

**2016-03-09 Bi-weekly Seismic Call Agenda Attachment**

| <b><u>The comparison of two editions in ASME Section III, Division 1, Article NE-3000</u></b> |  |  |  |                                 |  |
|---|--|--|--|---------------------------------|--|
| <b>Subarticle</b>   | <b>Title</b>                                 | <b>2001 Edition including 2003 Addenda</b>   | <b>2007 Edition including 2008 Addenda</b>   | <b>Design Affected (Yes/No)</b> | <b>Remarks</b>   |
| NE-3100   | General Design                               |  |  |                                 |  |
| NE-3110   | Loading Criteria                             |  |  |                                 |  |
| NE-3111   | Loading Conditions                           | Same   | Same   | No                              |  |
| NE-3112   | Design Loadings                              | Same   | Same   | No                              |  |
| NE-3112.1   | Design Pressure                              | Same   | Same   | No                              |  |
| NE-3112.2   | Design Temperature                           | Same   | Same   | No                              |  |
| NE-3112.3   | Design Mechanical Loads                      | Same   | Same   | No                              |  |
| NE-3112.4   | Allowable Stress Intensity and Stress Values | ~.<br>The material shall not be used at metal and design temperatures <u>above those for which</u> stress intensity values are listed. The values in the Tables may be interpolated for intermediate temperatures. | ~.<br>The material shall not be used at metal and design temperatures <u>that exceed the temperature limit in the applicability column for</u> which stress intensity values are listed. The values in the Tables may be interpolated for intermedia | No                              | The meanings of changed sentence has not impact to the design of MC components . |

|           |  |      |                         |    |  |
|-----------|--|------|-------------------------|----|--|
|           |  |      | te<br>temperatur<br>es. |    |  |
| NE-3113   | Service<br>Limits                        | Same | Same                    | No |  |
| NE-3113.1 | Level A<br>Service<br>Limits             | Same | Same                    | No |  |
| NE-3113.2 | Level B<br>Service<br>Limits             | Same | Same                    | No |  |
| NE-3113.3 | Level C<br>Service<br>Limits             | Same | Same                    | No |  |
| NE-3113.4 | Level D<br>Service<br>Limits             | Same | Same                    | No |  |
| NE-3113.5 | Level E<br>Service<br>Limits             | Same | Same                    | No |  |
| NE-3114   | Testing<br>Conditions                    | Same | Same                    | No |  |
| NE-3120   | Special Considerations                   |      |                         |    |  |
| NE-3121   | Corrosion                                | Same | Same                    | No |  |
| NE-3122   | Cladding                                 | Same | Same                    | No |  |
| NE-3122.1 | Primary<br>Stress                        | Same | Same                    | No |  |
| NE-3122.2 | Design<br>Dimensions                     | Same | Same                    | No |  |
| NE-3122.3 | Bearing<br>Stresses                      | Same | Same                    | No |  |
| NE-3122.4 | Maximum<br>Allowable<br>Stress<br>Values | Same | Same                    | No |  |
| NE-3122.5 | Maximum<br>Allowable<br>Temperature      | Same | Same                    | No |  |
| NE-3123   | Welds<br>Between<br>Dissimilar<br>Metals | Same | Same                    | No |  |

