

Title (en)  
LANCE FOR REPAIRING REFINING VESSEL

Publication  
**EP 0062986 B1 19850925 (EN)**

Application  
**EP 82301527 A 19820324**

Priority  
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Abstract (en)  
[origin: EP0062986A1] A spray lance (12) for repairing refractory linings of refining vessels such as steel making converters comprises multiple concentric tubes to form a passage (18) for repairing material such as powder refractory and carbon powder, a passage (19) for a combustible gas such as oxygen and passages (20, 21) for feeding and returning a cooling fluid. A plurality of nozzles (16) are provided on a cylindrical surface and a front end, each consisting of two concentric pipes (16a, 16b) communicating with the passages (18, 19) for the repairing material and the combustible gas, respectively, thereby enabling the lance (12) to repair wider areas of inner walls of furnaces. In addition, without providing a nozzle (16) at the front end of the lance (12), the passage (18) for the repairing material is closed at its front end to form a cleaning opening communicating the passage (19) for the combustible gas, through which the combustible gas is jetted against the bottom of the furnace to clean accumulated adhesives on the bottom.

IPC 1-7  
**C21C 5/44**; **F27D 1/16**

IPC 8 full level  
**C21C 5/44** (2006.01); **F27D 1/16** (2006.01)

CPC (source: EP)  
**C21C 5/443** (2013.01); **F27D 1/1652** (2013.01); **F27D 2001/1663** (2013.01)

Cited by  
ES2088725A2; CN114504938A; EP0277232A4; DE102007054949B4; JP2021000592A; EP4060270A1; FR3120937A1; US6186410B1

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