

APPENDIX 2

KILIMANJARO INDUSTRIAL DEVELOPMENT CENTER  
(KIDC)



## APPENDIX 2

### KILIMANJARO INDUSTRIAL DEVELOPMENT CENTRE (KIDC)

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## 1. Basic Characteristics

Technical-oriented institution: In this country, there are many kinds of industrial promotion institutions such as industrial estates, SIDO-industrial workshops, rural training centres. Their basic functions are industrial service provision, training and manufacturing of some particular products, and are to some extent common to each other. The variation among them attributes to which function they are putting their emphasis on.

For example, in case of industrial estate, its major aim is to produce certain products by utilizing external economies and common facilities, and incidentally providing technical training to the workers of the estate as well as out-side personnel. However, its service to out-side industries are generally limited to repairing and maintenance services. In addition, it has not a capacity to manufacture, on trial basis, new products for potential industries.

As discussed elsewhere, the major problems in Kilimanjaro's industries are, firstly, underutilization of production capacity due to improper repairing and maintenance services and shortage of spare parts. Secondly, even though there are a plenty of financial resources and high aspiration among industrialists, the proper incentives have not been given in terms of technology. In other words, most of potential industrialists do not know what kind of industry they can start or what kind of product is needed and suitable for market.

In this context, the proposed KIDC is placing its weight on maintenance service, spare parts supply and technical development for new industries, instead of establishing a limited number of pilot industries. Our basic belief is that, for the development of Kilimanjaro industry, this type of industrial promotion institution would be much more suitable than any others.

KIDC in spatial strategy: Our strategy is not to concentrate industrial units in one specific area to create agglomeration effects. Instead, our aim is to develop scattered small or village industries by establishing and utilizing regional and district industrial technical "growth centre". In other words, the industrial technical growth centre is surrounded by satellite village industries which would receive technical guidance and repairing services. The regional technical growth centre would, then, take care of problems which district technical growth centres can not answer.

Within the context of Kilimanjaro Region, the regional technical growth centre is made up of the KIDC and Moshi Industrial Estate, and district technical growth centres are composed of Rural Industrial Promotion Stations, SIDO-industrial workshops and rural training centres. In future perspectives, the number of technical growth centres in districts or rural areas shall increase.

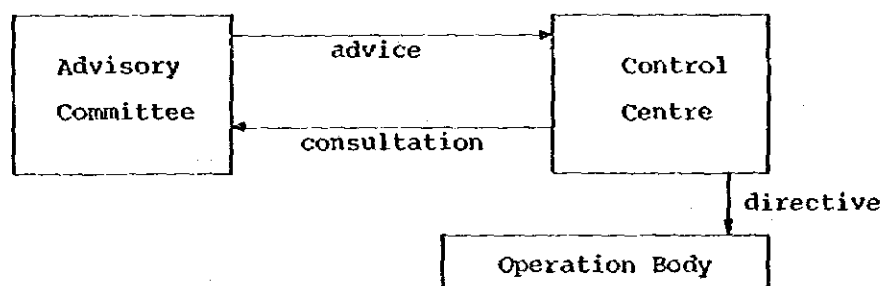
By intensifying closer linkage between these growth centres and village industries, potential finance and aspiration of villagers will be mobilized and materialized toward real industrial development.

## 2. Organization Structure

Organizationally, the KIDC is proposed to be a governmental institution under the supervision of the Regional Development Director. However, in view of the KIDC being an industrial technical centre, the close coordination with Small Industries Development Organization (SIDO) will be a very important matter.

Basically, the KIDC is composed of three major components, namely, Advisory Committee, Control Centre and Operation Body.

Basic Framework of Organization (Fig. 1)



The interrelationship among them is shown in Fig. 1. The Advisory Committee is to submit suggestions and advice to the Control Centre on fundamental issues like objectives of the KIDC, financing, etc. The Operation Body is subject to the Control Centre and will be expected to accomplish its functions in accordance with annual operational plan made and prepared by the Control Centre.

### Advisory Committee:

The committee meeting is expected to be held quarterly under the chairmanship of RDD, and the director of the KIDC will make a report on achievement and problems of the KIDC's activities in order to receive advice and suggestions from the Committee.

In case of emergency, an ad hoc meeting could be especially held by the consent of the RDD.

The members of the Committee shall consist of RDD (Chairman), District Development Directors, and representatives of SIDO, Tanzania Rural Development Bank, Kilimanjaro Regional Trading Company and District Development Corporations.

#### Control Centre:

The Control Centre is composed of the director, departmental managers, and advisors.

The role of Control Centre is, needless to say, to control and supervise the Operation Body, so that it will make an annual plan and budget estimates, taking into consideration the advice from the Committee. The initial draft of these planning activities will be carried out at Programming and Coordination Department with an assistance of departmental managers and advisors, although the final responsibilities will be taken by the director.

The advisor group is not a permanent manpower component, but it will be expected to make a great contribution to establishing foundations for the KIDC for the period of first 4 to 5 years. The chief advisor will assist the director in the area of general administration and management of the KIDC, the senior advisor of engineering will belong to Appropriate Technology Development Department and the senior advisor of management and marketing will assist the manager of Extension Service Department. Moreover, there are another five advisors of specific engineering fields.

#### Operation Body:

The Operation Body is composed of several sections in accordance with the objectives of the KIDC;

#### Programming and Coordination Department

- Administration Section,
- Planning and Research Section,
- Training Section.



**Extension Service Department**

- Marketing and Management Section,
- Engineering Section,
- Pare Industrial Promotion Station,
- Rombo Industrial Promotion Station,
- Moshi Industrial Exhibition Unit.

**Appropriate Technology Development Department**

- Foundry Section,
- Forging Section,
- Mechanical Engineering Section,
- Ceramic Section,
- Briquette Section.

Although Pare and Rombo Industrial Promotion Stations and Moshi Industrial Exhibition Unit are geographically separated from the headquarters of the KIDC, all of them will be organizationally, headed by the chief of Extension Service Department.

### 3. Implementation Schedule

The operation of each section or unit is planned to start as follows (see also Table-1):

#### A. Sections/Units which start in the first year;

- \* Control Centre Itself (including Advisory Committee)
- \* In the Programming and Coordination Department,
  - Administration Section, and
  - Planning Section.
- \* In Extension Service Department,
  - Marketing/Management Section, and
  - Engineering Section.
- \* In the Industrial Promotion Department,
  - Foundry Section, and
  - Forging Section.

#### B. Sections/Units which start in the second year;

- \* In the Programming and Coordination Department,
  - Training Course Section.
- \* In the Appropriate Technology Development Department
  - Mechanical Engineering Section.
- \* In the Extension Service Department,
  - Moshi Industrial Exhibition Unit.

#### C. Sections/Units which start in the third year;

- \* In the Appropriate Technology Development Department
  - Ceramic Section.
- \* In the Extension Service Department,
  - Pare Industrial Promotion Station.

D. Sections/Units which start in the fourth year;

- \* In the Extention Service Department,  
- Rombo Industrial Promotion Station.

E. Sections/Units which start in the fifth year;

- \* In the Appropriate Technology Development Department  
- Briquette Section.

#### 4. Manpower Planning and Staffing

Manpower requirements for the Kilimanjaro Industrial Development Centre are summarized in Table-2, in terms of local staff and expatriate advisors, and according to Dept./Section/Unit/Station. The local staff is classified briefly into nine job categories according to occupational posts and qualification, while the advisors are classified into three according to occupational posts and duration of duties. These are, then, translated into the organization chart in Chart-2.

Advisors' duration of stay and their responsibilities in transferring technology and skills are as follows (see Chart-3):

- A. The total advisory services given by expatriate advisors shall last for 4 years.
- B. Each advisor is required to stay for 2 years except short term advisors.
- C. Advisors are particularly responsible for training local staff (managers, chiefs, qualified staff and skilled workers) during the first 6 months before real on-the-job (operation) training starts.
- D. Advisors are also responsible for transferring all the necessary skills, technique and technology to the local staff before they complete their duration of stay, so that the local staff can continue their operation of KIDC without any problems.

## 5. Construction Schedule

During the first year of the construction schedule, land clearing and leveling, construction of headquarter buildings, construction of buildings of foundry project and forging project, and their installment of machinery/equipment will be completed. From the second year on, the following construction of buildings/sheds and installation of machines/equipment will be undertaken (see Chart-4, which shows the whole construction schedule quite neatly):

- (1) During the second year, the mechanical engineering workshop and Moshi industrial (products) exhibition unit.
- (2) During the third year, the ceramic workshop and Pare Industrial promotion station.
- (3) During the fourth year, Rombo industrial promotion station.
- (4) And, finally, during the fifth year, the briquette production workshop.

## 6. Facilities

Main characteristics of facilities available within the KIDC set-up would be explained well by deviding those available in the KIDC headquarters, those at Moshi industrial exhibition unit and those in Pare and Rombo industrial promotion stations. This is simply because those facilities are located separately.

### A. Facilities at the Headquarters:

#### \* Within the Main Buidling,

One Director's Room,

One Chief Advisor's Room,

Three Manager's Rooms,

Three Advisor's Rooms,

One Conference (Meeting) Room,

One Data Room,

One Lecture Room for Training,

Three Rooms for the Programming and Coordination Department,

Two Rooms for the Extension Service Department.

In all these rooms, desks/tables, chairs, bookshelves and typewriters will be equipped according to their requirements and necessity. In addition, the main building will be equipped with water supply and sewage disposal facilities, toilets, telephones and electricity.

\* A Water Supply Tower and a Power Distributer.

\* A Car-Shed.

\* A Dormitory whose accommodation capacity is 20, with the facilities such as a common room, a dining hall and a canteen.

- \* Five Workshops (Foundry, Forging, Mechanical Engineering, Ceramic and Briquette), which have a small office at a corner of each workshop building. All the workshop offices are equipped with a table and a desk, and a telephone. In addition, each workshop possesses its own Store Building separately from the workshop building.

- \* Roads within the headquarters are paved with tarmac.

- \* The KIDC is surrounded by fence of meshed iron net.

B. Facilities at Moshi Industrial (Products) Exhibition Unit

- \* A building for exhibition of industrial products, in which a stock room is included, and an office building with all the necessary facilities such as tables and desks, bookshelves and a telephone.

- \* A Car-Shed.

- \* Roads within this unit is tarmaced.

- \* The whole unit area is surrounded by fence of the similar kind as above.

C. Pare and Rombo Industrial Promotion Stations

Both stations are quite same in their nature so that facilities are also same as being described hereunder:

- \* Both stations are equipped with an office and a workshop.

- \* A Car-Shed for each station.

- \* Roads within the station is tarmac-paved.

- \* The station area is fenced by iron meshed-net.

## 7. Site Selection for KIDC

In selecting sites, our concern particularly centred around accessibility to physical infrastructural facilities such as availability of power (electricity) and telephone, accessibility to transportation (such as accessibility to the main road), accessibility to water supply and sewage disposal and lastly the necessary land area itself which is directly controlled and owned by the authorities.

Keeping all these conditions in mind, we selected site areas as follows:

- A. The Headquarters (8,800 m<sup>2</sup>, of which 2,825 m<sup>2</sup> are occupied by building/shed)

It should be suggested that there are two alternative sites. One site is located along the Taifa Road (Arusha-Tanga Road) and near Kibololoni industrial area. And the other is at the same site where the Moshi Industrial Estate is planned to be established by SIDO. As it is clear that the role of KIDC is complementary to that of the Industrial Estate, there would not be much difficulties in deciding the site of the KIDC Moshi Headquarters.

- B. Moshi Industrial Exhibition Unit (870 m<sup>2</sup>, of which 285 m<sup>2</sup> are occupied by building/shed)

It is recommended that this unit area should be secured within the central part of Moshi Township so that a larger number of people can learn about the products that the Region produces.

- C. Pare Industrial Promotion Station (630 m<sup>2</sup>, of which 210 m<sup>2</sup> are occupied by building/shed)

Same is recommended to be the site for this station. This is simply because most of the physical infrastructural facilities mentioned above are available. It would also be an advantage that DDD is located in Same.



D. Rombo Industrial Promotion Station (630 m<sup>2</sup>, of which 210 m<sup>2</sup> are occupied by building/shed)

Mukuu is the recommended site for the station. This consideration is also along the line described in Pare Station.

### 3. Costs Estimates

Estimations of costs are intensively carried out from various angles in Tables from 3 to 29. Various particular estimates necessary for KIDC construction and operation are, for the purpose of clarity and better visualization, divided into three parts; namely, summary of costs estimates for the whole KIDC, estimates of fixed capital investment costs, and estimates of running costs.

#### A. Summary of Costs Estimates for Whole KIDC

In this first part of summary, two tables are presented as follows:

##### Table-3 Estimated Investment Costs by Section/Unit and by Year

In this table, all the investment requirements, both fixed capital investment costs and working capital requirements (as running costs), are sorted out and listed yearly section, by section and unit by unit. In addition, total yearly investment requirements are divided into a foreign currency portion and a local currency portion in order to indicate possibility of implementation either with foreign assistance or without it.

##### Table-4 Initial Investment Costs by Department/Section and by Kinds of Fixed Capital Requirements

To make the whole picture of initial investment requirements for various sections and units clearer, they are summarized here in such a way that how much capital investment is required during the very first year of operation of each project (including administrative building/shed and etc.). Besides, similarly as above, total initial investment requirements are divided into a foreign currency portion and a local currency portion.

## B. Estimates of Fixed Capital Investment Costs

Estimation carried out here is, in fact, a breakdown of Table-4 above, particularly by kinds of fixed capital investment requirements. Therefore, five kinds of fixed capital requirements are compiled item by item in the following order:

- (i) Building/Shed Construction Costs (Table-5),
- (ii) Machines and Equipment Costs (Table-6),
- (iii) Office Equipment Costs (Table-7),
- (iv) Machinery Installation Costs (Table-8),
- (v) Infrastructure Costs (Table-9).

Then, all those tables are re-arranged on a timetable basis year by year over the coming five years, and are presented once again. They are, therefore, (i) Building/Shed Costs by Year (Table-10), (ii) Machines and Equipment Costs by Year (Table-11), (iii) Office Equipment Costs by Year (Table-12), (iv) Installation and Infrastructure Costs by Year (Table-13).