|           |   |   |   |    |                               |
|-----------|---|---|---|----|-------------------------------|
| NE-3125   | Comfigurati<br>ons                                      | Same  | Same  | No |                               |
| NE-3130   | General Design Rules                                    |   |   |    |                               |
| NE-3131   | Genral<br>Requirement<br>s                              | Same  | Same  | No |                               |
| NE-3132   | Dimensional<br>Standards<br>doe<br>Standard<br>Products | Dimensions<br>of<br>standard<br>products<br>shall<br>comply<br>with the<br>standards<br>and<br>specificat<br>ions<br>listed in<br><b><u>Table NE-<br/>3132-1</u></b><br>when the<br>standard<br>or<br>specificat<br>ion is<br>eferenced<br>in the<br>specific<br>design<br>Subarticle<br>. ~. | Dimensions<br>of<br>standard<br>products<br>shall<br>comply<br>with the<br>standards<br>and<br>specificat<br>ions<br>listed in<br><b><u>Table NCA-<br/>7100-1</u></b><br>when the<br>standard<br>or<br>specificat<br>ion is<br>referenced<br>in the<br>specific<br>design<br>Subarticle<br>. ~. | No | Table<br>reference<br>revised |
| NE-3133   | Component Under External Loading                        |   |   |    |                               |
| NE-3133.1 | General   | Same  | Same  | No |                               |
| NE-3133.2 | Nomenclatur<br>e  | S = pthe<br>lesser of<br>2 times<br>the<br>allowable<br>stress at<br>design<br>metal<br>temperatur<br>e from<br>Section<br>II, Part<br>D, Subpart<br>1, Tables<br>1A and 1B<br>or 0.9<br>times the  | S = the<br>lesser of<br>2 times<br>the<br>allowable<br>stress at<br>design<br>metal<br>temperatur<br>e from<br>Section<br>II, Part<br>D, Subpart<br>1, Tables<br>1A and 1B<br>or 0.9<br>times the   | No | Corrected<br>by errta         |

|                 |   |   |   |    |                    |
|-----------------|---|---|---|----|--------------------|
|                 |   | tabulated yield strength at design metal temperature from Section II, Part D, <b>Subpart 2</b> , Table Y-1, psi (kPa) | tabulated yield strength at design metal temperature from Section II, Part D, <b>Subpart 1</b> , Table Y-1, psi (MPa) |    |                    |
| NE-3133.3       | Cylindrical Shells                      | Same  | Same  | No |                    |
| NE-3133.4       | Spherical Shells and Formed Heads       | Same  | Same  | No |                    |
| NE-3133.5       | Stiffening Rings for Cylindrical Shells | Same  | Same  | No |                    |
| NE-3133.6       | Cylindrical Under Axial Compression     | Same  | Same  | No |                    |
| NE-3133.7       | Conical Heads                           | Same  | Same  | No |                    |
| Table NE-3132-1 | Dimensional Standards                   | <b>It maintains a table.</b>  | <b>Deleted</b>  | No | Table deleted      |
| NE-3134         | Material Properties                     | Same  | Same  | No |                    |
| NE-3134.1       | Yield Strength Values                   | The values of yield strength $S_y$ shall be those given in Section II, Part D, <b>Subpart 2</b> , Table Y-1.          | The values of yield strength $S_y$ shall be those given in Section II, Part D, <b>Subpart 1</b> , Table Y-1.          | No | Corrected by errta |
| NE-3134.2       | Ultimate Tensile Strength Values        | The values of ultimate tensile strength shall be those  | The values of ultimate tensile strength shall be those  | No | Corrected by errta |

|           |  |  |  |    |  |
|-----------|--|--|--|----|--|
|           |  | given in Section II, Part D, <b>Subpart 2</b> , Table TCD. | given in Section II, Part D, <b>Subpart 1</b> , Table U. |    |  |
| NE-3134.3 | Coefficients of Thermal Conductivity and Thermal Diffusivity | Same   | Same   | No |  |
| NE-3134.4 | Coefficients of Thermal Expansion                            | Same   | Same   | No |  |
| NE-3134.5 | Modulus of Elasticity Values                                 | Same   | Same   | No |  |
| NE-3134.6 | Allowable Stress Intensity and Stress Values                 | Same   | Same   | No |  |
| NE-3135   | Attachments  | Same   | Same   | No |  |
| NE-3200   | Design by Analysis   |  |  |    |  |
| NE-3210   | Design Criteria  |  |  |    |  |
| NE-3211   | General Requirements for Applicability                       | Same   | Same   | No |  |
| NE-3212   | Basis for Determining Stresses                               | Same   | Same   | No |  |
| NE-3213   | Terms Relating to Stress Analysis                            | Same   | Same   | No |  |

