



IAEA FEC 2014

Contribution ID: 49

Type: **Poster**

## **Experimental Base of Innovation S-Channel for Fusion LM Blanket**

*Friday 17 October 2014 14:00 (4h 45m)*

MHD geometry sensibility phenomenon was accidentally measured while an experimental investigation of MHD effect was conducting of the flow channel inserts (FCI) for liquid metal (LM) blanket system. Though the geometry sensibility phenomenon (or called secondary flow MHD effect) is successfully used to understand FCI duct flow behaviors, but, up to now, it is very little about secondary flow knowledge. To understand secondary flow MHD effect and to try to reduce MHD pressure drop by this effect, four special design experiments are carried out at the liquid metal experimental loop upgrade facility in southwestern institute of physics, China. The experimental results (see FIG.1) indicate that MHD pressure drop can be significantly reduced in the special designed ducts. And an innovation S-channel is addressed to reduce MHD pressure drop and to propel LM blanket MHD engineering feasibility key issue study forward.

### **Country or International Organisation**

China

### **Paper Number**

FIP/P8-1

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**Session Classification:** Poster 8