Finally, in this second part, total investment requirements for every single year are compiled year by year separately under the following titles:

- Table-14 1st Year Investment by Kinds of Fixed Capital Requirements
- Table-15 2nd Year Investment by Kinds of Fixed Capital Requirements
- Table-16 3rd Year Investment by Kinds of Fixed Capital Requirements
- Table-17 4th Year Investment by Kinds of Fixed Capital Requirements
- Table-18 5th Year Investment by Kinds of Fixed Capital Requirements

## C. Estimates of Running Costs Requirements

Running costs consist of (i) Salaries/Wages, (ii) Office Running Costs, (iii) Fuel Costs for Motor Vehicle, (iv) Maintenance Costs for Building/Shed, Machines/Equipment, and Motor Vehicle, (v) Raw Materials Costs, and (vi) Utilities Costs.

All those running costs are well-compiled item by item on a timetable basis year by year over the coming five-year period in Tables from 19 to 24. Then, similarly as above in II, all the running costs items are combined together and totalled year by year under such titles as 1st Year Running Costs by Section/Unit (Table-25), 2nd Year Running Costs by Section/Unit (Table-26), 3rd Year Running Costs by Section/Unit (Table-27), 4th Year Running Costs by Section/Unit (Table-28) and 5th Year Running Costs by Section/Unit (Table-29).

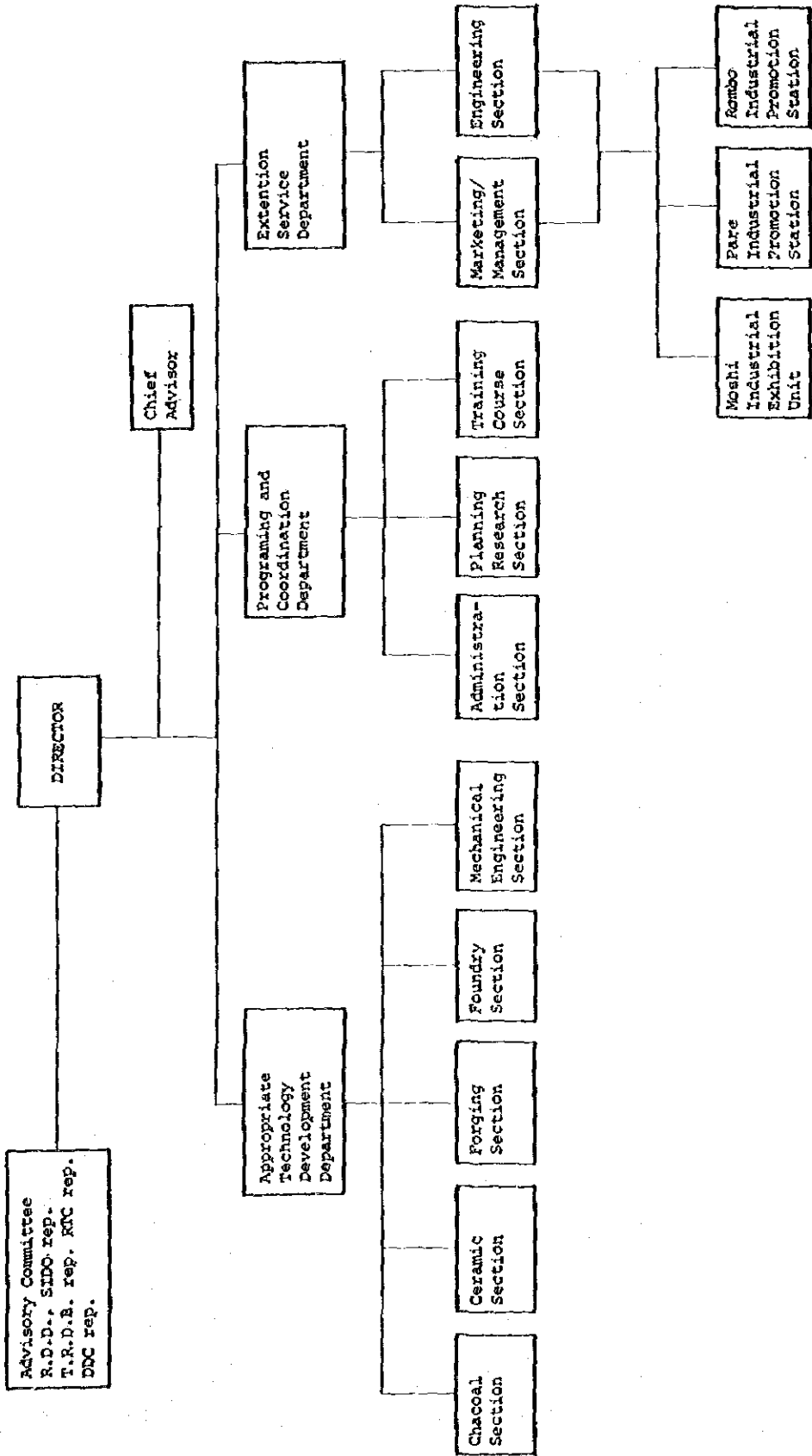
**ANNEX 1**

**ORGANIZATION, STAFFING AND CONSTRUCTION SCHEDULE**

**( K I D C )**



Organization Chart (Chart-1)



Starting Year of Each Section/Unit (Table-1)

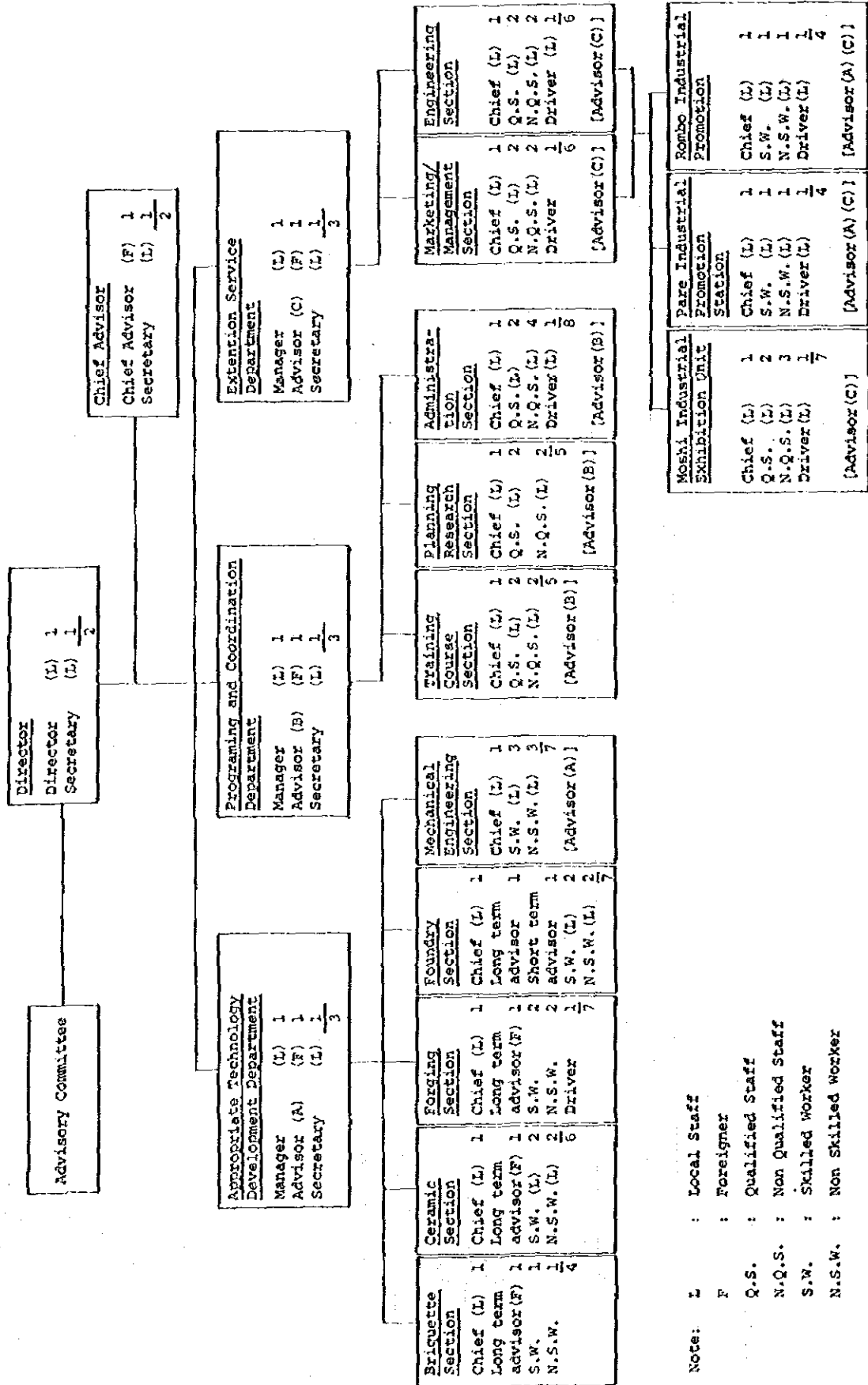
	1st Year	2nd Year	3rd Year	4th Year	5th Year
Control Centre					
Director	•				
Advisory Committee	•				
Advisor	•				
Programming and Coordination Department					
Administration Section	•				
Planning Research Section	•	•			
Training Course Section					
Extension Service Department					
Marketing/Management Section	•				
Engineering Section	•				
Appropriate Technology Development Dep.					
Mechanical Engineering Section		•			
Foundry Section	•				
Forging Section	•				
Ceramic Section			•		
Briquette Section					•
Moshi Industrial Exhibition Unit		•			
Pare Industrial Promotion Station			•		
Rombo Industrial Promotion Station					



Staffing Plan (Table-2)

	Local Staff										Advisor			Total G. Total		
	Director	Manager	Chief Secre- tary	Qualified Staff	Non Qualified Staff	Non Skilled Worker	Non Skilled Worker	Skilled Driver	Total Chief Advisor	Long Term Advisor	Short Term Advisor					
Head quarter	1	3	10	5	10	10	10	12	10	4	65	1	7	1	9	74
Control Centre	1			2							3	1			1	4
Programming and co- ordination department		1	3	1	6		8		1	1	20		1		1	21
Administration section		1	1	1	2		4		1	1	10		1		1	11
Planning research section			1		2		2				5					5
Training course section			1		2		2				5					5
Extention service department		1	2	1	4		4		2	2	14		1		1	15
Marketing/mangement section		1	1	1	2		2		2	2	9		1		1	10
Engineering section			1		2		2				5					5
Appropriate technology development department		1	5	1		10			10	1	28		5	1	6	34
Foundry section			1		2		2		2		5		1	1	2	7
Foreign section			1		2		2		2		5		1		1	6
Mechanical engineer- ing section		1	1	1		3		3	3	1	10		1		1	11
Ceramic section			1		2		2		2		5		1		1	6
Priquette section			1		1		1		1		3		1		1	4
Moshi industrial exhibition unit			1		2		3		1	1	7					7
Pare industrial promotion station			1		1		1		1	1	4					4
Rombo industrial promotion station			1		1		1		1	1	4					4
Total	1	3	13	5	12	12	15	12	7	60	1	7	1	9	89	

Staffing Plan (Chart-2)



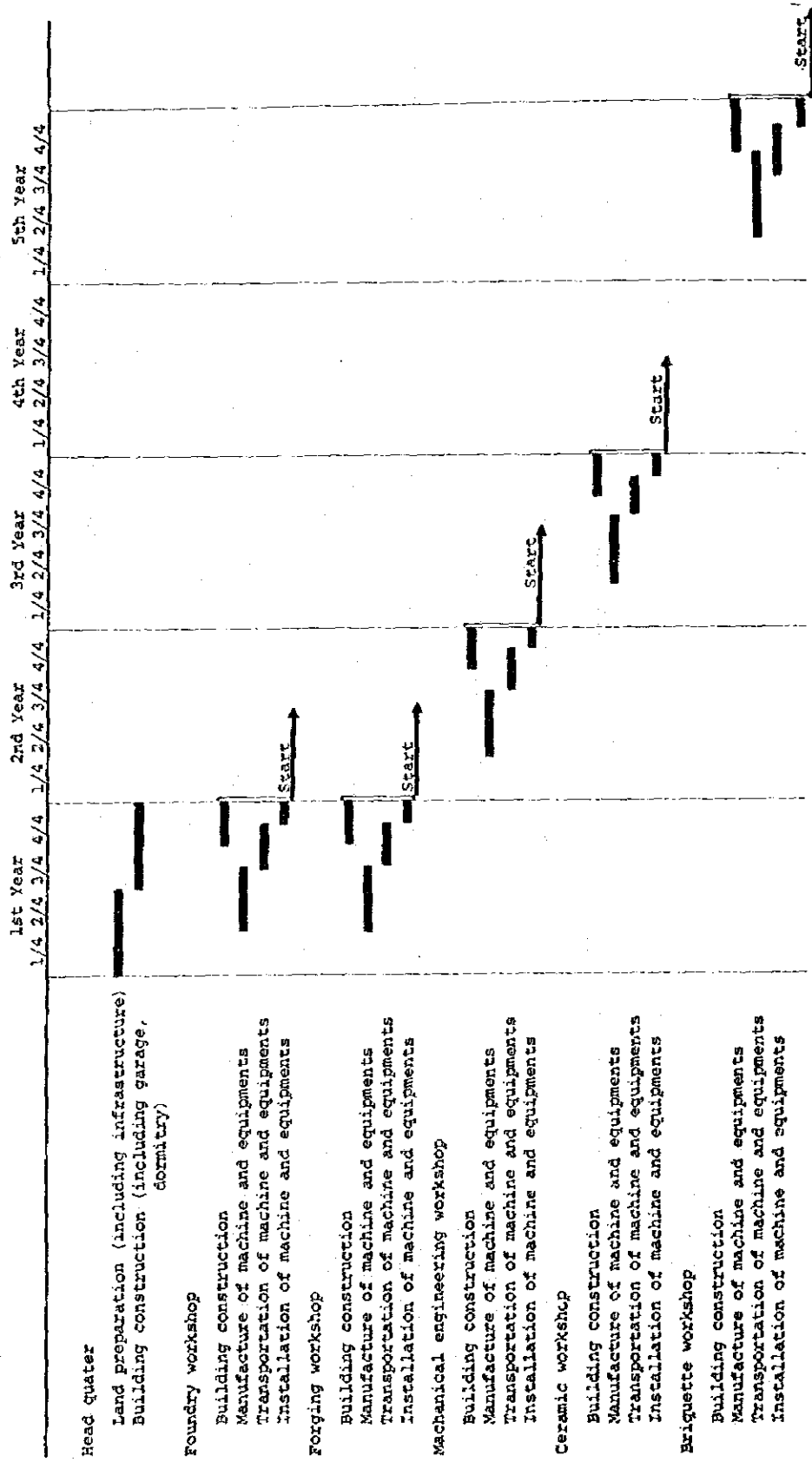
Note: L : Local Staff  
 F : Foreigner  
 Q.S. : Qualified Staff  
 N.Q.S. : Non Qualified Staff  
 S.W. : Skilled Worker  
 N.S.W. : Non Skilled worker