|           |                  |   |   |    |                       |
|-----------|------------------|---|---|----|-----------------------|
| NE-3213.1 | Stress Intensity | <p><b>Stress intensity is the equivalent intensity of combined stress, or, in short,</b> the stress intensity is defined as twice the maximum shear stress. <b>In other words, the stress intensity</b> is the difference between the algebraically largest principal stress and the algebraically smallest principal stress at a given point. Tensile stresses are considered positive and compressive stresses are considered negative.</p> | <p>Stress intensity is defined as twice the maximum shear stress, which is the difference between the algebraically largest principal stress and the algebraically smallest principal stress at a given point. Tensile stresses are considered positive and compressive stresses are considered negative.</p> | No | The sentences changed |
|-----------|------------------|---|---|----|-----------------------|

|           |                                |  |   |    |                       |
|-----------|--------------------------------|--|---|----|-----------------------|
| NE-3213.2 | Gross Structural Discontinuity | Same   | Same  | No |                       |
| NE-3213.3 | Local Structural Discontinuity | Same   | Same  | No |                       |
| NE-3213.4 | Normal Stress                  | Normal stress is the component of stress normal to the plane of reference. This is also referred to as direct stress. Usually the distribution of normal stress is not uniform through the thickness of a part, so this stress is considered to <b>be made up in turn of</b> two components, one of which is uniformly distributed and equal to the average value of | Normal stress is the component of stress normal to the plane of reference. This is also referred to as direct stress. Usually the distribution of normal stress is not uniform through the thickness of a part, so this stress is considered to have two components, one uniformly distributed and equal to the average stress across the thickness | No | The sentences changed |

|           |                 |   |   |    |                       |
|-----------|-----------------|---|---|----|-----------------------|
|           |                 | stress across the thickness under consideration, and the other of which varies from this average value with the location across the thickness.                                      | under consideration, and the other varying from this average value across the thickness.  |    |                       |
| NE-3213.5 | Shear Stress    | Same  | Same  | No |                       |
| NE-3213.6 | Membrane Stress | Membrane stress is the component of normal stress <b>which</b> is uniformly distributed and equal to the average of stress across the thickness of the section under consideration. | Membrane stress is the component of normal stress that is uniformly distributed and equal to the average of stress across the thickness of the section under consideration. | No | The sentences changed |
| NE-3213.7 | Bending Stress  | <b>Bending stress is the variable component of normal stress described in NE-3213.4.</b>  | Bending stress is the component of normal stress that varies across the thickness.  | No | The sentences changed |



|            |                                   |  |  |    |  |
|------------|-----------------------------------|--|--|----|--|
|            |                                   | The variation may or may not be linear across the thickness. | The variation may or may not be linear across the thickness. |    |  |
| NE-3213.8  | Primary Stress                    |  | Same   | No |  |
| NE-3213.9  | Secondary Stress                  |  | Same   | No |  |
| NE-3213.10 | Local Primary Membrane stress     |  | Same   | No |  |
| NE-3213.11 | Peak Stress                       | Same   | Same   | No |  |
| NE-3213.12 | Load Stress                       | Same   | Same   | No |  |
| NE-3213.13 | Thermal Stress                    | Same   | Same   | No |  |
| NE-3213.14 | Total Stress                      | Same   | Same   | No |  |
| NE-3213.15 | Service Cycle                     | Same   | Same   | No |  |
| NE-3213.16 | Stress Cycle                      | Same   | Same   | No |  |
| NE-3213.17 | Fatigue Strength Reduction Factor | Same   | Same   | No |  |
| NE-3213.18 | Shakedown                         | Same   | Same   | No |  |
| NE-3213.19 | Free End Displacement             | Same   | Same   | No |  |
| NE-3213.20 | Expansion Stresses                | Same   | Same   | No |  |
| NE-3213.21 | Limit Analysis - Collapse Load    | Same   | Same   | No |  |
| NE-3213.22 | Collapse Load - Lower Bound       | Same   | Same   | No |  |
| NE-3214    | Stress Analysis                   | Same   | Same   | No |  |
| NE-3215    | Derivation of Stress Intensities  | Same   | Same   | No |  |
| NE-3216    | Derivation of Stress Differences  | Same   | Same   | No |  |

