

LIVE SESSION - 3



Welding Processes



INTRODUCTION



PRACTICE QUESTIONS

Q1. Generally tungsten electrode is doped with rare earth oxides to

- A. reduce the melting point
- B. **promote thermionic emission**
- C. increase the work function for a given shielding gas
- D. increase the work function as a function of temperature

Q2. In direct current straight polarity (DCSP)

- A. **electrons reach work piece**
- B. ions reach work piece
- C. **deeper penetration can be ensured**
- D. shallow weld pool is formed

Q3. Which of the following characteristics attributed to GTAW process

- A. **Stable and controllable process**
- B. High deposition rate
- C. Higher welding speed
- D. **Good joint quality and high arc energy density**

Q4. Electrical conductivity of the arc increases by

- A. **increasing no. density of electrons**
- B. decreasing no. density of electrons
- C. increasing no. density of ions
- D. None of the above

Q5. Sharper electrode tip in GTAW

- A. increases depth of penetration
- B. decreases depth of penetration
- C. **weld width increases**
- D. none of the above

PRACTICE QUESTIONS

Q6. Which of the following gas medium preferred for welding of thicker aluminium alloys plates

- A. Ar
- B. Ar+He
- C. CO₂
- D. All of the above

Q7. Ar+He mixture can be use for joining of which of the following materials

- A. Aluminium and its alloy
- B. Cu and its alloy
- C. Steel and stainless steels
- D. All of the above

Q8. Addition of CO₂ to argon shielding gas during GTAW

- A. increases depth of penetration
- B. stabilizes arc
- C. arc core contracts
- D. weld width increases.

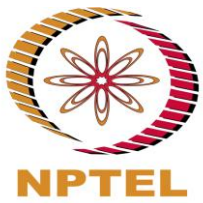
Q9. By replacing argon with helium as shielding gas in GTAW

- A. depth of penetration increases
- B. depth of penetration decreases
- C. arc temperature decreases
- D. arc core contracts.

Q10. Which one of the following shielding gases widely used to weld high conductive materials?

- A. Helium
- B. CO₂
- C. Hydrogen
- D. none of the above.

PRACTICE QUESTIONS



Q11. Arc ignition by direct heating is promoted by

- A. Joule heating of the electrode
- B. retraction of electrode after short-circuiting
- C. liquid bridge formation between the base metal and electrode
- D. **all the above**

Q12. Avalanche factor determines

- A. probability of welding power source cooling
- B. shielding gas velocity
- C. **number of ionization per electron per volt**
- D. number of dissociation events per mole of diatomic gas.