Duration of Stay for Advisors (Chart-3)

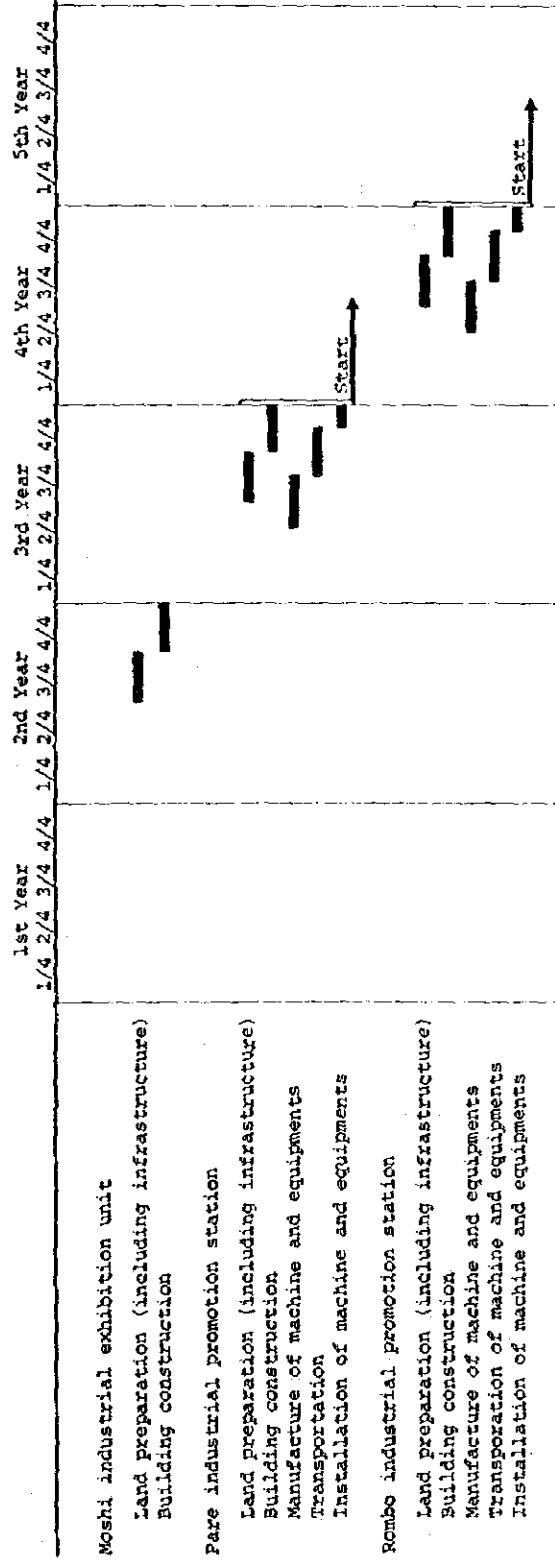
	1st Year	2nd Year	3rd Year	4th Year	5th Year	6th Year
	1/4 2/4 3/4 4/4	1/4 2/4 3/4 4/4	1/4 2/4 3/4 4/4	1/4 2/4 3/4 4/4	1/4 2/4 3/4 4/4	1/4 2/4 3/4 4/4
1) Chief advisor	—————					
2) Incharge of programing and coordination department	————— (local staff)					
3) Incharge of extention service department	————— (local staff)					
4) Incharge of appropriate technology development dep.	————— (Responsible for the industrial promotion department and Pare/Rombo industrial promotion stations and Moshi industrial exhibition unit)					
5) Foundry advisor (Melting & forming) (Wood working)	————— (local Staff)					
6) Forging advisor	————— (local staff)					
7) Ceramic advisor	————— (local staff)					
8) Briquette advisor	—————					

(Note: ——— : Guidance period of each manager, chief, qualified staff and skilled worker)

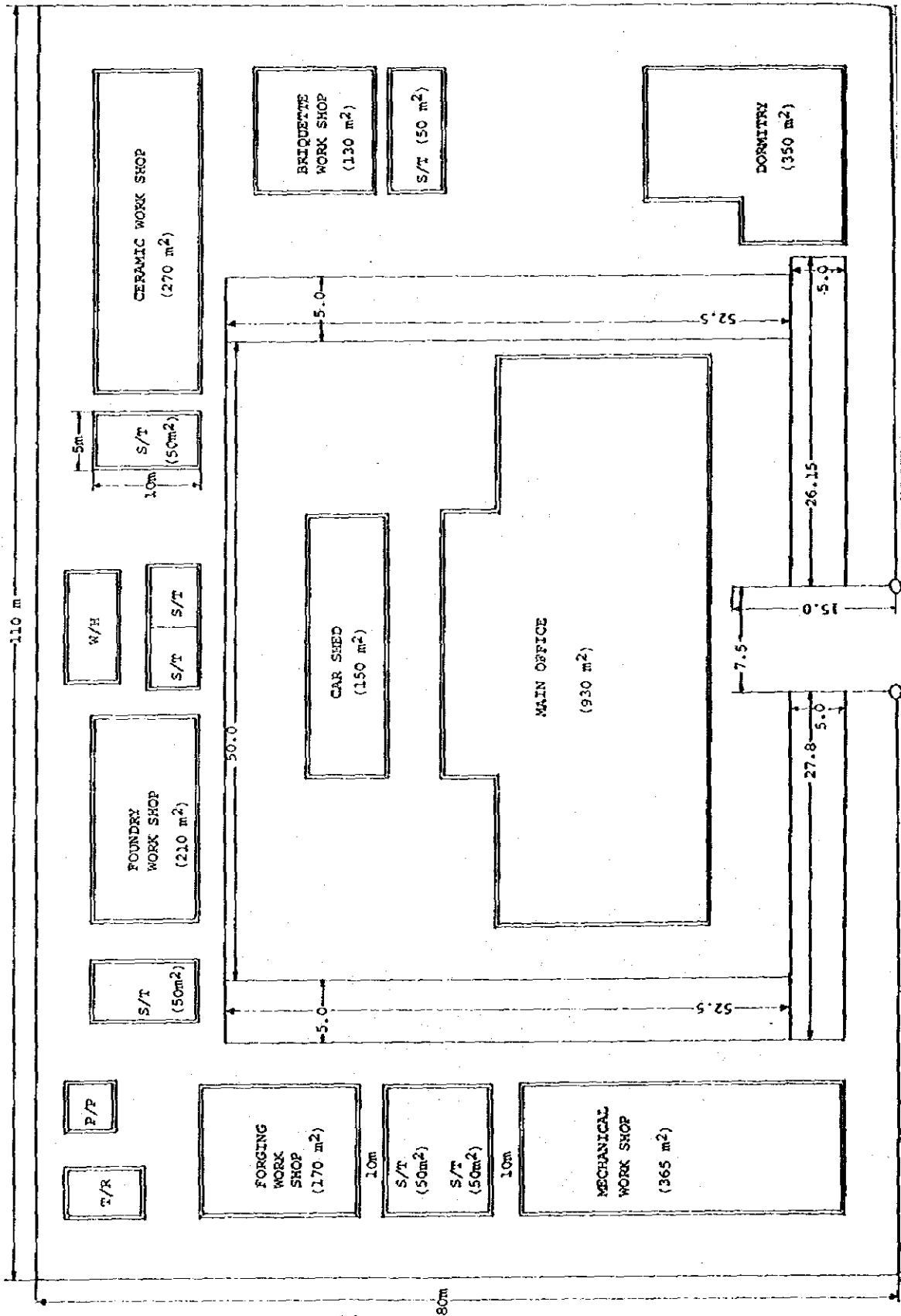
Construction Schedule (Chart-4a)



Construction Schedule (Chart-4b)

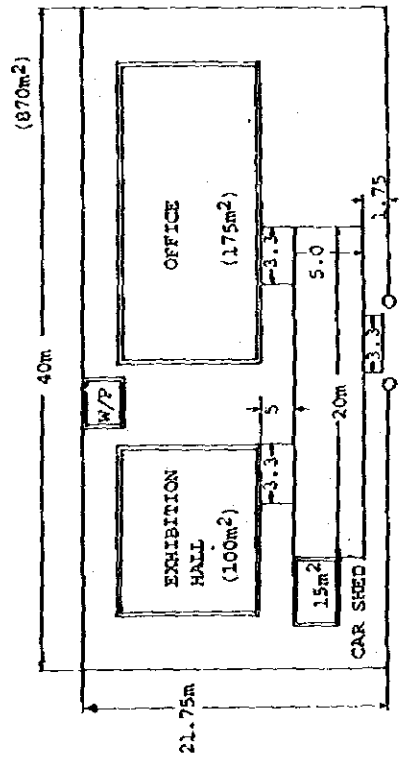


Layout of Headquarters (Sketch-Map - 1)

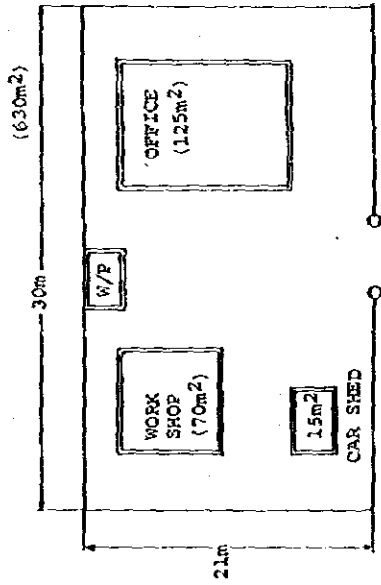


Layout of Moshi Unit and Rembo/Pare Stations (Sketch-Map - 2)

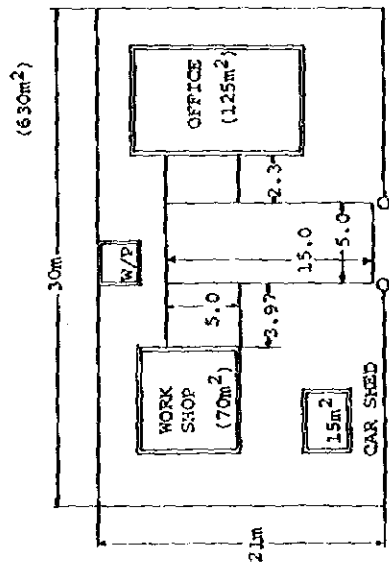
(1) Moshi Industrial Exhibition Unit (In Moshi)



(2) Pare Industrial Promotion Station (In Same)



(3) Rembo Industrial Promotion Station (In Mkuu)







ANNEX 2

DETAILED COST ESTIMATES

( K I D C )



Estimated Investment Costs by Section/Unit, and By Year (Table-3a)

(Unit: Tshs.)

	1st Year			2nd Year			3rd Year			4th Year			5th Year		
	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local
		Currency	Currency		Currency	Currency		Currency	Currency		Currency	Currency		Currency	Currency
Head-Quarter	4,411,342	1,082,787	3,328,555	4,325,334	2,851,668	1,473,666	1,516,067	164,450	1,342,617	1,134,098	-	1,134,098	1,449,336	60,000	1,389,336
Investment Running Cost	4,240,228	1,082,787	3,157,441	3,527,705	2,851,668	676,037	478,505	164,450	314,055	-	-	-	256,277	60,000	196,277
Control Centre	171,114	-	171,114	797,629	-	797,629	1,028,562	-	1,028,562	1,134,098	-	1,134,098	1,193,008	-	1,193,008
Total Investment Running Cost	1,010,168	413,000	597,168	15,840	-	15,840	16,646	-	16,646	16,716	-	16,716	17,554	-	17,554
Program- and Coordination Department	1,890,271	80,929	1,809,342	167,331	-	167,331	193,503	-	193,503	197,875	-	197,875	204,416	-	204,416
Administration Section	1,938,029	80,929	1,757,100	8,800	-	8,800	-	-	-	-	-	-	-	-	-
Total Investment Running Cost	52,242	-	52,242	158,531	-	158,531	193,503	-	193,503	197,875	-	197,875	204,416	-	204,416
Administration Section	385,351	80,929	304,422	117,108	-	117,108	112,491	-	112,491	114,825	-	114,825	119,259	-	119,259
Total Investment Running Cost	347,629	80,929	266,700	8,800	-	8,800	-	-	-	-	-	-	-	-	-
Planning Section	37,722	-	37,722	108,308	-	108,308	112,491	-	112,491	114,825	-	114,825	119,259	-	119,259
Total Investment Running Cost	67,220	-	67,220	39,333	-	39,333	40,813	-	40,813	41,328	-	41,328	42,874	-	42,874
Planning Section	52,700	-	52,700	-	-	-	-	-	-	-	-	-	-	-	-
Total Investment Running Cost	14,520	-	14,520	39,333	-	39,333	40,813	-	40,813	41,328	-	41,328	42,874	-	42,874

Estimate Investment Cost by Section/Unit, and By Year (Table-3d)

(unit: \$ths.)

	1st Year			2nd Year			3rd Year			4th Year			5th Year		
	Foreign Currency		Local Currency	Foreign Currency		Local Currency	Foreign Currency		Local Currency	Foreign Currency		Local Currency	Foreign Currency		Local Currency
	Total		Total		Total		Total		Total		Total		Total		
Briquette Section	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Investment Running Cost	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Moshi Industrial Exhibition Unit	35,156	-	35,156	75,143	504,495	71,729	71,729	71,729	71,729	74,328	74,328	74,328	74,328	76,415	76,415
Total Investment Running Cost	35,156	-	35,156	75,143	478,035	-	-	-	-	-	-	-	-	-	-
Pare Industrial Promotion Station	-	-	-	-	26,460	71,729	71,729	71,729	71,729	74,328	74,328	74,328	74,328	76,415	76,415
Total Investment Running Cost	-	-	-	-	27,368	528,225	210,625	317,600	56,376	56,376	56,376	56,376	56,376	58,702	58,702
Rombo Industrial Promotion Station	-	-	-	-	27,368	506,339	210,625	295,714	27,368	27,368	27,368	27,368	27,368	27,368	27,368
Total Investment Running Cost	-	-	-	-	27,368	21,886	21,886	21,886	21,886	27,368	27,368	27,368	27,368	27,368	27,368
Total	4,446,498	1,082,787	3,363,711	4,932,346	2,926,811	2,005,529	2,134,389	375,075	1,759,314	1,782,886	210,625	1,572,264	1,631,164	60,000	1,571,164
Total Investment Running Cost	4,275,384	1,082,787	3,192,597	4,108,251	2,926,811	1,181,440	1,012,212	375,075	637,137	506,339	210,625	295,714	256,277	60,000	196,277
Total Investment Running Cost	171,114	-	171,114	824,089	824,089	1,122,177	1,122,177	1,122,177	1,122,177	1,276,550	1,276,550	1,276,550	1,276,550	1,374,887	1,374,887

Estimated Investment Cost by Section/Unit, and By Year (Table-3c)

(Unit: Tshs.)

