

**T.C.
MİLLÎ EĞİTİM BAKANLIĞI**

METAL TEKNOLOJİSİ

**TEKNİK YABANCI DİL 1
(İNGİLİZCE)
222YDK013**

Ankara, 2011

- Bu modül, mesleki ve teknik eğitim okul/kurumlarında uygulanan Çerçeve Öğretim Programlarında yer alan yeterlikleri kazandırmaya yönelik olarak öğrencilere rehberlik etmek amacıyla hazırlanmış bireysel öğrenme materyalidir.
- Millî Eğitim Bakanlığınca ücretsiz olarak verilmiştir.
- **PARA İLE SATILMAZ.**

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AÇIKLAMALAR

KOD	222YDK013
ALAN	Metal Teknolojisi
DAL/MESLEK	Tüm dallar için ortak
MODÜLÜN ADI	Teknik Yabancı Dil 1 (İngilizce)
MODÜLÜN TANIMI	Ait olduğu meslekle ilgili İngilizce kelime ve kavramların tanınmasını, okunmasını, ve yazılmasını hedefleyen öğrenme materyalidir.
SÜRE	40/32
ÖN KOŞUL	
YETERLİK	Metal Teknolojisi ile ilgili temel kavram ve araç-gereçlerin İngilizcelerini okumak.
MODÜLÜN AMACI	Genel Amaç Öğrenci , gerekli ortam sağlandığında metal alanın genel kavramlarını yabancı dille ifade edebilecektir. Amaçlar 1. Metal dalı ile ilgili temel kavramları teknik yabancı dille ifade etmek 2. Soğuk şekillendirmede kullanılan araç ve makineleri teknik yabancı dille ifade etmek
EĞİTİM ÖĞRETİM ORTAMLARI VE DONANIMLARI	Dil laboratuvarı; Kulaklık, bilgisayar ve ekipmanları, kütüphane, projeksiyon vb. Bireysel öğrenme ortamları; İngilizce sözlük, yardımcı teknik kitaplar. İnternet ortamı, bilgi teknolojileri vb. İşletmeler ve üniversiteler
ÖLÇME VE DEĞERLENDİRME	Öğrencilere modül ile kazandırılan yeterlikler ve derste yapılan etkinlikler, aşağıda belirtilen kriterler dikkate alınarak ölçülür. 1. Metal dalı ile ilgili temel kavramları teknik yabancı dille ifade eder 2. Soğuk şekillendirmede kullanılan araç ve makineleri teknik yabancı dille ifade eder.

INTRODUCTION

Dear Student,

Some of the most considerable reasons why the humanity advances are so much research, development and production. The countries which are paying more money from their incomes to RESEARCH&IMPROVEMENT is getting an easier and more comfortable life style. Because The countries which don't renew their technology become underdeveloped day by day.

New technology develops thanks to foreign language and the one who knows foreign language. People can read the magazines; books and internet documents in English so can follow the recent technology on their own branches or jobs by learning foreign languages and technical foreign languages. They broad their mind. So they can be more effective and useful people for their country.

We have aimed to improve your occupational English into a higher level with the module "Technical English 1". In this case, you can learn the technical words and terms in English and follow the recent technology in the world more closely.

LEARNING ACTIVITY-1

AIM

You will be able to read the main concepts about metal branch.

SEARCH

- Search the English equivalents of main concepts about metal branch from internet, technical books and dictionaries and make a booklet

1. MAIN CONCEPTS ABOUT METAL BRANCH

1.1. Measurement, Control And Marking Tools

1.1.1. Straightening Plate

It's made of cast iron. Its surface is machined and it looks like a table. The largest one is 5-6 meters long 1.2 – 2 meters wide. Its thickness can vary between 100 and 200 millimeters

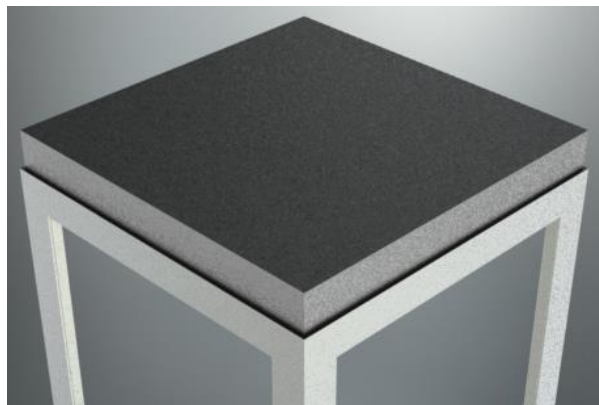
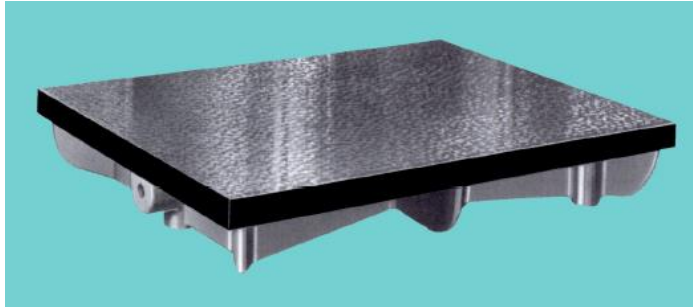


Figure 1.1: A straightening plate

1.1.2. Marking Plate

It's made of granite or cast iron. It's surface is machined quite sensitively. On this plate, we can do the marking only.



Picture 1.1: A check plate

1.1.3. Punctuating Tool

It's a kind of tool for marking. Before drilling, it's used for marking a socket that prevents the bit to slide. The pen-nibs are honed as 30° , 60° , 75° , and 90° .



Figure 1.2.a: The tool for punctuating



Figure 1.2.b: The tool for punctuating

1.1.4. Drawing Tool

It's a tool for marking lines on metals. It has about 15° point angle and is made of hard materials such as diamond and alloy steel.



Figure 1.3: Different types of marking tools

1.1.5. Compasses

They're the tools that are used for drawing a circle or a bow. They're made of steel and their nips are harden. The compasses should have pointed for a good marking.



Figure 1.4:: A compasses

1.1.6. Strip Meter

It's the tool that has been divided into millimeters and measures long materials roughly. Generally, it can 2,3,5,10,20,30,or 50 meters long and 12 or 13 millimeters wide. It's made of spring stainless steel.



Picture 1.2: Types of strip meters

1.1.7. Steel Ruler

It's used for measurement and marking. It's made of spring steel. Its wideness is 20 millimeters, its length can be 100 or 1000 meters and its thickness is 0,5 millimeters.



Picture 1.3: A steel ruler

1.1.8. Calipers

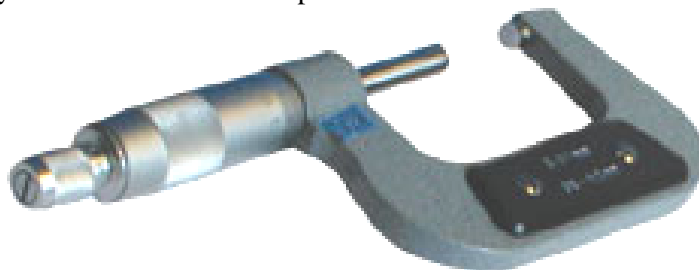
They are the measuring tools that can be adjusted. It's used for measuring the spaces like inner diameters, outer diameters, depths or canals. It's made of stainless steel.



Picture 1.4: Types of callipers

1.1.9. Micrometer

It's the tool that can do the measuring more sensitively than the calipers. It can measure the very thin sheets and circular parts.



Picture 1.5: A micrometer

1.1.10. Set-square

The tool checking the angles between the plane surfaces.



Picture 1.6: A set-square

1.1.11. Set-square With Angle

There is the chart showing the angle section on it. By means of this protractor, the angles between the plane surfaces can be checked by adjusting the angle we need.



Figure 1.5: Types of set-squares with angle

1.1.12. Universal Set-square

It's used for measuring and checking the very sensitive angles. We can do the angle transmitting and marking by means of this set-square.



