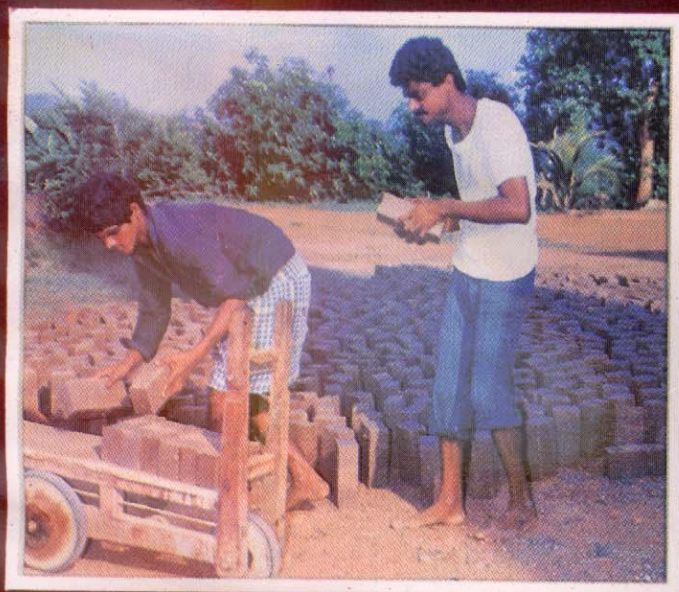


JOB ANALYSIS AND ON-THE-JOB TRAINING FOR  
PERSONS WITH MENTAL RETARDATION - SERIES - 1



# MANUFACTURE OF WIRE CUT BRICKS AND TILES



**National Institute for the Mentally Handicapped**

Manovikas Nagar, P.O. Secunderabad - 500 009.



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**MANUFACTURE OF WIRE CUT BRICKS AND TILES**

**A.T. THRESSIA KUTTY**

Lecturer In Vocational Counselling and Employment



**NATIONAL INSTITUTE FOR THE MENTALLY HANDICAPPED**

Manovikas Nagar, Secunderabad - 500009.

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First Published in 1991  
Reprint 1994 (NIMH)

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Cover photo : Persons with mental retardation on Job-training at Poly Garden, Vocational training and Habilitation Centre, Palghat, Kerala.

*Printed at :- Sree Ramana Process, Secunderabad. Hello : 811750*

## FOREWARD

If the decade of 1970s has come to be known as the period when progressive countries enacted legislation for compulsory special education of persons with mental retardation; perhaps the decade of 1990s will be remembered for innovative changes in the vocational training and employment of persons with mental retardation. For the professionals engaged in vocational training and employment of persons with mental retardation, the struggle has just begun to demonstrate to the general public that persons with mental retardation are capable of working and that job opportunities would have to be found to match the needs of all kinds of persons with mental retardation. There are wide variety of opportunities available in the small scale sector or domestic industry which has remained untapped. The profile of supported employment institutions, particularly the sheltered workshops, has also undergone a change. It has been the endeavour of our Institute to disseminate far and wide the successful stories of supported employment so that anybody who wishes to launch a similar kind of production unit could emulate the same. Ms. A.T. Thressiakutty, Vocational Counsellor of our Institute visited one such unit in Kerala and was impressed by the production of wire cut bricks and tiles. In this book she has recaptured the processes by undertaking the job analysis and has delineated the requirements of training for re-establishment of a similar unit elsewhere. We do hope that those who are interested in launching a unit for manufacture of bricks and tiles will derive benefits from this book. Comments, suggestions are invited from the readers which obviously will give useful feedback.

Date : 16<sup>th</sup> May 1991.

Place : Secunderabad

(D.K. Menon )

Director, NIMH

## **ACKNOWLEDGEMENT**

I acknowledge my sincere thanks to Rev. Father Paul Puvathingal, Director of Poly Garden who initiated the manufacture of wire-cut bricks and tiles at Lakkidi, Palghat, Kerala. As a result of his approach for approved scientific curriculum, an effort has been made to try out this curriculum in various parts of the country where this trade is existing.

I also extend my sincere thanks to the staff and the mentally retarded persons at Poly Garden without whose help I would not have been able to complete this project

I extend my gratitude to Mrs. Madhurani, Lecturer in English for the help she has rendered in editing the material.

Last not the least, I extend my thanks to Mr. E.D. Sarath for his secretarial work in typing out the material.

A.T. Thressia Kutty

Date : 16-5-91.

