Comments

Line 40 Define ODOW

Line 135 The period for roation around the vertical axis is missing.

Figure 3. The mooring lines are almost not visible.

Line 147 Sandy mud is not similar to clay.

Line 149 The geotechnical terms are “normally consolidated clay” and “over consolidated clay”. Replace “lightly consolidated” with “lightly over consolidated”.

Line 187 “over consolidated”

Line 207 There appears to be a typing error in equation (8). To get equation (9) by integration of eq (8) there need to be + in front of k_d2.

Line 207 The consolidation coefficient Cv is the product of stiffness and permeability. By including the swelling index in eq (8) the stiffness effect on the hardening is cancelled out. The hardening will then only depend on permeability. This may be correct for some processes (like creep). For consolidation of excess pore pressure generated during cyclic loading of an anchor it is likely that the time development of excess pore pressure is governed by Cv for unloading since the flow of water is driven by the unloading of the soil outside the region with excess pore pressure. The equation should include either unloading stiffness and permeability or Cv for unloading. Not both Cv and kappa*.

Table 1 The values for the compressibility index and swelling index are unrealistic large and would apply for seabed mud at very small depth (down to 1 m). For clay at anchor installation depth the range is typically 0.08 – 0.15 for lambda*. The swelling index is usually about 20% of lambda*. Cv appears to be for compression. If Cv is to be applied for a process driven by the unloading stiffness, the values should be increased by the ratio lambda*/kappa*.

Line 224 Which conference papers?

Line 360 The short time to D=1 is probably due to the unrealistic large lambda*. The clay is too soft. Combined with too soft unloading stiffness causing the hardening to be to slow.

Line 377 Lambda* = 2.5 is close to the compressibility index for mud or slurry

Line 383 Should refer to Eq 8 and 9.

Line 404 Which colour is operational and idle?

Line 420 and foot note 9. Is m “number of peaks per year” or “ number of exceedances per year”?