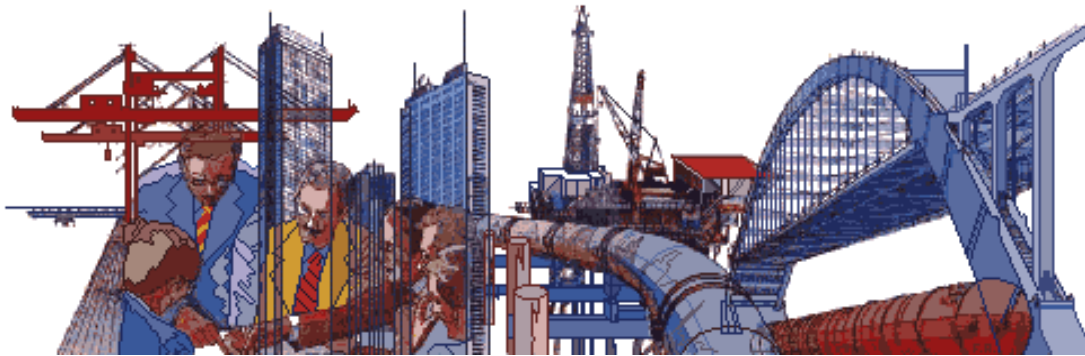
Picture 1.7: A universal set-square

1.2. Terms And Concepts About Cold Shaping

1.2.1. Metal Works

The branch that gives shape to metals as cold or hot according to the measure in the drawing. It also includes welding and heat treatments.

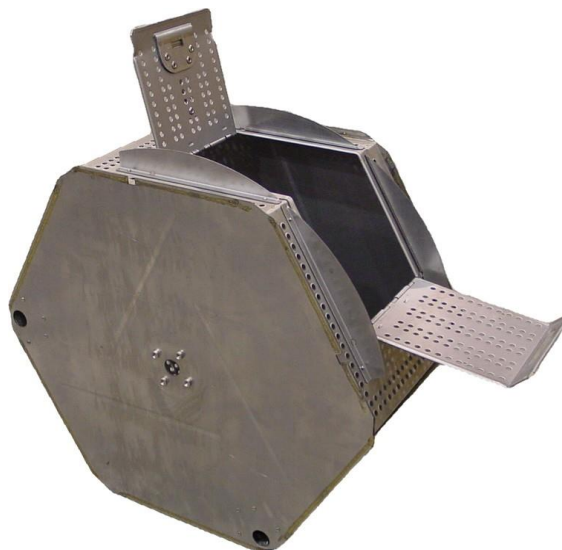
Metal work branches are chopping works, steel objects, steel construction, body working, metal decorating, hot shaping, oxy-gas welding, electric arc welding.



Picture 1.8: The usage of metals in some sectors

1.2.2. Cold Shaping

The process of shaping at the room temperature is called cold shaping. Cold shaping includes bending, drilling, chopping, filing.



Picture 1.9: Cold shaped equipment

1.2.3. Steel

It's the alloy of iron and carbon. It has up to 1.7 % carbon. If we wish, we can add some other metals or elements. It's the most used metal in industry.



Picture 1.10: Steel bridge

- It's Types
 - Steels with poor carbon
 - Steels with ordinary carbon
 - Alloy steels
 - Stainless steels
 - Construction steels
 - High speed steels
 - Tool steels

1.2.4. Alloy

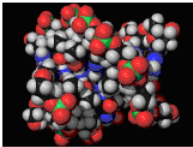
The mixture that is consisted by adding some elements into a metal. If we mix copper and zinc, we get brass.



Picture 1.11: Alloy rim

1.2.5. Element

It's a pure material that cannot be decomposed into materials by chemical methods. Iron, nickel, chrome, carbon, aluminium, copper are elements.



H																				He
Li	Be											B	C	N	O	F	Ne			
Na	Mg											Al	Si	P	S	Cl	Ar			
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr			
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe			
Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn			
Fr	Ra		Rf	Db	Sg	Bh	Hs	Mt	Uun	Uuu	Uub									
			La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu			
			Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr			

Table 1.1: Element table

1.2.6. Soldering

If we mix tin and lead, we get solder alloy. The soldering is the process of connecting without melting the materials themselves but by melting the solder alloy at lower temperature.

It's done in two ways; brazing and soldering.

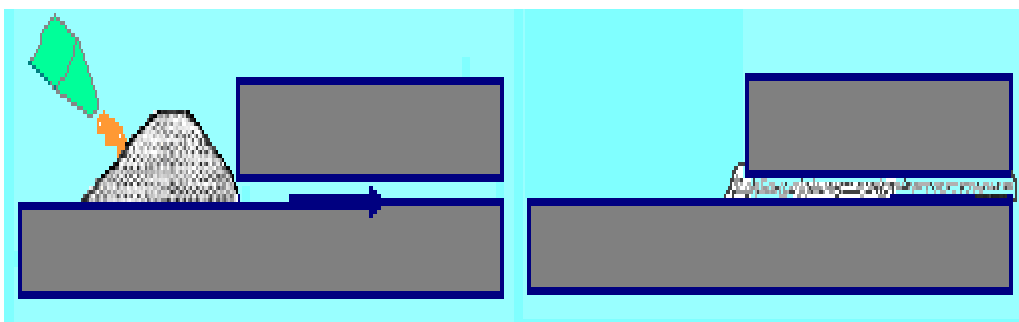


Figure 1.6: Soldering process

1.2.7. Marking

It's the process of copying the technical drawing on a material. Marking is the first step in production. It's very essential because the better marking the better production can be provided.



Picture 1.12: Marking process

1.2.8. Filing

The process of shaping by files on the surface of the material and forming it in a size, shape that we wish and need.

Filing can be done by hands on vises or by means of machines.



Figure 1.7: Filing process

1.2.9. Straightening

The process of having the deformed metal equipments put in use.

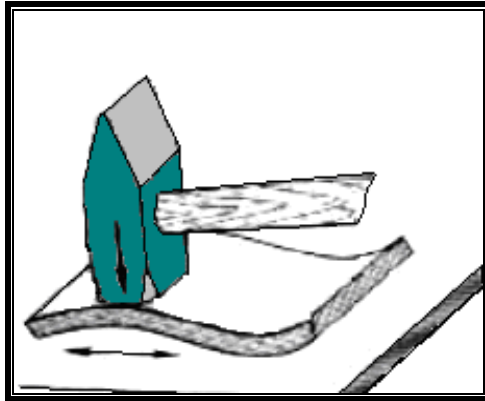


Figure1.8: Straightening process

1.2.10. Hammering

The process of striking the workpiece to make a hole or to shape the metal we wish.



Picture 1.13: Hammering process

1.2.11. Bending

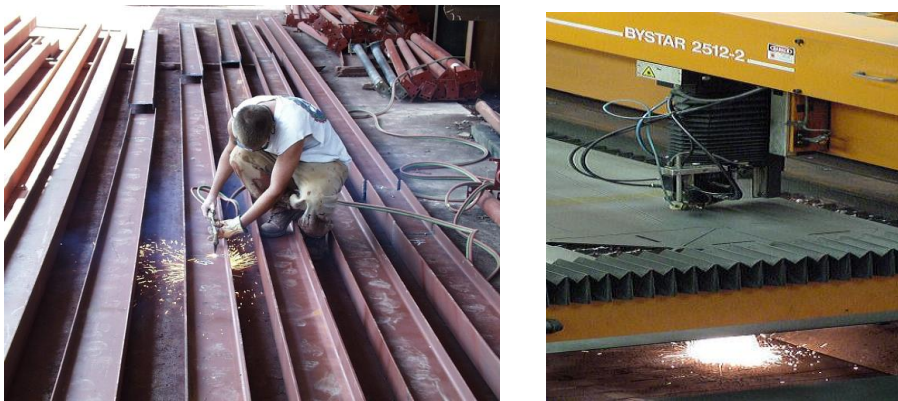
The process of producing new and permanent metal shapes by putting under force. We use this process to produce steel furniture, decorative hardware, machine and steel goods.



Picture 1.14: Bending process on the machine

1.2.12. Cutting

The process of separating the parts in definite size from the materials in various methods. We can cut a metal generally by metal removing, machining without chip and melting.



Picture 1.15: The cutting process by oxy-gas and laser

1.2.13. Drilling

It is the process of making cylindrical holes on materials. Generally we drill with hand or braces, punches and drills.



