

Výukový materiál zpracovaný v rámci operačního programu Vzdělávání pro konkurenceschopnost



INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

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Technical English



Předmět:	Anglický jazyk
Ročník:	1.,2.,3.,4.,ročník
Klíčová slova:	joining, welding, riveting
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Technical English

Metal-Joining Processes

Metal-Joining Processes

- Metal joining is a controlled process used to fuse metals.
- It is required when the desired component cannot be made by means of metal forming or machining.
- The essential metal- joining operations are:
 - Welding, soldering, adhesive bonding, riveting, bolting

Technical English

Metal-Joining Processes



Welding (svařování)

- Is a way of heating pieces of metal using electricity or a flame so that they melt and stick together.
- There are many kinds of welding, including arc welding, resistance welding, and gas welding.
- The most common type is arc welding.
- Anyone who is near welding needs to wear a special helmet or goggles and to cover all skin because hot sparks from the weld can burn it.

Technical English

Metal-Joining Processes



Soldering (pájení)

- Soldering is a process in which two or more metal items are joined together.
- They are heated with a soldering iron. Then they melt and a filler metal with a relatively low melting point flows into the joint.
- Soft soldering is characterized by the melting point of the filler metal, which is below 400°C.
- The filler metal used in the process is called solder.

Technical English

Metal-Joining Processes



Adhesive Bonding (lepení)

- Is used to fasten two workpieces together through the adhesive which must be highly adhesive and cohesive.
- The choice of adhesives depends on the material to be bounded.
- The bond is strong, corrosion resistant, clean-looking and has a good heat, sound and electrical insulation.
- Different materials with dissimilar thicknesses can be employed .



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Metal-Joining Processes



Riveting(nýtování)

- Is a joining technique wherein two work pieces are connected with rivets.
- A rivet is a metal pin for passing through holes in two or more plates or pieces to hold them together, usually made with a head at one end, the other end being hammered into a head after insertion.
- There are a number of types of rivets (solid, blind...)
- The inserting rivets may be either hot or cold.

Technical English

Metal-Joining Processes



Bolting (spojení šrouby)

- Is a method where two parts are connected together by bolt.
- It is very rapid method and the advantage is that the bolted parts can be easily disassembled by removing bolts.
- A machine bolt is a bolt with a square or hexagonal head on one end and a threaded shaft on the other end; tightened with a wrench; used to connect metal parts.



Technical English

Metal-Joining Processes



Practice 1

T/F Metal joining is a controlled process used to fuse metals.

T/F The most common type of welding is gas welding.

T/F A welder must wear shorts during the process of welding.

T/F The choice of adhesives depends on the material to be bounded.

T/F The inserting rivets may be only hot.

T/F The advantage of bolting is that the bolted parts can be easily disassembled by removing bolts.

Technical English

Metal-Joining Processes

Practice 2 (match the numbers to the letters)

- 1) Welding
- 2) Riveting
- 3) Bolting
- 4) Soldering
- 5) Adhesive Bonding

- a) Is a process in which two workpieces are joined together with a molten metal.
- b) Is the most common way of joining two workpieces to produce a single piece of metal.
- c) Is a process in which the choice of the fastener depends on the materials to be bond.
- d) Is a process where two pieces are connected with a metal fastener in a shape of a pin.
- e) Is a temporary method of joining metal materials.

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Metal-Joining Processes

Practice 3

(what goes to what?, circle)



Check your answers

Practice 1

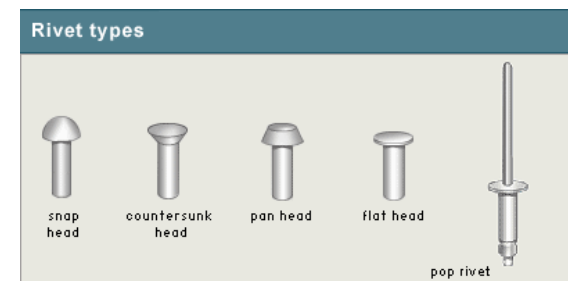
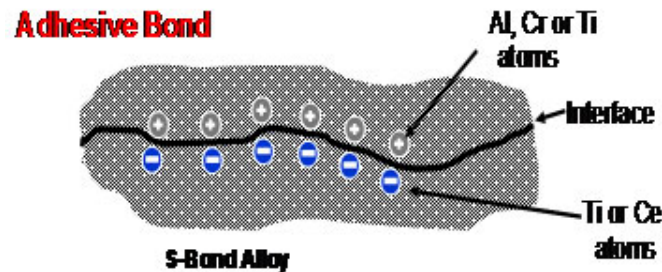
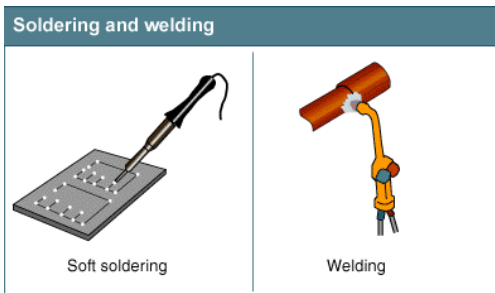
1T	2F	3F	4T	5T
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Practice 2

1B	2D	3E	4A	5C
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Practice 3

A4	B3	C2	D1
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Vocabulary

English	Czech	English	Czech
Adhesive	Lepidlo, přilnavý	dissimilar	Různý
affect	Působit	employ	Používat
apply	Nanést, aplikovat	fastener	Spojovací prvek
assemble	Dát dohromady	filler	Tmel, výplň
bond	Pojivo, slepení	fuse	Roztavit
coalescence	Sloučení	hexagonal	Šestiboký
crucial	rozhodující	insulation	izolace
joint	Spojení	melt	Tavit
layer	vrstva	molten	roztavený
punched	děrovaný	treated	závitový

Použité zdroje



- Veškeré použité obrázky (kliparty) pocházejí ze sady Microsoft Office 2010, Can. Stock. Photo 27.12.2013.
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