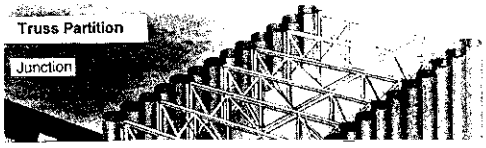
Static Behavior of Double Sheet-Pile Wall Structures with High Rigidity Partitions*

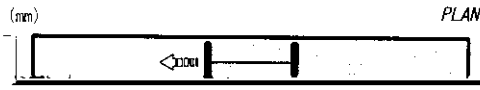
Synopsis:

New type double wall structures which have steel

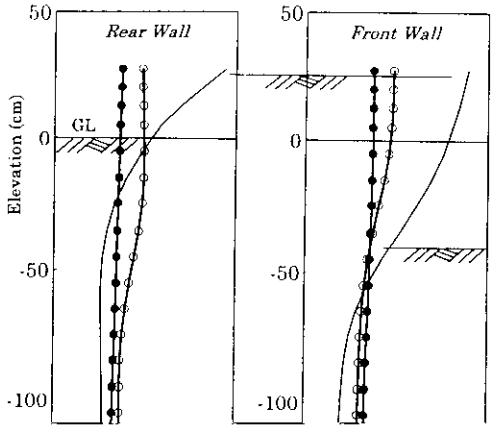
2 Concept of Double Sheet-Pile Wall Structures with High Rigidity Partitions

2.1 Conventional Measures to Increase Rigidity





depth based on an image of the earth pressure of back-fill. For the three-stage pressures, the loading points and



action of pressure seems to decrease.

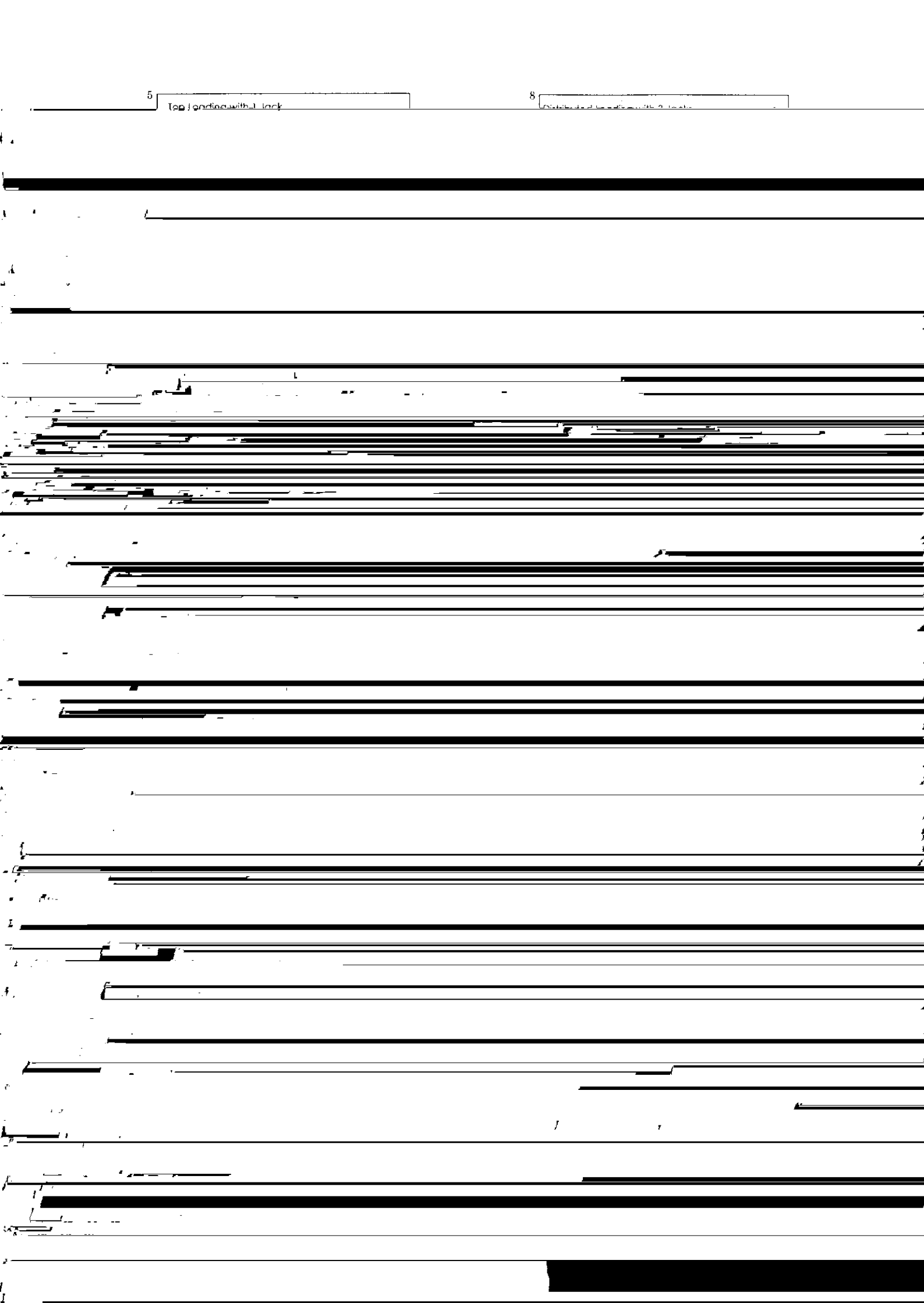
4.1.2 Difference in displacement behavior due to difference in type of structure

