CLAIMS

[Claim 1]

A pile rapid loading testing device for confirmation of pile bearing power by applying an axial pushing force to a pile in such a way as to allow a weight to fall onto a pile head, the pile rapid loading testing device being characterized by having a weight-catching device for catching, in midair, said weight which has fallen onto said pile head and bounced, wherein said weight-catching device comprises a clamp case having a holder inscription hole whose inner circumferential surface forms a tapered surface that gradually decreases in diameter downwards, a movable body holder disposed above the clamp case and configured to fall and become inscribed in said holder inscription hole, and a permanent electromagnetic holder disposed above the movable body holder and configured to attract said movable body holder only when generating a magnetic force, and said movable body holder has a plurality of movable bodies which are pushed by the inner circumferential surface of said holder inscription hole at the same time as falling into said holder inscription hole, thereby being allowed to clamp a weight-catching rod extending from said weight.

[Claim 2]

The pile rapid loading testing device according to claim 1, wherein said movable bodies include balls or wedge-shaped pieces.

[Claim 3]

A pile rapid loading testing device for confirmation of pile bearing power by applying an axial pushing force to a pile in such a way as to allow a weight to fall onto a pile head, the pile rapid loading testing device being characterized by having a

weight-catching device for catching, in midair, said weight which has fallen onto said pile head and bounced, wherein said weight-catching device comprises hydraulic jack cylinders each vertically installed near said weight and configured to catch said weight in midair by a hydraulically-controlled extension/contraction piston rod, and a hydraulic system for controlling hydraulic pressures of the hydraulic jack cylinders, wherein the hydraulic pressures of said hydraulic jack cylinders are controlled such that both pushing-side and drawing back-side valves of hydraulic hoses connected to said hydraulic jack cylinders are kept opened during a period up to just before said weight falls onto said pile head and bounces, and also that both the pushing-side and drawing back-side valves of said hydraulic hoses are closed to fix the strokes of said hydraulic jack cylinders when said weight bounces off said pile head and reaches the maximum height.