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NASA TECH BRIEF



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Low-Cost High-Temperature Brazing Material

Commercially available nickel-copper wire containing 6% and 12% nickel has been used in lieu of gold alloy brazing materials in high-temperature furnace brazing of rocket engine parts. The nickel-copper wire, commonly sold for electrical uses, is inexpensive and readily available.

Nickel-base alloys and stainless steels have been successfully brazed at temperatures of 2070°F and 2160°F using nickel-copper wire in lieu of materials such as gold-palladium alloys. The wire has also been used to replace braze materials such as gold-copper used for lower temperature brazing applications in the 1400°F region.

The results have been excellent. The brazed joints have properties comparable to or better than those

brazed with the more expensive materials, and the cost savings in materials have been substantial.

Note:

No additional documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
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Patent status:

No patent action is contemplated by NASA.

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