

Title (en)

MIXING DEVICE PROMOTING A HOMOGENEOUS DISTRIBUTION OF A DIPHASIC MIXTURE, HEAT EXCHANGE FACILITY AND ASSOCIATED MIXING METHOD

Title (de)

MISCHVORRICHTUNG ZUR FÖRDERUNG EINER HOMOGENEN VERTEILUNG EINER ZWEIPHASENMISCHUNG, WÄRMETAUSCHERINRICHTUNG UND ZUGEHÖRIGES MISCHVERFAHREN

Title (fr)

DISPOSITIF MÉLANGEUR FAVORISANT UNE DISTRIBUTION HOMOGÈNE D'UN MÉLANGE DIPHASIQUE, INSTALLATION D'ÉCHANGE DE CHALEUR ET PROCÉDÉ DE MÉLANGE ASSOCIÉ

Publication

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Application

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Abstract (en)

[origin: WO2021122115A1] The invention relates to a heat exchange assembly comprising a heat exchanger (1) having plates (2), a source of a first phase (61) of the first fluid (F1) fluidly connected to at least one first collector (30) of the heat exchanger (1), a source of a second phase (62) of the first fluid (F1) fluidly connected to at least one second collector (52) of the heat exchanger (1), a mixing device (3) for distributing a mixture of a first phase (61) and a second phase (62) of a first fluid (F1) generally in a longitudinal direction (z) into at least one passage (10) of a heat exchanger (1), the mixing device (3) comprising at least one lateral channel (31) configured for the flow of a first phase (61) of the first fluid (F1) from at least one first inlet (311), a series of longitudinal channels (32) extending in the longitudinal direction (z) and each being configured for the flow of a second phase (62) of the first fluid (F1) from a second inlet (321) to a second outlet (322), the longitudinal channels succeeding each other in a lateral direction (y) orthogonal to the longitudinal direction (z), and at least one opening (34) fluidly connecting the lateral channel (31) to at least one longitudinal channel (32) such that the mixing device (3) is configured to distribute a mixture of the first phase (61) and the second phase (62) via the second outlet (322) of the at least one longitudinal channel (32). According to the invention, the at least one longitudinal channel (32) is divided, in the longitudinal direction (z), into at least one upstream portion (323) and one downstream portion (324), each having a length (L3, L4) measured in the longitudinal direction (z) and a width (D3, Dy) measured in the lateral direction (y), the downstream portion (324) being arranged between the upstream portion (323) and the second outlet (322), the downstream portion (324) having, at any point along its length (L4), a width (Dy) greater than the width (D3) of the upstream portion (323).

IPC 8 full level

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