

Title (en)  
MELTING FURNACE AND MELTING PROCESS

Title (de)  
SCHMELZOFEN UND SCHMELZVERFAHREN

Title (fr)  
FOUR DE FUSION ET PROCÉDÉ DE FUSION

Publication  
**EP 4065913 A1 20221005 (EN)**

Application  
**EP 20824682 A 20201210**

Priority  
• IT 201900023667 A 20191211  
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Abstract (en)  
[origin: WO2021116969A1] The invention relates to a melting furnace (2), in particular an electric arc furnace, for the production of steel or cast iron via melting metal loads (28), in particular of direct reduced iron and/or scrap (28), comprising: a bottom (4) and side walls (6) defining a vessel; a vault (8) which closes the vessel, forming a melting chamber which is protected from gas exchanges with the external environment, being adapted to be managed in overpressure or at atmospheric pressure; at least one inlet (49) for feeding the metal loads (28) to be melted and optionally with additives (31); a suction plant for removing gas (36,37), in particular CO, formed during the melting process; and at least one outlet (38a, 38b) for discharging slag (22) and/or molten metal material (24). A related melting process involves the use of the CO produced in the furnace for the recovery of the latent energy stored in the CO.

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