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## **I. INTRODUCTION**

India, with an area of 3287782 Sq. Kms, composed of 25 states and 7 union territories has nearly 600,000 villages. Eighty percent of Indian population is rural mainly depending on agriculture and allied occupations. In a such vast country with a populatin of 36 crores, a nationwide survey has never been undertaken to findout the prevalence of mental retardation due to lack of inputs required in terms of finance, energy, time and trained manpower. Several small scale surveys have been carried out in different parts of the country.

\*In the city of Lucknow, Gupta and Sethi (1970) conducted a community survey by using standardized tests of intelligence to identify the mentally retarded and concluded that the prevalence state of retardation to be 23/1000 is in the general population. A total 8583 individuals - 5892 urban and 2691 rural - constitute the sample studied. The sample found the difference in the prevalence rates of mental retardation in urban and rural areas. It was higher in the rural areas 25.3 per thousand. In fact the prevalence of mental retardation tends to be more in rural areas has been reported from other countries as well. Similarly, retardation of mild to moderate degree was found to be more in the lower socio economic clases. Poverty and illiteracy do bring about inadequate and insufficient standards of living. This in turn can lead to cultural deprivation which may cause a higher occurance of milder forms of mental retardation in rural areas.

\*A questionnaire based survey was conducted (S.H.K. Reddy et al 1989) at NIMH with an objective to compile information about the existing facilities for the persons with mental retardation in India. The study reveals that 96 out of 314 institutions (30.5%) provide services for multi category handicapped persons, however majority 69.5% of institutions provide special education facilites exclusively to mentally retarded persons. These institutions are mainly concentrated in urban areas and generally children between 6 to 18 years are admitted. There are 15 sheltered workshops in India which provide training in assembling work, light engineering, weaving, carpentry, book binding, printing, cooking etc.

The high prevalence rate of mental retardation in the rural population of India, and the lack of vocational training facilities, reveal the need of vocational training and habilitation programmes.

### **CLAY WORKS - A SUITABLE TRADE FOR PERSONS WITH MENTAL RETARDATION**

There is an increasing demand for wire-cut bricks, roofing tiles and other allied products in India. Kerala is one of the states having the large number of factories producing clay materials. It is calculated that, there are about 500 tile producing factories in Kerala-producing 50 to 60 crores of tiles per annum. Even then the people have to wait for 2 to 3 months to get their requirement of tiles. This in turn has resulted in pushing up prices. Demand for tiles in other states also is fast increasing and about 70% of the tiles produced in Kerala is going outside the state.

Thus there is an ample scope for many more clay works units to come up in different parts of the country, especially in semi urban and rural areas to cater the needs of the consumers. The following items can be manufactured in a clay industry.

1. Clay bricks ( wire-cut bricks) used for buildings.
2. Roofing, flooring and ceiling tiles.
3. Other special items like flower pots and show materials.

\*Goel S.K. And Sen, A.K; Mental Retardation and learning, New Delhi, National Psychological Corp:1984; page-49.

\*\* Reddy S.H.K. et al; Education in India, A survey of facilities for children-Mental Handicap 18(1) March 1990, 26-30 pages.

## **RATIONALE FOR SELECTION**

### **1. Operations are simple**

The operations involved in clay works especially in wire cut bricks and roofing tiles are found very simple. Preparation of clay, filling in the machine, hand operations of the levers for wire cutting, drying the bricks in the sun and helping to load the bricks into the kiln can be done by the persons with mental retardation if properly trained.

### **2. Need for skilled workers are minimum:**

Skilled workers are needed only for overall supervision, maintenance of the machines, and to keep up the quality as well as quantity. The ratio of skilled and unskilled workers can be kept as 1:5. Operations involved to burn the bricks in the kiln are risky. Except this, mentally retarded persons could be trained and employed in all other operations which are normally done by the skilled workers.

### **3. Raw Materials are not many:**

The raw material mainly used is the clay which is available in paddy fields. Proximity is advised so that the transporting charges will be less.

### **4. Machinery is available**

The machinery is available at reasonable rates. The operations are simple and not very risky.

#### **Wastage is minimal :**

There is no wastage in the entire process of manufacturing bricks and tiles. The burnt bricks which are not in required size and quality also could be used for temporary works.

### **5. Increased demand:**

Short supply and high cost of cement and steel force people especially low income groups to give up R.C.C. type construction and to go for tile roofings. There are lakhs of thatched houses and dwellings in our villages and outskirts of cities and towns. They are being converted into tiled houses with the help of available financed assistance from Government and other agencies.

