

Title (en)
Heat exchanger for a dyeing machine

Title (de)
Wärmetauscher für eine Färbemaschine

Title (fr)
Echangeur de chaleur pour une machine de teinture

Publication
EP 1418265 A3 20050511 (EN)

Application
EP 03024903 A 20031028

Priority
CN 02261078 U 20021029

Abstract (en)
[origin: EP1418265A2] A heat exchanging apparatus for increasing/decreasing dye temperature of a gas-liquid dyeing machine, including a heat exchanger (10) installed between the inlet (31) and outlet (32) of the dye-circulating pipe (30) of the dyeing machine (20). At least one partitioning layer (11) is disposed in an interior of the heat exchanger (10) to partition the interior into a gas flowing space (13) and a dye flowing space (12). The dye flowing space (12) has a dye inlet (121) and a dye outlet (122) which are respectively connected to the dye outlet (32) and dye inlet (31) of the dyeing machine (20). The gas flowing space (13) has a gas inlet (131) and a gas outlet (132). The gas inlet (131) is connected to a cold air source (40) and a steam source (50). The gas outlet (132) is connected to a water condenser (60). Multiple tubular vacuum thermally conductive elements (14) are inserted on the partitioning layer (11). Each thermally conductive element (14) has two ends which respectively extend into the gas flowing space (13) and the dye flowing space (12). By means of the high efficiency heat exchange of the vacuum thermally conductive elements (14), the temperature of the circulated dye can be quickly increased/decreased and more stably controlled. <IMAGE>

IPC 1-7
D06B 23/22; **F28D 15/02**

IPC 8 full level
D06B 23/22 (2006.01); **F28D 15/02** (2006.01); **F28F 3/02** (2006.01)

CPC (source: EP)
D06B 23/22 (2013.01); **F28D 15/0275** (2013.01); **F28F 3/022** (2013.01)

Citation (search report)
• [X] GB 2013863 A 19790815 - STEIN SURFACE
• [X] GB 2024401 A 19800109 - FUNKE WAERME APPARATE KG
• [A] CH 593470 A5 19771130 - SCHULTHESS AD MASCHINENFABRIK
• [A] CH 589742 B5 19770715 - SCHULTHESS AD MASCHINENFABRIK
• [A] FR 2259932 A1 19750829 - BRUECKNER APPARATEBAU GMBH [DE]

Cited by
EP3216906A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR

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EP 1418265 A2 20040512; **EP 1418265 A3 20050511**

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