|           |   |      |      |    |  |
|-----------|---|------|------|----|--|
| NE-3216.1 | Constant Principal Stress Direction                                     | Same | Same | No |  |
| NE-3216.2 | Varying Principal Stress Direction                                      | Same | Same | No |  |
| NE-3217   | Classification of Stresses  | Same | Same | No |  |
| NE-3220   | Stress Intensity and Buckling Stress Values for Other Than Bolts        |      |      |    |  |
| NE-3221   | Stress Intensity Values   |      |      |    |  |
| NE-3221.1 | General Primary Membrane Stress Intensity                               | Same | Same | No |  |
| NE-3221.2 | Local Membrane Stress Intensity   | Same | Same | No |  |
| NE-3221.3 | Primary General or Local Membrane Plus Primary Bending Stress Intensity | Same | Same | No |  |
| NE-3221.4 | Primary Plus Secondary Stress Intensity                                 | Same | Same | No |  |
| NE-3221.5 | Analysis for Cyclic Operation   | Same | Same | No |  |
| NE-3221.6 | Thermal Stress Ratchet  | Same | Same | No |  |
| NE-3221.7 | Deformation Limits  | Same | Same | No |  |

|                 |  |      |      |    |  |
|-----------------|--|------|------|----|--|
| Table NE-3217-1 | Classification of Stress Intensity in Vessels for Some Typical Cases   | Same | Same | No |  |
| Table NE-3221-1 | Summary of Stress Intensity Limits   | Same | Same | No |  |
| Fig. NE-3221-1  | Stress Categories and Limits of Stress Intensity for Design Conditions   | Same | Same | No |  |
| Fig. NE-3221-2  | Stress Categories and Limits of Stress Intensity for Level A and B Service Limits; and for Level C Service Limits where the Structure is not integral and Continuous | Same | Same | No |  |

|                |   |      |      |    |  |
|----------------|---|------|------|----|--|
| Fig. NE-3221-3 | Stress Categories and Limits of Stress Intensity for Level C Service Limits where the Structure is Integral and Continuous; and for Level D Service Limits where the Structure is not Integral and Continuous, and at Partial Penetration Welds | Same | Same | No |  |
| Fig. NE-3221-4 | Stress Categories and Limits of Stress Intensity for Level D Service Limits where the Structure is Integral and Continuous  | Same | Same | No |  |
| NE-3222        | Buckling Stress Values  |      |      |    |  |
| NE-3222.1      | Basic Compressive Allowable Stress  | Same | Same | No |  |
| NE-3222.2      | Stability Stress Limits   | Same | Same | No |  |
| NE-3226        | Testing Limits  | Same | Same | No |  |

|           |  |  |  |    |                    |
|-----------|--|--|--|----|--------------------|
| NE-3227   | Special Stress Limits                            | Same   | Same   | No |                    |
| NE-3227.1 | Bearing Loads                                    | ~<br>(1) for materials to which<br><b>Note (2)</b> of Section II, Part D, Subpart 1, Tables 1A and 1B applies, the lower of 0.5Sy at 100°F (38°C) and 0.675Sy at temperature;<br>~   | ~<br>(1) for materials to which<br><b>Note (G5)</b> of Section II, Part D, Subpart 1, Tables 1A and 1B applies, the lower of 0.5Sy at 100°F (38°C) and 0.675Sy at temperature;<br>~  | No | Corrected by errta |
| NE-3227.2 | Pure Shear                                       | Same   | Same   | No |                    |
| NE-3227.3 | Progressive Distortion of Nonintergal Connection | ~<br>Therefore, primary plus secondary stress intensities (NE-3221.4) which result in slippage between the parts of a nonintegral connection in which is engagement could occur as a result of progressive distortion shall be | ~<br>Therefore, primary plus secondary stress intensities (NE-3221.4) which result in slippage between the parts of a nonintegral connection in which is engagement could occur as a result of progressive distortion shall be | No | Corrected by errta |

