CLAIMS

1. Method of manufacturing a leak tight electrical connection through the wall of a ceramic package of an image intensifying tube, the ceramic package being provided with a hole opening up on an internal surface of the package through a first orifice and on an outside surface of the package through a second orifice, characterised in that:

- the hole is metallised to obtain a via, by successively depositing a metallic bond layer, a diffusion barrier and a wetting agent layer;

- a portion of filler metal made of indium or a eutectic chosen from among AuSn, AuGe, AgSn, InSn is deposited on each of the first and second orifices;

- said portion of filler metal is melted, the molten filler metal closing off the via so as to make it leak tight.

2. Method of making a leak tight electrical connection though the wall of a ceramic package according to claim 1, characterised in that the bond layer is composed of a metal chosen from among tungsten, molybdenum, titanium and chromium.

3. Method of making a leak tight electrical connection though the wall of a ceramic package according to claim 1 or 2, characterised in that the diffusion barrier is made from a metal chosen from among nickel, chromium, a nickel-chromium alloy and platinum.

4. Method of making a leak tight electrical connection though the wall of a ceramic package according to any one of the preceding claims, characterised in that the wetting agent layer is made of gold or silver.

5. Method of making a leak tight electrical connection though the wall of a ceramic package according to any one of the preceding claims, characterised in that the AuSn eutectic is composed of 80% gold and 20% tin, the AuGe eutectic is composed of 88% gold and 12% germanium, the AgSn eutectic is composed of 96.5% tin and 3.5%

silver, the InSn eutectic is composed of 52% of indium and 48% tin, the percentages being by mass.

6. Image intensifier tube comprising a ceramic package forming the tube body, an entry window on the inside face of which is deposited a photocathode and closing the tube at a first end, an exit window on the internal face of which is deposited a phosphor screen, a micro-channel plate called MCP, located on a shoulder of the ceramic package, the ceramic package being provided with electrical connections passing through its wall and connecting electrodes of the MCP with external contact pins, characterised in that the electrical connections are made using the method in claim 1.

7. Image intensifier tube according to claim 6, characterised in that the ceramic package comprises a vertical annular stop on its top part, said stop being an integral part of the ceramic package, the inside face of the entry window resting on this stop when it is bonded on the package, said stop fixing a predetermined distance between the photocathode and the top face of the MCP.

8. Image intensifier tube according to claim 6 or 7, characterised in that the entry window and the exit window are bonded on the ceramic package using seals made of indium or a eutectic material chosen from among InSn with 52% indium and 48% tin, AuSn with 80% gold and 20% tin, AuGe with 88% gold and 12% germanium and AgSn with 96.5% tin and 3.5% silver, the percentages being by mass.

9. Image intensifier tube according to one of claims 6 to 8, characterised in that the ceramic package is made by injection moulding of ceramic particles followed by sintering.