CLAIMS

1. A railcar collision energy absorbing device comprising:

an energy absorbing element crushed in collision;

a casing extending in a car longitudinal direction so as to accommodate the energy absorbing element, the casing being constituted by a plurality of tubular bodies, the casing being configured to telescopically contract in the collision by breaking of a coupling portion between the tubular bodies, and overlapping portions of the tubular bodies being coupled to each other;

a base plate attached to a main structure of the railcar, one end of the casing being fixed to the base plate; and

a top plate provided such that the energy absorbing element is sandwiched between the top plate and the base plate,

an end surface of the energy absorbing element being attached to at least one of the base plate and the top plate by an adhesive.

2. The railcar collision energy absorbing device according to claim 1, wherein the plurality of tubular bodies comprise three or more tubular bodies.

3. The railcar collision energy absorbing device according to claim 1 or 2, wherein the energy absorbing element is a roll member formed by rolling up a hollow sheet around a central axis extending in the car longitudinal direction, the hollow sheet being formed by stacking a flat plate and a corrugated plate on each other.

4. The railcar collision energy absorbing device according to claim 3, wherein both end surfaces of the roll member are attached to the base plate and the top plate by an adhesive.

5. The railcar collision energy absorbing device according to claim 3 or 4, wherein:

the roll member includes a through hole located at a center of the roll member;

the base plate includes a guide fitted in the through hole; and

the top plate includes a guide fitted in the through hole.

6. The railcar collision energy absorbing device according to claim 3, wherein:

the roll member includes a through hole located at a center of the roll member; and

the roll member is tied to the top plate and the base plate by a wire inserted into the through hole.

7. The railcar collision energy absorbing device according to any one of claims 1 to 6, wherein the energy absorbing element is crushed in advance by a predetermined amount.

8. A railcar comprising the railcar collision energy absorbing device according to any one of claims 1 to 7.