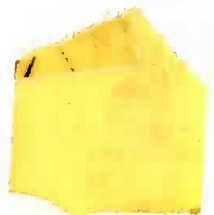


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- 9 AGO. 1960

NEW WELDING TECHNIQUE FOR "SPACE AGE" METALS -- A new electronic welding technique that is expected to accelerate working with the new hard-to-handle "space age" metals is being developed by the Republic Aviation Corporation of Farmingdale, New York. Company research engineers report success in achieving welded joints able to withstand temperatures up to 3,000 degrees Fahrenheit using such metals as molybdenum alloys and pure tungsten. Molybdenum and tungsten are considered ideal for use in space craft because of their resistance to extremely high temperatures. The process involves the operation of an electron-beam gun in a cylindrical, contamination-free vacuum chamber. The weld joint area is bombarded with a narrow, concentrated beam of fast-moving electrons to generate about 6,000 degrees Fahrenheit needed for the welding. The technique is said to be 2½ times as fast as conventional methods. Here a company technician positions the metal pieces before the chamber is sealed. (60-9193)



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SCIENCE - ASTRONAUTICS - RESEARCH