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Lycée Jean PERRIN

Enseignement professionnel en langue vivante étrangère CRCI 1

Fiche activité : Cisaille Hydraulique

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| **FICHE ACTIVITE** |
| **Cisaille Hydraulique** |
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| **Unités du diplôme visées** | U2 - Langue vivante étrangère : anglais |
| U6 - Organisation et suivi de la réalisation, préfabrication, installation et de la maintenance |
| **Compétences visées** | C02 Rechercher une information dans une documentation technique, en local ou à distance en anglais. |
| C08 Choisir et spécifier des technologies et des moyens de réalisation. |
| C03 Formuler et transmettre des informations, communiquer sous forme écrite et orale y compris en anglais |
| **Savoirs associés** | S10 Sécurité, ergonomie et environnement |
| S7.1 Les procédés de découpage |
| **Tâches mobilisées** | A4-T3 : Organiser et gérer des moyens matériels et humains |
| A4-T5 : Formuler et transmettre une information technique de façon écrite et orale en français et en anglais. |
| **Intention** |  - Développer le vocabulaire nécessaire à un échange technique et commercial concernant un moyen de production - Organiser la mise en production en sécurité d’un moyen de production |
| **Démarche** | Inductive |
| **Durée** | 8h |
| **Forme de travail** | Binôme |
| **Pré requis** | Procédés de cisaillage, Métallurgie, Forces mécaniques, construction d’interrogation en anglais, Niveau B1 anglais |
|  |
| **On donne** | **On demande** |
| Un document sujet | Compléter le TD |
| Un ordinateur relié à internet | Analyser un texte |
|  | Mobiliser le comparatif |
|   |   |
|   |   |
| **Commentaires** |
| Séance 1 (1h) : Apport de vocabulaireSéance 2 (1h) : Le comparatifSéance 3+4 (1h45) : Préparation oralSéance 4 (15’) : Evaluation formatrice d’acquisition du lexique technique à l’écritSéance 5 + 6 (2h) : Jeu de rôle acheteur / vendeur machineSéance 7 + 8 (2h) : Evaluation orale par binôme (10 ‘ par binôme) |

**In this activity you will develop your technical vocabulary in shearing. You will be assessed orally, in a machine buyer/seller situation. To succeed in your task, you will have to develop your argumentation and technical comparison skills.**

Figure 1 : Hydraulic shearing machine Jean Perrin High Scool

# **TODAY’S OBJECTIVE** : Read and study the text below to think and learn more about the use and the risks of using a guillotine shear.

# If necessary you can use this video to see the machine in operation: <https://youtu.be/0A1w3yv7P-E>

A hydraulic guillotine shearing machine is a specialized cutting machine designed for cutting metal sheets made of various alloys, such as bronze, aluminum, brass, and mild steel. It operates similarly to scissors, with the sheet placed between two blades that are compressed to cut it off. However, the hydraulic shearing machine provides much greater pressure than normal scissors, making it ideal for larger, thicker, and heavier workpieces that require machining.

There are two main types of shearing machines used for cutting metal sheets: hydraulic and mechanical. The hydraulic shearing machine, which is the focus of this discussion, is driven by a hydraulic system that includes a hydraulic oil pump to generate pressure on the shearing blades for cutting the workpieces. The hydraulic guillotine shearing machine is preferred by metal sheet manufacturers due to its lower energy consumption, making it more cost-effective. It also performs efficiently, cutting workpieces quickly and increasing product output, thanks to the pressure of its hydraulic pressure.

## In groups of 3 , read this short text explaining what a shearing machine is and find the English equivalents of the following words :

* Une cisaille guillotine………………………………..……………………………
* Couper (x2)……………………………………………….……………………….
* Une tôle………………………………………………..…………………………..
* Un alliage………………………………….………………………………………
* Cuivre………………………………………………...…………………………….
* Acier doux………………………………………………………………………….
* Une lame…………………………………………………………………………..
* Epais……………………………………………………………………………….
* Usiner……………………………………………………………………………….
* Une pièce (x2)……………………………………………………………………..
* Lourd………………………………………………………………………………..
* Un vérin hydraulique……………………………………………………………..
* Un industriel……………………………………………………………………….
* Rentable……………………………………………………………………………
* La production / rendement de la production…………………….. …..………..

## Answer the following questions :

* What do you use an hydraulic shearing machine for ?

……………………………………………………………………...……………….

* How does it work ?

……………………………………………………………………………………….

* What are its advantages as compared to a mechanical one ?

……………………………………………………………………………………….

* Which elements of PPE do you need to use to protect yourself ?

………………………………………………………………………….…………….

* Recap orally what you have understood to the members of your work group

Write down a few key elements to help you express yourself :

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## Grammar point

Observer cette phrase du texte. Qu’expriment les formes en gras?

“However, the hydraulic shearing machine provides much **greater** pressure than normal scissors, making it ideal for **larger, thicker, and heavier** workpieces that require machining.”

