



GELINA DU-Mo Rotating Target Assembly Fabrication

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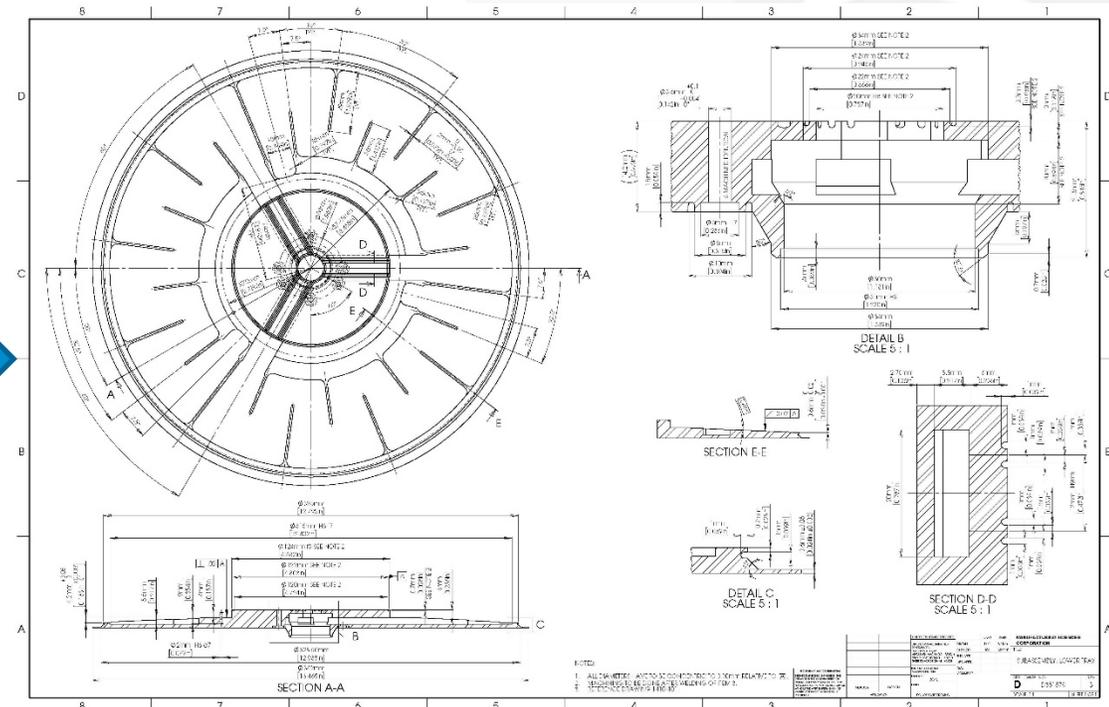
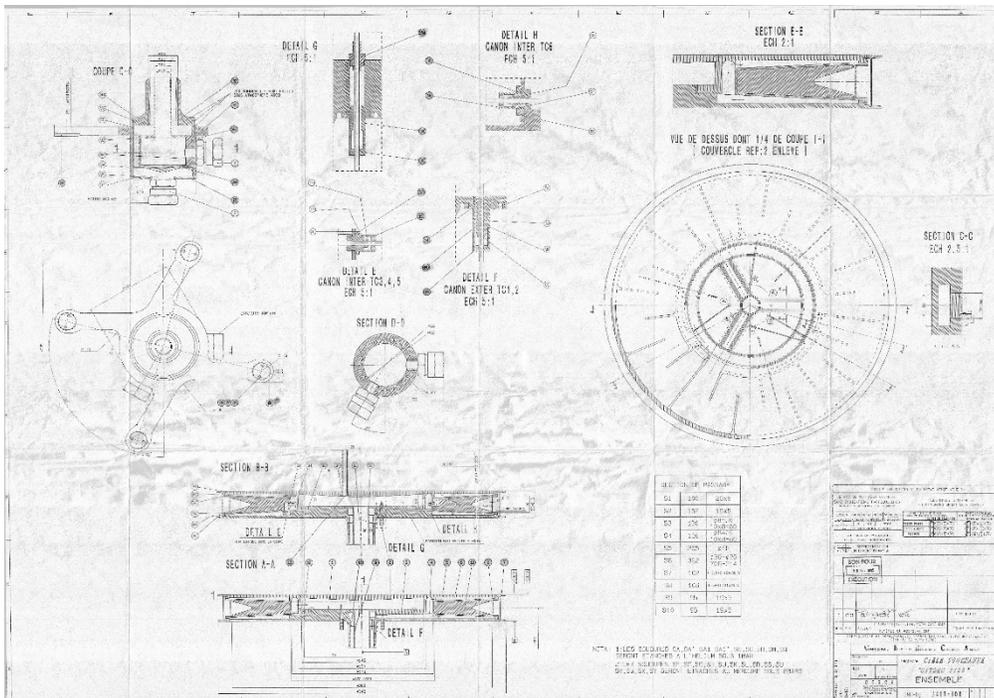
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GELINA Target Assembly- Drawing Digitization and Translation