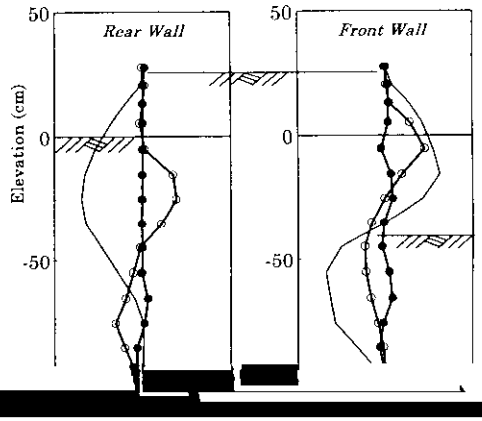
(1) Effect of Rigidity of Partitions

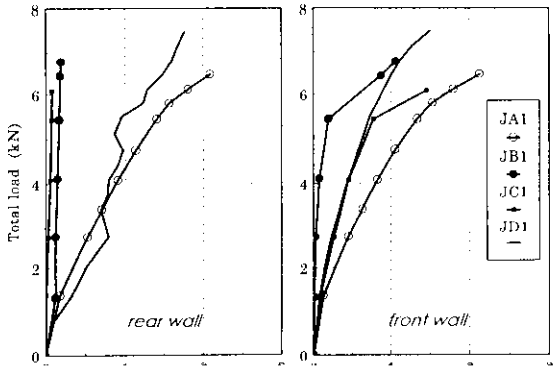
The displacement at the top changes depending on the rigidity of the partitions. That is to say, in the present tests the rigidity of the partitions increases in the order: no partition (Y), shear slip panel partition (J), panel partition (X), and rigid body (H), and the displacement at the top decreases accordingly.

(2) Effect of Depth of Partitions

The displacement is larger when truss partitions are


5
Top Loading with 1 lock
8


Rear Wall
Front Wall
Elevation (cm)
50
0
-50


Total load (kN)
rear wall
front wall
JA1
JB1
JC1
JD1

(2) In double sheet-pile wall structures, it is important for the sand-fill portion to have sufficient resistance to compression, tension and shearing. The loading

tions in the sand-fill portion.

References

1) M. Sawaguchi: "Lateral Behavior of a Double Sheet Pile Wall Structure", *Journal of the Japanese Society of Soil Mechanics*

2) K. Ohori, Y. Shoji, K. Takahashi, H. Ueda, M. Hara, Y. Kawai,