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Proposer une règle de construction, est-ce valable dans tous les cas ?

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## Observe maintenant le tableau

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| --- | --- |
| Adjectif  | COMPARATIF DE SUPERIORITE |
| 1 ou 2 syllabes en y, er, ow, lecheap, big, dirty, simple, narrow, fast | Adj + er + (than)cheaper than/ bigger than/ dirtier than/ narrower than/ faster than/ simpler than |
| 2 syllabes ou plusreliable/ handsome /powerful | More + adj + thanMore reliable than/ more handsome than/ more powerful than |

5) APPLICATION: Traduis les phrases suivantes en utilisant un comparatif de supériorité.

1. La machine est plus puissante que celle utilisée à l’atelier et la lame est plus résistante.

………………………………………………………………………………………………

………………………………………………………………………………………………

1. La tôle que nous devons utiliser pour fabriquer une cuve sous pression doit être plus épaisse.

………………………………………………………………………………………………

………………………………………………………………………………………………

1. L’acier inoxydable (stainless steel) est plus résistant à la corrosion que l’acier doux.

………………………………………………………………………………………………

1. Cette nouvelle machine est plus rentable que l’ancienne.

………………………………………………………………………………………………

………………………………………………………………………………………………

1. La machine à cisaille hydraulique est spécialisée en pièces plus lourdes et plus grandes.

………………………………………………………………………………………………

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**Role play**

You will form groups of 2 or 3 students to simulate the purchase of a guillotine shear.

- 1 student will be the customer

- 1 student will be the seller

- Optional: 1 student will be the representant of a rival company.

You will have 10 minutes to discuss this purchase project and compare the current machine with the new one you would like to buy. The discussion should focus on technical and safety features and should be conducted exclusively in English.

You will have two sessions to prepare for these exchanges.

At the end of this preparation, a random draw will determine the order of appearance as well as the role of each student for the oral evaluation.

To get ready before your oral presentation, you can record it.

VOCABULARY TEST

Name………………

Translate the following words into English :

1. cuivre……………………

2. lame………………………..

3. vérin hydraulique……………………….

4. rentable……………………..

5. tôle………………….

6. alliage…………………….

7. une pièce…………………….

8. acier………………………

9. acier doux……………………..

10. épais…………………………..

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VOCABULARY TEST

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7. une pièce…………………….

8. acier………………………

9. acier doux……………………..

10. épais…………………………..

#  **GRILLE D’EVALUATION DE L’ORAL**

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| --- | --- | --- | --- | --- | --- | --- |
| Nom de l’élève | Contenu technique (pertinence des arguments de limitée à suffisament étendue pour parler du sujet) /5 | Correction grammaticale (de limitée à bonne) /2,5 | Richesse du vocabulaire (Vocabulaire varié, utilisation de synonymes, limité à suffisament étendu pour parler du sujet) /2,5 | Aisance / Fluidité (pauses/ débit régulier) / 2,5 | Prononciation (de comprénhensible avec erreurs à claire et naturelle) / 2,5 | TOTAL |
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**CORRECTION**

1)

* a shearing machine
* to cut / to shear
* a metal sheet
* an alloy
* brass
* mild steel
* a blade
* thick
* usiner
* a workpiece/ a part
* heavy
* an hydraulic oil pump
* a manufacturer
* cost-effective
* product output

2)

A shearing machine is a tool used in the cutting of alloys and other sheet metals.

The machine cuts the sheet placed between two blades thanks to the pressure its hydraulic system exerts.

The hydraulic shearing machine is more powerful than a mechanical one, so it can cut thicker sheets. It also consumes less energy and works faster which increases efficiency and output.

To protect yourself you need gloves to avoid cutting your hands, overalls, goggles to protect your eyes from projection and safety shoes.

3) Les formes en gras expriment une comparaison. On veut exprimer qu’un élément est plus…..que l’autre.

Ici la pression obtenue par la machine hydraulique est plus grande que la pression obtenue avec des ciseaux.

4) ADJ + ER + (than) lorsque l’adjectif fait 1 syllabe/ 2 syllabes et se termine par y

Non cette règle n’est pas valable pour les adjectifs de 2 syllabes ou plus.

5 ) This machine is more powerful than the one used in the workshop and the blade is more resistant.

 The metal sheet we have to use to make a pressure vessel must be thicker.

 Stainless steel is more resistant to corrosion than mild steel.

 This new machine is more cost-effective than the old one.

 The shearing machine is specialised in heavier and larger parts/ workpieces.

VOCABULARY TEST (Correction)

1. cuivre = brass

2. lame = a blade

3. vérin hydraulique = an hydraulic oil pump

4. rentable = cost-effective

5. tôle = a metal sheet

6. alliage = an alloy

7. une pièce = a workpiece/ a part

8. acier = steel

9. acier doux = mild steel

10. épais = thick