Picture 1.16: Drilling process

1.2.14. Elastic Deformation

It's the temporarily shape change of the material that is exposed to force. If we remove the force, the material takes its previous form. (Look up Figure 1.4)

1.2.15. Plastic Deformation

It's the permanent shape change of the material under force. Metals are suitable for plastic shaping. (Look up Figure 1.4)

1.2.16. Shaping

The process of snapping after bending or pulling. (Look up Figure 1.4)

1.2.17. Breaking off

It is the process on the material after the strike force. In the process of breaking off, we can find out the stretch and perish of the material.

1.2.18. Tensing

It's the force on a material. This process is done in one axis, in a definite speed and at fixed temperature until the material will be snapped.

In the process of pulling, cross-section constriction and stretching come into existence on the material.

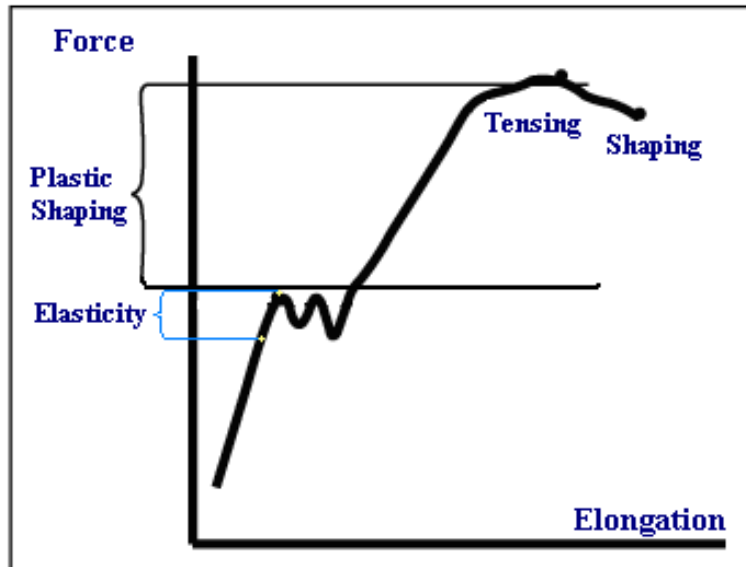


Figure 1.9: The diagram of tensile test

APPLICATION ACTIVITY

Use technical English about the main concepts of metal branch.

Steps of process	Suggestions
Find a text about this process and translate.	<ul style="list-style-type: none"> ➤ Please read all of the text. ➤ If you do not know words in text, research the meaning during translation ➤ Use English dictionary for the meaning of words from English to Turkish ➤ You can find detailed information about the technical words in the text. ➤ Make research about main concepts about metal branch

CHECKLIST

If you have behaviors listed below, evaluate yourself putting (X) in “Yes” box for your earned skills within the scope of this activity otherwise put (X) in “No” box.

Evaluation Criteria	Yes	No
1. Have determined the technical terms about the text?		
2. Have you acquired the main idea of the text?		
3. Can you answer the questions about the text?		
4. Can you explain the summary of the text verbally?		

EVALUATION

Please review your “No” answers in the form at the end of evaluation. If you do not find yourself enough, repeat the learning activity. If you give all your answers “Yes” to all questions, pass to the “Measuring and Evaluation”.

MEASURING AND EVALUATION

Fill in the blanks with the suitable words.

-: It's the alloy of iron and carbon. It includes carbon up to 1.7 %. If we wish, we can add some other metals or elements. It's the most used metal in industry.
A) Alloy B) Churn C) Steel D) Element
-: Joining the metals by heating or pressing or using both of them having a supplement with. The supplement can be used if it is needed.
A) Solder B) Cold Shaping C) Marking D) Welding
-: The current whose direction and intensity change according to time.
A) Arc light B) Alternative current C) Filing D) Metal works
- The minimum structure of elements.
A) Heat B) Crystal C) Atom D) Hardness
-: The flame coming out while the a flammable and oxygen gases are burning in the process of oxy-gas welding.
A) Welding Flame B) Cold shaping C) Softness D) Tempering

EVALUATION

Please compare the answers with the answer key. If you have wrong answers, you need to review the Learning Activity. If you give right answers to all questions, pass to the next learning activity

LEARNING ACTIVITY-2

AIM

You will be able to read the terms of tools and machines about cold shaping in English.

SEARCH

- Search the English equivalents of the tools and machines about cold shaping from internet, technical books and dictionaries and make a booklet.

2. THE TOOLS AND MACHINES ABOUT COLD SHAPING

2.1. File

A tool that is made of hardened steel. It's used to work on, make smooth and shape the metal parts by the help of its rough surface.

- Its types
 - The files according to where they are used.
 - The files according to their size.
 - The files according to their rough density.
 - The files according to their shapes.



Picture 2.1: Half circle file

2.2. Hammer

It's a tool for striking. It is made of steel and its two ends are hardened. It has a fitting handle to make the striking easy.

- Types of hammer
 - Globe headed hammers
 - Hammers with swollen top
 - Hammers with flat top
 - Hammers with diagonal top

- Square headed hammers



Picture 2.2: A hammer

2.3. Chisel

The tool for cutting the small pieces from metallic materials. The edge shaped like a dagger has been hardened.

- Its types
 - Nail chisel
 - Chisel for snapping
 - Chisel for duck and slot



Picture 2.3: Types of chisel

2.4. Punching Tools

The tool that has a cylindrical knife at one side and is used for piercing. The piercing process is done by punches and the knives cutting inside.



Picture 2.4: Punching Tools

2.5. Vises

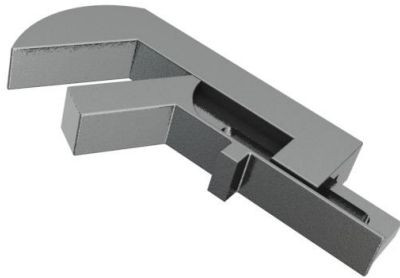
It has two jaws. One of them is moving. The process of filing, cutting, curling and installation is done on it.



Picture 2.5: A machinist vise

2.6. Chamfer Vise

It is the vise that has been produced to form a chamfer on the workpieces. Its jaws are curved.



Picture 2.6: A chamfer vise

2.7. Pipe Vise

The vise whose jaws have been designed for grasping the pipes. By grasping the pipe in this kind of vise, we do the cutting or thread cutting on the pipes.



Picture 2.7: A pipe vise

2.8. Drill Bench Vice

The tools that can be fixed on drill benches and enable to drill the small work pieces safely.



Picture 2.8: A drill bench vice

2.9. Sawing Lama

The equipment that has teeth arranged in order and sharpened to cut metals. The teeth are directed towards the cutting direction.



Picture 2.9: A sawing lama

2.10. Saw Handle

The equipment that can stretch the lama through the opposite directions.



Picture 2.10: A saw handle

2.11. Shears Used in Hands

They have got knives whose blades have been sharpened. They are used for cutting sheet metals to 1 millimeter thick.



Picture 2.11: Shears used in hands

2.12. Shears Used By Arms

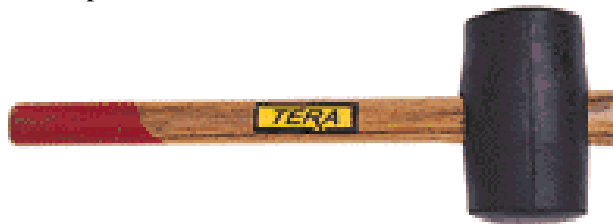
The shears for cutting thicker sheet metals and lamas that cannot be cut by the shears used in hands. So they can cut the sheet metals that are approximately 5 millimeters thick.



Picture 2.12: Shears used by arms

2.13. Knops

The tools that are used for repairing the completed works and for working on soft metals. Their heads can be plastic, brass or lead.



Picture 2.13: A knop

2.14. Numbering Tips

There are numbers from 0 to 9 on them and we use them for marking the metals.



Picture 2.14: Numbering tips

2.15. Drills

The machine that can do the drilling by having the bit spinned on its own axis. On every drill, there are a shaft that enables to spin the drill chuck, an engine that moves the shaft and a panel on which the work piece is fixed.



Picture 2.15: A drill bench

2.16. Drill Bit

It is a tool that can make a hole on a material. To drill the steel and alloy steel, we use 118° of bit angle and to drill the soft and fragile materials, we use 130° of bit angle.

