For instance, three main spindle variants are available with a maximum speed of 10,000, 14,000 or 18,000 revolutions per minute, and with SK 40 / HSK 63 tool fixtures. The standard model includes a 38-way tool changer, while a 60-way changer is also optionally available.

**Задание 1. Ответьте на вопросы:**

1. What is the manufacture of the BA 1100? What country is it from?
2. What kind of machines do they produce?
3. What kind of tool is the BA 1100?
4. What is the purpose of this machine?
5. What travel distances does it support?
6. What distance does it have on the y-axis?
7. Why can the BA1100 be easily adjusted to specific production requirements?
8. How many variants of spindle and speeds are available?
9. What kind of tool changers are presented?

**Задание 2. Переведите письменно технические характеристики центра.**

Unique features of KUNZMANN machining centres:

**Design**

* FEM-optimised cast iron construction in cross table design, with C-frame holding the vertical spindle and tool changer.
* The BA 1100 comes with a unique space concept that includes extra-large travel ranges, in particular along the Y-axis (750 mm) and the Z-axis (up to 900 mm). Ideal for the machining of cube-shaped workpieces.
* Linear roller profile guideways in X-, Y- and Z-axis for dynamic axis repositioning.
* Large ball-type linear drives, 40 mm X-, Y- and Z-axis, guarantee optimum stability.
* The pneumatic weight compensation in the Z-axis supports the ball-type linear drive and ensures additional dynamics as well as optimised surface finish.
* As the machine is available with a range of spindle versions, it can be easily adapted for various machining tasks.
* The large, quick tool changer (38 or 60 pockets) allows for efficient production with minimum disruption.
* All BA 1100 models come with a slat band chip conveyor and adjustable chip bath rinsing.
* Machining accuracy
* Polished ball-type linear drives in all axes for exceptionally high positioning and reproduction accuracy.
* Constant spindle temperature thanks to spindle cooling system that is included as standard.
* Direct incremental linear measuring system protected by sealing air in all axes for high-precision production (optional).

**Ergonomic design**

* Easy access to working area through large front doors.
* Machine table at optimised working height (approx. 1.000 mm). The table can be moved to the front of the booth to bring the clamping table and workpiece as close as possible to the operator.
* The movable operating panel and the electronic hand wheel facilitate setup and retooling of the machine.
* The smooth internal walls and adjustable chip bath rinsing make the machine easy to clean and guarantee efficient chip removal.
* The overall design of the machine with lateral booth maintenance doors facilitates maintenance.

**Technical Data BA 1100 L/H**

**Working range**

|  |  |  |
| --- | --- | --- |
| X-axis (longitudinal) | mm | 1.100 |
| Y-axis (cross) | mm | 750 |
| Z-axis (vertical) BA 1100 L BA 1100 H | mm mm | 650 900 |
| Main spindle drive | kW | (100% DC) 10,0 (40% DC) 14,0 |
| Spindle speed range | rpm | 10.000/14.000/18.000 |
| Tool taper |  | SK 40/HSK 63 |
| Feed rate | m/min | 30/30/30 |
| Rapid traverse | m/min | 30/30/30 |
| Contouring control |  | TNC 640 840 D sl ShopMill |
| Weight | kg | approx. 8.900 |
| Clamping table | mm | 1.350 x 700 |
| T-slots |  | 6 x 18 H 8 |
| Loading ability | kg | max. 1.500 |
| Tool changer |  |  |
| Number of tool positions |  | 38/60 |
| Tool change time | sec | approx. 3 |
| Chip-to-chip-time | sec | approx. 8 |
| Coolant supply through spindle | bar | 25/40 |

**Практическое занятие № 34**

**Тема: Особенности перевода текстов технической направленности.**  Отраслевые выставки. Практикум перевода технических текстов

**Цель**:

* закрепление и систематизация теоретических знаний по лексическим и грамматическим темам;
* совершенствование навыков перевода и понимания текстов профессиональной направленности.

***Прочитайте текст и выполните задания***

**Drawing types and scales**

In engineering, most design information is shown on drawings. Today, drawings are

generally not drawn by hand. They are produced on computer, using CAD (computer-aided design) systems.

**A key factor on a drawing is the scale - that is, the size of items on the drawing in relation to their real size. When all the items on a drawing are shown relative to their real size, the drawing is drawn to scale, and can be called a scale drawing. An example of a scale is 1:10 (one to ten). At 1:10, an object with a length of 100 mm in real life would measure 10 mm on the drawing.**

**Most engineering designs consist of a set of drawings (a number of related drawings):**

* + - **General arrangement (GA) drawings show whole devices or structures, using a small scale. This means objects on the drawing are small, relative to their real size (for example, a 1:100 drawing of an entire building).**
    - **Detail drawings show parts in detail, using a large scale, such as 1:5 or 1:2. Small parts are sometimes shown in a detail as actual size (1:1), or can be enlarged to bigger than**

**actual size (for example, 2:1).**

**For electrical circuits, and pipe and duct networks, it is helpful to show designs in a simplified form. In this case, schematic drawings (often referred to as schematics) are used.**

An everyday example is the map of a train network.

In non-technical, everyday English, engineering drawings are often called plans.

Section is the short form of cross-section, and is commonly used in technical contexts.

Two-dimensional and three-dimensional are often shortened to 2D and 3D.

**Задание 1. Переведите письменно на русский язык выделенные предложения.**

**Задание 2. Закончите предложения, используя текст.**

1. Enlarged drawings show components larger than their.................................................
2. For engineering drawings, 1:5 is a commonly used................................
3. Whole machines or structures are shown on .............................................. drawings.
4. Electrical drawings don't usually show sizes. They're shown as.................................
5. A ..........................of drawings for a large project can consist of hundreds of pages.
6. Most drawings are produced on computers, using................................software.

**Задание 3. Найдите соответствия между определением в первой колонке (1-6) с терминами во второй (a-f).**

1. a 2D view of the side of an object a) a plan
2. a 2D view inside an object, as if it is cut through b) a section
3. a 2D view, looking down on top of an object c) an isometric projection
4. a 3D view, showing an assembly taken to pieces d) an oblique projection
5. a 3D view, with the 2D face of the object at the front e) an exploded view
6. a 3D view, with a corner of the object at the front f) an elevation