	1st Year			2nd Year			3rd Year			4th Year			5th Year		
	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local
		Currency	Currency		Currency	Currency		Currency	Currency		Currency	Currency		Currency	Currency
Approp- riate Tech. Dev't Dep.	1,079,382	430,929	648,453	3,991,781	2,851,668	1,140,113	1,140,485	164,450	976,035	760,067	-	760,069	1,061,548	60,000	1,001,548
	1,026,762	430,929	595,833	3,518,905	2,851,668	667,237	478,505	164,450	314,055	-	-	-	256,277	60,000	196,277
	52,620	-	52,620	472,876	-	472,876	661,980	-	661,980	769,067	-	769,067	805,271	-	805,271
Foundry Section	-	-	-	349,352	-	349,352	367,591	-	367,591	382,681	-	382,681	401,035	-	401,035
	655,752	287,929	367,823	-	-	-	-	-	-	-	-	-	-	-	-
	38,100	-	-	349,352	-	349,352	367,591	-	367,591	382,681	-	382,681	401,035	-	401,035
Forging Section	-	-	-	103,945	-	103,945	108,656	-	108,656	112,565	-	112,565	117,674	-	117,674
	371,010	143,000	228,010	-	-	-	-	-	-	-	-	-	-	-	-
	14,520	-	-	103,945	-	103,945	108,656	-	108,656	112,565	-	112,565	117,674	-	117,674
Mechani- cal Engneer- ing Section	-	-	-	3,537,055	2,851,668	685,387	171,213	-	171,213	179,043	-	179,043	186,091	-	186,091
	-	-	-	3,518,905	2,851,668	667,237	-	-	-	-	-	-	-	-	-
	-	-	-	18,150	-	18,150	171,213	-	171,213	179,043	-	179,043	186,091	-	186,091
Ceramic Section	-	-	-	-	-	-	493,025	164,450	328,575	85,778	-	85,778	89,581	-	89,581
	-	-	-	-	-	-	478,505	164,450	314,055	-	-	-	-	-	-
	-	-	-	-	-	-	14,520	-	14,520	85,778	-	85,778	89,581	-	89,581

Estimated Investment Costs by Section/Unit and By Year (Table-3b)

(Unit: Tshs.)

	1st Year			2nd Year			3rd Year			4th Year			5th Year		
	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local	Total	Foreign	Local
	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency	Currency
Train- ing Course Section	214,500	-	214,500	10,890	-	10,890	40,199	-	40,199	41,722	-	41,722	42,283	-	42,283
	214,500	-	214,500	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	10,890	-	10,890	40,199	-	40,199	41,722	-	41,722	42,283	-	42,283
Dormitory etc.	1,223,200	-	1,223,200	-	-	-	-	-	-	-	-	-	-	-	-
	1,223,200	-	1,223,200	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exten- sion Service Depart- ment	431,521	157,929	273,592	150,382	-	150,382	156,433	-	156,433	159,440	-	159,440	165,848	-	165,848
	372,529	157,929	214,600	-	-	-	-	-	-	-	-	-	-	-	-
	58,992	-	58,992	150,382	-	150,382	156,433	-	156,433	159,440	-	159,440	165,848	-	165,848
Engine- ering Section	290,000	106,500	183,500	92,583	-	92,583	96,481	-	96,481	98,014	-	98,014	102,133	-	102,133
	251,900	106,500	145,400	-	-	-	-	-	-	-	-	-	-	-	-
	38,100	-	38,100	92,583	-	92,583	96,481	-	96,481	98,014	-	98,014	102,133	-	102,133
Market- ing/ Manage- ment Section	141,521	51,429	90,092	57,799	-	57,799	59,952	-	59,952	61,426	-	61,426	63,715	-	63,715
	120,629	51,429	69,200	-	-	-	-	-	-	-	-	-	-	-	-
	20,892	-	20,890	57,799	-	57,799	59,952	-	59,952	61,426	-	61,426	63,715	-	63,715

Initial Investment Costs by Department/Section and by Kinds of Fixed Capital Requirements (Table-4)

(unit: fshs.)

	Building & Car shed	Machine & Equipment (inc. Car)	Office Equipment	Machine Installation	Infra-structure	Total	Break-down by currency	
							Foreign currency	Local currency
Head quarter	3,542,070	3,713,978	193,650	341,109	711,908	8,502,715	4,158,905	4,343,810
Control centre	264,000		27,000		711,908	1,002,908	413,000	589,908
Programming and coordination dept.	1,693,350	51,429	102,050			1,846,829	80,929	1,765,900
Administration sec.	231,000	51,429	65,200			347,629	80,929	266,700
Planning sec.	49,500		3,200			52,700		52,700
Training course sec.	214,500		8,800			223,300		223,300
Car shed, domitory, etc.	1,198,350		24,850			1,223,200		1,223,200
Extension service dept.	198,000	151,429	23,100			372,529	157,929	214,600
Engineering sec.	132,000	100,000	19,900			251,900	106,500	145,400
Marketing/management sec.	66,000	51,429	3,200			120,629	51,429	69,200
Appropriate technology development department	1,386,720	3,511,120	41,500	341,109		5,280,449	3,507,047	1,773,402
Foundry sec.	333,080	281,429	23,100	18,143		655,752	287,929	367,823
Forging sec.	208,910	143,000	4,800	14,300		371,010	143,000	228,010
Mechanical engineering sec.	376,570	2,851,668	5,500	285,167		3,518,905	2,851,668	667,237
Ceramic sec.	292,810	164,450	4,800	16,445		478,505	164,450	314,055
Briquette sec.	175,350	70,573	3,300	7,054		256,277	60,000	196,277
Moshi industrial exhibition unit	466,335	57,143	29,700		35,156	588,334	75,143	513,191
Pare industrial promotion station	277,565	203,625	10,500	14,649	27,368	533,707	210,625	323,082
Rombo industrial promotion station	277,565	203,625	10,500	14,649	27,368	533,707	210,625	323,082
<b>Total</b>	<b>4,563,535</b>	<b>4,178,371</b>	<b>244,350</b>	<b>370,407</b>	<b>801,800</b>	<b>10,158,463</b>	<b>4,655,298</b>	<b>5,503,165</b>





ANNEX 3

ESTIMATES OF FIXED CAPITAL INVESTMENT COSTS

( K I D C )



Building/Shed Construction Costs (Table-5)

(unit: Tshs.)

	m <sup>2</sup>	Unit Price	Cost		m <sup>2</sup>	Unit Price	Cost
Head Quarter	2,825		3,542,070	Mechanical engineering section	415		376,570
Control centre	160		264,000	Office	20	1,650	33,000
Director	30	1,650	49,500	Advisor	15	1,650	24,750
Chief advisor	30	1,650	49,500	Work shop	330	839	276,870
Conference room	100	1,650	165,000	Storage	50	839	41,950
Lobby and toilet, etc.	300	1,650	495,000	Ceramic section	320		292,810
Car shed	150	839	125,850	Office	15	1,650	24,750
Dormitory	350	1,650	577,500	Advisor	15	1,650	24,750
Programming and coordination department	300		495,000	Work shop	240	839	201,360
Manager	25	1,650	41,250	Storage	50	839	41,950
Advisor	25	1,650	41,250	Bricquette section	180		175,350
Administration section	40	1,650	66,000	Office	15	1,650	24,750
Planning research section	30	1,650	49,500	Advisor	15	1,650	24,750
Training course section	30	1,650	49,500	Work shop	100	839	83,900
Class room	100	1,650	165,000	Storage	50	839	41,950
Data room	50	1,650	82,500	Moshi industrial exhibition unit	290		466,335
Extension service department	120		198,000	Office	160	1,650	264,000
Manager	25	1,650	41,250	Advisor	15	1,650	24,750
Advisor	25	1,650	41,250	Exhibition hall	100	1,650	165,000
Engineering section	30	1,650	49,500	Car shed	15	839	12,585
Marketing/Management section	40	1,650	66,000	Pare industrial promotion station	210		277,565
Appropriate technology devtnt dep.	1,445		1,386,720	Office	110	1,650	181,500
Manager	25	1,650	41,250	Advisor	15	1,650	24,750
Advisor	25	1,650	41,250	Work shop	70	839	58,730
Foundry section	260		250,580	Car shed	15	839	12,585
Office	15	1,650	24,750	Rombo industrial promotion station	210		277,565
Advisor	25	1,650	41,250	Office	110	1,650	181,500
Storage	50	839	41,950	Advisor	15	1,650	24,750
Forging section	220		208,910	Work shop	70	839	58,730
Office	15	1,650	24,750	Car shed	15	839	12,585
Advisor	15	1,650	24,750	Total	3,535		4,563,535
Work shop	140	839	117,460				
Storage	50	839	41,950				

Machines and Equipment Costs (Table-6a)

(unit:Tshs.)

	Spec.	KW/HR	Q'ty	Price	Remark	
Administration section	Land cruiser	4230 cc	1	51,429		
Engineering section	Truck	3T diesel	100,000			
Marketing/management sec.	Land cruiser	4230 cc	1	51,429		
Foundry sec.	Truck	3T diesel	100,000			
	Cupola	0.3 T/HR	1	17,143		
	Blower		1	1,143		
	Hand feed planer	0.75	1	16,572	Wood pattern	
	Lathe (wood)	0.5	1	11,429	"	
	Circular-saw	0.75	1	14,286	"	
	Band-saw	0.75	1	8,572	"	
	Surface Planer	Single	1	17,143		
	Hand tool		1*	17,143		
	Shot blast		1	71,429		
	Spare parts, etc		1	6,569		
	Total			281,429		
Forging Section	Forging machine	1T air	1	42,857		
	"	0.3T air	1	22,857		
	Anvil	S-C.	1	2,829		
	Trolley	0.5T	1	1,143		
	Hand tool		1*	8,283		
	Jig, etc.		1*	59,317		
	Spare parts, etc			5,714		
		Total			143,000	
	Mechanical engineering section	Bench lathe	90m/m	1	28,572	
		Engine lathe	1,000m/m	1	85,715	
Copying lathe		800m/m	7.5	100,000		
Turret lathe			2.2	100,000		
Vertical milling			5.5	114,286		
Plain milling			5.5	114,286		
Tool milling			1.5	97,143		
Bench drill			0.55	17,143		
Radial drill			3.7	228,572		
Planer			7.0	257,143		
Surface grinder			5.5	142,858		
Tool & cutter grinder			0.55	42,859		
Cutting tool grinder			0.3	34,286		
Hobbing machine			0.75	114,286		
Gear shaper			2.2	257,143		
Shaper			5.5	114,286		
Honing machine			1.5	85,715		
Contour machine			0.75	28,572		
Sawing machine			1.5	34,286		
Cut machine		Movable	3.7	7,143		
Braking press		65T	22	208,572		
Block gauge			1*	1,000		
Dial gauge			4	2,857		
Magnetic base			6	6,286		
Hardness tester		Shore	1	2,858		
"	Rockwell	1	11,429			
Spring tester		1	2,572			
Fitting bench	2x1.5(F.C)	1	10,000			
Bench grinder		0.75	4,572			
Jig and tool		1*	100,000	Included welding		
Electric trolley		2.25	15,714			
Air compressor		2	128,572			
Oil revitization machine		2	142,858			
Spare parts			210,084			
	Total			2,851,668		

Note: \* set

Machines and Equipment Costs (Table-6b)

		(unit: Tshs.)		
	Spec.	Q'ty	Price	Remark
Ceramic Section	0.8T/	1	40,857	
Roll Crusher		1	47,142	
Biscuit Kiln	0.4kw/h	1	31,429	
Vacuum agitator		1	31,429	
Pug mill		1	13,593	
Spare parts etc.			164,450	
Total:				
Briquette Section	kw/w		42,858	
Crusher	kw/w		15,000	
Molder	kw/w	1	2,000	Local made
Filter (Wooden)		5	5,573	"
Wooden box		100	3,000	"
Wooden Mixing ank		2	2,142	
Spare Parts			70,573	
Moshi Industrial Exhibition Unit		1	57,143	
Pickup	2T			
Pare Industrial Promotor Station	2T	1	57,143	
Pickup		1	71,430	
Engine Lathe		1	14,286	
Drilling machine		1	11,429	
Arc welder		1	3,714	
Bench guilder		1	25,000	
Air compressor		1	8,572	
Tool		1	8,572	
Hand saw		1	3,479	
Spare parts			203,625	
				Total
				4,178,371

## Office Equipment Costs (Table-7a)

Item	Price	Q'ty	Cost	Remark
Head quarter	193,650			
Control centre	27,000			
Director	6,400			
Desk	1,000	1	1,000	Local-made
Chair	600	1	600	"
Book shelf	1,200	1	1,200	"
Reception set	3,000	1	3,000	"
Chair (for guest)	200	3	600	"
Chief advisor	6,400			
Desk	1,000	1	1,000	"
Chair	600	1	600	"
Book shelf	1,200	1	1,200	"
Reception set	3,000	1	3,000	"
Chair (for guest)	200	3	600	"
Secretary	14,200			
Desk	400	2	800	"
Chair	200	2	400	"
Typewriter	6,500	2	13,000	Import
Programming and coordination dep.	102,050			
Manager and advisor	9,600			
Desk	800	2	1,600	Local-made
Chair	400	2	800	"
Book shelf	1,000	2	2,000	"
Reception set	2,000	2	4,000	"
Chair (for guest)	200	6	1,200	"
Secretary	7,100			
Desk	400	1	400	"
Chair	200	1	200	"
Typewriter	6,500	1	6,500	Import
Administration section	26,700			
Desk	600	1	600	Local-made
"	400	2	800	"
"	300	3	900	"

Item	Price	Q'ty	Cost	Remark
Chair	300	1	300	Local-made
"	250	2	500	"
Copy machine	11,000	2	22,000	Import
Safe	1,000	1	1,000	"
Planning section	3,200			
Desk	600	1	600	Local-made
"	400	2	800	"
"	300	2	600	"
Chair	300	1	300	"
"	250	2	500	"
"	200	2	400	"
Training course section	8,800			
Desk	600	1	600	"
"	400	2	800	"
"	300	2	600	"
Chair	300	1	300	"
"	250	2	500	"
"	200	2	400	"
Desk (for class room)	400	1	400	"
"	300	10	3,000	"
Chair	200	11	2,200	"
Data room	10,400			
Book shelf	800	10	8,000	"
Table	200	4	800	"
Chair	200	8	1,600	"
Conference room	11,400			
Table	300	10	3,000	"
Chair	200	30	6,000	"
Shelf	800	3	2,400	"
Dormitory	24,950			
Bed	300	10	3,000	"
Desk	200	11	2,200	"
Chair	150	11	1,650	"
Table	200	5	1,000	"
Bench	100	10	1,000	"
Shelf	600	10	6,000	"
Kitchen set	10,000	1	10,000	"

(units/shs.)

