- **استانداردهای مربوط به استفاده از فونداسیون به عنوان ارت گسترده (روش یوفر)**

استاندارد IEC۶۰۳۶۴-۵-۵۴:

Annex C
(informative)

Erection of concrete-embedded foundation earth electrodes

C.1 General

Concrete used for the foundations of buildings has a certain conductivity and generally a large contact area with the soil. Therefore bare metal electrodes completely embedded in concrete can be used for earthing purposes, unless the concrete is isolated from the soil by use of a special thermal insulation or other measures. Due to chemical and physical effects, bare or hot-dip galvanized steel and other metals embedded in concrete to a depth of more than 5 cm are highly protected against corrosion, normally for the whole life-time of the building. Wherever possible, the conductive effects of the reinforcement of the building should also be used.

The production of a concrete-embedded foundation earth electrode during the erection of the building may be an economical solution to obtain a good earth electrode of long standing because

استاندارد IEC۶۲۳۰۵-۳:

5.4.4 Natural earth electrodes

Interconnected reinforcing steel in concrete foundations in accordance with 5.6, or other suitable underground metal structures, should preferably be used as an earth electrode. When the metallic reinforcement in concrete is used as an earth electrode, special care shall be exercised at the interconnections to prevent mechanical splitting of the concrete.

NOTE 1 In the case of pre-stressed concrete, consideration should be given to the consequences of the passage of lightning discharge currents which may produce unacceptable mechanical stresses.

NOTE 2 If a foundation earth electrode is used, a long-term increase in earthing resistance is possible.

NOTE 3 More extensive information on this topic is reported in Annex E.