Pretest Info Section PAT Fasteners & Powerloads

1. Why are PAT fasteners made from special hardened steel? To penetrate steel and to withstand the workload imposed on it

2. Are powerloads and fasteners brand specific? Yes. Only use Hilti with a Hilti tool, etc.

3. What are some of the most common fastener types? Headed pin, threaded studs, internal threaded studs, utility head, and eye pins

4. What is the approximate tensile strength of heat-treated fasteners? 250,000 psi

5. How far should a fastener penetrate concrete for maximum holding power? 6-8 times the diameter (concrete)

6. What two forces hold a fastener fired into concrete? Compressive force and fusion

7. What is the spall area of a fastener? Chipping away of the concrete on the surface around the fastener

8. What is compressive bond? Compressive force that squeezes the fastener and provides some of the holding power

9. What two factors increase the holding power of a fastener in steel?

10. How far should a fastener penetrate into steel for maximum holding power? Completely through

11. What is fish-hooking? Fastener hits something hard that causes it to bend and deflect

12. How is it avoided? Reduce penetration, increase shaft size, check power level (make sure it is not too high), and fasten through a metal disc

13. What are the two most common powerload sizes? (caliber) 22 cal and 38 cal

14. What are the two types of ends on powerloads? Crimped and wadded

15. What are the three components of powerloads? Case, primer, and propellant

16. What two materials are used for the case of powerloads? Brass and nickel

17. Where is the priming mixture located in the case of a powerload? Rim cavity

18. How is the propellant ignited in a powerload? Priming charge
19. What are three methods of indicating the strength of powerloads? Load color, cartridge case color, and load number