- Y-12 contracted with Manufacturing Sciences Corporation (MSC) in Oak Ridge, TN to convert the existing hard copy GELINA Target Assembly drawings into a digital format and translate from French to English in September 2018.
- Digital drawings in English were delivered by MSC in early 2019



GELINA Target Assembly- Timeline and Delivery Schedule

- After drawing conversion, the next phase was the solicitation and contracting for fabrication of the actual Target Assembly
- Following a review of all potential internal options and outside suppliers, Y-12 again contracted with Manufacturing Sciences Corporation (MSC) to fabricate the replacement Target Assembly in January 2020 with an expected delivery of late 2020 timeframe
 - Based significantly on MSC having fabricated the DU-Mo disk for the most recent replacement of the Target Assembly
 - Contract included fabrication and testing of the entire assembly and for shipment to the GELINA site including the NRC export license
 - MSC was also responsible for sub-contracting for the fabrication of stainless-steel components and for welding and inspection/testing of the final assembly
- DU-Mo disk completed internally by MSC in May 2020
- Considerable delays experienced with the MSC stainless steel sub-contractor due to COVID-19.
 - MSC was ultimately forced to re-source these parts to a different supplier
- Y-12 extended the MSC contract multiple times to accommodate the impacts of COVID-19 on MSC and their suppliers

GELINA Target Assembly- Fabrication

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GELINA Target- Completed DU-Mo Disk

GELINA Target Assembly- Component Fabrication

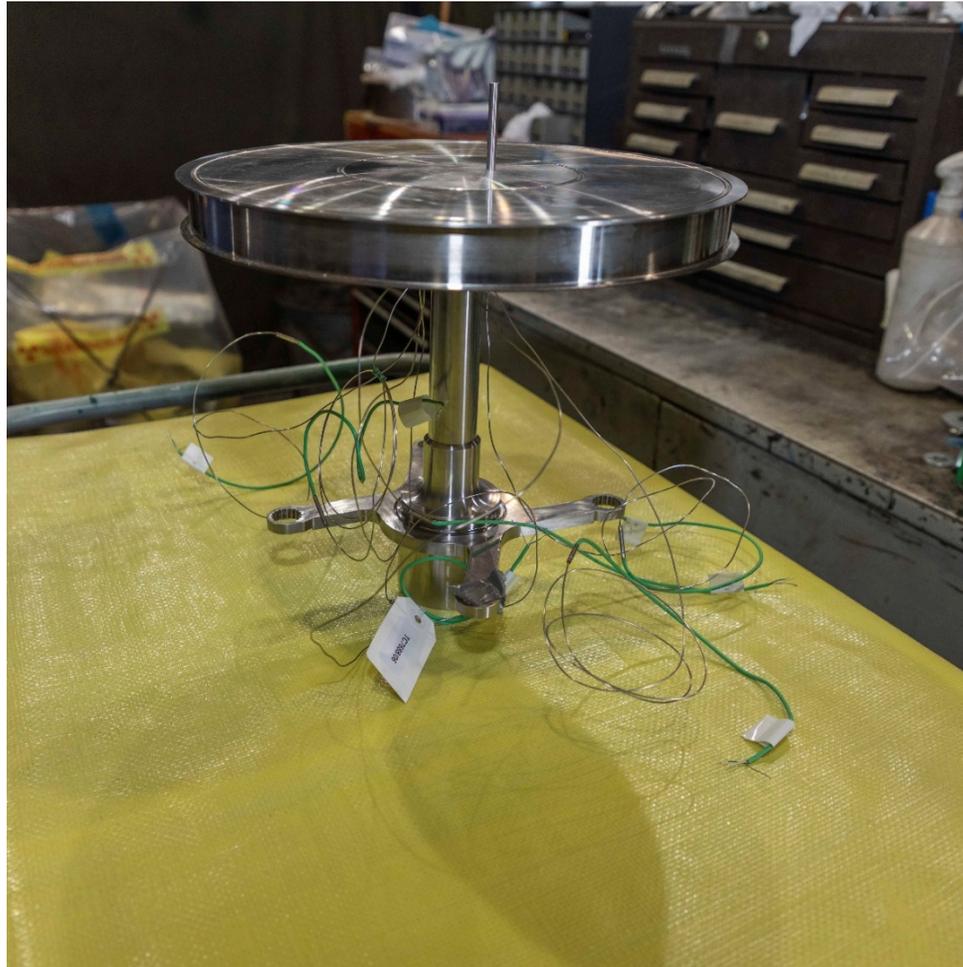
**GELINA Target-
Completed
Stainless Steel
Parts**



GELINA Target Assembly- Timeline and Delivery Schedule

- A few minor issues were resolved during the fabrication and assembly processes via coordination between MSC, Y-12, ORNL, and GELINA personnel
 - Klaus Guber, ORNL was instrumental in coordinating communication with the GELINA site
- MSC also had an issue with the breakage of thermocouples during the final assembly process in June 2021 which further delayed completion
 - Replacement thermocouples were ultimately located and delivered after approximately 6 weeks
 - Final assembly and welding was completed in August 2021
 - Target passed all required dimensional and leak test requirements in September 2021
- Eventual delivery to the GELINA facility occurred in November 2022

Completed GELINA Target Assembly Photos



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