



Proposal Electrical Installation
Machinery Department
Technical School, Zeway

04/08/09

Zeway, Ethiopia

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Foreword

Not knowing where their donations to NGO's were precisely used for and questioning if Africa is really that bad as being told, three men decided to check out the continent for them self. These three men are us; Henk Rigter, Marten Mulder and Minne Bonnema, hereafter referred to as 'we' or 'the ThreeLeftHands', which also identifies the non-profit organization we founded to explore and to document the situations throughout Africa. While doing this, we help out people and organizations where ever we can and report about our activities to the Netherlands using various media among which our website ThreeLeftHands.com. Africa is a big continent and we cover all the distance in our easy recognizable 25-year old and orange minibus.

As being a supportive organization, ThreeLeftHands strive to improve other organizations that are being visited. To achieve this ambitious goal, the ThreeLeftHands posses a various skill set which are acquired through study and, mostly, excessive practice. Fields of expertise wherein TLH can excel are especially, but not limited to, internet and other computer applications, (mechanical) engineering, marketing / communication and business management. In cooperation with the counterpart organization, one or more projects are appointed to the ThreeLeftHands and after completing the goals agreed upon, ThreeLeftHands moves on to the next organization that will hopefully also benefit from their visit. As long as an organization is serving the public, ThreeleftHands will not differentiate between organizations and offer their services completely free of charge.

While the ThreeLeftHands are perfectly capable of taking care of their own, a donation or expense coverage is never expected, but always highly appreciated

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Organization Profile

Name: ThreeLeftHands

Established: July, 2008

Mission:

To experience Africa by own hand, to report on situations throughout Africa from a different, sincere view and to help out people, communities and organizations where possible.

Vision:

Africa is often referred to as 'The Lost Continent' and news feed from this region often agrees with this negative alias. Whether is famine or war, dictators or rebellion, there's not much good coming from Africa. We don't believe that. We believe that there is more to a story, more to a continent than the media tells us. Also we believe that one man can make a difference and therefore we travel through Africa to make that difference and find out what's Africa about by our own experience. By our stories, we hope to inspire people to try to change the world as well.

This are the ThreeLefthands:

Henk Rigter, age 25

Fields of expertise: Communication, marketing and management;

Marten Mulder, age 24

Fields of expertise: (Mechanical) engineering and teaching

Minne Bonnema, age 26

Fields of expertise: Computer applications, internet solutions and business management

Contact details:

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We prefer contact by email. That is, when we are not in the direct neighborhood. When we are, you are allowed to speak to us.

Introduction

One year ago an German NGO installed some metal construction machinery in a new department new department on the Technical School in Zeway. Unfortunately they forgot to install the electrical installation to make good use of this machines. Giving us the right equipment and some coffee, we can deliver this installation to make the tools and class room working. Because this installation doesn't fit into scope of our helping hand at the school, we ask some small expenses in return, to keep us helping other people and organizations in Africa.

1.0 Project details

1.1. Electrical Installation in the Machinery Department

Priority: High, giving lessons in the class room is quite hard at the moment.

Duration: 4 days maximum

1.1.1 Objectives

- Electrical installation of 400v and 220v boxes
- Connect and finish installation of current available machines
- Instruction to teachers of use and maintenance of available machines
- Install hanging electrical connectors above working tables
- Install 220v connectors in the office in the machinery department, to make good use of the computers.

1.1.2 How to achieve the objectives

Just using our brain, some hard work and cooperation of the school's employees

1.1.3 Project limitations and recommendations

Without the right equipment and materials it's hard creating a professional working installation. We can't start without all the materials, equipment and expenses listed below. In case not all the materials and equipment is present, please consult us to get substitutes. Although we can provide some of our own equipment, tools seem to get small feet in Africa, we prefer to use provided equipment.

The proposed installation is quite failure proof, although untrained personnel and especially students shouldn't operate the fusebox and shouldn't modify the installation without proper knowledge. Teachers have to instruct proper use of the installed machinery to the students and keep an watching eye on all time. The proposed hanging 220v connectors are for connecting electrical equipment, NOT to hang heavy materials or students on.

To instruct the students there is a good visibility needed. At the moment the TL-lightning above the working areas is insufficient. Installing some extra TL-light boxes is recommended.

Unfortunately we had to find out in the past that there's a difference between promised expenses and actually getting expenses. Therefor we cannot start before at least half of the expensed are ready for us.

1.2 Needed Materials

25	m	3 phase cable, 4 mm ²
83	m	3 phase cable, 2,5 mm ²
110	m	220v cable, 2,5mm ²
1	x	Fuse box
6	x	3 phase fuses
5	x	1 phase fuses
6	x	3 phase wall connectors
12	x	Double 220v wall connectors
5	x	Central electrical box (splitting cable on ceiling for hanging connectors and office)
1	box	Electrical wire connector units
8	m	Steel cable, 4mm ²
6	x	Steel cable connectors, nuts and bolts
8	x	Wooden boards, 25x25x2cm (mounting connectors to wall)
3	x	Wooden boards, 20x30x2cm (mounting connectors to cable from roof)
24	x	Phillips screws, 60x3mm (mounting board and fusebox to concrete wall)
24	x	Concrete plugs, 50x5mm (mounting board and fusebox to concrete wall)
40	x	Metal screws, 30x4mm (mounting board and cable to metal wall)
50	x	Phillips screws, 30x2mm
50	x	Concrete plugs, 30x4mm
50	x	Cable mounts, (mounting cable to concrete/metal wall) Or metal cable mount strip
1	box	Plastic quick straps

1.3 Needed Equipment

1	x	Electrical drilling boar
1	x	5mm concrete drill
1	x	20mm concrete drill
1	x	5mm concrete drill
1	x	2mm steel drill
1	x	Battery screw machine
2	x	Pair of pliers for electrical systems
2	x	Small flat screwdriver
2	x	Phillips screwdriver
2	x	Stanley knife
1	x	Pair of steel scissors

1.4 Expenses

1	x	Car battery, minimal 70Ah
1	x	Round vile
1	x	Pair of combination pliers
1	x	Chisel / wood cutter
1	x	Wood saw
1	x	Iron saw, including extra blade
1	x	Hand drill, including some small drills
1	x	Tube of kit, rubber glue
1	x	Solder Iron, including tin and grease
1	x	Rests of paint
1	x	Pieces of metal, for creating front tent
1	x	220v->12v transformer
1	crate	St. Georges beer (to celebrate the victory afterwards)
		Coffee, tea and food during working hours

1.5 Attachments

In the attached document you can find a detailed technical drawing of the proposed installation.