Claims

1. A method for obtaining, by additive manufacturing, a construction element (1) comprising at least one structural element (2) and at least one insulating element (3, 4), wherein a dry mortar is mixed with mixing water so as to form a basic wet mortar, said basic wet mortar is transported to a printing head (28), and stacked layers of mortar (11, 12) are successively deposited by moving said printing head (28) so as to form said at least one structural element (2) and said at least one insulating element (3, 4), said method being such that, before depositing the layers of mortar belonging to an insulating element (3, 4), an aqueous foam is additionally added to said basic wet mortar during the transport of said basic wet mortar to the printing head (28).

2. The method according to claim 1, wherein the construction element (1) is a wall or a wall element.

3. The method according to one of the preceding claims, wherein the density after hardening of the layers of mortar belonging to the structural element (2) is at least 2000 kg/m^3, particularly at least 2100 kg/m^3.

4. The method according to one of the preceding claims, wherein the density after hardening of the layers of mortar belonging to the at least one insulating element (3, 4) is at most 1500 kg/m^3.

5. The method according to claim 4, such that the construction element (1) comprises an insulating element (3) the density whereof after hardening is at most 100 kg/m^3.

6. The method according to claim 4, such that the construction element (1) comprises an insulating element (4) the density whereof after hardening is between 700 and 1500 kg/m^3, particularly between 800 and 1200 kg/m^3.

7. The method according to one of the preceding claims, wherein the construction element (1) comprises a structural element (2), a first insulating element (3) and a second insulating element (4), the second insulating element (4) having a density greater than that of the first insulating element (3), the quantity of aqueous foam added to the basic wet mortar when the first insulating element (3) is obtained being greater than the quantity of aqueous foam added to the basic wet mortar when the second insulating element (4) is obtained.

8. The method according to the preceding claim, wherein the density after hardening of the mortar layers belonging to the first insulating element (3) is at most 100 kg/m^3 and the density after hardening of the mortar layers belonging to the second insulating element (4) is between 700 and 1500 kg/m^3.

9. The method according to one of the preceding claims, wherein the structural elements (2) and the insulating elements (3, 4) are formed sequentially.

10. The method according to one of claims 1 to 8, wherein the structural elements (2) and the insulating elements (3, 4) are formed simultaneously.

11. The method according to one of the preceding claims, wherein the quantity of aqueous foam relative to the quantity of basic wet mortar is adjusted automatically.

12. The method according to one of the preceding claims, wherein the dry mortar comprises at least one hydraulic binder, in particular chosen from Portland cements, aluminous cements, sulfoaluminate cements, hydrated lime, ground granulated blast furnace slag, fly ash and mixtures thereof.

13. The method according to one of the preceding claims, wherein the

mixing of the aqueous foam and the basic wet mortar is done using a static mixer (27).