

Intermediate Strength Alloys for High Temperature Service in Liquid-Salt Cooled Energy Systems

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Technology Summary

The present invention comprises new high temperature alloys that can be used in contact with liquid fluorides. These alloys have significantly improved creep resistance when compared to existing alloys such as Alloy N at temperatures up to 850 °C combined with good resistance to corrosion by liquid fluoride salts. These alloys have yield strengths typically greater than that of alloys primarily strengthened by solid solution strengthening such as Alloy N. These alloys can be applied to the design and fabrication of several components in high temperature heat exchangers in nuclear reactors, concentrated solar power systems, and industrial heat exchangers.

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