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Overview of pressure exchange process and effects of entropy rise KARTIK BULUSU¹, CHARLES A. GARRIS JR.², The George Washington University — Our research group has been working on developing devices (Garris' patents³) that exploit interface pressure forces between two or more fluids, that in the laboratory frame of reference are in non-steady mode. An analogy of such devices can be drawn from conventional turbomachines that operate on interface pressure forces between a solid and a working fluid. It has been of interest more recently to discuss the efficiency of pressure exchange type of devices vis-à-vis conventional devices, which led our focus on to entropy rise. Schlieren technique is used to understand and characterize entropy generating flow structure since the Garris' pressure exchange devices operate in the supersonic flow regime.

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