

টুল এন্ড টেকনোলজি ইন্সটিটিউট

বাংলাদেশ শিল্প কারিগরি সহায়তা কেন্দ্র (বিটাক), শিল্প মন্ত্রণালয়

১১৬(খ), তেজগাঁও শিল্প এলাকা, ঢাকা-১২০৮।

গবেষণা প্রস্তাব

গবেষণা শিরোনাম (Title of the Research)	সমস্যার বর্ণনা (Statement of the Problem)	গবেষণার উদ্দেশ্যসমূহ (Objectives of the Study)	সাহিত্য পর্যালোচনা (Review of Literature)	গবেষণার গুরুত্ব (Rationale of the Study)	গবেষণা পদ্ধতি (Methods of the Study)	প্রত্যাশিত ফলাফল (Expected output)	কর্ম পরিকল্পনা এবং সম্ভাব্য বিবরণী (Action Plan and Tentative Budget)	গ্রন্থ পঞ্জী (Bibliography Reference)
১	৩	৪	৭	৮	১০	১১	১৪	১৫
Local development of Forklift as industrial material handling equipment	Material handling is one of the common operations for all the industries. Most of the industries use manpower for these purposes. To peruse productivity & competitiveness, it needs mechanization and one of the first required equipment is Forklift. This research & development project will offer a modern mechanized material handling & stocking material in the warehouses. There is a huge latent demand of such handling equipment in the industrial sector for material handling and stocking in the ware houses. But at present it is costly, difficult to source the product & also difficult to get maintenance & spare	<p>1.To develop this technology locally.</p> <p>2.To reduce cost of material handling of the industries.</p> <p>3.To increase productivity in material handling</p> <p>4.To create new Forklift manufacturer entrepreneur.</p> <p>5 To generate employmen</p>	<p>Forklift is a small industrial vehicle, having a power operated forked platform attached at the front that can be raised and lowered for insertion under a cargo to lift or move it. Forklifts serve the needs of various industries including warehouses and other large storage facilities. Forklifts are powered by electric battery or combustion engines. Some Forklifts allow the operators to sit while driving and operating the machine while others require the operator to stand. It is being extensively used throughout the industry for transporting materials and goods</p> <p>Battery operated motorized and</p>	<p>BITAC have already developed hydraulic lift, which is one of the major components of the project and the other is battery driven vehicle, which become common & components are easy to source, rest of the items are easy to fabricate. Basically, it is a project of integration of hydraulic lift system and battery driven vehicle, so it is a diversified use of hydraulic system.</p> <p>On the other hand, TTI is going to start hi-tech hydraulic training course exclusively first ever in Bangladesh, this facility will complement to this</p>	<p>Utilizing the basic engineering of hydraulic and automobile considering the available capacity, the Forklift will be developed.</p> <p>Work will be done in association with LEI, engaging expert. Also engineering university students will be attached as a part of their study.</p>	<p>Bangladeshi brand Forklift of load capacity 500 kg, lifting height 2 meter battery type will be developed. Cost will be approximately half of import price (average price TK. 18 lac per piece). If it is available at low price alone with technology support, most of the SME will buy this equipment as a result it will improve the cost and quality of material handling system in Bangladesh. At the same time, it will save huge foreign currencies for importing it.</p>	<p>Time frame:</p> <p>1.Design- 12weeks</p> <p>2.procurement- 8 weeks</p> <p>3.Manufacture- 12 weeks</p> <p>4.Redesign- 6 w</p> <p>5.Manufacture- 6 weeks</p> <p>6.Quality control- 4 weeks</p> <p>7.Final test- 2 weeks</p> <p>Total 54 weeks</p> <p>Tentative Budget:</p> <p>1.Raw material- 3 lac</p> <p>2.Hydraulic part- 3 lac</p> <p>3.Electrical part- 1 lac</p> <p>4.Control system. - 1 lac</p> <p>5.Other- 1 lac</p> <p>Total cost 9 lac</p>	<p>Industrial Fluid Power Volume 1,2,3 by Charles S. Hedges, Robert C. Womack</p>

	<p>parts, so now most of the cases the material is handled manually. The local development of forklift will offer an easy and cost-effective solution of industrial material handling.</p>	<p>t of skill & unskilled manpower</p>	<p>automatic hydraulic type Forklift consist of: 1.Hydraulic lifting system 2.Battery driven cart 3.Transmission & drive control 4.Braking system 5.Body with sitting arrangement</p>	<p>R & d work without any extra cost.</p>				
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Forklift



Forklift Schematic Diagram

