

Summary of Decisions of the Structural Engineering Committee  
SEC 4/2008 held on 30.06.2008

(a) Case 4/2008

- Issue: Suction Can foundation design and test proposal.
- Recommendation: To accept the revised test method for in-situ tension test on a trial suction can (with reduced diameter) for verification of design shaft friction/cohesion.
- Decision: Taking the following into consideration, members endorsed the recommendations:
- (a) SEC Case 05/2007;
  - (b) a load-displacement curve will be obtained from the test for foundation design;
  - (c) ultimate shaft frictional resistance will be determined from the initial linear portion of the load-displacement curve subject to not more than 34 mm displacement of the trial suction can;
  - (d) pressure and displacement will be measured by pressure sensor, echo sounder and seabed reference sensor. Pressure and displacement readings will be taken every 30 seconds throughout the load increment. The reading frequency will be checked against wave change frequency;
  - (e) the curve should show a distinguished elastic portion and a plastic portion;
  - (f) the plastic portion of the curve should show that the load resistance of the foundation is maintained for a substantial portion before it begins to reduce;
  - (g) the proposed ultimate frictional resistance of the foundation will be based on the maximum load resistance in the elastic portion of the curve subject to not more than 34 mm displacement (i.e. any increase in load resistance in the plastic portion of the curve will be ignored); and
  - (h) the allowable design frictional resistance of the pile will be obtained by applying a factor of safety of 3 to the obtained ultimate frictional resistance of the foundation.