Office Equipment Costs (Table-7b)

(unit:Tshs.)

Item	Price	Qty	Cost	Item	Price	Qty	Cost	Remark
Extension service dep.			23,100	Secretary			7,100	
Manager and advisor			9,600	Desk	400	1	400	Local-made
Desk	800	2	1,600	Chair	200	1	200	"
Chair	400	2	800	Typewriter	6,500	1	6,500	Import
Book shelf	1,000	2	2,000	Foundry section			6,400	
Reception set	2,000	2	4,000	Desk	600	3	1,800	Local-made (including 2 advisors)
Chair (for guest)	200	6	1,200	Chair	300	3	900	"
Secretary			7,100	Working table	150	6	900	Local-made
Desk	400	1	400	Chair	200	6	1,200	"
Chair	200	1	200	Shelf	800	2	1,600	"
Typewriter	6,500	1	6,500	Import				
Marketing/Management section			3,200	Forging section			4,800	
Desk	600	1	600	Desk	600	2	1,200	Local-made (including 1 advisor)
"	400	2	800	Chair	300	2	600	"
"	300	2	600	Working table	150	4	600	Local-made
Chair	300	1	300	Chair	200	4	800	"
"	250	2	500	Shelf	800	2	1,600	"
"	200	2	400	Mechanical engineering section			5,500	
Engineering section			3,200	Desk	600	2	1,200	Local-made (including 1 advisor)
Desk	600	1	600	Chair	300	2	600	"
"	400	2	800	Working table	150	6	900	Local-made
"	300	2	600	Chair	200	6	1,200	"
Chair	300	1	300	Shelf	800	2	1,600	"
"	250	2	500	Ceramic section			4,800	
"	200	2	400	Desk	600	2	1,200	Local-made (including 1 advisor)
Engineering section			3,200	Chair	300	2	600	Local-made
Desk	600	1	600	Working table	150	4	600	"
"	400	2	800	Chair	200	4	800	"
"	300	2	600	Shelf	800	2	1,600	"
Chair	300	1	300	Briquette section			3,300	
"	250	2	500	Desk	600	2	1,200	Local-made (including 1 advisor)
"	200	2	400	Chair	300	2	600	Local-made
Appropriate tech. dev't dep.			42,500	Working table	150	4	600	"
Manager and advisor			9,600	Chair	200	4	800	"
Desk	800	2	1,600	Shelf	800	2	1,600	"
Chair	400	2	800	Ceramic section			4,800	
Book shelf	1,000	2	2,000	Desk	600	2	1,200	Local-made (including 1 advisor)
Reception set	2,000	2	4,000	Chair	300	2	600	Local-made
Chair (for guest)	200	6	1,200	Working table	150	4	600	"
				Chair	200	4	800	"
				Shelf	800	2	1,600	"
				Briquette section			3,300	
				Desk	600	2	1,200	Local-made (including 1 advisor)
				Chair	300	2	600	Local-made
				Working table	150	2	300	"
				Chair	200	2	400	"
				Shelf	800	1	800	"

## Office Equipment Costs (Table-7c)

(units:fms.)

Item	Price	Q'ty	Cost	Remark
Moshi industrial exhibition unit			29,700	
Desk	600	1	600	Local-made
"	400	2	800	"
"	300	3	900	"
Chair	300	1	300	"
"	250	2	500	"
"	200	3	600	"
Book shelf	1,000	1	1,000	"
Table	200	10	2,000	"
Shelf	500	10	5,000	"
Typewriter	6,500	1	6,500	Import
Copy machine	11,000	1	11,000	"
Safe	500	1	500	"
Pare industrial promotion station			10,500	Local-made
Desk	600	1	600	"
"	400	1	400	"
"	300	1	300	"
Chair	300	1	300	"
"	250	1	250	"
"	200	1	200	"
Book shelf	1,000	1	1,000	"
Working table	150	3	450	"
Typewriter	6,500	1	6,500	Import
Safe	500	1	500	"
Rombo industrial promotion sta.			10,500	Local-made
Desk	600	1	600	"
"	400	1	400	"
"	300	1	300	"
Chair	300	1	300	"
"	250	1	250	"
"	200	1	200	"
Book shelf	1,000	1	1,000	"
Working table	150	3	450	"
Typewriter	6,500	1	6,500	Import
Safe	500	1	500	"
Total			244,350	
				Local-made 157,850
				Import 875,001



Machinery Installation Costs (Table-8)

	(unit: Shs.)
Appropriate technology development department	341,109
Foundry section	Machineries cost Shs.181,429 x 10%
Forging section	" Shs.143,000 x 10%
Mechanical engineering section	" Shs.2,851,668 x 10%
Ceramic section	" Shs.164,450 x 10%
Briquette section	" Shs.70,573 x 10%
Pare industrial promotion station	" Shs.146,482 x 10%
Rombo industrial promotion station	" Shs.164,482 x 10%
Total	370,407

Infrastructure Costs (Table-9)

(unit: Tshs.)

	Land Levelling and Fencing	Road	Drainage	Water Supply	Electricity	Waste Disposal	Total
Headquarters	110m <sup>2</sup> x 80m <sup>2</sup> = 8,800m <sup>2</sup> 8,800m <sup>2</sup> x $\frac{\text{Shs } 200}{100\text{m}^2}$	(A) 7.5m x 15m = 112.5m <sup>2</sup> (B) 5m x 27.8m = 139m <sup>2</sup> (C) 5m x 52.5m = 262.5m <sup>2</sup> (D) 5m x 50m = 250m <sup>2</sup> (E) 5m x 52.5m = 262.5m <sup>2</sup> (F) 5m x 26.15m = 130.75m <sup>2</sup> 1,157.25m <sup>2</sup> 1,157.25m <sup>2</sup> x $\frac{\text{Shs } 200}{\text{m}^2}$	Circumference 110m x 2 = 220m <sup>2</sup> , 380m <sup>2</sup> 80m x 2 = 160m <sup>2</sup> Roadside 52.5m x 2 = 105m <sup>2</sup> 50m x 2 = 100m <sup>2</sup> Others 300m x 250m x 20% = 117m <sup>2</sup> 702m <sup>2</sup> 702m <sup>2</sup> x $\frac{\text{Shs } 66}{\text{m}^2}$	320m <sup>2</sup> x Shs 20.30/m Shs 6496/-	Shs 400,000/- (including transformer) (import)	Shs 711,908/-	Shs 711,908/-
Moshi Industrial Exhibition Unit	40m x 21.75m = 870m <sup>2</sup> x $\frac{\text{Shs } 200}{100\text{m}^2}$ Shs 1,740/-	Shs 480/- (A) 5m x 10m = 100m <sup>2</sup> (B) 3.3m x 5m x 2 = 33m <sup>2</sup> (C) 33m x 1.75m = 57.75m <sup>2</sup> 138.8m <sup>2</sup> 138.8m <sup>2</sup> x $\frac{\text{Shs } 200}{\text{m}^2}$ Shs 27,760/-	Roadside 20m x 2 = 40m <sup>2</sup> 5m x 2 = 10m <sup>2</sup> Others 50m x 20% = 10m <sup>2</sup> 60m <sup>2</sup> 60m <sup>2</sup> x $\frac{\text{Shs } 66}{\text{m}^2}$ Shs 3,960/-	83.5m x Shs 20.30/m	Shs 400,000/-	Shs 10,000/-	Shs 35,156
Pare Industrial Promotion Station	30m x 21m = 630m <sup>2</sup> x $\frac{\text{Shs } 200}{100\text{m}^2}$ 630m <sup>2</sup> x $\frac{\text{Shs } 200}{100\text{m}^2}$ Shs 1,260/-	(A) 5m x 15m = 75m <sup>2</sup> (B) 5m x 3.97m = 19.85m <sup>2</sup> (C) 5m x 2.3m = 11.5m <sup>2</sup> 106.4m <sup>2</sup> 106.4m <sup>2</sup> x $\frac{\text{Shs } 200}{\text{m}^2}$	Roadside 15m x 2 = 30m <sup>2</sup> 2m x 395m = 790m <sup>2</sup> Others 2m x 2.3m = 4.6m <sup>2</sup> 42.5m x 20% = 8.5m <sup>2</sup> 51m <sup>2</sup> 51m <sup>2</sup> x $\frac{\text{Shs } 66}{\text{m}^2}$ Shs 3,366/-	72m x Shs 20.30/m Shs 1,462/-	Shs 1,462/-	Shs 27,368/-	Shs 27,368/-
Rombo Industrial Promotion Station	30m x 21m = 630m <sup>2</sup> x $\frac{\text{Shs } 200}{100\text{m}^2}$ 630m <sup>2</sup> x $\frac{\text{Shs } 200}{100\text{m}^2}$ Shs 1,260/-	(A) 5m x 15m = 75m <sup>2</sup> (B) 5m x 3.97m = 19.85m <sup>2</sup> (C) 5m x 2.3m = 11.5m <sup>2</sup> 106.4m <sup>2</sup> 106.4m <sup>2</sup> x $\frac{\text{Shs } 200}{\text{m}^2}$	Roadside 15m x 2 = 30m <sup>2</sup> 2m x 3.95m = 7.9m <sup>2</sup> 2m x 2.3m = 4.6m <sup>2</sup> Others 42.5m x 20% = 8.5m <sup>2</sup> 51m <sup>2</sup> 51m <sup>2</sup> x $\frac{\text{Shs } 66}{\text{m}^2}$ Shs 3,366/-	72m x Shs 20.30/m Shs 1,462/-	Shs 1,462/-	Shs 27,368/-	Shs 27,368/-
TOTAL	21,860/-	301,860/-	57,024/-	11,116/-	400,000/-	10,000/-	801,800/-

Building/Shed Costs By Year (Table-10)

(Unit: Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Head quarter	2,697,340	376,570	292,810		175,350
Control Centre	264,000				
Programming and coordination department	1,693,350				
Administration section	231,000				
Planning section	49,500				
Training course section	214,500				
Dormitory etc.	1,198,350				
Extention service department	198,000				
Engineering section	132,000				
Marketing/Management section	66,000				
Appropriate technology dev't dep.	541,990				
Foundry section	333,000				
Forging section	208,910				
Mechanical/engineering section		376,570			
Ceramic section			292,810		
Eriquette section					175,350
Moshi industrial exhibition unit		466,335			
Pare industrial promotion station			277,565		
Rombo industrial promotion station				277,565	
Total	2,697,340	842,905	570,375	277,565	175,350

Machines and Equipment Costs by Year (Table-II)

(unit:Tshs.)

	<u>1st Year</u>	<u>2nd Year</u>	<u>3rd Year</u>	<u>4th Year</u>	<u>5th Year</u>
	Total F.C.	Total F.C.	Total F.C.	Total F.C.	Total F.C.
	L.C.	L.C.	L.C.	L.C.	L.C.
Head quarter	627,287	2,851,668	164,450		70,573
Control centre					60,000
Programming and coordination dep.	51,429				
Administration sec.	51,429				
Planning sec.					
Training course sec.					
Dormitory, etc.					
Extension service dep.	151,429				
Engineering sec.	100,000				
Marketing/management sec.	51,429				
Appropriate tech. dev't dep.	424,429	2,851,668			
Foundry section	281,429				
Forging sec.	143,000				
Mechanical engineering sec.		2,851,668	164,450		
Ceramic sec.					
Briquette sec.					
Moshi Industrial Exhibition Unit		57,143			
Pare Industrial Promotion Station			203,625	203,625	
Rombo Industrial Promotion Station				203,625	203,625
Total	627,287	2,908,811	368,075	203,625	70,573
					60,000
					10,573

## Office Equipment Costs by Year (Table-12)

(unit:Tshs.)

	1st Year		2nd Year		3rd Year		4th Year		5th Year	
	Total	F.C. L.C.	Total	F.C. L.C.	Total	F.C. L.C.	Total	F.C. L.C.	Total	F.C. L.C.
Head quarter	171,250	55,500	115,750	14,300	-	14,300	4,800	4,800		
Control centre	27,000	13,000	14,000							
Programming and coordination dep.	93,250	29,500	63,750	8,800	-	8,800				
Administration sec.	65,200	29,500	35,700							
Planning sec.	3,200	-	3,200							
Training course sec.				8,800	-	8,800				
Dormitory, etc.	24,850	-	24,850							
Extension service dep.	23,100	6,500	16,600							
Engineering sec.	19,900	6,500	13,400							
Marketing/management sec.	3,200	-	3,200							
Appropriate tech dev't dep.	27,900	6,500	21,400	5,500	5,500	4,800	4,800			
Foundry section	23,100	6,500	16,600							
Forging sec.	4,800	-	4,800							
Mechanical engineering sec.				5,500	-	5,500				
Ceramic sec.						4,800	4,800			
Briquette sec.									3,300	3,300
Moshi industrial exhibition unit				29,700	18,000	11,700				
Pare industrial promotion station							10,500	7,000	3,500	
Rombo industrial promotion station								10,500	7,000	3,500
Total	171,250	55,500	115,750	44,000	18,000	26,000	15,300	7,000	8,300	3,300

Installation and Infrastructure Costs by Year (Table-13)

(unit: Tshs.)

	Machine Installation					Infrastructure				
	1st Year	2nd Year	3rd Year	4th Year	5th Year	1st Year	2nd Year	3rd Year	4th Year	5th Year
Head quarter	32,443	285,167	16,445		7,054	711,908				
Control centre						711,908				
Programming and coordination dep.										
Administration section										
Planning section										
Training course section										
Dormitory, etc.										
Extension service dep.										
Engineering section										
Marketing/management sec.										
Appropriate tech. dev't dep.	32,443	285,167	16,445		7,054					
Foundry section	18,143									
Forging section	14,300									
Mechanical engineering sec.		285,167								
Ceramic section			16,445							
Briquette section					7,054					
Moshi industrial exhibition unit										
Pare industrial promotion station			14,649							
Rombo industrial promotion station				14,649						
Total	32,443	285,167	31,094	14,649	7,054	747,064	27,368	27,368	27,368	

1st Year Investment by Section/Department and by Kinds of Fixed Capital Requirements (Table-14) (unit: 'shs.)