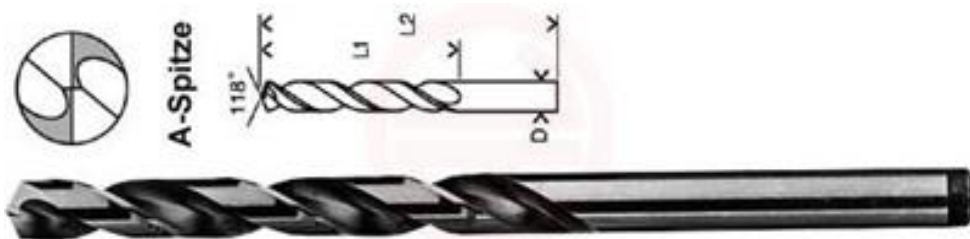


Figure 2.1: A drill bit

2.17. Drill Chuck

The section that the drill bit is mounted firmly. Drill chucks are divided into two; tighten by hands and wrenches.

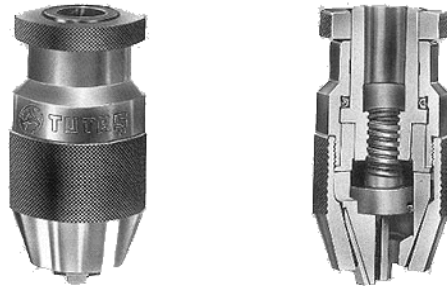
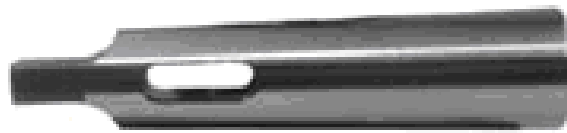


Figure 2.2: A drill chuck

2.18. Morse Sleeve

It is the equipment that enables to mount the drill bit or drill chuck with the conical handle to the drill shaft.



Picture 2.16: A morse sleeve

2.19. Morse Key

The equipments that are used to pull out the drill chucks and morse sleeves.

2.20. Spanner

It's used for fixing and pulling out of the nuts and screws in standard sizes.



Picture 2.17: A spanner

2.21. Ring Spanner

They are close-ended wrenches so they enable to connect the bolts and nuts without sliding.



Picture 2.18: A ring spanner

2.22. Allen Wrench

Some screws are allen screws. We use allen wrenches for connecting these kinds of screws.



Picture 2.19: Allen wrench tools

2.23. Socket Tools

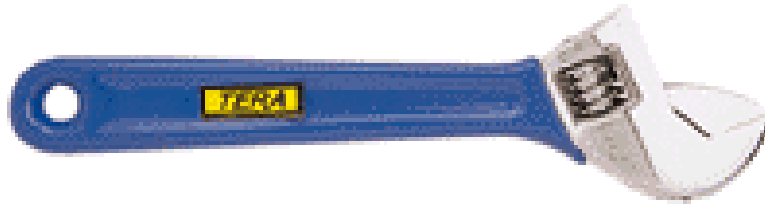
The wrench group that are used for connection of allen screws and nuts that are too difficult to reach. Socket tools consist of tommy bars, gear latches and socket pulleys.



Picture 2.20: Socket tools

2.24. Adjustable Wrench

The wrench whose jaws can be adjusted according to the screw head size.



Picture 2.21: An adjustable wrench

2.25. Screwdriver

It's used for screwing and unscrewing bit made of steel and its handle is insulated against electricity.



Picture 2.22: A screwdriver

2.26. Cross-Head Screwdriver

It's used for cross-head screws. It has small and large bit types.



Picture 2.23: A cross-head screwdriver

2.27. Pliers

They are tools for grasping, pulling, squeezing, bending and shaping the materials. Handles of the pliers are insulated.



Picture 2.24: Pliers

2.28. Side Chisels

The tools that can cut the thin wires and narrow parts. Their handles are insulated.



Picture 2.25: Side chisels

2.29. Long Nosed Pliers

The tools whose edges are thin and long unlike ordinary pliers. It's used for grasping and shaping the parts that are too difficult for ordinary pliers to reach.



Picture 2.26: Long nosed pliers

2.30. Spirit-Level

It's used for controlling the horizontal or vertical balance of materials and machines. For this, we pay attention to the bubble in the water in the tube of tool.



Pictures 2.27: Types of spirit-level

2.31. Tap

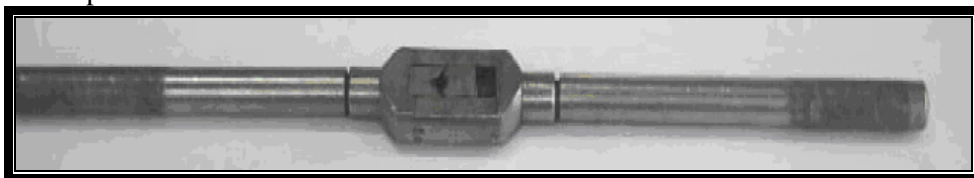
The tools produced for making screws in the holes. The bodies of the taps are made of high speed steel (HSS). It's diversified into hand tap and machine tap.



Picture 2.28: Types of taps

2.32. Tap Handle

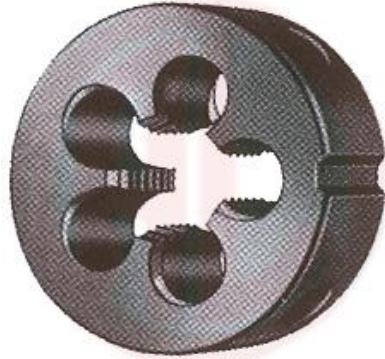
The equipment for holding the taps in hands. It's diversified into two; adjustable and measured tap handles.



Picture 2.29: A tap handle

2.33. Die

The tool that makes a screw on the surface of the cylindrical parts. If the material is a pipe, we must use pipe die.



Picture 2.30: A die

2.34. Die Handle

The apparatus that a die is mounted in the centre of and is made of alloy steel.



Picture 2.31: A die handle

2.35. Puller

They are used for pulling out the materials that are tightened into or onto some thing firmly. They are produced with two or three jaws.



Picture 2.32: A puller

2.36. Guillotine Shears

The machines used for cutting the sheet metals in various thickness. Lower knife is inactive but upper knife is active. The body of the machine is generally moulded.



Picture 2.33: Guillotine shears

2.37. Pres Brakes

It's used for bending thin sheet metals. The length of sheet metals can vary according to the size of the press.



Picture 2.34: A press brake

2.38. Roller

It's used for twisting thin cold sheet metals. It makes them cylindrical. There are three cylinders to twist sheet metals. Two of them are lower cylinders and one of them is upper cylinder.



Picture 2.35: A roller

2.39. Combined Shears

The shears benches on which have got various knives and so enable to do the various cutting processes. On one side of the machine, we do the punching and on the other side, we do the cutting of the thick materials.



Picture 2.36: A combined shears

2.40. Portable Emery

The emeries that are used for cleaning the surface of workpieces by putting on abrasive disk. It depends upon the electrical or pneumatic systems.



Picture 2.37: A portable emery

2.41. Hydraulic Sawing Machine

The machine produced for cutting the materials roughly. It consists of a vise that is set on the panel and a lama that is put on a hydraulic bar. Swing lama does the cutting by moving forward and backward. While cutting, heat occurs. To prevent high heat a cooling media is used.



Picture 2.38: A hydraulic sawing machine

2.42. Circular Sawing Machine

The machine that can do the cutting of any metal beam in a straight or angular way. It cuts by the help of high speed of the disc. Tour that is accelerated by an engine. There are sharp teeth around the disc.



Picture 2.39: A circular sawing machine

2.43. Cutting Without Burr

It's the process of cutting the materials without burr. While cutting by means of cutter stones, we don't have any burr.



Picture 2.40: A cutting without burr machine

2.44. Abrasive Disk

It works on the surface of a metal by abrasive machining. It's also used for honing the tools. Abrasive disk is made of the materials like silicon calcium carbide and aluminum oxide. It's mounted to the grinding machine.



Picture 2.41: An abrasive disk

2.45. Pipe Bending Machine

It's the tool that is used for bending the pipe in the angles as we wish.



Picture 2.42: The machine for bending pipes

2.46. Eccentric Press

The pressing machine working by the help of the gear and eccentric fixed on a rod. It's basicly used for cutting, bending, etc.



