Abstract

Metal Casting

Metal casting apparatus (10) comprises a tungsten inert gas (TIG) hand torch (12), a graphite crucible (14) and a graphite mould (16). Energised by a high frequency alternating current by supply (30), the torch (12) produces a pulsating arc within an inert gas shield (22). The arc melts metal (28) in the crucible (14), and cleaning of the molten metal is achieved by superimposing a positive DC bias on the alternating current. Different metals may be alloyed, with homogeneity resulting from agitation and stirring the molten metal. The molten metal is poured into mould (16) through conduit (24) by opening tap rod (26).

Figure 1