	Building	Machine and Equipment	Office Expenditure	Machine Installation	Infrastructure	Total	F.C.	Break-down L.C.
Head quarter	2,697,340	627,287	171,250	32,443	711,908	4,240,228	1,082,787	3,157,441
Control centre	264,000		27,000		711,908	1,002,908	413,000	589,908
Programming and coordination dep.	1,693,350	51,429	93,250			1,838,029	80,929	1,757,100
Administration section	231,000	51,429	65,200			347,629	80,929	266,700
Planning section	49,500		3,200			52,700		52,700
Training course section	214,500					214,500		214,500
Dormitory, etc.	1,198,350		24,850			1,223,200		1,223,200
Extension service dep.	198,000	151,429	23,100			372,529	157,929	214,600
Engineering section	132,000	100,000	19,900			251,900	106,500	145,400
Marketing/management sec.	66,000	51,429	3,200			120,629	51,429	69,200
Appropriate tech. dev't dep.	541,990	424,429	27,900	32,443		1,026,762	430,929	595,833
Foundry section	333,080	281,429	23,100	18,143		655,752	287,929	367,823
Forging section	208,910	143,000	4,800	14,300		371,010	143,000	228,010
Mechanical engineering sec.								
Ceramic section								
Brigette section					35,156	35,156		35,156
Moshi industrial exhibition unit								
Pare industrial promotion station								
Rombo industrial promotion station								
<b>Total</b>	<b>2,697,340</b>	<b>627,287</b>	<b>171,250</b>	<b>32,443</b>	<b>747,064</b>	<b>4,275,384</b>	<b>1,082,787</b>	<b>3,192,597</b>

2nd Year Investment by Section/Department and by Kinds of Fixed Capital Requirements (Table-15)

(unit: Tshs.)

	Building	Machine and Equipment	Office Expenditure	Machine Installation	Infrastructure	Total	F.C.	Break-down I.C.
Head quarter	376,570	2,851,668	14,300	285,167		3,527,705	2,851,668	676,037
Control centre								
Programming and coordination dep.			8,800			8,800		8,800
Administration section								
Planning section			8,800			8,800		8,800
Training course section								
Dormitory, etc.								
Extension service dep.								
Engineering section								
Marketing/management sec.								
Appropriate tech. dev't dep.	376,570	2,851,668	5,500	285,167		3,518,905	2,851,668	667,237
Foundry section								
Forging section								
Mechanical engineering sec.	376,570	2,851,668	5,500	285,267		3,518,905	2,851,668	667,237
Ceramic section								
Briquette section								
Moshi industrial exhibition unit	466,335	57,143	29,700			553,178	75,143	478,035
Pare industrial promotion station					27,368	27,368		27,368
Rombo industrial promotion station								
Total	842,905	2,908,811	44,000	285,167	27,368	4,108,251	2,926,811	1,181,440



3rd Year Investment by Section/Department and by Kinds of Fixed Capital Requirements (Table-16) (unit: \$ths.)

	Building	Machine and Equipment	Office Expenditure	Machine Installation	Infrastructure	Total	F.C.	Break-down
								Z.C.
Head quarter	292,810	164,450	4,800	16,445		478,505	164,450	314,055
Control centre								
Programming and coordination dep.								
Administration section								
Planning section								
Training course section								
Dormitory, etc.								
Extension service dep.								
Engineering section								
Marketing/management sec.								
Appropriate tech. dev't dep.	292,810	164,450	4,800	16,445		478,505	164,450	314,055
Foundry section								
Forging section								
Mechanical engineering sec.								
Ceramic section	292,810	164,450	4,800	16,445		478,505	164,450	314,055
Briquette section								
Moshi industrial exhibition unit								
Pare industrial promotion station	277,565	203,625	10,500	14,649		506,339	210,625	295,714
Rombo industrial promotion station					27,368	27,368		27,368
Total	570,375	368,075	15,300	31,094	27,368	1,012,212	375,075	637,137

4th Year Investment by Section/Department and by Kinds of Fixed Capital Requirements (Table-17)

(units/ths.)

	Building	Machine and Equipment	Office Expenditure	Machine Installation	Infrastructure	Total	F.C.	Break-down L.C.
Head quarter								
Control centre								
Programming and coordination dep.								
Administration section								
Planning section								
Training course section								
Dormitory, etc.								
Extension service dep.								
Engineering section								
Marketing/management sec.								
Appropriate tech. dev'nt dep.								
Foundry section								
Forging section								
Mechanical engineering sec.								
Ceramic section								
Briquette section								
Moshi industrial exhibition unit								
Pare industrial promotion station								
Rombo industrial promotion station	277,565	203,625	10,500	14,649		506,339	210,625	295,714
Total	277,565	203,625	10,500	14,649		506,339	210,625	295,714

5th Year Investment by Section/Department and by Kinds of Fixed Capital Requirements (Table-18)

(unit: Tshs.)

	Building	Machine and Equipment	Office Expenditure	Machine Installation	Infrastructure	Total	F.C.	Break-down I.C.
Head quarter	175,350	70,573	3,300	7,054		256,277	60,000	196,277
Control centre								
Programming and coordination dep.								
Administration section								
Planning section								
Training course section								
Dormitory, etc.								
Extension service dep.								
Engineering section								
Marketing/management sec.								
Appropriate tech. dev't dep.	175,350	70,573	3,300	7,054		256,277	60,000	196,277
Foundry section								
Forging section								
Mechanical engineering sec.								
Ceramic section								
Bricquette section	175,350	70,573	3,300	7,054		256,277	60,000	196,277
Moshi industrial exhibition unit								
Pare industrial promotion station								
Rombo industrial promotion station								
Total	175,350	70,573	3,300	7,054		256,277	60,000	196,277



ANNEX 4

ESTIMATES OF RUNNING COSTS REQUIREMENTS

( K I D C )



Salaries/Wages by Year (Table-19a)

(Unit: Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Headquarters	131,700	371,880	454,152	480,576	509,820
Control Centre	6,600	13,200	13,872	13,872	14,568
Director					
Secretary	550 x 6M	6,600	578 x 12M	578 x 12M	607 x 12M
Advisor					
Secretary	550 x 6M	6,600	578 x 12M	578 x 12M	607 x 12M
Programming & Co-ordination Dep.					
Manager	41,700	125,220	155,040	157,968	162,816
Secretary	2,000 x 6M	24,000	2,100 x 12M	2,100 x 12M	2,205 x 12M
Administration	3,300	6,600	6,936	6,936	7,284
Sec.					
Chief	1,100 x 6M	49,200	50,532	51,672	53,064
Qualified Staff	6,600	13,200	13,860	13,860	14,556
Non-qualif'd Staff	550 x 2 x 6M	6,600	578 x 2 x 12M	578 x 2 x 12M	607 x 2 x 12M
Driver					
Planning Sec.	13,200	35,520	36,852	37,308	38,700
Chief	1,100 x 6M	13,200	1,155 x 12M	1,155 x 12M	1,213 x 12M
Qualified Staff	6,600	13,200	13,860	13,860	14,556
Non-qualif'd Staff	550 x 2 x 6M	6,600	578 x 2 x 12M	578 x 2 x 12M	607 x 2 x 12M
Training Course Section					
Chief	9,900	9,900	35,520	36,852	37,308
Staff	1,100 x 6M	6,600	1,100 x 12M	1,155 x 12M	1,155 x 12M
Qualified Staff					
Non-qualif'd Staff	550 x 6M	3,300	550 x 2 x 12M	578 x 2 x 12M	578 x 2 x 12M
Extension Dep.					
Manager	41,700	110,760	9,120	9,120	9,576
Secretary	2,000 x 6M	24,000	2,100 x 12M	2,100 x 12M	2,205 x 12M
Marketing/Management Sec.	3,300	6,600	6,936	6,936	7,284
Chief	1,100 x 6M	40,080	41,412	42,096	43,488
Qualif'd Staff	550 x 2 x 6M	6,600	578 x 2 x 12M	578 x 2 x 12M	607 x 2 x 12M
Non-qualif'd Staff					
Driver	380 x 2 x 12M	9,120	9,120	9,120	9,576
Engineering Sec.	380 x 12M	4,560	4,560	4,788	4,788
Chief	13,200	40,080	41,412	42,096	43,488
Qualif'd Staff	1,100 x 6M	13,200	1,155 x 12M	1,155 x 12M	1,213 x 12M
Non-qualif'd Staff	550 x 2 x 6M	6,600	578 x 2 x 12M	578 x 2 x 12M	607 x 2 x 12M
Driver	380 x 2 x 12M	9,120	9,120	9,576	9,576
Staff					
Driver	380 x 12M	4,560	4,560	4,788	4,788

Salaries/Wages by Year (Table-19b)

(unit:Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Appropriate Technology Development Department	41,700	122,700	170,280	195,408	211,716
Manager	2,000 x 6M	2,000 x 12M	2,100 x 12M	2,100 x 12M	2,205 x 12M
Secretary	550 x 6M	550 x 12M	578 x 12M	578 x 12M	207 x 12M
Foundry Sec.	13,200	40,080	41,412	42,096	43,488
Chief	6,600	13,200	13,860	13,860	14,556
Non-skilled	550 x 2 x 6M	550 x 2 x 12M	578 x 2 x 12M	578 x 2 x 12M	607 x 2 x 12M
worker					14,568
Driver		380 x 2 x 12M	380 x 2 x 12M	399 x 2 x 12M	399 x 2 x 12M
Forging Sec.	13,200	4,560	4,560	4,788	4,788
Chief	6,600	35,520	36,852	37,308	38,700
Skilled Worker	1100 x 6M	13,200	13,860	13,860	14,556
Non-skilled	550 x 2 x 6M	550 x 2 x 12M	578 x 2 x 12M	578 x 2 x 12M	607 x 2 x 12M
Worker		13,200	13,872	13,872	14,568
Mechanical		380 x 2 x 12M	380 x 2 x 12M	399 x 2 x 12M	399 x 2 x 12M
Engineering		9,120	9,120	9,576	9,576
Sec.		16,500	46,680	48,348	49,032
Chief		6,600	13,200	13,860	13,860
Skilled Worker		550 x 3 x 6M	550 x 3 x 12M	578 x 3 x 12M	578 x 3 x 12M
Non-skilled		9,900	19,800	20,808	20,808
Worker			380 x 3 x 12M	380 x 3 x 12M	399 x 3 x 12M
Ceramic Sec.			13,680	13,680	14,364
Chief			13,200	35,520	36,852
Skilled Worker			6,600	13,200	13,860
Non-skilled "			550 x 2 x 6M	550 x 2 x 12M	578 x 2 x 12M
Briquette Sec.			6,600	9,120	9,120
Chief			1100 x 6M	1155 x 12M	1155 x 12M
Skilled Worker			550 x 2 x 6M	578 x 2 x 12M	578 x 2 x 12M
Non-skilled "			380 x 2 x 6M	380 x 2 x 12M	380 x 2 x 12M
Chief			1100 x 6M	1100 x 6M	9,900
Skilled Worker			550 x 2 x 6M	550 x 2 x 6M	6,600
Non-skilled "			380 x 2 x 6M	380 x 2 x 6M	3,300
Moshi Industrial Exhibition Unit					
Chief	13,200	44,640	44,640	46,884	46,884
Qualified Staff	6,600	13,200	13,200	13,860	13,860
Non-qualif'd "	6,600	550 x 2 x 6M	550 x 2 x 12M	578 x 2 x 12M	578 x 2 x 12M
Driver		380 x 3 x 12M	380 x 3 x 12M	399 x 3 x 12M	399 x 3 x 12M
		380 x 12M	4,560	4,560	4,788



Salaries/Wages by Year (Table-19c)

(Unit: Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Pare Industrial Promotion Sta. Chief			9,900	28,920	29,916
Skilled Worker			6,600	13,200	13,860
Non-skilled Worker			3,300	6,600	6,936
Driver				4,560	4,560
				1100 x 12M	1155 x 12M
				550 x 6M	578 x 12M
				380 x 12M	380 x 12M
				380 x 12M	380 x 12M
Rombo Industrial Pro- motion Sta. Chief				9,900	28,920
Skilled Worker				6,600	13,200
Non-skilled Worker				3,300	6,600
Driver					4,560
				1100 x 6M	1100 x 12M
				550 x 6M	550 x 12M
				380 x 12M	380 x 12M
				380 x 12M	380 x 12M
TOTAL:	131,700	385,080	508,692	568,368	615,540

Office Running Costs by Year (Table-20)

