

**RERTR 2015 – 36<sup>th</sup> INTERNATIONAL MEETING ON  
REDUCED ENRICHMENT FOR RESEARCH AND TEST REACTORS**

**OCTOBER 11-14, 2015**

**THE PLAZA HOTEL**

**SEOUL, SOUTH KOREA**

**PIE Results of Mini-plate Irradiation Test HAMP-1 for U(Mo)-Al(Si)  
Dispersion Fuel**

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**ABSTRACT**

U-7wt%Mo / Al-5wt%Si dispersion fuel will be used as a driver fuel in the KiJang research reactor (KJRR). Three HANARO Mini-Plate Irradiation tests (HAMP-1, 2, and 3) were planned as part of the qualification of the new fuel. The HAMP-1 irradiation test with a total of eight mini-plates was performed successfully during four cycles of irradiation (from Jan. 27 to June 18, 2014). The post-irradiation examination (PIE) work for the HAMP-1 mini-plates were performed at the Irradiated Material Examination Facility (IMEF). The non-destructive analyses on the 8 mini-plates test were finished. These include visual inspection, 2-D measurements of plate thickness and oxide thickness and gamma spectrometric mapping of the mini-plates. The results of non-destructive PIE have shown good correspondence with as-run analysis. Destructive PIE works are ongoing for the two mini-plates (KJM8031 and KJM6506 with 8.0 and 6.5gU/cm<sup>3</sup> in fuel meat, respectively). The microstructure analyses through Optical Microscopy, SEM and EPMA have been summarized in this paper.