22ND INTERNATIONAL CONFERENCE ON RF SUPERCONDUCTIVITY
September 21-26, 2025

Contribution ID: **174** Contribution code: **TUP49** Type: **Poster Presentation**

A novel manufacture of niobium foil cavities

Tuesday 23 September 2025 14:30 (3 hours)

In order to reduce the cost of superconducting cavities, we propose a new method of manufacturing cavities using 0.2 mm thick niobium foil tubes. We came up with the idea of applying a plastic processing technology called elctromagnetic forming (EMF). As a result of a feasibility study, we found that niobium is a difficult material to form by EMF, and experimental results showed that it was almost impossible to form. Therefore, we tried a method of forming niobium by layering copper or aluminum materials called drivers on niobium, and felt that it was possible to form it. We report the experimental results so far.

I have read and accept the Privacy Policy Statement

Yes

Footnotes

Funding Agency

Author: YAMANAKA, Masashi (High Energy Accelerator Research Organization)

Presenter: YAMANAKA, Masashi (High Energy Accelerator Research Organization)

Session Classification: Tuesday Poster Session

Track Classification: MC3: Cavities