

Summary of Decisions of the Structural Engineering Committee  
SEC Meeting 5/2018 held on 18.7.2018

Case 22/2018

Issue: To accept a modified socketed steel H-pile formed by the welding of two steel plates to the flanges of a recognized steel H-pile

Recommendation: To accept a modified socketed steel H-pile formed by welding two 250mmx35mm Grade S450J0 steel plates to a recognized 305x305x223 kg/m Grade S450J0 steel H-pile socketed into rock as piling system (Modified Socketed Steel H-pile).

Decision: Having noted the background information, the clarifications made by the RSE and his consultant team, members endorsed the recommendations on a case-by-case basis subject to the following conditions:

- (i) The provision of grout pipes should be adequate and arranged in such a manner to ensure that the injected grout could fill every corner of the drilled holes readily; taking into full consideration of the free flowing of the grout could be seriously limited by the very small gaps between the steel pile sections and the rock;
- (ii) For the verification tests to confirm the mechanical and chemical properties of the steel material would not be adversely affected by the extensive welding works, the sampling and preparation of the test specimens should be carried out under the supervision of the RSE and the RC of their representatives either at factory or on site to ensure that the required test standards are complied with; and
- (iii) For the welding of stiffening steel plates to the steel H-pile, the welding procedures and preparation work proposed by the RSE in Appendix E according to BS EN 1993-1-10:2005 should be observed to control the occurrence of lamellar tearing during welding. For avoidance of hydrogen cracking, the welding procedures should also be in adherence to the recommendations given in Annex C of BS EN 1011-2:2001.