

Analysis on sealing performance of piston rings used in the liquid hydrogen pump

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The sealing structure has a significant impact on the performance of high-pressure liquid hydrogen reciprocating pumps. Piston ring sealing is one of the significant sealing methods employed in such pumps. This paper establishes a leakage calculation model for the piston ring sealing structure in high-pressure liquid hydrogen reciprocating pumps. And the impact of different dimensions on the leakage rate is analyzed and discussed. This work provides a theoretical foundation for the design of liquid hydrogen pumps.

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