

Title (en)  
APPARATUS FOR INJECTING GAS INTO A VESSEL

Title (de)  
VORRICHTUNG ZUM EINBRINGEN VON GAS IN EIN GEFÄSS

Title (fr)  
APPAREIL SERVANT A INJECTER DU GAZ DANS UN RECIPIENT

Publication  
**EP 1377689 A1 20040107 (EN)**

Application  
**EP 02717831 A 20020410**

Priority  
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• AU PR436901 A 20010411

Abstract (en)  
[origin: WO02083958A1] An injection lance (26) for injecting hot gas into a vessel includes an elongate gas flow duct (31) which receives hot gas from a gas inlet structure (32) and an elongate central tubular structure (33) which extends within gas flow duct (31) from its rear end to its forward end. Adjacent the forward end of duct (31), central structure (33) carries a series of flow directing vanes (34) for imparting swirl to the hot gas flow exiting the duct. The wall of duct (31) downstream from gas inlet (32) is internally water cooled by flow of water through annular passages (43,44). The cooling water also flows through the interior of a duct tip (36) at the forward end of duct (31). The front end of central structure (33) which carries the swirl vanes (34) is internally water cooled by cooling water supplied forwardly through a central water flow passage (52) from a water inlet (53) at the rear of the lance through to a nose (35) of the central structure. The cooling water returns back through the central structure via an annular water return passage (54) to a water outlet (55) at the rear end of the lance.

IPC 1-7  
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