CLAIMS

1. A solar-control glazing comprising on at least one of the faces of a glass substrate a layer system comprising at least one solar radiation absorbing layer and dielectric layers surrounding said solar radiation absorbing layer, characterized in that the solar radiation absorbing layer is a metallic layer based on tungsten alloyed with at least nickel, the layer system comprising, between the substrate and the solar radiation absorbing layer, at least one layer made of a dielectric material based on a compound selected from silicon oxide, aluminum oxide, silicon nitride, aluminum nitride, mixed aluminum-silicon nitrides, silicon oxynitride and aluminum oxynitride and, over the solar radiation absorbing layer, at least one layer made of a dielectric material based on a compound selected from silicon oxide, aluminum oxide, silicon nitride, aluminum nitride, mixed aluminum-silicon nitrides, silicon oxynitride and aluminum oxynitride.

2. The glazing as claimed in claim 1, such that the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel also comprises at least one additional metal selected from Ti, Nb, Zr, Ta and Cr.

3. The glazing as claimed in claim 2, such that the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel comprises Cr.

4. The glazing as claimed in any one of the preceding claims, such that the solar radiation absorbing metallic layer comprises from 50% to 90% by weight of tungsten, and nickel and chromium in a nickel/chromium weight ratio of between 100/0 and 50/50, preferentially 80/20.

5. The glazing as claimed in any one of the preceding claims, such that the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel has a geometrical thickness of at least 2 nm, preferentially of at least 3 nm and of not more than 30 nm, preferentially of at least 3 nm and of not

more than 25 nm.

6. The glazing as claimed in claim 5, such that the metallic layer based on tungsten alloyed with at least nickel has a geometrical thickness of at least 5 nm and preferably of at least 6 nm.

7. The glazing as claimed in any one of the preceding claims, such that the layer of dielectric material between the substrate and the solar radiation absorbing layer based on tungsten alloyed with at least nickel has an optical thickness of at least 10 nm and of not more than 200 nm, preferentially of at least 40 nm and of not more than 180 nm.

8. The glazing as claimed in any one of the preceding claims, such that the layer of dielectric material located over the solar radiation absorbing layer based on tungsten alloyed with at least nickel has an optical thickness of at least 20 nm and of not more than 200 nm.

9. The glazing as claimed in any one of the preceding claims, such that the layer system comprises at least two solar radiation absorbing layers.

10. The glazing as claimed in any one of the preceding claims, such that the layer system comprises at least one additional silver-based metallic layer such that the or each silver-based layer is surrounded by a dielectric coating.

11. The glazing as claimed in claim 10, such that at least one of the dielectric coatings comprises at least two dielectric layers and the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel is inserted between these two dielectric layers of this dielectric coating.

12. The glazing as claimed in claim 11, such that the two said dielectric layers sandwiching the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel are based on silicon nitride or aluminum nitride.

13. The glazing as claimed in claim 10, such that the additional silver-based metallic layer is located in the stack directly over and/or under the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel.

14. The glazing as claimed in any one of claims 10 to 13, such that the additional silver-based metallic layer(s) have a thickness of at least 9 nm, preferentially of at least 13 nm and of not more than 23 nm, more preferentially of at least 15 nm and of not more than 22 nm.

15. The glazing as claimed in any one of claims 10 to 14, such that the solar radiation absorbing metallic layer has a geometrical thickness of between 0.5 and 8 nm and preferably between 0.5 and 5 nm.

16. The glazing as claimed in any one of the preceding claims, in which the colorimetric variation in transmission, ΔE^*_{TL}, is less than 8, preferentially less than 5, more preferentially less than 3, when said glazing is subjected to a temperature of at least 630°C and of not more than 670°C for 7 minutes.

17. The glazing as claimed in any one of the preceding claims, in which the colorimetric variation in glass-side reflection, ΔE^*_{Rg}, is less than 8, preferentially less than 5, more preferentially less than 3, when said glazing is subjected to a temperature of at least 630°C and of not more than 670°C for 7 minutes.

18. The glazing as claimed in any one of the preceding claims, in which the colorimetric variation in layer-side reflection, ΔE^*_{Rl}, is less than 8, preferentially less than 5, more preferentially less than 3, when said glazing is subjected to a temperature of at least 630°C and of not more than 670°C for 7 minutes.

19. The glazing as claimed in any one of the preceding claims, in

which the thickness of the solar radiation absorbing metallic layer is chosen so that the light transmission for a substrate consisting of clear glass 4 mm thick is at least equal to 2% and not more than 75%.

