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A rate and temperature dependent unified creep-plasticity model for high strength steel and solder alloys

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Highlights

- The temperature effect on strain rate sensitivity of different metals and alloys is investigated.
- An analytical method is proposed to simulate the change of material rate sensitivity as a function of temperature.
- The temperature function, drag stress evolution function and the adjustment equations can be determined.
- Compared with the experimental data, the proposed method can accurately describe the strain rate sensitivity at different temperatures.

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