

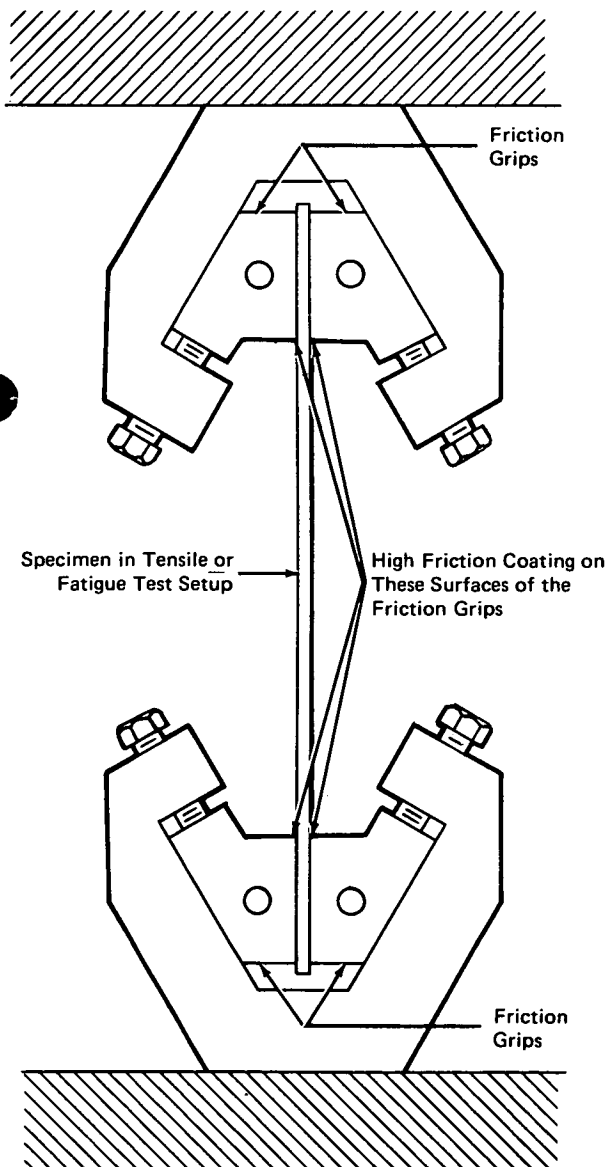
NASA TECH BRIEF

Lyndon B. Johnson Space Center



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High-Friction Mechanical Grips



Wedge-Shaped Grip With Plasma-Arc-Sprayed Coating

The problem:

Mechanical-grip friction surfaces are usually machined to a high-friction finish by multiple serrations. The high-friction finishes produced by this method may be relatively expensive.

The solution:

Plasma-arc spraying offers a method of preparing the required surface at a greatly reduced cost.

How it's done:

A coarse-grained, tungsten carbide bonded-nickel coating is applied by plasma-arc spraying. This coating has been used successfully on wedge-shaped mechanical test grips.

The test grip shown in the illustration demonstrates plasma-arc-sprayed coatings. These grips were proof tested to a 150,000-pound (670,000-newton) pull. This indicates that they may be used for 100,000-pound (450,000-newton) laboratory tests.

Note:

No further documentation is available.

Patent status:

NASA has decided not to apply for a patent.

Source: E. G. Stevens of
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