|           |  |  |  |    |                    |
|-----------|--|--|--|----|--------------------|
|           |  | limited to the value $S_y$ (Section II, Part D, <b>Subpart 2</b> , Table Y-1).   | limited to the value $S_y$ (Section II, Part D, <b>Subpart 1</b> , Table Y-1).   |    |                    |
| NE-3227.4 | Triaxial Stresses  | Same   | Same   | No |                    |
| NE-3227.5 | Nozzle Piping Transition   | Same   | Same   | No |                    |
| NE-3227.6 | Application of Elastic Analysis for Stresses Beyond the Yield Strength | Same   | Same   | No |                    |
| NE-3228   | Application of Plastic Analysis  | Same   | Same   | No |                    |
| NE-3228.1 | Plastic Analysis   | Same   | Same   | No |                    |
| NE-3228.2 | Limit Analysis   | The limits on local membrane stress intensity (NE-3221.2) and primary membrane plus primary bending stress intensity (NE-3221.3) need not be satisfied at a specific | The limits on local membrane stress intensity (NE-3221.2) and primary membrane plus primary bending stress intensity (NE-3221.3) need not be satisfied at a specific | No | Corrected by errta |

|                        |   |  |  |    |  |
|------------------------|---|--|--|----|--|
|                        |   | location if it can be shown by means of limit analysis or by tests that the specified loadings do not exceed two-thirds of the lower bound collapse load except for those materials of Section II, Part D, Subpart 1, Tables 2A and 2B to which Note (2) of those tables is applicable . ~ . | location if it can be shown by means of limit analysis or by tests that the specified loadings do not exceed two-thirds of the lower bound collapse load except for those materials of Section II, Part D, Subpart 1, Table 2A to <b>which Note G7 is applicable</b> and Table 2B to which Note G1 is applicable . ~ . |    |  |
| NE-3228.3              | Simplified Elastic-Plastic Analysis                                       | Same   | Same   | No |  |
| NE-3228.4              | Impulse Loads   | Same   | Same   | No |  |
| Table NE-3228.3(b) - 1 | Values of $m, n$ and $T_{max}$ for Various Classes of Permitted Materials | Same   | Same   | No |  |
| NE-3230                | Stress Limits for Bolts   |  |  |    |  |
| NE-3231                | Design Conditions   | Same   | Same   | No |  |

|           |  |      |      |    |  |
|-----------|--|------|------|----|--|
| NE-3232   | Combined Loads                           | Same | Same | No |  |
| NE-3232.1 | Average Stress                           | Same | Same | No |  |
| NE-3232.2 | Maximum Stress                           | Same | Same | No |  |
| NE-3232.3 | Fatigue Analysis of Bolts                | Same | Same | No |  |
| NE-3236   | Design Stress Values                     | Same | Same | No |  |
| NE-3300   | Design Formula                           |      |      |    |  |
| NE-3310   | Design Criteria                          |      |      |    |  |
| NE-3311   | Requirements for Acceptability           | Same | Same | No |  |
| NE-3320   | Design Considerations                    |      |      |    |  |
| NE-3324   | Vessels under Internal Pressures         |      |      |    |  |
| NE-3324.1 | General Requirements                     | Same | Same | No |  |
| NE-3324.2 | Nomenclature                             | Same | Same | No |  |
| NE-3324.3 | Cylindrical Shells                       | Same | Same | No |  |
| NE-3324.4 | Spherical Shells                         |      |      |    |  |
| NE-3324.5 | Formed Heads, General Requirements       |      |      |    |  |
| NE-3324.6 | Ellipsoidal Heads                        | Same | Same | No |  |
| NE-3324.7 | Hemispherical Heads                      | Same | Same | No |  |
| NE-3324.8 | Torispherical Heads                      | Same | Same | No |  |
| NE-3324.9 | Conical Heads without Transition Knuckle | Same | Same | No |  |