Şekil 1 Picture 2.43: Eccentric press machine

2.47. Hydraulic Pres

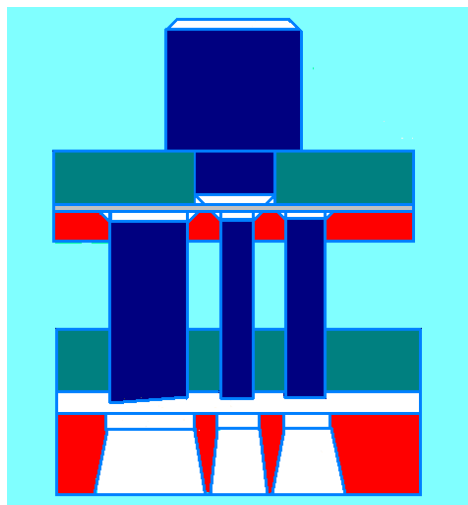
It moves by the help of its hydraulic system and it has a striking head. It's used for working on metal sheets.



Picture 2.44: Hydraulic press machine

2.48. Cutting And Drilling Dies

The forms which can both cut and drill on the marked materials.



Picture 2.45: Cutting die

2.49. Bending Dies

They are produced to shape metal sheets. The dies are set on the machine and sheet metals are bent.

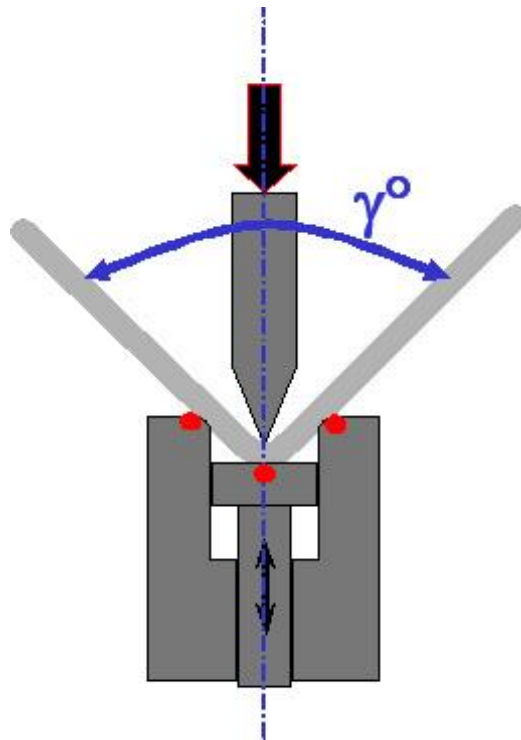


Figure 2.3: Bending die

APPLICATION ACTIVITY

Use technical English about the the tools and machines about cold shaping.

Steps of process	Suggestions
Find a text about this process and translate.	<ul style="list-style-type: none"> ➤ Please read all of the text. ➤ If you do not know words in text, research the meaning during translation ➤ Use English dictionary for the meaning of words from English to Turkish ➤ You can find detailed information about the technical words in the text. ➤ Make research about the tools and machines about cold shaping?

CHECKLIST

If you have behaviors listed below, evaluate yourself putting (X) in “Yes” box for your earned skills within the scope of this activity otherwise put (X) in “No” box.

Evaluation Criteria	Yes	No
1. Have determined the technical terms about the text?		
2. Have you acquired the main idea of the text?		
3. Can you answer the questions about the text?		
4. Can you explain the summary of the text verbally?		

EVALUATION

Please review your “No” answers in the form at the end of evaluation. If you do not find yourself enough, repeat the learning activity. If you give all your answers "Yes" to all questions, pass to the "Measuring and Evaluation".

MEASURING AND EVALUATION

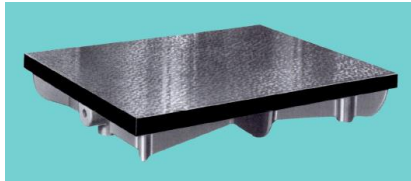
Fill in the blanks with the suitable term.

1)



.....

3)

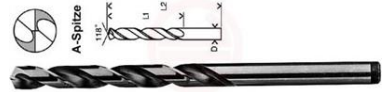


5)



.....

2)



.....

4)



.....

6)



.....

EVALUATION

Please compare the answers with the answer key. If you have wrong answers, you need to review the Learning Activity. If you give right answers to all questions, pass to the next learning activity

MODULE EVALUATION

A. Fill in the blanks with the suitable term

1. branches are chapping works, steel objects, steel construction, body working, metal decorating, hot shaping, oxy-gas welding, electric arc welding.
2.: The process of shaping by abrasive machining on the surface of the material and forming in the size, shape and set square we wish and need.
3.: It's the tool that can do the measuring more sensitively than the calipers. It can measure the very thin sheets and circular parts.

4.



.....

5.



.....

6.



.....

7.



.....

EVALUATION

Please compare the answers with the answer key. If you have wrong answers, you need to review the Learning Activity. If you give right answers to all questions, please contact your teacher and pass to the next module

B. CHECKLIST

If you have behaviors listed below, evaluate yourself putting (X) in “Yes” box for your earned skills within the scope of this activity otherwise put (X) in “No” box.

Evaluation Criteria		Yes	No
1.	Have you had your own dictionary?		
2.	Have you expressed the terms of cold shaping?		
3.	Have you expressed the terms of Measurement, Control And Marking Tools		
4.	Have you expressed the usage and the names of the tools and machines about cold shaping?		
5.	Have you pronounced the terms and expressions used in the Learning Activities?		
6.	Have you had one of your experienced friends listen to you while pronouncing the concepts and tools?		

EVALUATION

Please review your “No” answers in the form at the end of evaluation. If you do not find yourself enough, repeat the learning activity. If you give all your answers "Yes" to all questions, pass to the "Measuring and Evaluation".

ANSWER KEYS

LEARNING ACTIVITY 1 ANSWER KEY

1	C
2	D
3	B
4	C
5	D

LEARNING ACTIVITY 2 ANSWER KEY

1	Half circle file
2	A drill bit
3	A check plate
4	Tap
5	A circular sawing machine
6	A knop

MODULE EVALUATION ANSWER KEY

1	Metal
2	C old shaping
3	Micrometer
4	Universal Set-square
5	Spanner
6	Chisel
7	A machinist vise

DICTIONARY

abrasive disk	zımpara taşı
abrasive machining	aşındırma ile talaş kaldırma
acceptance sampling	kabul için örnek alma
accessory	aksesuar, yardımcı teçhizat
accuracy	hassasiyet, doğruluk
acetylene gas	asetilen gazı
acorn nut	tırtıllı somun, taçlı somun
actuator	uyarıcı
adapter	adaptör (ara rakor; birbirinden ayrı cins iki dişli ucu birleştiren ara parça)
addendum	diş ucu (dişlide)
adhesion	tutma, adezyon
adhesive joining	yapıştırma yolu ile birleştirme
adjustment	ayarlama
age hardening	yaşlandırarak sertleştirme
air furnace	hava fırını
allen screw	alyen vida; altı köşeli gömme başlı vida
allen wrench	alyen anahtar, gömme anahtar, altı-köşe "L" şeklinde anahtar
allotropic changes	allotropik değişme, eşözdek değişimi
allowance	pay, tolerans
alloy	alaşım
anchor bolt	tesbit civatası, ankraj bulonu
angle	köşebent demiri, köşebent, korniye; aç
angle milling cutter	açı frezesi, konik freze bıçağı
annealing	normalleştirme tavi, menevişleme
annular gear	içten dişli
anodizing	anotlama, anotsal işlem, anotlama usulü ile oksitleme
anvil	örs
apparatus	cihaz, aygıt, alet
apron	araba önlüğü
arbor	malafa
arch press	kemerli pres
arc spot welding	arklı nokta kaynağı
artificial aging	sunî yaşlanma
assemble	monte etmek
assembly	takım; birkaç parçadan meydana gelen parça grubu; komple, montaj
attachment	yardımcı teçhizat, ataşman

austempering
austenite
automatic screw machine
axial

B

bainite
bakalite
band sawing machine
barrel finishing
base
base circle
batch production
batch size
batch furnace
beam
 I-beam
 U-beam
bearing
 ball-bearing
 needle bearing
 roller bearing
 tapered roller bearing
 bearing cone
 bearing cup
bellows
belt
belt polishing
bench lathe
bench molding
bending
bentonite
bessemer converter
bevel gear
bevel protractor
bilateral
billet
bit
blast furnace

