Claims

[Claim 1] A method for manufacturing a lithium-ion secondary-battery case (1), comprising: bringing a cup component (2) and a cover component (3) into direct contact with each other; and integrating the cup component (2) and the cover component (3) through diffusion bonding, the cup component (2) being formed by deep drawing an austenitic stainless steel foil into a cup-like shape, having a flange (8) formed at a peripheral edge of an opening part thereof, and having a hole (6) for drawing out an electrode terminal formed at a vertical wall part (7), the cover component (3) being formed of a two-phase stainless steel foil having an austenite transformation start temperature A_{C1} in a temperature increase process at 650°C to 950°C and having an austenite and ferrite two-phase temperature range of 880°C and higher , the cover component (3) covering the opening part of the cup component (2), wherein

upon the diffusion bonding, a seam welder (11) is used, a bar-like electrode (11a) of a square shape in a cross section is arranged on the cup component (2) side and an electrode wheel (11b) of a disc-like shape is arranged on the cover component (3) side, and the diffusion bonding is proceeded while accompanied by grain boundary movement upon transformation of the two-phase stainless steel foil from a ferrite phase into an austenite phase within a heating temperature range of 880°C to 1080°C.