|                                   |   |      |      |    |  |
|-----------------------------------|---|------|------|----|--|
| NE-3324.10                        | Torispheric<br>al Heads   | Same | Same | No |  |
| NE-3324.11                        | Reducer<br>Sections   | Same | Same | No |  |
| NE-3324.12                        | Nozzles   | Same | Same | No |  |
| Fig. NE-<br>3324.2-1              | Principal<br>Dimensions<br>of Typical<br>Heads  | Same | Same | No |  |
| Table NE-<br>3324.2-1             | Values of<br>Factor K   | Same | Same | No |  |
| Table NE-<br>3324.8(b) -<br>1     | Values of<br>Factor M   | Same | Same | No |  |
| Fig. NE-<br>3324.11(a)<br>(6) -1  | Large Head<br>Opening:Rev<br>erse Curve<br>and Concial<br>Shell<br>Reducer<br>Sections            | Same | Same | No |  |
| Table NE-<br>3324.11(b)<br>(2) -1 | Values $\Delta$<br>for<br>Junctions<br>at the<br>Large<br>Cylinder<br>for $\alpha \leq 30$<br>deg | Same | Same | No |  |
| Table NE-<br>3324.11(b)<br>(3) -1 | Values $\Delta$<br>for<br>Junctions<br>at the<br>Small<br>Cylinder<br>for $\alpha \leq 30$<br>deg | Same | Same | No |  |
| NE-3325                           | Flat Heads<br>and Covers  | Same | Same | No |  |
| NE-3325.1                         | Nomenclatur<br>e  | Same | Same | No |  |
| NE-3325.2                         | Thickness   | Same | Same | No |  |
| NE-3325.3                         | Values of C   | Same | Same | No |  |
| Fig. NE-<br>3325-1                | Some<br>Acceptable<br>Types of<br>Unstayed<br>Flat Heads<br>and Covers                            | Same | Same | No |  |

|                  |   |      |      |    |  |
|------------------|---|------|------|----|--|
| NE-3326          | Spherically Dished Covers with Bolting Flanges                    |      |      |    |  |
| NE-3326.1        | Nomenclature  |      |      |    |  |
| NE-3326.2        | Spherically Dished Heads with Bolting Flanges                     | Same | Same | No |  |
| Fig. NE-3326.1-1 | Spherically Dished Covers with Bolting Flanges                    | Same | Same | No |  |
| NE-3327          | Quick Actuating Closures  | Same | Same | No |  |
| NE-3327.1        | Positive Locking Devices  | Same | Same | No |  |
| NE-3327.2        | Other Quick Access and Safety Devices                             | Same | Same | No |  |
| NE-3327.3        | Manual Operation  | Same | Same | No |  |
| NE-3327.4        | Pressure Indicating Device  | Same | Same | No |  |
| NE-3328          | Combination Units   | Same | Same | No |  |
| NE-3330          | Openings and Reinforcement  |      |      |    |  |
| NE-3331          | General Requirement for Openings                                  | Same | Same | No |  |
| NE-3332          | Reinforcement Requirement for Openings in Shells and Formed Heads |      |      |    |  |
| NE-3332.1        | Openings not Requiring Reinforcement                              | Same | Same | No |  |
| NE-3332.2        | Required Area of Reinforcement                                    | Same | Same | No |  |
| NE-3332.4        | Reinforcement for External Pressure                               | Same | Same | No |  |