ösmenevişleme
östenit
index tezgahı
eksenel

bainit, alçak derecede sulanmış çelik
bakalit
şerit testere
dolaplama
taban, kaide, temel
diş dibi dairesi (dişlide)
küme üretimi
küme büyüklüğü
yığılm fırını
kiriş
I profilli demir, I-kirişi
U profilli demir, U-kirişi
yatak, rulman
bilyalı rulman
iğneli rulman
makaralı yatak
konik makaralı yatak
yatak göbeği, iç yatak
rulmanların dış çemberi, yatak kabı
körük, körük biçiminde
kayış
kayışlı parlatma
masa tornası, saatçi tornası
tezgah kalıplaması
bükme, eğme
yumuşak balçık
bessemer potası
konik dişli
dereceli gönye
çift yönlü
bilet, ham demir çubuk
uç, matkap ucu, kalem ucu
yüksek fırın

blind riser	kör oluk
blister copper	saf bakır
bloom	demir kütüğü
blow molding	hava basınçlı kalıplama
bluing	menevişleme
board hammer	tahtalı şahmerdan
bolt	civata
bonding	yapıştırma, bağlama
boring machine	oyma tezgahı, delik işleme tezgahı
boring mill	delik tezgahı
bottom board	faraş tahtası
brace	el matkabı
bracket	konsol, çıkma, destekli raf, dirsek
brass	pirinç
brazing	sert lehim, pirinç kaynağı
break corner	kırma ağız
brittle	gevrek, kırılğan
broaching	broşlama, tığ çekme, boşaltma
broaching machine	boşaltma tezgahı
broaching tools	boşaltma kalemleri, boşaltma tığları
bronze	bronz, tunç
buffing	perdahlama
built-up edge	yığıma ağız
burnishing	çapak temizleme
burr	çizik, kazıntı, torna taleiminin bıraktığı iz, çapak
bushing	burç
butterfly nut	kelebek somun
button	kontrol düğmesi, düğme
butt welding	düz ek kaynağı, alın kaynağı
C	
calibration	kalibrasyon, ayar
calliper	kumpas
calorizing	sementasyon ile alüminyum kaplama
cam	kam, eksantrik, armutçuk, mil dirseği, boynuz
cap screw	civata başlı vida; altı köşe başlı somunsuz vida,
	kapak vidası, başlık vidası
carbide	karbür
carbide tools	sert maden takımlar

course	kaba, kalın
coating	örtme, kaplama
coining press	darb presi
cold heading	soğuk baş yapma
cold sawing	soğuk kesme
cold welding	soğuk kaynak
cold working	soğuk işlem
collar	bir parçanın etrafını saran blok bilezik, yaka, halka
collet	bilezik, esnek kovan, freze çakısı tutacağı (pens)
collet holder	esnek kovan (pens) tutacağı
column	sütun
combination die	keser basar kalıp
combination chuck	üniversel ayna
combined cut	birleşik kesim, kombine kesim
compass	pergel, pusula
compensation	denkleştirme
compound rest	takım kızağı
compression molding	basınçlı döküm
compressive strength	sıkıştırma dayanımı
computer	bilgisayar
Computer Numerical Control (CNC)	bilgisayarlı sayısal denetim
concentric	eş merkezli
continuous casting	sürekli döküm
continuous chip	akma talaş
contour	çevre yolu
converter	konverter, değıştirici
coolant	soğutucu
cope	örtme, üst döküm derecesi
copper (or cupper)	bakır
core	maça (dökümcülükte)
core diameter (drills)	öz çapı
core print	maça yatağı, maça yuvası
corrosion	yenim, paslanma
cost	maliyet
cotter pin	maşalı pim, kopilya
cotton waste	üstüpü
counter boring	düz havşa açma
counter sinking	konik havşa açma
coupling	kavrama, kaplin

drag	alt döküm derecesi
draw bar	çekme çubuğu, çekirme
draw-cut shaper	çeker keser vargel
drawing	çekme
drawing die	çekme kalıbı
drill chuck	matkap aynası, mandren
drill performance	matkap verimi
drill point	matkap ucu
drilling machine	delme tezgahı, matkap tezgahı
drive	tahrik
drop forging	şahmerdanda dövme
drop hammer	serbest düşüslü tokmak, şahmerdan
drug	alt derece
drum	tambur
drum lathe	kampana tornası
ductility	yumuşaklık, süreklilik
duplicating machine	kopye makinası
dye	boya, boyamak
dynamometer	dinamometre

Ɖ

eccentric	eksantrik, dış merkezli; kam
elastic	esnek, elastik
elastic limit	esneklik sınırı
elasticity	esneklik
electric discharge machining	kıvılcımla malzeme işleme
electrode	elektrot, elektrik kaynak çubuğu, elektrik kutup çubuğu
electromechanical grinding	elektro mekanik taşlama
electroforming	elektrikle şekillendirme
electrohydraulic forming	elektrohidrolik şekillendirme
electroplating	elektroliz yoluyla kaplama (galvanoplasti)
electroslag welding	cürufaltı kaynağı
electrotinning	elektrikle kalaylama
element	öğe, eleman
elongation	uzama
embedding	gömülme
embossing	kabartma
emery	zımpara
emery paper	zımpara kağıdı

emulsion	sütsü, sübye, emülsiyon
enamel	emaye
end clearance angle	uç boşluk açısı
end cutting edge angle	yan ağız açısı
end-mill cutter	parmak freze
endurance	dayanım, sürme
engine lathe	torna tezgahı
equipment	aygıt, aparat, ekipman
etching	asitle aşındırma, dağlama
expansion	genişleme
expansion reamer	genişletme raybası
explosive forming	patlama yoluyla şekillendirme, patlama kalıplaması
extract	özüt
extraction	özütleme
extrusion	ekstrüzyon, kalıptan basma, darçıkım

F

face	alın, yüz
face milling	alın frezeleme
face milling cutter	alın frezesi, alın işleme çıkısı
face plate	firdöndü aynası
facing	alın tornalama işlemi
fastening	sıkıştırma, bağlama
fatigue	yorulma, hareket halindeki aksamın yorulması
feed	ilerleme, besleme
feedback	geriye besleme
feedrate	talaş kaldırma hızı, ilerleme hızı
feed rod	talaş mili
feeler gage	hassas mastar
ferrous metal	demirli, demirden oluşan metal
file	eğge, törpü
coarse file	kaba eğge
bastard file	orta kalın dişli eğge
needle file	saatçi eğgesi
slitting file	oluk eğgesi
square file	dörtköşe eğge
superfine file	ince perdah eğgesi
triangular file	üçköşe eğge
round file	yuvarlak eğge

taper file	konik eęe, fare kuyruęu eęe
parallel file	düz eęe
flat file	yassı eęe
drill file	delik tesviye eęesi
filing	törpüleme, eęeleme
fillet	pervaz
fillet weld	pervaz kaynaęı
fillister head screw	yıldız bařlı vida
fillister head screw driver	yıldız uçlu tornavida
fine	ince
finish allowance	iřleme payı
finishing	son iřleme
finishing cut	ince iřleme
finishing teeth	kalibre aęızları
fit	alıřtırma, geęme
transition fit	ara geęme
interference fit	sıkı geęme, temaslı alıřtırma
clearance fit	bol geęme
medium fit	orta sıkı alıřtırma, tatlı alıřtırma, tatlı geęme
running fit	döner alıřtırma, oynar alıřtırma
sliding fit	kayar alıřtırma, kayar geęme
shrink fit	sıkı geęme, sıkma alıřtırma
fixture	baęlama aygıtı, baęlama düzeni
flame cutting	oksijenle kesme
flame hardening	alevle sertleřtirme
flange	flanř; baęlantı, birleřme yüzü
flank (gear)	diř yanı
flank wear	serbest yüzey aşınması
flash welding	yakma alın kaynaęı
flexibility	esneklik
floor molding	yer dökümü
flute	yiv, oluk (matkapta)
fly-cutter	yaprak çakı
fly nut	kelebek somun
follower rest	gezer yatak
forging	dövme
form milling cutter	modül freze bıçaęı, profil frezesi
forming	řekillendirme
foundary process	dökümcülük

taper file	konik eęe, fare kuyruęu eęe
parallel file	düz eęe
flat file	yassı eęe
drill file	delik tesviye eęesi
filing	törpüleme, eęeleme
fillet	pervaz
fillet weld	pervaz kaynaęı
fillister head screw	yıldız bařlı vida
fillister head screw driver	yıldız uçlu tornavida
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finishing cut	ince iřleme
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clearance fit	bol geęme
medium fit	orta sıkı alıřtırma, tatlı alıřtırma, tatlı geęme
running fit	döner alıřtırma, oynar alıřtırma
sliding fit	kayar alıřtırma, kayar geęme
shrink fit	sıkı geęme, sıkma alıřtırma
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fly nut	kelebek somun
follower rest	gezer yatak
forging	dövme
form milling cutter	modül freze bıçaęı, profil frezesi
forming	řekillendirme
foundary process	dökümcülük

