Errata Record #23-2323

A typographical error was introduced in the 2008 Addenda of ASME Section XI. Specifically, IWL-2320(a)(3)(d) has the word “recorded” when the text should say “reworded”. A review of the original Record# 05-140 shows that the text should say “reworded”. This error was made during publication. A review of the 2023 Edition of ASME Section XI shows that the error has yet to be corrected.

IWL-2320(a)(3)(d) in the 2023 Edition of Section XI, Division 1 with proposed correction:

\(\text{reworded}\)

\(-d\) individuals failing to attain the required passing grades shall receive additional training as determined by the Responsible Engineer before reexamination. The written reexamination questions shall be selected at random from a bank of questions containing at least twice the number of examination questions, or the written examination shall contain at least 30% different or recorded questions. The practical reexamination test shall contain at least 50% different test specimens or shall contain specimens with at least 50% different examples of damage or degradation from those used during the most recent practical examination that was not passed by the candidate. No individual shall be reexamined more than twice within any consecutive 12-month period.
Supporting documentation

As published in the 2008 Addenda:

**ASME Section XI, IWL-2320, page 216**

2008a SECTION XI, DIVISION 1

(1) at least 10 hr plant experience, such as that gained by plant personnel involved in inspection, maintenance, or repair/replacement activities in each of the following:
   
   (a) structural concrete and reinforcing steel;
   
   (b) post-tensioning system components (for plants with post-tensioning systems only);

(2) at least 4 hr of training in Section XI, Subsection IWL requirements and at least 2 hr of training in plant-specific procedures for IWL visual examinations. Training shall include requirements for inservice and preservice examinations and reporting criteria for the following:

   (a) concrete (applicable conditions such as those described in ACI-201.1 should be included)
   
   (b) reinforcing steel
   
   (c) post-tensioning system items (e.g., wires, strands, anchorage hardware, corrosion protection medium, and free water) [for plants with post-tensioning systems only]

number of examination questions, or the written examination shall contain at least 30% different or recorded questions. The practical reexamination test shall contain at least 50% different test specimens or shall contain specimens with at least 50% different flaws or indications from those used during the most recent practical examination that was not passed by the candidate. No individual shall be reexamined more than twice within any consecutive 12 month period.

(4) training proficiency shall be demonstrated by administering subsequent examinations at a frequency not exceeding 5 years

(5) the vision test requirements of IWA-2321

(b) The preceding qualification requirements shall be described in the Employer's written practice.

IWL-2330 RESPONSIBLE ENGINEER

The Responsible Engineer shall be a Registered Practi.
As approved in Record #05-140:

BC05-140 Proposed Code Changes

**IWL-2160 GENERAL**

The requirements of IWA-2000 apply, except that the requirements of IWA-2210 and IWA-2300 are not applicable to visual examinations or qualification of visual examination personnel for concrete containment.

The requirements of IWA-2000 apply, except as noted below:
(a) The requirements of IWA-2210, IWA-2500, and IWA-2600 do not apply
(b) Except as noted in IWL-2326, the requirements of IWA-2350 do not apply.

**BC05-140 Proposed Code Changes**

**IWL-2310 VISUAL EXAMINATION AND PERSONNEL QUALIFICATION**

(a) General visual examinations of concrete surfaces shall be performed to assess the general structural condition of containment. The general visual examination shall be performed in sufficient detail to identify areas of concrete deterioration and distress, such as described in ACI 201.1 and ACI 24W.3B.

(b) Detailed visual examinations shall be performed to determine:
(1) the magnitude and extent of deterioration and distress of suspect concrete surfaces initially detected by general visual examinations;
(2) the magnitude and extent of deterioration and distress of suspect concrete surfaces, at tendon anchorage areas, initially detected by general visual examinations;
(3) the condition (e.g., cracks, wear, or corrosion) of tendon wires or strands, and anchorage hardware, as described in IWL-2524.1;
(4) the condition of concrete surfaces affected by repair/replacement activities, in accordance with IWL-2525; and
(5) the condition of reinforcing steel exposed as a result of removal of defective concrete as described in IWL-422(4).

(c) Visual examinations shall be performed directly or remotely, with adequate illumination, by personnel with visual acuity sufficient to detect evidence of degradation.

(d) The Owner shall define qualification requirements for personnel performing examinations of concrete and tendon anchorage hardware, wires, or strands.

(e) The Owner shall define requirements for visual examination of tendon anchorage hardware, wires, or strands.

**IWL-2320 PERSONNEL QUALIFICATION**

(a) Personnel performing general or detailed visual examinations shall be approved by the Responsible Engineer and shall be qualified by satisfying the following requirements:
(1) at least 10 hours plant experience, such as that gained by plant personnel involved in inspection, maintenance, or repair/replacement activities in each of the following:
   (a) structural concrete and reinforcing steel
   (b) post-tensioning system components (for plants with post-tensioning systems only);
   (2) at least 4 hours of training in Section XI, Subsection IWL requirements and at least 2 hours of training in plant-specific procedures for IWL visual examinations;
   (3) training proficiency shall be demonstrated by administering a qualification examination consisting of the following:
      (a) a written examination covering Section XI, Subsection IWL requirements and plant-specific procedure requirements for visual examinations, containing at least 15 questions in each of the following:
         (1) concrete and reinforcing steel
         (2) post-tensioning system components (i.e., wires, strands, anchorage hardware, corrosion protection medium and free water) [for plants with post-tensioning systems only]
      (b) a practical examination using test specimens with flaws or indications to be detected by the following visual examination techniques:
         (1) general and detailed visual examination of concrete
         (2) detailed visual examination of reinforcing steel
         (3) detailed visual examination of post-tensioning system components (i.e., wires, strands, and anchorage hardware) [for plants with post-tensioning systems only]
      (c) passing grades for examinations shall be as follows:
         (1) an average combined grade of 80% for written and practical examinations; and
         (2) a minimum grade of 70% for each written and practical examination
   (d) individuals failing to attain the required passing grades shall receive additional training as determined by the Responsible Engineer before reexamination. The written reexamination questions shall be selected at random from a bank of questions containing at least twice the number of examination questions, or the
BC05-140 Proposed Code Changes

written examination shall contain at least 30% different or reworded questions. The practical reexamination test shall contain at least 50% different test specimens or shall contain specimens with at least 50% different flaws or indications from those used during the most recent practical examination that was not passed by the candidate. No individual shall be reexamined more than twice within any consecutive 12 month period;

4) training proficiency shall be demonstrated by administering subsequent examinations at a frequency not exceeding 5 years; and

5) the vision test requirements of IWA-2321

(b) The above qualification requirements shall be described in the Employer's written practice.