Steel Quiz

Steel Quiz, a monthly feature in Modern Steel Construction, allows you to test your knowledge of steel design and construction. Answers can generally be found in the LRFD Manual of Steel Construction, 2nd edition, but other industry standards are often referenced.

Many thanks to SSPC: The Society for Protective Coatings for contributing the questions and answers for this month’s Steel Quiz. Learn more about SSPC by visiting its web site: www.sspc.org

If you or your firm are interested in submitting a Steel Quiz question or column, please contact Keith Grubb at grubb@black-squirrel.net

Questions

1. Which relative new epoxy product permits low temperature application and rapid curing?
2. Paint thickness is commonly measured in which units?
   a. cm
   b. feet
   c. mils
   d. coats
3. How much mill scale and other residue is permitted on steel cleaned to an SSPC-SP 14 surface?
4. What do SC1, 2 and 3 mean?
5. What are the limitations of a plural-component spray application system?
6. For which of the following reasons does lead ingestion have more effect on children than on adults?
   a. Children have less body mass.
   b. Children do not develop a resistance to lead as fast as adults.
   c. Coatings taste better to children than to adults.
   d. Children have higher rates of metabolism than adults.
7. For which one of the following does federal EPA have no regulation?
   a. Air
   b. Water
   c. Soil
   d. Paint
8. What is the meaning of the abbreviation tsp when referring to monitoring of industrial pollutants?
   a. Trisodium phosphate
   b. Total suspended particulates
   c. Toxic soluble pollutants
   d. Toxic solid products
9. Which of the following grades of air is suitable for supplied air respirators?
   a. Grade A
   b. Grade B
   c. Grade C
   d. Grade D
10. Above which of the following heights is fall protection required?
    a. 6 feet
    b. 10 feet
    c. 20 feet
    d. 30 feet
1. cycloaliphatic amine-cured epoxy

2. c, mils. A mil is 1/1000 of an inch.

3. 10% per 9 in.² of tightly adherent millscale is allowed

4. SC1,2 and 3 are levels of soluble salts allowed as non-visible surface contaminants.

5. Limitations include: initial/maintenance cost is high; proportioning/temperature control is required; skilled operator is required; and it is impractical for small jobs.

6. a.

7. d.

8. b.

9. d.

10. a.