20. The glazing as claimed in any one of the preceding claims, in which the optical thickness of the dielectric layers is chosen so that the layer-side reflection is at least 1% and not more than 40%.

21. The glazing as claimed in any one of the preceding claims, characterized in that the substrate-side measured light reflection is at least 27%, preferably at least 30% and advantageously at least 35%.

22. The glazing as claimed in any one of the preceding claims, characterized in that the light reflection measured on the substrate side is at least 2 times, preferably at least 2.5 times and advantageously at least 3 times greater than the light reflection measured on the layer-system side.

23. The glazing as claimed in claim 12, characterized in that the layer system comprises the following succession: layer of silicon nitride or of aluminum nitride/solar radiation absorbing layer/layer of silicon nitride or of aluminum nitride/layer of intercalating transparent oxide based on Zn, Sn, Ti or Zr oxide, or a mixture thereof, different from the wetting layer/wetting layer based on zinc oxide/additional silver-based metallic layer.

24. The glazing as claimed in claim 23, characterized in that the solar radiation absorbing metallic layer has a geometrical thickness of between 0.5 and 8 nm and preferably between 0.5 and 5 nm.

25. The glazing as claimed in either of claims 23 and 24, characterized in that the intercalating transparent oxide is a mixed zinc-tin oxide or a mixed titanium-zirconium oxide, preferably a mixed zinc-tin oxide containing at least 20% tin and 10% zinc.

26. The use of a solar-control glazing as claimed in any one of the

preceding claims, as a glazed element of a motor vehicle, as a glazing element of buildings or as a glazed element of a household electrical appliance such as an oven door.

CLAIMS

1. A solar-control glazing comprising on at least one of the faces of a glass substrate a layer system comprising at least one solar radiation absorbing layer and dielectric layers surrounding said solar radiation absorbing layer, characterized in that the solar radiation absorbing layer is a metallic layer based on tungsten alloyed with at least nickel, the layer system comprising, between the substrate and the solar radiation absorbing layer, at least one layer made of a dielectric material based on a compound selected from silicon oxide, aluminum oxide, silicon nitride, aluminum nitride, mixed aluminum-silicon nitrides, silicon oxynitride and aluminum oxynitride, and, over the solar radiation absorbing layer, at least one layer made of a dielectric material based on a compound selected from silicon oxide, aluminum oxide, silicon nitride, aluminum nitride, mixed aluminum-silicon nitrides, silicon oxynitride and aluminum oxynitride.

2. The glazing as claimed in claim 1, such that the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel also comprises at least one additional metal selected from Ti, Nb, Zr, Ta and Cr.

3. The glazing as claimed in claim 2, such that the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel comprises Cr.

4. The glazing as claimed in any one of the preceding claims, such that the solar radiation absorbing metallic layer comprises from 50% to 90% by weight of tungsten, and nickel and chromium in a nickel/chromium weight ratio of between 100/0 and 50/50, preferentially 80/20.

5. The glazing as claimed in any one of the preceding claims, such that the layer of dielectric material between the substrate and the solar radiation absorbing layer based on tungsten alloyed with at least nickel has an optical thickness of at least 10 nm and of not more than 200 nm, preferentially of at least 40 nm and of not more than 180 nm.

6. The glazing as claimed in any one of the preceding claims, such that the layer of dielectric material located over the solar radiation absorbing layer based on tungsten alloyed with at least nickel has an optical thickness of at least 20 nm and of not more than 200 nm.

7. The glazing as claimed in any one of the preceding claims, such that the layer system comprises at least two solar radiation absorbing layers.

8. The glazing as claimed in any one of the preceding claims, such that the layer system comprises at least one additional silver-based metallic layer such that the or each silver-based layer is surrounded by a dielectric coating.

9. The glazing as claimed in claim 8, such that at least one of the dielectric coatings comprises at least two dielectric layers and the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel is inserted between these two dielectric layers of this dielectric coating.

10. The glazing as claimed in claim 9, such that the two said dielectric layers sandwiching the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel are based on silicon nitride or aluminum nitride.

11. The glazing as claimed in claim 8, such that the additional silver-based metallic layer is located in the stack directly over and/or under the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel.

12. The glazing as claimed in claim 11, such that the stack comprises the following successive layers: silicon nitride or aluminum nitride layer / solar radiation absorbing metallic layer / silver-based metallic layer / solar radiation absorbing metallic layer / silicon nitride or aluminum nitride layer.

