

## CODE

**20.6.2** Embedment materials shall not be harmful to concrete or reinforcement.

**20.6.3** Aluminum embedments shall be coated or covered to prevent aluminum-concrete reaction and electrolytic action between aluminum and steel.

**20.6.4** Reinforcement with an area at least 0.002 times the area of the concrete section shall be provided perpendicular to pipe embedments.

**20.6.5** Specified concrete cover for pipe embedments with their fittings shall be at least 40 mm for concrete exposed to earth or weather, and at least 20 mm for concrete not exposed to weather, or not in contact with ground.

## COMMENTARY

be endangered. Many general building codes have adopted ASME Piping Code **B31.1** for power piping and **B31.3** for chemical and petroleum piping. The licensed design professional should be sure that the appropriate piping codes are used in the design and testing of the system. The contractor should not be permitted to install conduits, pipes, ducts, or sleeves that are not shown in the construction documents or not approved by the licensed design professional.

**R20.6.3** The Code prohibits the use of aluminum in structural concrete unless it is effectively coated or covered. Aluminum reacts with concrete and, in the presence of chloride ions, may also react electrolytically with steel, causing cracking, spalling, or both. Aluminum electrical conduits present a special problem because stray electric current accelerates the adverse reaction. **Provision 26.4.2.2(f)** prohibits calcium chloride or any admixture containing chloride from being used in concrete with aluminum embedments.