

The present invention concerns a lance composed of a top lance (1t) and of a sub lance (2) coupled to the top lance (1t), which forms a shoulder (1s) between the top lance and the sub lance. The sub lance (2) of the present invention is provided with a protective device (3) comprising a coupling end (2c) opening to the cavity (2v), wherein, • when at rest, the protective device (3) is in an initial configuration characterized by an outer maximum diameter (D3o) which is not more than 10 % larger than the diameter (D2) of sub lance (2) ($D3o \leq 1.1 D2$), • when the sub lance (2) is coupled to the lance the protective device (3) contacts the shoulder (1s) and is deformed into a deformed configuration, forming a surface impervious to molten metal and slag, which spans over a whole area of the shoulder (1s).