

ABSTRACT

PROCESS AND APPARATUS FOR VACUUM DISTILLATION OF HIGH-PURITY MAGNESIUM

A starting material (2) in the form of a magnesium-containing metal melt is present together with the upper region (32) of a condensation vessel (3) in the upper region (11) of a retort (1) heated by the external heating element (5), and the steam raised according to arrows (91), according to arrow (92), enters the upper region (32) of the condensation vessel (3) through the orifice (31) below the cover (4) which provides protection from unwanted ingress of contaminated magnesium melt, and is heated in the lower region (12) of the retort which is heated by a second heating element (51), below the line (8) corresponding to the melting point isotherm of magnesium to give the high-purity magnesium melt (21) in the lower region (33) of the condensation vessel (3). By opening a barrier unit (6), the interior of the retort (1) can be connected temporarily to the supply chamber (13), and also via a line (73) and a valve (72) to a vacuum pump (73), via a further line (74) to a pressure measuring instrument (75), and via a third line (76) via a valve (77) and a pressure and/or flow regulator (77) to an inert gas source (79).

(Figure 1)