### **6. More chances for job opportunities:**

Since the demand is increasing for bricks and tiles, there is a scope for many more units to come up in different parts of the country. This will create job opportunities.

The reasons explained above reveal that the manufacture of bricks, tiles and other clay products is a suitable trade for persons with mental retardation.



## II. GUIDELINES FOR PLANNING

### **Infrastructure facilities :**

The place selected for clay works should be well connected with roads and rails so that the products could be transported by road and rails to other consuming centres.

### **Raw materials:**

Another aspect to keep in mind while selecting the place is the availability of raw materials in close proximity. The main raw material required is clay, lean and plastic type. Good quality clay in abundance is available in different parts of the country. Such places may be selected because availability of the main raw material is one of the factors for the success of the industry.

### **Fuel**

Firewood is the main fuel required for clay works for burning the green bricks, tiles and other products. The sub-urban and rural areas are rich in this aspect and firewood is available at comparatively low prices. The kiln can be modified to suit coal also.

### **Power and water:**

3 phase power supply should be available near the site to get the required power connection. Water from river/well/borewell could be used for the purpose of mixing clay.

### **Market:**

There is an increasing need for the bricks and tiles for the construction of buildings throughout the country. A survey can be made to find out the demand for clay products in the local market and neighbouring states.

A minimum of two acres of land is sufficient to put up shed, store, firewood and yards for clay weathering and drying the green bricks.

### **Employment:**

The skilled and unskilled workers may be appointed in a proportion of 1 : 5. The mentally retarded persons can be trained in unskilled jobs. This shows that there is a chance of 25 mentally retarded persons to be employed in an industry where 5 normal skilled workers and a supervisor are needed. Getting experienced workers for new industry is not difficult because they move from one industry to another looking for better prospects.

### **Availability of machine and equipment:**

There are leading foundries and engineering works in our country especially in the state of Kerala producing the modern type of tile machinery. The state supplies to other parts of the country and even exporting to foreign countries. The details regarding the machines and equipments are available at foundries and foundaries TRICHUR, Kerala.

## **TECHNOLOGY**

### **Manufacturing process:**

The process involved in the manufacture of bricks and tiles is briefly explained below:

Lean and plastic clay of red burning variety is taken in right proportion. The clay should be exposed for weathering for a period of one year to improve plasticity and workability. Every day the required quantity of weathered clay is cut out from the clay yard, mixed with the required quantity of water. (If the mixer is available, the mixed clay is then charged into the mixer for thorough mixing). This is then charged into pug mill for fine grinding and pugging. The pugged clay is extracted through the pug mill mouth in the form of clay slabs. These slabs are used for preparation

of bricks and tiles.

a) To prepare bricks the clay slabs are cut on a wire cutter. The green bricks are kept for drying and then stacked in the kiln for burning in the right temperature.

b) To prepare tiles the clay slabs are taken into the press for pressing into tiles. Pressed tiles are received on a wooden pallet and kept on racks for drying for a period of 8 to 10 days. The dried tiles are then taken to the kiln where they are loaded inside and fired to a temperature about 800<sup>0</sup> to 900<sup>0</sup> c. The burnt tiles are unloaded, sorted out and stored for disposal.

**Standardization - quality control:**

Production of quality materials is essential both for manufacturers and for the consumers.

It is important that the bricks and tiles should be well burnt. Such materials have a pleasing shade and ringing sound. It is also important to have correct and uniform dimensions. The ISI has prescribed the required specifications in respect of shrinkage, size, dimensions, strength etc.,. These details are contained in IS 654-1902 - Roofing tiles.

**Kiln:**

One continuous chamber kiln of 6 chambers is required initially. The kiln should have a chimney of 100 feet height.

**Initial investment requirements:**

- Land - about 2 acres of land
- Building - Workshed and an office room

**Plant and machinery:**

1. Pug mill - 600 mm dia x 500 mm face
2. Electric Motor 50 H.P. with all accessories
3. Hand operated screw press
4. Feed hole covers with rings - 25 sets
5. Tiles dia for burning tiles and roofing tiles
6. Pumpset for water.

**Drying equipments:**

1. Racks and pallets to hold 2000 tiles
2. Kiln - 6 chambers with a chimney of 100 feet
3. Office furniture and other miscellaneous items.

