

Title (en)
Heat insulating composite profile

Title (de)
Wärmegeädämmtes Verbundprofil

Title (fr)
Profilé composite thermiquement isolant

Publication
EP 0927808 A3 20010411 (DE)

Application
EP 99106735 A 19960905

Priority
• DE 19532772 A 19950905
• EP 96937182 A 19960905

Abstract (en)
[origin: WO9709504A1] The invention concerns a heat-insulated composite profiled section comprising an insulation web (6) having two substantially parallel delimiting walls (6.1, 6.2) which form a cavity therebetween. The delimiting walls (6.1, 6.2) can be interconnected by at least one transverse web (10). From an initial wall thickness $s = 0.5$ mm and a heat conductivity $\lambda = 0.35$ W/mK of the delimiting walls (6.1, 6.2), the width (D) of the insulation web is set at 20 mm in order to achieve thermal insulation of the insulation web in the range of from $0.15 \text{ m}^2\text{K/W}$ to $0.30 \text{ m}^2\text{K/W}$, 30 mm for thermal insulation in the range of from $0.25 \text{ m}^2\text{K/W}$ to $0.50 \text{ m}^2\text{K/W}$, 40 mm for thermal insulation in the range of from $0.35 \text{ m}^2\text{K/W}$ to $0.65 \text{ m}^2\text{K/W}$, and 50 mm for thermal insulation in the range of from $0.40 \text{ m}^2\text{K/W}$ to $0.80 \text{ m}^2\text{K/W}$. Therefore, the width (d) of the cavity or hollow chamber is less than or equal to the width (D) of the insulation web and greater than or equal to one third of the width (D) of the insulation web, provided the height of the cavity or hollow chamber (11) is less than or equal to 5 mm. If the height of the cavity or hollow chamber is between 5 mm and 20 mm and at least one transverse web (10) is present, the ratio of height (h) to width (d) is greater than or equal to 0.2 and less than or equal to 5. For a variation in the wall thickness (s) of between 0.25 mm and 1.0 mm, a dependency of the thermal insulation on the wall thickness (s) according to the relation: $R(s) = R(s=0.25 \text{ mm}) + (s - 0.25)/0.25 \cdot \Delta R$, with the value of ΔR ranging from 0.025 to 0.05, has to be taken into account. Increasing the heat conductivity of the delimiting walls (6.1, 6.2) by 10 % in the range of from 0.15 W/mK to 0.40 W/mK reduces the thermal insulation by between 2 and 4 %, which is to be taken into account accordingly for the dimensions initially selected.

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Citation (search report)
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• [A] DE 3202352 A1 19830811 - HARTMANN & CO W [DE]
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WO 9709504 A1 19970313; AT E186967 T1 19991215; AT E232936 T1 20030315; CA 2231102 A1 19970313; CZ 65998 A3 19980715; DE 59603733 D1 19991230; DE 59610159 D1 20030327; DK 0927808 T3 20030519; EP 0848781 A1 19980624; EP 0848781 B1 19991124; EP 0927808 A2 19990707; EP 0927808 A3 20010411; EP 0927808 B1 20030219; JP H11512158 A 19991019; NO 309782 B1 20010326; NO 980935 D0 19980304; NO 980935 L 19980427; PL 181284 B1 20010731; PL 325156 A1 19980706

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