[0058]

(Calculation of shear strength)

The calculation of the shearing is performed as bellows.

7-1) An allowable shear strength or an ultimate shear strength is acquired on the basis of the RC standard or ACI 318. In addition, those may be acquired on the basis of standards applied to the corresponding country or region.

7-2) The minimum shear reinforcement ratio follows the rules of the applied design standard.

7-3) The shear force is calculated at the pedestal and a joint end point.

7-4) At a small gap of the pedestal, the shear friction strength for grout is reviewed.

[0059]

(Design of Joint)

Next, the joint (lap splice) of the pedestal portion is designed in accordance with the following sequences (a) to (c).

(a) A lap splice length Ld according to attachment is calculated.

(b) Next, it is checked that bending yield does not occur at the cross-section of the joint end point.

(c) Then, the required transverse reinforcement amount p_{wd} of the joint section is calculated.

[0060]

(a) Calculation of lap splice length L_d according to attachment

The required lap splice length L_d of the non-contact lap splice portion is calculated using the following Equations (18) to (23). In addition, please refer to Fig. 5 for symbols included in the equations

[0061]