Q13. Breakdown voltage is

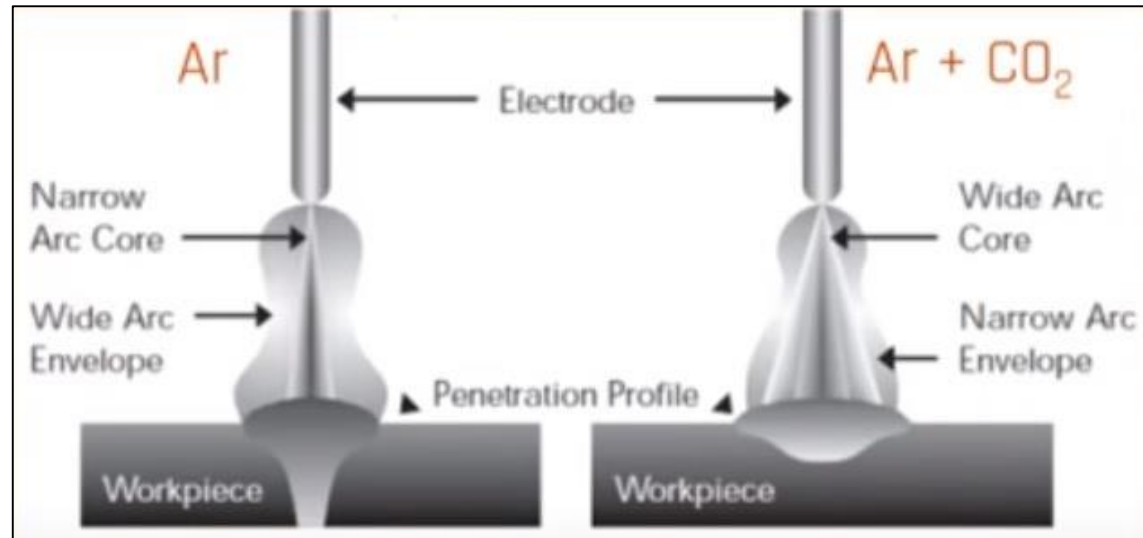
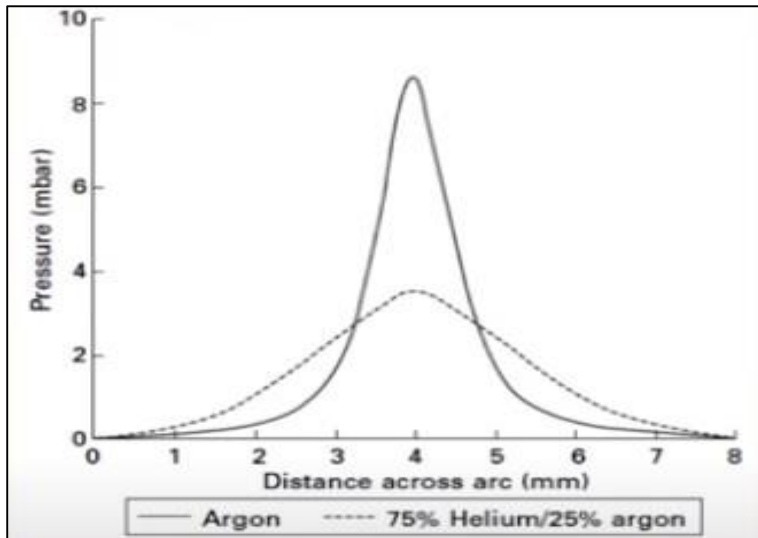
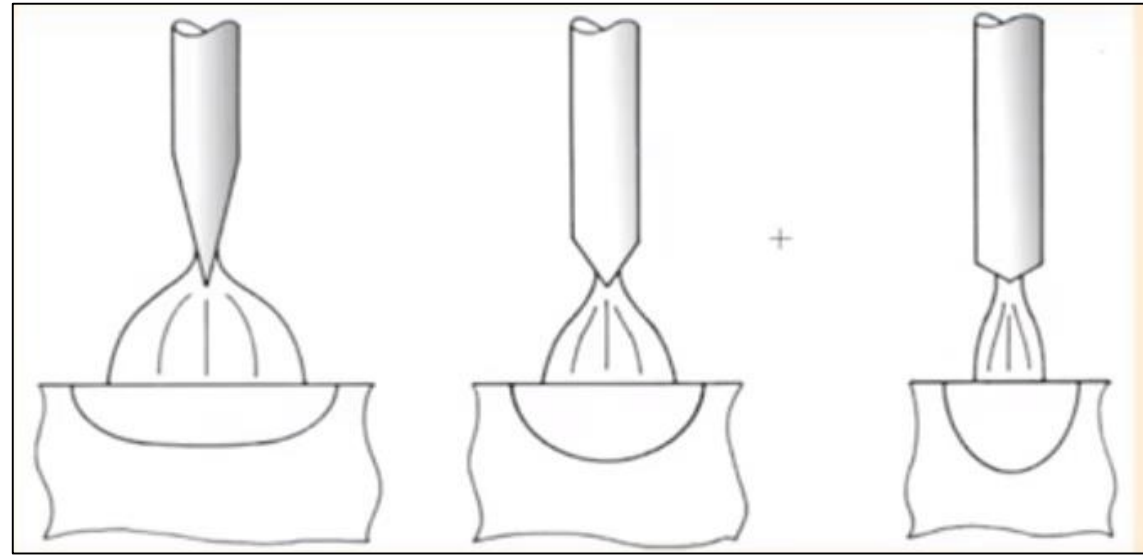
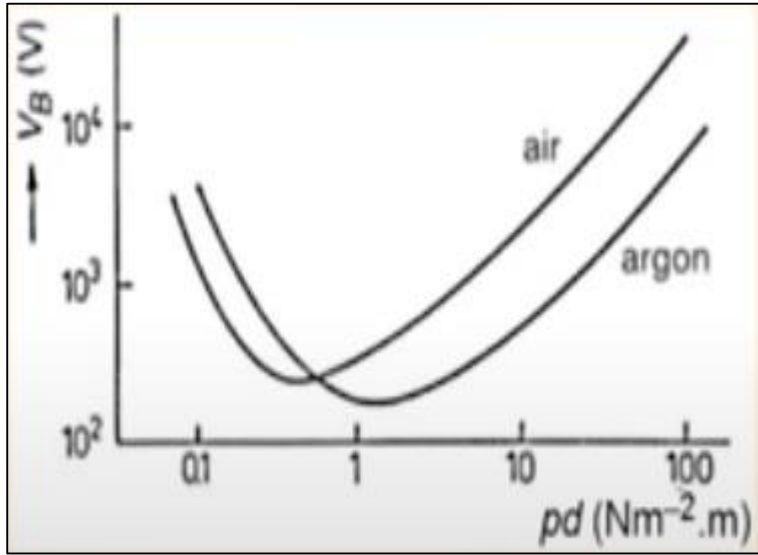
- A. maximum voltage beyond which welding power source breaks down
- B. **minimum voltage required to ignite arc by electric breakdown**
- C. voltage supplied to sharpen the tip of tungsten electrode
- D. arc voltage

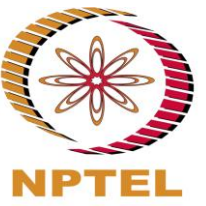
Q14. Breakdown voltage is the function of

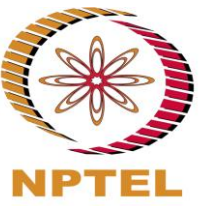
- A. Pressure
- B. distance between tip of anode and cathode
- C. Shielding gas
- D. **All of the above**

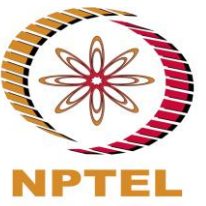
Q15. Which arc ignition method is suitable for non-consumable welding processes

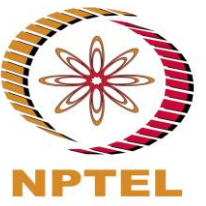
- A. Arc ignition of electric breakdown
- B. direct heating
- C. high frequency ignition
- D. **both A and C**

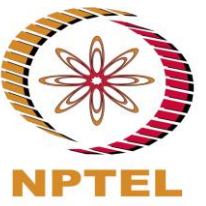


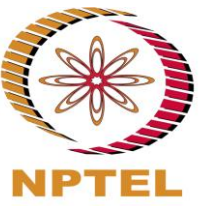












Thank you.....