



Managed by Fermi Research Alliance, LLC for the U.S. Department of Energy Office of Science

MQXFS1-d Welding Results

A. Vouris

CM Status Meeting

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Fit-Up

Fit Up:

Root Gap required - .094"

Actual – Side A: 0.103" - 0.121"
(2.6mm – 3mm)

Actual – Side B: 0.096" – 0.105"
(2.4mm – 2.7mm)



Welding

Temperature:

Start

1st Pass – 2° C

2nd Pass - 2° C

3rd Pass – 1.5° C

Total 5 - 6° C Rise

**Returned to Room
Temperature in 48 hours.



Results

Weld Joint Shrinkage:

	Side A	Side B
1 st Pass	.017" (0.43 mm)	.025" (0.64 mm)
2nd Pass	.011" (0.28 mm)	.008" (0.2 mm)
3 rd Pass	.010" (0.25 mm)	.014" (0.36 mm)
Total	.038" (0.96 mm)	.047" (1.2 mm)

Strain Gauges:

Coil stress increased - 5 MPa

Welding issues/observations to be corrected:

- Inconsistent root gap
- Root gap width larger than anticipated
- Welder #2 (Side B) not as familiar with controls - delayed adjustments on the fly

Status – HMS leak test (presently pumping down)

Next – Cold Measurements / Shell Weld NDE