[Claims]

Claim 1:
A walking control device for a legged mobile robot comprising a torso and a plurality of legs, each having at least one joint and connected to the torso via joints, the device comprising:
(a) a shock absorption mechanism connecting the joint of each leg to the distal end of the leg;
(b) a target gait generation means for generating a target posture of the robot;
(c) a detection means for measuring the floor reaction force acting on the robot and detecting the actual position of the Zero Moment Point (ZMP) as the point of application;
(d) a deviation calculation means for comparing the detected actual ZMP position with a target ZMP position and calculating the deviation therebetween; and
(e) a target posture correction means for correcting the target posture according to the calculated deviation,
wherein the target posture correction means causes the robot's joint displacements to follow the corrected target posture, and thereby generates stress through deformation of the shock absorption mechanism so as to reduce the calculated deviation.

Claim 2:
A walking control device for a legged mobile robot comprising a torso and a plurality of legs, each having at least one joint and connected to the torso via joints, the device comprising:
(a) a shock absorption mechanism connecting the joint of each leg to the distal end of the leg;
(b) a target gait generation means for generating a target posture of the robot;
(c) a floor reaction force moment detection means for detecting a floor reaction force moment about a predetermined reference point acting on the robot;
(d) a deviation calculation means for comparing the detected floor reaction force moment with a target floor reaction force moment and calculating the deviation therebetween; and
(e) a target posture correction means for correcting the target posture according to the calculated deviation,
wherein the target posture correction means causes the robot's joint displacements to follow the corrected target posture, and thereby generates stress through deformation of the shock absorption mechanism so as to reduce the calculated deviation.

Claim 3:
The walking control device for a legged mobile robot according to Claim 2, wherein the predetermined reference point is the target ZMP position.

Claim 4:
The walking control device for a legged mobile robot according to any one of Claims 1 to 3, further comprising:
(f) a detection means for detecting an inclination angle and/or an angular velocity of inclination of the torso; and
(g) an inclination deviation calculation means for comparing the detected inclination angle and/or angular velocity with a command value and calculating a second deviation,
wherein the target posture correction means corrects the target posture based on both the deviation calculated by the deviation calculation means and the second deviation calculated by the inclination deviation calculation means.