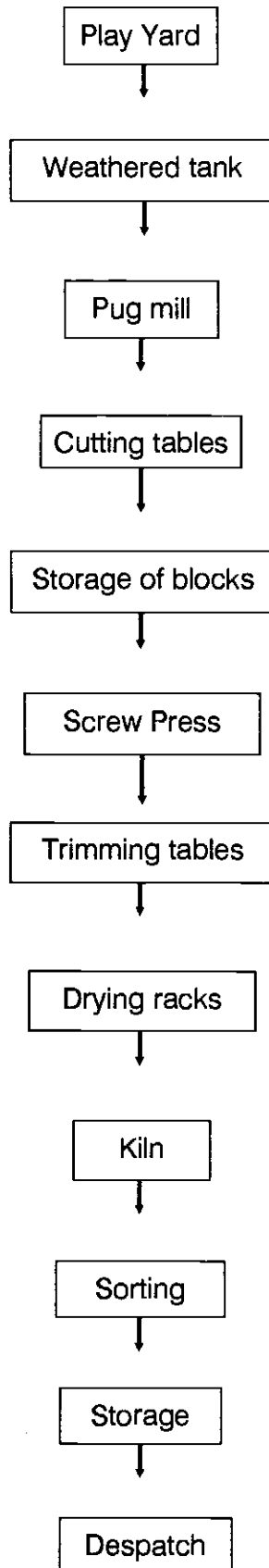
**Working Capital:**

The main raw material mainly clay can be mixed and stocked only once in a year when the harvesting season is over and the land is free from water logging. Further it is also necessary that the clay stock should be exposed to weathering to improve plasticity and workability. Therefore one year stock of clay will be needed initially and provisions will have to be made accordingly in the working capital requirement.

**Financial assistance:**

Khadi and Village Industries Commission provides assistance of finance for successful implementation of village industries. Details are given in a guide on how to start V.I. in KVI sector page 10-14. No financial assistance is given to purchase the land. 100 percent loan is given for construction of workshed, tools, equipment/machinery and working capital for production, sales and storing of materials for the approved schemes.

## PROCESS FLOW CHART



### III. SELECTION OF TRAINEES

For any successful training programme, criteria for selection of trainees is important. The adults with mental retardation seeking training and employment can be grouped into four categories on the basis of education and experience which they received in their childhood and adolescent stages.

1. The adults with borderline intelligence and mild mental retardation who are unable to complete the normal schooling due to low intelligence.
2. The mentally retarded adults who have completed special school programmes and available prevocational training.
3. The mentally retarded adults who have not undergone any normal or special school programmes.
4. The mentally retarded adults who were employed and lost their jobs due to lack of vocational training and professional help during the placement and on-the-job.

From the above heterogeneous group of adults what criteria should be used for selection ?

1. Chronological age can be fixed as 18 years and above.
2. Trainable and educable persons will fit for this trade. They should have independent mobility and normal hand functioning.
3. Severely mentally retarded adults without associated handicapping conditions, may be fit for this job. The percentage of achievement of specific skills and production rate will differ from the trainable and educable group.

In addition to the chronological and mental age, prerequisite skills should also be considered during the selection for vocational training. They are independent mobility, hand coordination, personal and social skills, ability to communicate, safety and independent travel, domestic skills and functional academics. These skills are called generic skills. They may not be directly related to the job, but are essential for successful job placement.

The generic skills check list (see sample filled in formats) which is used for vocational training and job placement, include 80 skills in 8 domains. It could be used for the assessment of the generic skills. Achievement of 80% skills is expected for the selection. Since functional academics is not very essential for the repetitive tasks in the manufacture of bricks and tiles 80% skills in other areas can be fixed as entry level. It can be kept as a general criteria for the selection. At the same time relaxation could be given depending on the background and capabilities of the candidate after collecting the informations and completing the assessments. Those who do not have the necessary generic skills, may be considered for prevocational training. The check list gives the areas in which the training has to be given.

#### **IV. MANUFACTURE OF WIRE CUT BRICKS - JOB ANALYSIS**

The stages involved in the manufacture of bricks can be broadly grouped into five.

1. Preparation of clay
2. Preparation of green bricks
3. Drying green bricks
4. Burning the green dried bricks in the kiln
5. Sorting and Storing the burnt bricks

These are the core work routines in a clay industry in the process of manufacturing clay bricks. Core work routines are job routines made up of cycles that are naturally repeating without significant interruption between the cycles. The cycle of the task begins with the first step of a job sequence and ends with the first step of the next sequence. Core routines are those tasks that are likely to be the most frequently performed by the employee.

