PATENT CLAIM

1. A device to be installed in pipes, that eliminates internal corrosion in the welded joints because it prevents the damage of the welding heat to the inner coating of said pipes by dissipating it naturally and spontaneously, that includes a first part (1) which is assembled to a second part (2) producing a confined space (51) where both parts (1 and 2) are formed by two concentric rings, an inner ring (4, 21) of the same diameter as the pipe (38), and an outer ring (3, 20) with the rings joined together by a solid steel mantle (5, 22); the inner ring (4) has a cavity (8) where the guide wedge (29) of the inner ring (21) is assembled and at the bottom of the cavity (8) of the first part (1) there is a concavity (9) to accommodate a fluor elastomer ring (45) and at the end of the guide wedge (29) of the second part (2) there is a concavity (30) confining said ring of fluor elastomer (45) to the concavity (9), and the inner area of the contact surfaces (39) between the inner rings (4, 21) are protected with a highly adhesive epoxy seal, and by the type of assembly (52) of parts (1 and 2), a separation of 2 to 3 millimeters (46) is achieved between the outer rings (3, 20) where the welded joint (44) is done, CHARACTERIZED in that the width (10, 23) of the solid steel mantle (5, 22) that separates the inner and outer rings of both parts (1 and 2) is at least 50 mm and the thickness (14, 24) of this solid steel mantle (5,22) as well as the thickness of the assembly area (52) between the cavity (8) of part (1) and the guide wedge (29) of part (2) is at least twice the thickness of the pipe (40, 41).
2. A device according to claim 1, CHARACTERIZED in that the inner ring (4) has a minimum width (12) corresponding to 30 millimeters plus twice the thickness of the pipe (40, 41) plus the width of the welding neck (18).

3. A Device according to claim 1, CHARACTERIZED in that the inner ring (21) has a minimum width (32) corresponding to the width of the guide wedge (29) plus 20 mm, plus twice the thickness of the pipe (40, 41) plus the width of the welding neck (26).

4. A device according to claim 1, CHARACTERIZED in that the outer rings (3 and 20) have a minimum outer diameter (11 and 33) equivalent to the inner diameter of the pipe (38) plus 100 millimeters, plus 6 times the pipe thickness (40, 41) and the minimum width (16 and 34) of these rings is at least 23.5 millimeters plus twice the thickness of the pipe (40, 41).

5. A device according to claim 1, CHARACTERIZED in that the ring of fluor elastomer (45) remains compressed between the concavity (9) of part (1) and the concavity (30) of part (2).

6. A device according to claim 1, CHARACTERIZED in that the contact area (39) of both faces of the inner rings (4, 21) where the epoxy seal is applied has a minimum separation of 0.5 millimeters with a maximum clearance of +/- 20% which prevents electrical contact between the faces forming the crevice (47), preventing crevice corrosion in the device.