



Local buckling of pier box vertical plate owing to the lack of stiffeners - collapsed cantilever arm falling on the pier

It appears that the connection of plates were at the top flange plate (pier vertical plates and the bent up compression flange), the entire concentration of forces at the pier head was at the top which could not find a proper load path for getting transferred to the pier through the pier head, finally ruptured at collapse post formation of plastic hinges.

Splices remained intact

Compression flange plate of cantilever arm is bent up vertically (no weld appears at the interface with the pier face at this level). Perhaps welded with the top tension flange plate of pier cap

Vertical section of pier remained erect

Collapsed cantilever arm

Collapsed cantilever arm

01.04.2016 14:35