13. The glazing as claimed in claim 8, such that the layer system comprises two silver-based metallic layers, each silver-based metallic layer being situated directly under or above the solar radiation absorbing metallic layer, said absorbing metallic layer comprising tungsten and at least nickel.

14. The glazing as claimed in claim 13, such that the stack comprises the following successive layers: silicon nitride or aluminum nitride layer / solar radiation absorbing metallic layer / silver-based metallic layer / solar radiation absorbing metallic layer / silicon nitride or aluminum nitride layer / solar radiation absorbing metallic layer / silver-based metallic layer / solar radiation absorbing metallic layer / silicon nitride or aluminum nitride layer.

15. The glazing as claimed in any one of claims 8 to 14, such that the additional silver-based metallic layer(s) have a thickness of at least 9 nm, preferentially of at least 13 nm and of not more than 23 nm, more preferentially of at least 15 nm and of not more than 22 nm.

16. The glazing as claimed in any one of claims 8 to 15, such that the solar radiation absorbing metallic layer has a geometrical thickness of between 0.5 and 8 nm and preferably between 0.5 and 5 nm.

17. The glazing as claimed in any one of the preceding claims, in which the colorimetric variation in transmission, ΔE^*_{TL}, is less than 8, preferentially less than 5, more preferentially less than 3, when said glazing is subjected to a temperature of at least 630°C and of not more than 670°C for 7 minutes.

18. The glazing as claimed in any one of the preceding claims, in which the colorimetric variation in glass-side reflection, ΔE^*_{Rg}, is less than 8, preferentially less than 5, more preferentially less than 3, when said glazing is subjected to a temperature of at least 630°C and of not more than 670°C for 7 minutes.

19. The glazing as claimed in any one of the preceding claims, in which the colorimetric variation in layer-side reflection, ΔE^*_{Rl}, is less than 8, preferentially less than 5, more preferentially less than 3, when said glazing is subjected to a temperature of at least 630°C and of not more than 670°C for 7 minutes.

20. The glazing as claimed in any one of the preceding claims, in which the thickness of the solar radiation absorbing metallic layer is chosen so that the light transmission for a substrate consisting of clear glass 4 mm thick is at least equal to 2% and not more than 75%.

21. The glazing as claimed in any one of the preceding claims, in which the optical thickness of the dielectric layers is chosen so that the layer-side reflection is at least 1% and not more than 40%.

22. The glazing as claimed in any one of the preceding claims, characterized in that the substrate-side measured light reflection is at least 27%, preferably at least 30% and advantageously at least 35%.

23. The glazing as claimed in any one of the preceding claims, characterized in that the light reflection measured on the substrate side is at least 2 times, preferably at least 2.5 times and advantageously at least 3 times greater than the light reflection measured on the layer-system side.

24. The glazing as claimed in claim 10, characterized in that the layer system

comprises the following succession: layer of silicon nitride or of aluminum nitride/solar radiation absorbing layer/layer of silicon nitride or of aluminum nitride/layer of intercalating transparent oxide based on Zn, Sn, Ti or Zr oxide, or a mixture thereof, different from the wetting layer/wetting layer based on zinc oxide/additional silver-based metallic layer.

25. The glazing as claimed in claim 24, characterized in that the solar radiation absorbing metallic layer has a geometrical thickness of between 0.5 and 8 nm and preferably between 0.5 and 5 nm.

26. The glazing as claimed in either of claims 24 and 25, characterized in that the intercalating transparent oxide is a mixed zinc-tin oxide or a mixed titanium-zirconium oxide, preferably a mixed zinc-tin oxide containing at least 20% tin and 10% zinc.

27. The glazing as claimed in any one of the preceding claims, such that the solar radiation absorbing metallic layer based on tungsten alloyed with at least nickel has a geometrical thickness of at least 2 nm, preferentially of at least 3 nm and of not more than 30 nm, preferentially of at least 3 nm and of not more than 25 nm.

28. The glazing as claimed in claim 5, such that the metallic layer based on tungsten alloyed with at least nickel has a geometrical thickness of at least 5 nm and preferably of at least 6 nm.

29. The use of a solar-control glazing as claimed in any one of the preceding claims, as a glazed element of a motor vehicle, as a glazing element of buildings or as a glazed element of a household electrical appliance such as an oven door.