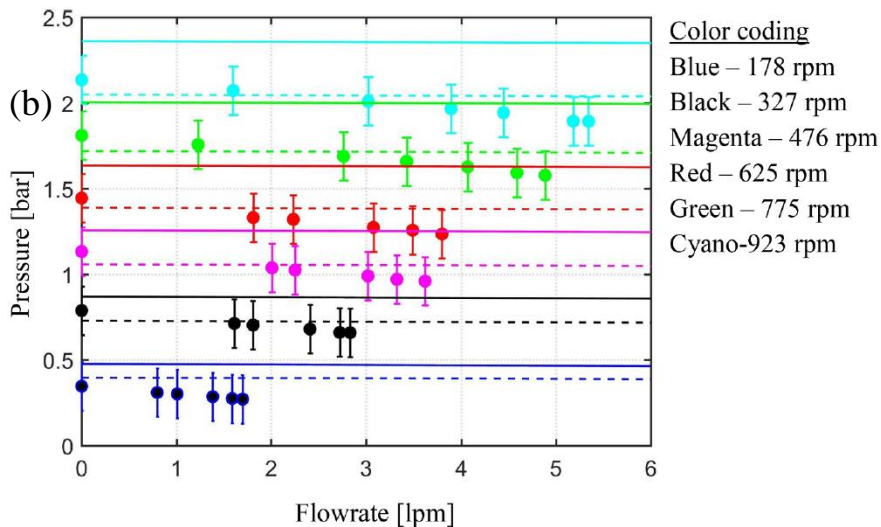
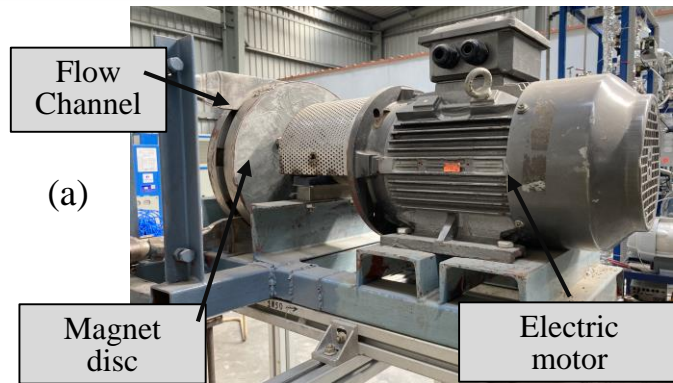


Effect of inlet/outlet height difference on P-Q characteristics of an electromagnetic pump for heavy liquid metals

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A picture of the developed electromagnetic pump showing (a) various parts and (b) P-Q curve after offsetting the inlet/outlet height difference effect

A permanent magnet based pump has been developed for high temperature (~ up to 350°C) heavy liquid metals. It has features of being bi-directional in operation and non-intrusive in technique. The pump has been tested for its functionality and it has been characterized by generating its pressure vs flowrate (P-Q) curve. Usually, the pressure developed by the pump is measured by taking the difference of pressure at discharge and suction ends. Our experiment shows that the measured pressure difference between the suction and discharge end is different from that of the actual pressure developed by the pump for such heavy liquid metals. This is attributed towards the existing height difference between the suction and discharge end of the pump. The relation of this height difference on P-Q curve has been systematically studied and an accurate P-Q curve has been generated for the pump.

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