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## Challenges for Fabricating Aluminium Alloy Insertion-Device Vacuum Chambers

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Vacuum chambers prepared from aluminium alloys bring unique fabrication challenges, and with recent experience preparing and testing a series of insertion-device vacuum chambers, new processes were developed and limits to mechanical design better understood. These challenges and new understandings are presented. Processes include: precision machining of almost 6 metre long aluminium extrusions with sub-millimetre wall thickness, radiographically inspected TIG welding of heterogeneous Al alloys, cleaning, ultra-high vacuum testing, alignment, and packaging for international shipment.

### Funding Agency

### Footnotes

### I have read and accept the Privacy Policy Statement

Yes

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