

ABSTRACT

A passive safety protective bellows structure for rolling stock, a rolling stock and a method, which solve the problem in the prior art that bellows structures fail to effectively buffer carriages against compression therebetween, and have the beneficial effects of effectively resisting to impact force and avoiding secondary collisions. The specific solution is as follows: the passive safety protective bellows structure for rolling stock comprises a capsule (2); the capsule (2) is mounted on rolling stock by means of a bellows mounting base (18); an empty chamber (1) is formed between the capsule (2) and the bellows mounting base (18); an air curtain (5) is provided in the empty chamber (1); the air curtain (5) is expandable; the air curtain (5) is supported by means of a plurality of fixing devices (3); the fixing devices (3) are arranged in the circumferential direction of the rolling stock; each fixing device (3) comprises a fixing base (14) mounted on the bellows mounting base (18); each side of each fixing base (14) is movably connected to a support member by means of a rotatable member (19); an elastic member (13) is provided between the rotatable member (19) on each side and the fixing base (14); the support members are connected to a fixing cover (7), with a space (20) formed therebetween to limit the air curtain (5) while supporting the air curtain (5).