CLAIMS

1. Austenitic stainless steel with improved heat resistant and corrosion resistance, characterized in that the steel contains in weight %

Carbon	0.03 - 0.20
Chromium	20.00 – 26.00
Nickel	19.00 – 22.00
Silicon	0.50 – 2.50
Maganese	0.50 - 2.00
Nitrogen	0.10 – 0.40
Sulphur	<0.015
Phosphous	<0.040
Rare earth metals, mainly cerium and lanthanum	0.03 – 0.08

and the rest being iron (Fe) and inevitable impurities.

2. The austenitic stainless steel according to claim 1, wherein the carbon content is at least 0.05 but not more than 0.10 w%.

3. The austenitic stainless steel according to claim 1 and 2, wherein the silicon content is at least 1.20 but not more than 2.50 w%.

4. The austenitic stainless steel according to any of claims 1 to 3, wherein the nitrogen content is at least 0.12 but not more than 0.20 w%.

5. The austenitic stainless steel according to any of the preceding claims, wherein the chromium content is at least 24.0 but not more than 26.0 w%.

6. The austenitic stainless steel according to any of the preceding claims, wherein nitrogen, carbon and rare earth metal (REM) contents satisfy the relationship: $0.40\% \leq N + 3xC + 3xREM \leq 0.60\%$.

7. The austenitic stainless steel according to any of the preceding claims, wherein the manganese content is at least 0.50 but not more than 2.00 w%.

8. The austenitic stainless steel according to any of the preceding claims, wherein the sulphur and phosphorus content is not more than 0.010% and 0.040%, respectively.

9. The austenitic stainless steel according to any of the preceding claims, comprising one or more of the inevitable impurities contains in weight %

trace amounts V ≤ 0.20%
trace amounts Co ≤ 0.60%
trace amounts Sn ≤0.05%
trace amounts As ≤0.05%
trace amounts W ≤0.40%
trace amounts B ≤0.0050%
trace amounts Nb ≤ 0.060%
trace amounts Cu ≤ 0.50%
trace amounts Zr ≤ 0.1%.

10. An object comprising the stainless steel according to any of claims 1 to 9.

11. Use of the stainless steel according to any of claims 1 to 9 in the formation of an object according to claim 10.

12. The use according to claim 11, wherein the object is selected from the group consisting of plate, sheet, strip, tube, pipe, bar and wire.

13. Use of an object comprising the austenitic stainless steel according to the claims 1-9 in applications relating to heat treatment applications.

14. Use of an object according to claim 10 in aggressive high temperature environments with a temperature ranged from 1000°C to 1200°C.