	(Unit: Tshs.)				
	1st Year	2nd Year	3rd Year	4th Year	5th Year
Headquarters	13,170	37,188	45,419	48,362	50,986
Control Centre	$660 \times \frac{10}{100}$	$13,200 \times \frac{10}{100}$	$13,872 \times \frac{10}{100}$	$13,872 \times \frac{10}{100}$	$14,568 \times \frac{10}{100}$
Programming & Coordination Dep.	4,170	12,522	15,505	15,798	16,282
Administration					
Sec. (Inc. Manager)	$2,850 \times \frac{10}{100}$	$7,980 \times \frac{10}{100}$	$8,267 \times \frac{10}{100}$	$8,381 \times \frac{10}{100}$	$8,681 \times \frac{10}{100}$
Planning Sec.	$1,320 \times \frac{10}{100}$	$3,552 \times \frac{10}{100}$	$3,686 \times \frac{10}{100}$	$3,731 \times \frac{10}{100}$	$3,870 \times \frac{10}{100}$
Training Course					
Sec.	$9,900 \times \frac{10}{100}$	$990 \times \frac{10}{100}$	$3,552 \times \frac{10}{100}$	$3,686 \times \frac{10}{100}$	$3,731 \times \frac{10}{100}$
Extension Svc. Dep.	4,170	11,076	11,497	11,634	12,073
Marketing/Management					
Sec. (Inc. Manager)	$2,850 \times \frac{10}{100}$	$7,068 \times \frac{10}{100}$	$7,355 \times \frac{10}{100}$	$7,424 \times \frac{10}{100}$	$7,724 \times \frac{10}{100}$
Engineering					
Sec.	$1,320 \times \frac{10}{100}$	$4,008 \times \frac{10}{100}$	$4,142 \times \frac{10}{100}$	$4,210 \times \frac{10}{100}$	$4,349 \times \frac{10}{100}$
Appropriate Tech. Dev't Dep.	4,170	12,270	17,029	19,542	21,174
Foundry Sec. (Inc. Manager)	$2,850 \times \frac{10}{100}$	$7,068 \times \frac{10}{100}$	$7,355 \times \frac{10}{100}$	$7,424 \times \frac{10}{100}$	$7,724 \times \frac{10}{100}$
Forging Sec.	$1,320 \times \frac{10}{100}$	$3,552 \times \frac{10}{100}$	$3,686 \times \frac{10}{100}$	$3,731 \times \frac{10}{100}$	$3,870 \times \frac{10}{100}$
Mechanical Engineer'g					
Ceramic Sec.	$16,500 \times \frac{10}{100}$	$1,650 \times \frac{10}{100}$	$4,668 \times \frac{10}{100}$	$4,835 \times \frac{10}{100}$	$4,504 \times \frac{10}{100}$
			$13,200 \times \frac{10}{100}$	$35,520 \times \frac{10}{100}$	$36,852 \times \frac{10}{100}$
			1,320	3,552	3,686
Briquette Sec					$9,900 \times \frac{10}{100}$
Moshi Industrial Exhibition Unit	$13,200 \times \frac{10}{100}$	$1,320 \times \frac{10}{100}$	4,464	$45,972 \times \frac{10}{100}$	$46,884 \times \frac{10}{100}$
Pare Industrial Promotion Sta.			990	$28,920 \times \frac{10}{100}$	$29,916 \times \frac{10}{100}$
Rombo Industrial Promotion Sta.				$9,900 \times \frac{10}{100}$	$28,920 \times \frac{10}{100}$
				990	2,892
Total	13,170	38,508	50,873	56,842	61,559

Fuel Costs for Motor Vehicles by Year (Table-21)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Headquarters	21,700	45,570	47,850	50,244	52,758
Programming & Coordination Dep.					
Administration Sec.	11,200 x 1/2 =5,600	11,200 x 1.05 =11,760	11,760 x 1.05 =12,348	12,348 x 1.05 =12,966	12,966 x 1.05 =13,615
Extension Svc Dep Engineering Sec.	10,500 x 1/2 = 5,250	10,500 x 1.05 =11,025	11,025 x 1.05 = 11,577	11,577 x 1.05 =12,156	12,156 x 1.05 =12,764
Mkt'g/Management Sec.	11,200 x 1/2 =5,600	11,200 x 1.05 = 11,760	11,760 x 1.05 = 12,348	12,348 x 1.05 = 12,966	12,966 x 1.05 = 13,615
Appropriate Tech. Dev't Dep. Foundry Sec.	10,500 x 1/2 =5,250	10,500 x 1.05 =11,025	11,025 x 1.05 = 11,577	11,577 x 1.05 =12,156	12,156 x 1.05 = 12,764
Moshi Industrial Exhibition Unit	17,500	17,500 x 1/2 = 8,750	17,500 x 1.05 = 18,375	18,375 x 1.05 = 19,294	19,294 x 1.05 = 20,259
Pare Industrial Promotion Stn.	17,500	17,500 x 1/2 = 8,750	17,500 x 1.05 = 18,375	18,375 x 1.05 =19,294	19,294 x 1.05 = 20,259
Rombo Industrial Promotion Stn.	17,500	17,500 x 1/2 = 8,750	17,500 x 1.05 = 18,375	18,375 x 1.05 =19,294	19,294 x 1.05 = 20,259
TOTAL:	21,700	54,320	74,975	87,913	101,061

(Unit: Tshs.)

Maintenance Costs - Building/Shed (Table-22-a)

(unit: Tshs.)

	Building & Car Shep etc.	1st Year	2nd Year	3rd Year	4th Year	5th Year
Head Quarter			12,429	16,064	18,337	19,259
Control Centre	$264,000 \times \frac{0.5}{100} = 1,320$	1,320	1,320x1.05 = 1,386	1,386x1.05 = 1,456	1,456x1.05 = 1,529	1,529x1.05 = 1,605
Programming and Coordination Dep.		7,408	8,907	9,354	9,824	10,299
Administration Sec. (Inc. Carshed, Domitory, Robby, and Manager)	$1,429,300 \times \frac{0.5}{100} = 7,147$	7,147	7,147x1.05 = 7,505	7,505x1.05 = 7,881	7,881x1.05 = 8,276	8,276x1.05 = 8,689
Planning Section	$49,500 \times \frac{0.5}{100} = 248$	261	261x1.05 = 275	275x1.05 = 289	289x1.05 = 304	304x1.05 = 319
Training Course Sec.	$214,500 \times \frac{0.5}{100} = 1,073$	990	1,040	1,093	1,149	1,207
Extention Service Dep		660	660x1.05 = 693	693x1.05 = 728	728x1.05 = 765	765x1.05 = 802
Engineering Section (Inc. Manager)	$132,000 \times \frac{0.5}{100} = 660$	330	330x1.05 = 347	347x1.05 = 365	365x1.05 = 384	384x1.05 = 402
Marketing/Management Sec.	$66,000 \times \frac{0.5}{100} = 330$					
Appropriate Technology Development Department		2,711	4,731	6,434	8,757	11,834
Foundry Section (Inc. Manager)	$333,080 \times \frac{0.5}{100} = 1,666$	1,666	1,666x1.05 = 1,750	1,750x1.05 = 1,838	1,838x1.05 = 1,930	1,930x1.05 = 2,026
Forging Section	$208,910 \times \frac{0.5}{100} = 1,045$	1,045	1,045x1.05 = 1,098	1,098x1.05 = 1,153	1,153x1.05 = 1,211	1,211x1.05 = 1,271
Mechanical Engineering Sec	$376,570 \times \frac{0.5}{100} = 1,883$		1,883	1,883x1.05 = 1,978	1,978x1.05 = 2,077	2,077x1.05 = 2,180
Ceramic Section	$292,810 \times \frac{0.5}{100} = 1,465$			1,465	1,465x1.05 = 1,538	1,538x1.05 = 1,615
Briquette Section	$175,350 \times \frac{0.5}{100} = 877$					
Moshi Industrial Exhibition Unit	$466,335 \times \frac{0.5}{100} = 2,332$	2,332	2,332x1.05 = 2,449	2,449x1.05 = 2,572	2,572x1.05 = 2,699	2,699x1.05 = 2,838
Pare Industrial Promotion Station	$277,565 \times \frac{0.5}{100} = 1,388$		1,388	1,388x1.05 = 1,458	1,458x1.05 = 1,531	1,531x1.05 = 1,607
Rombo Industrial Promotion Station	$277,656 \times \frac{0.5}{100} = 1,388$					
Total		14,761	19,901	22,367	24,774	27,399

Maintenance Costs - Machines/Equipment (Table-22b)

	(unit: Tshs.)				
	1st Year	2nd Year	3rd Year	4th Year	5th Year
Headquarters		6,489	63,848	70,331	73,850
Control Centre					
Programming & Coordination Dep. Administration Sec.					
Planning Sec.					
Training Course Sec.					
Extension Svc Dep.					
Engineering Sec.					
Mt'ng Management Sec.					
Appropriate Tech. Dev't Dep.		6,489	63,848	70,331	73,850
Foundry Sec.	180,429x2/100=3,629	3,629	3,629x1.05=3,811	3,811x1.05=4,002	4,002x1.05=4,203
Forging Sec.	143,000x2/100=2,860	2,860	2,860x1.05=3,003	3,003x1.05=3,154	3,154x1.05=3,312
Mechanical Engineering Sec.	2,851,668x2/100=57,034	57,034	57,034	57,034x1.05=59,886	59,886x1.05=62,881
Ceramic Sec.	164,450x2/100=3,289	3,289	3,289	3,289	3,289x1.05=3,454
Brigette Sec.	70,573x2/100=1,412				
Moshi Industrial Engineering Unit					
Pare Industrial Promotion Svc.	146,482x2/100=2,930			2,930	2,930x1.05=3,077
Rombo Industrial Promotion Svc.	146,482x2/100=2,930				2,930
TOTAL:		6,489	63,848	73,261	79,857

Raw Material Costs - Motor Vehicles (Table-22-c)

(unit: Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Head Quarter	4,544	9,542	10,022	10,526	11,054
Control Centre					
Programming and Coordination Dep.	772	1,621	1,703	1,789	1,879
Administration Sec.	$51,429 \times \frac{3}{100} = 1,543$	$1,543 \times \frac{1}{2} = 772$	$1,621 \times 1.05 = 1,703$	$1,703 \times 1.05 = 1,789$	$1,789 \times 1.05 = 1,879$
Planning Section					
Training Course Section					
Extention Service Dep.	2,272	4,771	5,011	5,263	5,527
Engineering Section	$100,000 \times \frac{3}{100} = 3,000$	$3,000 \times \frac{1}{2} = 1,500$	$3,150 \times 1.05 = 3,308$	$3,308 \times 1.05 = 3,474$	$3,474 \times 1.05 = 3,648$
Marketing/Management Sec.	$51,429 \times \frac{3}{100} = 1,543$	$1,543 \times \frac{1}{2} = 772$	$1,621 \times 1.05 = 1,703$	$1,703 \times 1.05 = 1,789$	$1,789 \times 1.05 = 1,879$
Appropriate Tech. Dev't Dep.	1,500	3,150	3,308	3,474	3,648
Foundry Section	$100,000 \times \frac{3}{100} = 3,000$	$3,000 \times \frac{1}{2} = 1,500$	$3,150 \times 1.05 = 3,308$	$3,308 \times 1.05 = 3,474$	$3,474 \times 1.05 = 3,648$
Forging Section					
Mechanical Engineering Sec.					
Ceramic Section					
Briquette Section					
Moshi Industrial Exhibition Unit	$57,143 \times \frac{3}{100} = 1,715$	$1,715 \times \frac{1}{2} = 858$	$1,715 \times 1.05 = 1,801$	$1,801 \times 1.05 = 1,892$	$1,892 \times 1.05 = 1,987$
Pare Industrial Promotion Station	$57,143 \times \frac{3}{100} = 1,715$		$1,715 \times \frac{1}{2} = 858$	$1,715 \times 1.05 = 1,801$	$1,801 \times 1.05 = 1,892$
Rombo Industrial Promotion	$57,143 \times \frac{3}{100} = 1,715$			$1,715 \times \frac{1}{2} = 858$	$1,715 \times 1.05 = 1,801$
Total	4,544	10,450	12,681	15,077	16,734

Raw Material Costs by Year (Table-23)

(unit: Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Head Quarter		295,020	369,571	418,051	438,955
Control Centre					
Programming and Coordination Dep.					
Administration Section					
Planning Section					
Training Course Section					
Extension Service Dep.					
Engineering Section					
Marketing/Management Section					
Appropriate Tech. Dev't Dep.		295,020	369,571	418,051	438,955
Foundry Section	Steel 36T etc. 235,740	235,740	235,740x1.05 = 247,527	247,527x1.05 = 259,904	259,904x1.05 = 272,900
Forging Section	Steel 12T etc. 59,280	59,280	59,280x1.05 = 62,244	62,244x1.05 = 65,357	65,357x1.05 = 68,625
Mechanical Engineering Section	Steel 6T etc. 59,800		59,800	59,800x1.05 = 62,790	62,790x1.05 = 65,930
Ceramic Section	Clay 144T etc. 30,000			30,000	30,000x1.05 = 31,500
Briquette Section	Chacoal 1,200 etc. 105,900				
Moshi Industrial Exhibition Unit					
Pare Industrial Promotion Station					
Rombo Industrial Promotion Station					
Total		295,020	369,571	418,051	438,955

Utilities Costs By Year (Table-24)

(Unit: Tshs.)

	1st Year	2nd Year	3rd Year	4th Year	5th Year
Head quarter		19,511	21,636	34,671	36,407
Control centre					
Programming and coordination dep.					
Administration section					
Planning section					
Training course section					
Extention service dep.					
Engineering section					
Marketing/mangement section					
Appropriate tech. dev'nt dep.		19,511	21,636	34,671	36,407
Foundry section	Electrocity 60,000kw 15,111	17,823	17,823x1.05=18,715	18,715x1.05=19,651	19,651x1.05=20,634
	Propangas 720kg 840				
	Achtylene 1,872				
	17,823				
Corging section	Electrocity 6.752kw 0.25	1,688	1,688x1.05 = 1,773	1,773x1.05 = 1,862	1,862x1.05 = 1,956
	1,688				
Mechanical/engineering sec.	Electrocity 4,592kw 0.25		1,148	1,148x1.05 = 1,206	1,206x1.05 = 1,267
	1,148				
Ceramic section	Electrocity 33,200kw 0.25				
	8,300				
	Water etc. 3,652				
	11,952			11,952	11,952x1.05=12,550
Briquette section	Electrocity 2,400kw 720				
Moshi industrial exhibition unit					
Pare industrial promotion station					
Rombo industrial promotion station					
Total		19,511	21,636	34,671	36,407



1st Year Running Costs by Section/Unit and By Item (Table-25)

(Unit: Tshs.)

	Salary	Office Expenditure	Car Petrol	Maintenance Cost		Raw Material	Utility	Total
				Building	Machine Car			
Head quarter	131,700	13,170	21,700		4,544			171,114
Control centre	6,600	660						7,260
Programming and coordination department	41,700	4,170	5,600		772			52,242
Administration section	28,500	2,850	5,600		772			37,722
Planning section	13,200	1,320						14,520
Training course section	-	-						
Exhibition service department	41,700	4,170	10,850		2,272			58,992
Engineering section	28,500	2,850	5,250		1,500			38,100
Marketing/management section	13,200	1,320	5,600		772			20,892
Appropriate tech. dev't dep.	41,700	4,170	5,250		1,500			52,620
Foundry section	28,500	2,850	5,250		1,500			38,100
Forging section	13,200	1,320						14,520
Mechanical/engineering section								
ceramic section								
briquette section								
Moshi industrial exhibition unit								
Pare industrial promotion station								
Rombo industrial promotion station								
Total	131,700	13,170	21,700		4,544			171,114

2nd Year Running Cost by Section/Unit and By Item (Table-26)

(unit: Tshs.)