|                   |   |      |      |    |  |
|-------------------|---|------|------|----|--|
| NE-3332.5         | Reinforcement for Both Internal and External Pressure | Same | Same | No |  |
| Table NE-3332.2-1 | Values of Spherical Radius Factor $K_1$               | Same | Same | No |  |
| Fig. NE-3332.2-1  | Chart for Determining Values of F                     | Same | Same | No |  |
| NE-3333           | Reinforcement Required for Openings in Flat Heads     | Same | Same | No |  |
| NE-3334           | Limits of Reinforcement                               | Same | Same | No |  |
| NE-3334.1         | Limit of Reinforcement Along the Vessel Wall          | Same | Same | No |  |
| NE-3334.2         | Limit of Reinforcement Normal to the Vessel Wall      | Same | Same | No |  |
| Fig. NE-3334.2-1  | Nozzle Dimensions                                     | Same | Same | No |  |
| NE-3335           | Metal Available for Reinforcement                     | Same | Same | No |  |
| NE-3335.1         | Reinforcement of Multiple Openings                    | Same | Same | No |  |
| Fig. NE-3335.1-1  | Arrangement of Multiple Openings                      | Same | Same | No |  |
| NE-3336           | Strength of Reinforcing Material                      | Same | Same | No |  |
| NE-3336.1         | Strength of Weld                                      | Same | Same | No |  |

|                        |   |      |      |    |  |
|------------------------|---|------|------|----|--|
| NE-3336.2              | Strength of Attachment  | Same | Same | No |  |
| NE-3338                | Pressure Stresses in Openings for Fatigue Evaluation under Operating Conditions |      |      |    |  |
| NE-3338.1              | General   | Same | Same | No |  |
| NE-3338.2              | Stress Index Method   | Same | Same | No |  |
| Table NE-3338.2 (c) -1 | Stress Indices for Nozzles  | Same | Same | No |  |
| Fig. NE-3338.2-1       | Direction of Stress Components  | Same | Same | No |  |
| NE-3350                | Design of Welded Connections  |      |      |    |  |
| NE-3351                | Welded Joint Categories   |      |      |    |  |
| NE-3351.1              | Category A  | Same | Same | No |  |
| NE-3351.2              | Category B  | Same | Same | No |  |
| NE-3351.3              | Category C  | Same | Same | No |  |
| NE-3351.4              | Category D  | Same | Same | No |  |
| Fig. NE-3351-1         | Welded Joint Locations Typical of Categories A,B,C and D                        | Same | Same | No |  |
| NE-3352                | Permissible Types of Welded Joints  | Same | Same | No |  |
| NE-3352.1              | Joint of Category A   | Same | Same | No |  |

|           |                     |                      |  |    |  |
|-----------|---------------------|----------------------|--|----|--|
| NE-3352.2 | Joint of Category B | (a) Same<br>(b) None | (a) Same<br>(b) <b>Surface examination in accordance with NE-5280(b) may be substituted for radiographic examination required in NE-5221 for Category B butt welds in electrical penetration assemblies subject to the following limitations:<br/>(1) The allowable stress for the weld joint shall be multiplied by a factor of 0.8.<br/>(2) P-No. 1 base materials shall be used for construction.</b> | No | There is no impact in APR1400 design because the revised contents have relaxed the requirement of nondestructive examination for Category B butt weld in the electrical penetration assemblies . |
| NE-3352.3 | Joint of Category C | Same                 | Same   | No |  |
| NE-3352.4 | Joint of Category D | Same                 | Same   | No |  |

