

VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELGAUM



B. L. D. E. Association's
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DEPARTMENT OF MECHANICAL ENGINEERING

A PROJECT REPORT ON

**“DESIGN, FABRICATION AND PERFORMANCE EVALUATION OF
AN AUTOMATIC SHOWER BATH SYSTEM”
(FINANCED BY KSCST)**

Submitted in partial fulfillment of the requirement for the award of the degree
of

**BACHELOR OF ENGINEERING
IN
MECHANICAL ENGINEERING**

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ABSTRACT

In the present scenario man is a busy person and there is a great demand for energy by this civilized world to do so many activities. All are talking about energy crises .But in nature energy is in balanced form .Thus there should not be any energy crises .Around us only there is enough energy and we have to trap it for various activities in our day to day life .Early morning bath is one of the most important activities for human being .Human being is a live creature and it has an automatic/acted motion .This motion can be utilized to increase the fluid pressure with suitable micromechanical fluid system .The automatic shower bath is an example of this micro mechanical fluid device .The easy chair mounted on the curved base ,during its slow oscillation by a person sitting on the chair has to and fro motion at its four curved ends .This reciprocating motion can be utilized to operate a small positive displacement mechanical device like diaphragm pump , acting on the principle of change in volume to pressurize the fluid. An innovative and totally new attempt is being made to design and fabricate an automatic shower bath system using only 5 liters of a mixture of hot water, cold water and pressurized air for total bath. The person sitting on the easy chair, while taking bath may oscillate the easy chair slowly by his body weight keeping his legs and hands totally free. The water will fall on the body as per the wish of the person and without operating any valves .Thus keeping the hands totally free for bathing purpose .The device is most compact, light in weight, portable, low cost and most useful where there is shortage of water.