	Salary	Office Expenditure	Car Petrol	Maintenance Cost			Raw Material	Utility	Total
				Building	Machine	Car			
Head quarter	371,880	37,188	45,570	12,429	6,409	9,542	295,020	19,511	797,629
Control centre	13,200	1,320		1,320					15,840
Programing and coordination department	125,220	12,522	11,760	7,408		1,621			158,531
Administration section	79,800	7,980	11,760	7,147		1,621			108,308
Planning section	35,520	3,552		261					39,333
Training section	9,900	990							10,890
Extention service department	110,760	11,076	22,785	990		4,771			150,382
Engineering section	70,680	7,068	11,025	660		3,150			92,583
Marketing/management section	40,080	4,008	11,760	330		1,621			57,799
Appropriate technology dev'nt dep.	122,700	12,270	11,025	2,711	6,489	3,150	295,020	19,511	472,876
Foundry section	70,680	7,068	11,025	1,666	3,629	3,150	235,740	17,823	350,781
Forging section	35,520	3,552		1,045	2,860		59,280	1,688	103,945
Mechanical/engineering section	16,500	1,650							18,150
ceramic section									
Briquette section									
Moshi industrial exhibition unit	13,200	1,320	8,750	2,332		858			26,460
Pare industrial promotion station									
Rombo industrial promotion station									
Total	385,080	38,508	54,320	14,761	6,409	10,400	295,020	19,511	824,089

3rd Year Running Costs by Section/Unit and by Item (Table-27)

(unit: Tshs.)

	Office		Car		Maintenance Cost		Raw	Material	Utility	Total
	Salary	Expenditure	Petrol	Building	Machine	Car				
Head Quarter	454,152	45,419	47,850	16,064	63,848	10,022	369,571	21,636	1,028,562	
Control Centre	13,872	1,388		1,386					16,646	
Programming and Coordination Dep.	155,040	15,505	12,348	8,907		1,703			193,503	
Administration Sec.	82,668	8,267	12,348	7,505		1,703			112,491	
Planning Section	36,852	3,686		275					40,813	
Training Section	35,520	3,552		1,127					40,199	
Extension Service Dep.	114,960	11,497	23,925	1,040		5,011			156,433	
Engineering Sec.	73,548	7,355	11,577	693		3,308			96,481	
Marketing/Management Sec.	41,412	4,142	12,348	347		1,703			59,952	
Appropriate Tech. Dev't Dep.	170,280	17,029	11,577	4,731	63,848	3,308	369,571	21,636	661,980	
Foundry Section	73,548	7,355	11,577	1,750	3,811	3,308	247,527	18,715	367,591	
Forging Section	36,852	3,686		1,098	3,003		62,244	1,773	108,656	
Mechanical Engineering Sec.	46,680	4,668		1,883	57,034		59,800	1,148	171,213	
Ceramic Section	13,200	1,320							14,520	
Briquette Section										
Moshi Industrial Exhibition Unit	44,640	4,464	18,375	2,449		1,801			71,729	
Pare Industrial Production Station	9,900	990	8,750	1,388		858			21,886	
Rombo Industrial Promotion Station										
Total	508,692	50,873	74,975	19,901	63,848	12,681	369,571	21,636	1,122,177	

4th Year Running Costs by Section/Unit and by Item (Table-28)

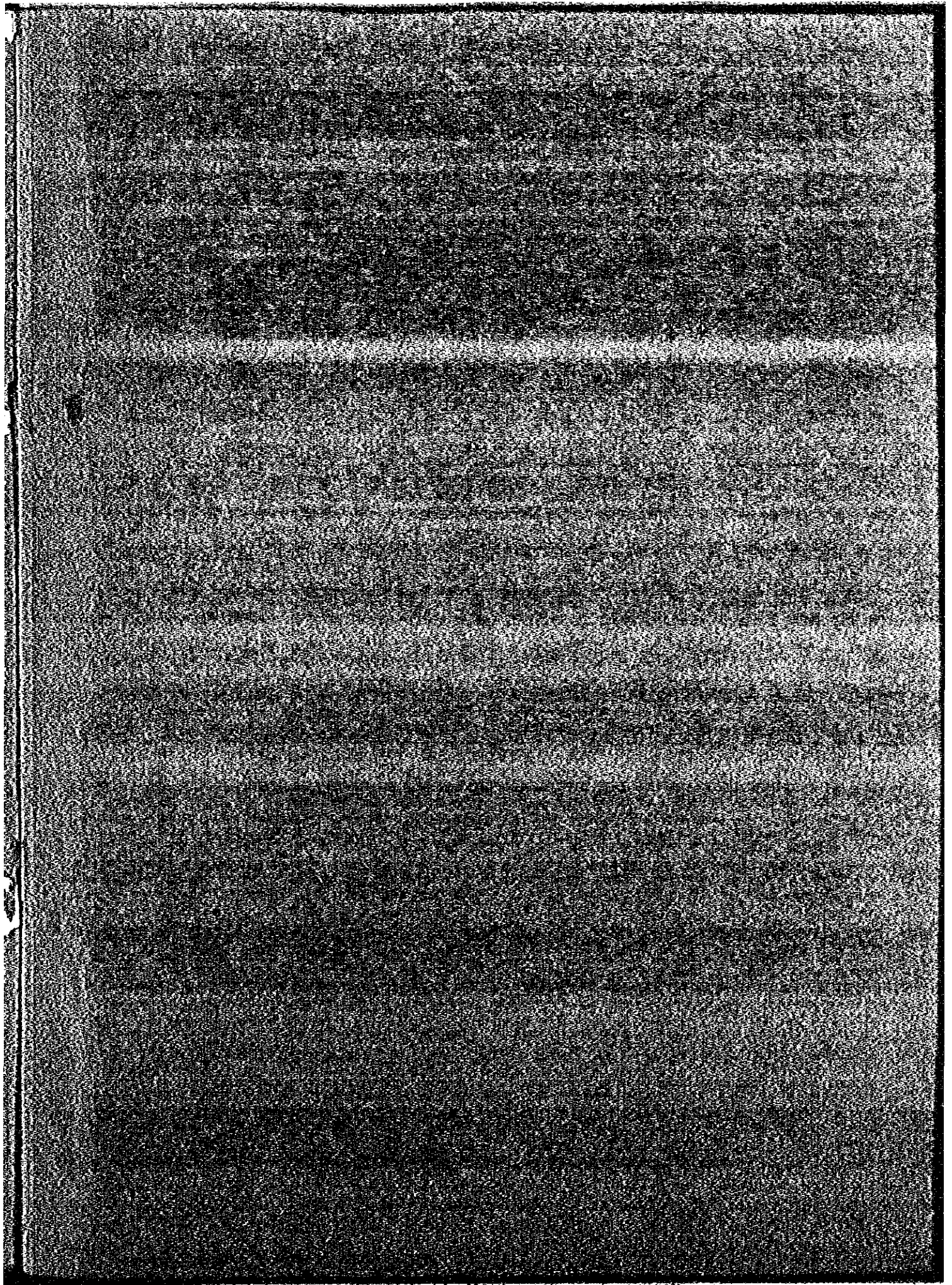
(Unit: Tshs.)

	Office		Car		Maintenance Cost		Raw		Total
	Salary	Expenditure	Petrol	Car	Building	Machine	Material	Utility	
Head Quarter	483,576	48,362	50,244	18,337	70,331	10,526	418,051	34,671	1,134,098
Control Centre	13,872	1,388		1,456					16,716
Programming and Coordination Dep.	157,968	15,798	12,966	9,354		1,789			197,875
Administration Sec.	83,808	8,381	12,966	7,881		1,789			114,825
Planning Section	37,308	3,731		289					41,328
Training Course Section	36,852	3,686		1,184					41,722
Extension Service Dep.	116,328	11,634	25,122	1,093		5,263			159,440
Engineering Sec.	74,232	7,424	12,156	728		3,474			98,014
Marketing Management Sec.	42,096	4,210	12,966	365		1,789			61,426
Appropriate Tech. Dev't Dep.	195,408	19,542	12,156	6,434	70,331	3,474	418,051	34,671	760,067
Foundry Section	74,232	7,424	12,156	1,838	4,002	3,474	259,904	19,651	382,681
Forging Section	37,308	3,731		1,153	31,54		65,357	1,862	112,565
Mechanical Engineering Sec.	48,348	4,835		1,978	59,886		62,790	1,206	179,043
Ceramic Section	35,520	3,552		1,465	3,289		30,000	11,952	85,778
Briquette Section									
Moshi Industry Exhibition Unit	45,972	4,598	19,294	2,572		1,892			74,328
Pare Industrial Promotion Station	28,290	2,892	18,375	1,458	2,930	1,801			56,376
Rombo Industrial Promotion Station	9,900	990				858			11,748
<b>Total</b>	<b>568,368</b>	<b>56,842</b>	<b>87,913</b>	<b>22,367</b>	<b>73,261</b>	<b>15,077</b>	<b>418,051</b>	<b>34,671</b>	<b>1,276,550</b>

5th Year Running Costs by Section/Unit and by Item (Table-29)

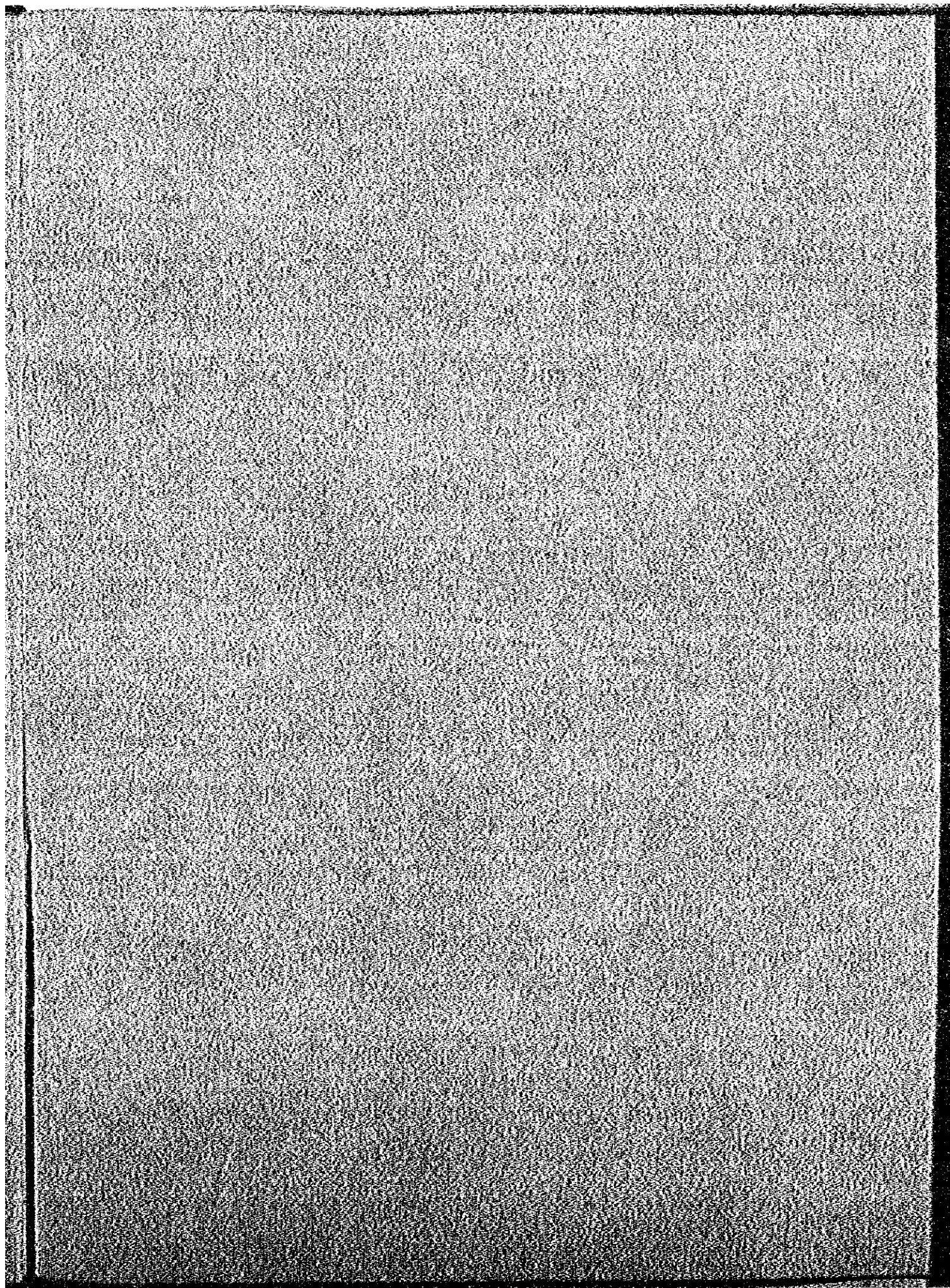
	(unit:Tshs.)									
	Salary	Office Expenditure	Car Petrol	Building	Maintenance Cost Machine	Car	Raw Material	Utility	Total	
Head Quarter	509,820	50,986	52,758	19,259	73,850	11,054	438,955	36,407	1,193,089	
Control Centre	14,568	1,457		1,529					17,554	
Programming and Coordination Dep.	162,816	16,282	13,615	9,824		1,879			204,416	
Administration Sec.	86,808	8,681	13,615	82,76		1,879			119,259	
Planning Section	38,700	3,870		304					42,874	
Training Course	37,308	3,731		1,244					42,283	
Extension Service Dep.	120,720	12,073	26,379	1,149		5,527			165,848	
Engineering Sec.	77,232	7,724	12,764	765		3,648			102,133	
Marketing Management Sec.	43,488	4,349	13,615	384		1,879			63,715	
Appropriate Tech. Dev't Dep.	211,716	21,174	12,764	6,757	73,850	3,648	438,955	36,407	805,271	
Foundry Section	77,232	7,724	12,764	1,930	4,203	3,648	272,900	20,634	401,035	
Forging Section	38,700	3,870		1,211	3,312		68,625	1,956	117,674	
Mechanical Engineering Sec.	49,032	4,904		2,077	62,881		65,930	1,267	186,091	
Ceramic Section	36,852	3,686		1,539	3,454		31,500	12,550	89,581	
Briquette Section	9,900	990							10,890	
Moshi Industrial Exhibition Unit	46,884	4,689	20,259	2,596		1,987			76,415	
Pare Industrial Promotion Station	29,916	2,992	19,294	1,531	3,077	1,892			58,702	
Rombo Industrial Promotion Station	28,920	2,892	8,750	1,388	2,930	1,801			46,681	
Total	615,540	61,559	101,061	24,774	79,857	16,734	438,955	36,407	1,374,887	

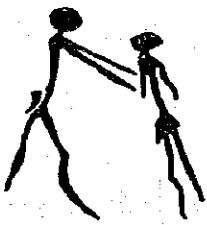












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