|                       |   |      |      |    |  |
|-----------------------|---|------|------|----|--|
| Fig. NE-3352-1        | Typical Butt Joints   | Same | Same | No |  |
| NE-3355               | Welding Grooves   | Same | Same | No |  |
| NE-3356               | Fillet Welds  | Same | Same | No |  |
| NE-3358               | Design Requirements for Head Attachments                      |      |      |    |  |
| NE-3358.1             | Skirt Length of Formed Heads                                  | Same | Same | No |  |
| NE-3358.2             | Unstayed Flat Heads Welded to Shells                          | Same | Same | No |  |
| NE-3358.3             | Head Attachments using Corner Joints                          | Same | Same | No |  |
| NE-3358.4             | Flat Heads with Hubs  | Same | Same | No |  |
| Fig. NE-3358.1(a) - 1 | Heads Attached to Shells                                      | Same | Same | No |  |
| NE-3359               | Design Requirements for Nozzle Attachment Welds               | Same | Same | No |  |
| NE-3360               | Special Vessel Requirements                                   |      |      |    |  |
| NE-3361               | Tapered Transitions   | Same | Same | No |  |
| Fig. NE-3361-1        | Category A and B Joints between Sections of Unequal Thickness | Same | Same | No |  |
| NE-3362               | Bolted Flange and Studded Connection                          | Same | Same | No |  |
| NE-3363               | Access Openings   | Same | Same | No |  |
| NE-3364               | Attachments   | Same | Same | No |  |
| NE-3365               | Supports  | Same | Same | No |  |

|           |                          |  |  |    |                    |
|-----------|--------------------------|--|--|----|--------------------|
| NE-3366   | Bellows Expansion Joints |  |  |    |                    |
| NE-3366.1 | General Requirements     | Same   | Same   | No |                    |
| NE-3366.2 | Design Requirements      | <p>~.<br/>(e) (1) ~.<br/>The cyclic life plot (versus the combined stress) used in evaluating <b>NE-3365.1 (d)</b> shall be obtained from the results of at least 25 fatigue tests on bellows of varying diameters, thicknesses, and convolution profiles.</p> <p>~.<br/>(e) (2) (b)</p> <p>~.<br/>Cumulative fatigue requirements can be satisfied in accordance with <b>NE-3365.1 (g)</b> without additional testing by assuming that the slope of the fatigue</p> | <p>~.<br/>(e) (1) ~.<br/>The cyclic life plot (versus the combined stress) used in evaluating <b>NE-3366.2 (d)</b> shall be obtained from the results of at least 25 fatigue tests on bellows of varying diameters, thicknesses, and convolution profiles.</p> <p>~.<br/>(e) (2) (b)</p> <p>~.<br/>Cumulative fatigue requirements can be satisfied in accordance with <b>NE-3366.2 (g)</b> without additional testing by assuming that the slope of the fatigue</p> | No | Corrected by errta |

|  |  |  |   |  |  |
|--|--|--|---|--|--|
|  |  | <p>curve is 4.3 (on a log-log plot) and that the curve passes through the test point.</p> <p>~</p> <p>(e) (3) (b) ~. the pressure test of NE-6230, provided that the test is conducted at 2.25 times the equivalent cold design pressure, and single rotation and universal joints are held at their design rotation angle or offset movement during the test and the requirements of NE-3365.1(b) are not exceeded by such a test.</p> <p>~</p> | <p>curve is 4.3 (on a log-log plot) and that the curve passes through the test point.</p> <p>~</p> <p>(e) (3) (b) ~. the pressure test of NE-6230, provided that the test is conducted at 2.25 times the equivalent cold design pressure, and single rotation and universal joints are held at their design rotation angle or offset movement during the test and the requirements of <b>NE-3366.2(b)</b> are not exceeded by such a test.</p> <p>~</p> |  |  |
|--|--|--|---|--|--|



|         |  |   |  |    |                         |
|---------|--|---|--|----|-------------------------|
| NE-3367 | Closures on Small Penetrations                   | Closures on penetrations of 2 in. pipe size (DN 50) or less may be made by the use of closure fittings such as blind flanges, welded plugs, or caps manufactured in accordance with standards listed in <b>Table NE-3132-1.</b> | Closures on penetrations of NPS 2 (DN 50) or less may be made by the use of closure fittings such as blind flanges, welded plugs, or caps manufactured in accordance with standards listed in <b>Table NCA-7100-1.</b> | No | Table reference revised |
| NE-3700 | Electrical and Mechanical Penetration Assemblies |   |  |    |                         |
| NE-3720 | Design Rules                                     | Same  | Same   | No |                         |