In addition to the core work routine there are some other tasks that are made up of cycle that occur infrequently: For example once a day or possibly a few times per week. These tasks are called episodic work routines. In a clay industry such episodic work routines are :

1. Cleaning of the pug mill
2. Lubrication
3. Cleaning the shed/surroundings

Other than core and episodic work routine, an employee should have some specific work related skills such as personal, social, communication, safety and functional academics. These skills are not explicitly required by the employer for the job. But they are vital for successful performance of the job. These routines may occur on-the-site or off the job.

Each employer has his own expectation for employees and accordingly flexibility is exercised. Skills to adjust to a particular work situation are included in the necessary skills required for on-the-job training and job placement of persons with mental retardation. Thus a detailed job analysis includes core work routines, episodic work routines, work behaviour and work related skills.

Job analysis of manufacturing bricks serves as the specific curriculum and training plan for facilitating successful employment for the mentally retarded employees. It becomes the content for training and can be used as an accountability measure to ensure that employees are able to perform their jobs to the standards expected by the employer. The detailed job analysis of manufacturing clay bricks (done at Poly Garden) is given below.

##### **I. Core work routines**

- A. Preparation of clay
- B. Preparation of green bricks
- C. Drying the green bricks
- D. Burning the green bricks in a kiln
- E. Sorting and storing of the burnt bricks

##### **Sequential steps involved in each stage:**

- A. Preparation of clay:
  1. Prepares the yard for mixing clay

2. Sifts the sand
3. Puts 10 baskets of yellow clay in the yard
4. Puts 5 baskets of black clay on the top of the yellow clay
5. Puts 5 baskets of cleaned sand on the clay
6. Adds water to the clay and sand using the hose pipe.
7. Mixes the clay and sand with water
8. Takes out the sand and other materials from the prepared clay

Note: 2:1:1 is the proportion of yellow clay, black clay and sand used to prepare the mixture for the manufacture of clay bricks. Depending on the nature of mud/clay, the proportion will differ. It has to be decided by testing after preparing bricks at different proportions.

**B. Preparation of green bricks:**

1. Fills the prepared clay in the basket
2. Takes the filled basket to the pug mill
3. Puts the clay into the hole where the rollers are fixed
4. Mixes crude oil and kerosine in 1:10 proportion
5. Pours the mixed oil through the mouth of the pug mill
6. Puts on the switch to start the machine
7. Waits till the clay slab reaches the mark on the cutting table
8. Operates the handle to cut the clay slab
9. Pushes the clay slab towards the wire cutter
10. Operates the handle of the wire cutter
11. Presses on the top of the cut bricks with a plank
12. Removes the side pieces which are not in the required sizes
13. Puts those pieces again into the roller
14. Takes out the green brick in twos
15. Keeps in twos on the plank to be kept for drying
16. Removes the grass and other materials from the wire cutter.

**C. Drying the green bricks:**

1. Carries the green bricks kept on the plank to the place to be stacked to drain water
2. Takes out the green bricks from the plank
3. Stacks the bricks in a way so that air can pass
4. Stacks the green bricks ( after draining water) on a pushing cart
5. Pulls the cart toward the yard for drying
6. Keep the brick vertically one by one

Note: After wire cutting the green brick are kept inside the shed to drain water. Later they are taken to the yard depending on the nature of the slab and temperature outside the shed.

**D. Burning green bricks in the kiln:**

1. Stacks the dried green bricks on the pushing cart
2. Pushes the cart towards the kiln
3. Takes out the bricks one by one from the cart
4. Gives to the person who stacks the bricks inside the kiln



5. Stacks the bricks inside the kiln
6. Mixes mud with water to cover the kiln
7. Gives the mixed clay to the person who covers the kiln
8. Covers the kiln with clay
9. Brings the firewood from the yard
10. Gives to the person who stacks the firewood into the kiln
11. Lights the firewood
12. Regulates the air
13. Puts off the fire after the bricks are burnt properly

**E. Sorting and storing of burnt bricks:**

1. Takes out the burnt bricks after properly cooling the kiln and the bricks
2. Stores the bricks outside the kiln
3. Keeps the broken bricks separately
4. Sorts out the good bricks
5. Stacks in the storage
6. Cleans the kiln
7. Cleans the surroundings of the kiln

**II. Episodic work routines:**

- F. Cleaning the pug mill
- G. Lubrication

**F. Cleaning the pug mill**

1. Wipes the machine part with cloth
2. Uses brush for the parts where the hands do not reach
3. Gets inside the part of the pug mill where clay is put in
4. Sits on the roller
5. Takes out the mud stuck on the roller with a thin blade
6. