

Claims

1. Fire resistant lightweight cladding comprising thin sheet material having an outer layer which is predominantly steel and a thicker inner layer which is predominantly aluminium, the inner layer being a supporting layer and the sheet material being formed into a panel of predetermined outline.
2. Fire resistant lightweight cladding according to claim 1, the panel having attachment means provided for the purpose of anchoring the panel to a substrate.
3. Fire resistant lightweight cladding according to claim 1 or claim 2 when used in a fire-resistant wall panel assembly suitable for wall cladding and comprising a substrate supporting outer panels in side by side relation, each panel having a said cladding sheet being a composite of a relatively thin steel layer and a relatively thick aluminium layer, the steel layer being outside the aluminium layer, the relative dimensions of the layers and the overall panel thickness being so made and arranged that, the assembly, corresponding to said cladding sheets in a test specimen, under a fire test of the specimen of said sheets in a wall panel assembly, according British Standard BS 8414-2 2015 (amdt 1) as modified by Australian 5113-2016 (amdt 1), the specimen passes the classification criteria 5.4.5(b) for temperature reached behind the cladding.
4. A fire-resistant cladding according to claim 1 or claim 2 wherein the steel layer is about .4mm thick and the aluminium layer is about 2mm thick.
5. A fire-resistant cladding according to claim 1 or claim 2 or claim 3 wherein cladding sheet density ranges from 6kg/m² to 9kg/m².
6. A fire-resistant wall panel assembly according to claim 3 wherein each panel has a lower edge formed behind the sheet and extending toward the substrate, the panels being so made and arranged that, the assembly, corresponding to said panels under said fire test, the specimen passes the classification criteria 5.4.5(g).

7. A fire-resistant cladding according to any one of claims 1, 2, 3 or 4 wherein the panel has a folded edge formation with a terminal edge of the sheet concealed inside the folded edge formation.

8. A fire-resistant cladding according to claim 7 wherein the panel has an open box form with the folded edge formation being an upstanding surrounding flange, the terminal edge being located inside the flange.

9. A fire-resistant cladding according to any one of claims 1, 2, 3, 4 or 6 wherein the panel has an open box form with the folded edge formation being an upstanding surrounding flange, the flange having spaced openings used to anchor the panel to a substrate.

10. A fire-resistant wall panel assembly according to any one of claims 8-10 wherein the folded edge formation is a double fold.

11. In a fire-resistant cladding panel as claimed in use in claim 3 or claim 6, the composite sheet having a sheet density ranging from 6kg/m^2 to 9kg/m^2 , the thin steel layer, the thicker aluminium layer, being pre formed then folded to provide a folded edge formation with a terminal edge of the sheet concealed inside the folded edge formation to protect the terminal edge.

12. A panel according to claim 11 wherein the steel layer is about .4mm thick, the aluminium layer is about 2mm thick.

13. A panel according to claim 11 or 12 wherein the panel has an open box form with the folded edge formation being an upstanding surrounding flange, the terminal edge being located inside the flange.

14. A panel according to claim 11 or 12 wherein the panel has an open box form with the folded edge formation being an upstanding surrounding flange, the flange having spaced panel attachment means used to anchor the panel to a substrate.

15. A method for forming a panel as set out in any one of claims 1-14, the method comprising:
- a. providing a rectangular sheet of predetermined external dimensions having respective marginal edge sections terminating in respective terminal edges of the sheet ;
 - b. cutting corners from the sheet;
 - c. pressing fold lines in the marginal edge sections;
 - d. folding the marginal edge sections about the fold lines to form a double fold folded edge formation, with the terminal edges concealed inside the flange.
16. A method according to claim 15 including the further step of cutting spaced slots between the fold lines before performing step d.
17. A method according to claim 15 including, in no particular order, but before step d. the further steps of, cutting spaced slots at a position set to be between the fold lines and cutting the terminal edges with cutouts aligned with the position of said slots.
18. A method according to claim 15 including the further step of providing spaced slots in said fange.
19. Sheet material when used in any one of claims 1-18, said steel layer being Zinccanneal or equivalent.