H

hacksaw blade	el testere bıçağı
hacksaw machine	kollu testere makinası
hammer	çekiç
hand milling machine	el freze tezgahı
hardenability	sertleşebilme
hardness	sertlik
headstock	tornada başlık tarafı, torna aynası, torna feneri, tahrik tertibatı
heat treatment	ısıtma işlemi
helical gear	helis dişli
helical spring	helezon yay
helix angle	helis açısı
herringbone gear	çavuş dişli
high speed steel	hava çeliği, yüksek hız çeliği
hobbing	azdırma
honing	honlama, ince taşlama, parlatma, bileme
horn press	mahmuzlu pres
hot spinning	sıcak sıvama
hot working	sıcak işleme
hose	hortum
hub	göbek (kasnak, dişli vb. göbeği)
hydraulic press	hidrolik pres
hydraulic shaper	hidrolik vargel
hypoid gear	hipoid dişli

I

idler gear	avara dişli
impact	çarpma, darbe, şok
impurity	pislik, kir, yabancı madde
inclined press	eğik pres
indentation	çukuriz
independent chuck	çeneleri ayrı sıkılır ayna, mengenalı ayna
index head	bölümlü başlık
indicator	gösterge, sayaç
induction hardening	endüksiyonla sertleştirme
ingot	ingot, külçe
injection molding	enjeksiyonlu kalıplama

lead	kurşun
lead screw	vida açma mili (tornada)
leather	deri
lever	levye, kol, manivela, kumanda kolu
linkage	bağlantı, mekanizma, düzen
lip angle	kenar açısı
lock nut	kontra somunu
longitudinal	boyuna, uzunlamasına
lubricant	yağlama maddesi
lubricating gun	yağ tabancası
lubrication	yağlama
lubricator	yağdanlık, gresörlük

M

machinability	işlenebilirlik
machine bed	tezgah gövdesi
machine frame	tezgah gövdesi
machine molding	makinalı kalıplama
machine screw	makina vidası, civata başlı vida, somunlu vida
machine shop	atelye, işlik
machine tool	takım tezgahı
machining time	işleme zamanı
magnet	mıknatıs
magnetic chuck	mıknatıslı ayna
maintenance	bakım
malleable	dövülgen
malleable iron	dövülgen demir
mandrel	mandrel, malafa, torna punta veya matkap başlığı
manual	elle işleyen, elle çalıştırılan; el kitabı
manufacturing processes	imalat yöntemleri
margin (drills)	faz, zırh
martensite	martensit
mash seam weld	ezme dikiş kaynağı
masking	maskeleme
mass production	seri imalat
material	gereç, malzeme
measurement	ölçme, ölçü
measuring instruments	ölçme aletleri, ölçme cihazları
mechanism	mekanizma, tertibat

mesh	tel örgü, örgü süzgeç; birbirine geçme, dişlilerin temas halinde olması
metal	metal
metal removing	talaş kaldırma
metal spinning	sıvama
metal spraying	metal püskürtme
metrology	ölçme bilimi
mica	mika
micrometer	mikrometre
mild steel	yumuşak çelik
milling cutter	freze çakısı
milling machine	freze tezgahı
monel metal	monel pirinçi
morse taper	mors konikliği
mould (or mold)	döküm kalıbı, kalıp dökme
multiple cut	çoklu kesme
multi-point	çok ağızlı takım

N

nail	çivi
nail puller	kerpeten
natural	doğal, tabii
neck (drills)	boyun
needle	iğne, ibre
nipple	nipel, boru rakoru, meme, meme ucu
nitriding	nitritleme
nodular iron	yumrulu demir
nominal size	nominal ölçü
nonferrous metal	demir içermeyen metal
normalizing	normalleştirme tavı
notching	kertikleme
numerical control	sayısal denetim
nut	somun

O

offset	kaçıklık, sapma, yerinden kaçma
oil	yağ
oil bath	yağ banyosu
oil screw gun	vidalı yağ pompası

oil tempered
open-end wrench
open-hearth furnace
operation
ore
oxidation
oxy-acetylene welding

yağda tavllanmış
açık ağız anahtar
siemens-martin fırını
işlem
cevher
oksitlenme, paslanma
oksijen kaynağı

P

panel

parkerizing
pattern
pattern allowance
pellet
penetration
percussion press
perforating
permeability
piercing
pig iron
pin
pincers
pinion
pipe
pipe wrench
pit molding
pitch

pitch circle
plain milling cutter
plain milling machine
planer
planetary gear
planetary milling machine
plant
plastic
plate
plating

pano, tablo, şalter veya kontrol
saatleri panosu; plaka
parkerleme
model (dökümcülükte)
kalıp payı
topak
girinim, penetrasyon
vurgu presi
delikleme
geçirgenlik
delme (Mannesman metodu)
pik demir
pim, perno, muylu, şiş, iğne
kerpeten, kısıkaç, pense
küçük dişli
boru
boru anahtarı
kuyu dökümü
hatve, vidanın her dişte ilerleme miktarı,
iki diş arasındaki uzaklık, adım
diş açıklığı dairesi, bölme dairesi (dişlide)
silindirik freze bıçağı
düz freze tezgahı
planya
gezegen dişli, gezer dişli, planet dişli
gezegen başlı freze tezgahı
fabrika, tesis, atölye
plastik
levha, plaka
kaplama

pliers	pense
ploughing force	sürtme kuvveti, kazma kuvveti
plug	tapa, tıkaç, elektrik fişi
plug gage	delik mastarı
plumber	tesisatçı
pneumatic gage	havalı master
pneumatic hammer	havalı tokmak
pneumatic rammer	havalı (pnömatik) şahmerdan; basınçlı hava tokmağı
point angle (drills)	uç açısı
pointer	gösterge, ibre
polishing	parlatma, polisaj
porosity	gözeneklilik
powder metallurgy	toz metal bilimi
precipitation hardening	çökelterek sertleştirme
precision	hassasiyet
press	pres, cendere, presle basma
pressing	presle şekillendirme, presle basma işlemi
process	süreç
product	ürün
production	üretim
profiling machine	kopye tezgahı
protractor	açı ölçer
puller	çektirme
pulley	kasnak, makara
punch	zimba
punching	zimba ile delme, presle delme

Q

quality control	kalite kontrolü
quantity	miktar, nicelik
quench hardening	su verme sertleştirme
quenching	su verme
quick return mechanism	vargel mekanizması

R

rack	kremayer dişli
ram	şahmerdan tokmağı, pres kütüğü
rammer	şahmerdan

raw	ham, işlenmemiş, tabii
reamer	rayba
reaming	raybalama
recess	oluk, oyuk, girinti
red hardness	kızıl sertlik
refractory	tuğlamsı
reinforce	takviye etme, kuvvetlendirme, sağlamlaştırma
relief angle	freze bıçağının arka yüzü ile kesilen parça arasındaki açı
remote control	uzaktan kontrol
removable pattern	sökülebilir model
residual stress	artık gerilme
resin	reçine, akındırık
resistance welding	direnç kaynağı
retaining ring	tesbit segmanı, tesbit bileziği
revolver head	döner kafa, döner başlık
rigid	esnemez
ring	bilezik, halka, piston segmanı
ring gage	yüzük master
riser	oluk
riveting	perçinleme
rod	çubuk, kol
roller	merdane, rulo, silindir
roll forging	dövmeli hadde
roll forming	haddeleme
rolling	haddeleme
rolling mill	hadde makinası
rotation	dönme, bir eksen etrafında dönme, rotasyon
roughing cut	kaba işleme
roughing teeth (for broach)	kaba kesme ağızları
roughness	pürüzlülük
rubber	lastik, kauçuk
run-out	salgı
rupture strength	kopma dayanımı
rust	pas, paslanma

S

saddle	oturak, eyer, boyun
safety pin	emniyet pimi
sampling	örnek alma

sand	kum
saw milling cutter	testere ağızlı freze çakısı
saw type cutter	testere tipi çakı
sawing machine	testere tezgahı
scale	ölçek
scissors	makas
scrap	hurda
screw cutting	vida açma
screw driver	tornavida
screw machine	civata makinası
seal	keçe, yağ keçesi
seaming	ekleme, dikiş
seam welding	dikiş kaynağı
sensitivity	duyarlık, hassasiyet
set screw	tesbit vidası, kontra vida
set-up time	hazırlık zamanı
shaft	döner mil, şaft
shake allowance	tıklama payı
shank	kesici kalem sapı, şaft
shank cutter	parmak freze
shaper	vargel
shaving	traşlama
shear angle	yarma açısı
shearing	(preste, makasta) kesme
shear strength	kesme dayanımı, kayma dayanımı
sheathing	kaplama
sheave	oluklu kasnak, makara
sheet	levha
sheet metal screw	saç vidası
sheet metal shears	teneke makası
shell reamer	takma rayba, kovan rayba
shearadizing	toz çinko ile galvanizleme, çinko emdirme
shift	vardiya; yerinden oynatma, yer değiştirme, vitese geçirme
shim	şim; dişliler veya hareketli yüzeyle arasındaki açıklığı ayarlamak için kullanılan madeni levhalar
shock resistance	sarsım direnci
shot peening	bilyalı yüzey dövme
shrinkage allowance	çekilme payı
side milling cutter	silindirik alın freze bıçağı

side rake angle	yan talaş açısı
sieve	elek
silicon	silisyum
silver	gümüş
sine bar	sinüs çubuğu
sintering	külçeleme, sinterleme
skilled	kalifiye
slab	slab, yassı kütük
slab milling	vals frezeleme
slag	cüruf, dışık
sleeve	gömlek, kovan, mil üzerine bilezik gibi geçen parça; manşon (boruda)
slide	kızak
slideway	kızak
slip plane	kayma düzlemi
slitting	dilme, yarma
slotter	yarma frezesi
snap gage	çeneli mastar
snap ring	tesbit segmanı, yaylı tutturma bileziği
soaking pit	çelik demlendirme fırını
socket	yuva, soket, priz
socket adapter	cırcır anahtarı
socket wrench	lokma anahtarı
soldering	lehimleme
spanner	civata anahtarı
spare	yedek, fazla
specific	özgül
specification	specifikasyon; makina veya cihazın özellikleri, kendine has ölçüleri
specimen	numune, örnek
spindle	fener mili
spindle support	mil desteği
spinning	sıvama
spirit level	düzeç, kabarcıklı düzeç, su terazisi, tesviye ruhu
spline	freze oluklu kayar geçme yapma; iç ve dış dişlileri birbirine geçirmek suretiyle birleştirme
spot face	pul yatağı
spot welding	punta kaynağı
spraying	püskürtme

spring
spring lock washer
spring washer
spring winding
sprocket
sprue
spur gear
square nut
stainless steel
stability
standard
standard deviation
stem
step drill
stiff
storage
strain
strain hardening
strength
stress
stretch forming
strip
stripping machine
stroke
structure
stud
submerged arc welding
super finishing
surface finishing
surface hardening
swaging
sweep pattern
synchronization

T

T-slot cutter
tailstock
tang (drill)

yay
yaylı rondela
yaylı rondela
yay sarma
zincir dişlisi, cer dişlisi
döküm deliği
düz dişli
dörtköşe somun
paslanmaz çelik
dengelimlik
standart, tek biçim, ölçünlü
standart sapma, tek biçim sapması
sap, gövde
kademeli matkap
bükülmez
depolama
gerinim
uzama sertleşmesi, gerinim sertleşmesi
direnc, mukavemet, dayanım
gerilim
uzatarak, gererek şekillendirme
şerit, lime, kuşak, band
sıyırma makinası, soyma makinası
kurs
yapı
saplama, başlıksız civata
toz atı kaynağı
hassas perdelama
yüzey perdelama
yüzey sertleştirme, sementle etmek
tokaçlama
silmeli model
senkronize etme; aynı anda ve beraber
çalışır duruma getirme, eşleme, eş zamanlı

yarık freze bıçağı, T-kanalı açma bıçağı
torna punta başlığı
sökme ucu (konik şaftlı)

tap	klavuz
taper	konik
taper turning	konik tornalama
tap hole	klavuz deliđi
taper attachment	konik tornalama aygıtı
taper gage	koniklik mastarı
taper reamer	konik rayba
tapping	kılavuz çekme, kılavuzla diş açma
tapping machine	dişli vida diş çekmek için kılavuz tezgahı
tempering	tavlama
template	şablon
tensile strength	çekme dayanımı
tension	gerginlik
thread	diş
thread cutting	diş açma, vida açma
thumb nut	diş yüzü tırtıllı dairesel (silindirik) somun
thumb screw	elle gevşetilir sıkıştırılan vida, silindirik başlı ayar
civatası	
tin	kalay, teneke
tip	uç (kalemde)
titanium	titan
tolerance	pay, tolerans
tommy bar	lokma anahtar kolu
tool	alet, takım, torna bıçađı
tool cutter	kalem
tool cutter edge angle	ayar açısı
tool cutting edge inclination	mevil açısı, eğim açısı
tool holder	kalem tutucu, kalemlik, kater
tool included angle	uç açısı
tool life	takım dayanma zamanı
tool minor cutting edge angle	yan bileme açısı
tool normal clearance angle	serbest aç
tool normal rake angle	talaş açısı
tool normal wedge angle	kama açısı
tool post	kalem tutacağı, kater
toolroom	takımhane
tool slide	takım kızađı
torch	üfleç, hamlaş, asetilen alevi, şaloma
torch cutting	üfleçle kesme, kaynakla kesme

torque	burulma momenti, tork
torque wrench	civata sıkma torkunu ölçen anahtar
torsion	burulma, torsiyon
torsional strength	burulma dayanımı
toughness	tokluk
tracing	konye etme
transparent	saydam, şeffaf
transverse	enlemesine
trimming machine	kordon makinası
T-slot	T-kanalı, T-oluğu
tumbling mill	döner değirmen
tungsten	volfram
turning machine	torna tezgahı
turret lathe	revolver torna, yarı-otomatik torna
twist drill	helisel matkap

U

ultimate strength	maksimum mukavemet
ultrasonic machining	ses üstü dalgalarıyla talaş alma
uniform	düzgün, tek biçimli
unilateral	tek yönlü
upcut milling	aksi yönlü frezeleme
upright drill	sütunlu matkap
upset forging	şişirme

V

valve	valf, vana, süpap, ventil
V-block (Vee-block)	V-yatağı
vernier caliper	sürgülü kumpas
vise	mengene
void	boşluk
volatile	uçucu

W

washer	pul, rondela
waviness	dalgalılık
wear	aşınma
welded steel	kaynaklı çelik
welding	kaynak

electric arc welding	elektrik ark kaynađı
fusion welding	erime kaynađı
oxy-acetylene welding	oksijen kaynađı, asetilen kaynađı
spot welding	nokta kaynađı
thermit welding	termit kaynađı
welding rod	kaynak çubuđu, kaynak elektrodu
welding powder	kaynak tozu
welding machine	kaynak makinası
welding helmet	kaynak başlıđı
white cast iron	beyaz pik
wind nut	kelebekli somun
wire drawing	tel çekme
wiring	elektrik şebekesi tel düzeni
wood screw	ađaç vidası
work hardening	işleme sertleşmesi
work piece	iş parçası
work table	iş tablası
worm gear	sonsuz dişli, salyangoz dişli
wrench	anahtar
wrought iron	dövme demir, dörük demir

Y

yield point	akma dayanımı
yoke	çatal, mafsal çatalı

Z

zinc	çinko
zone	bölge

SOURCES

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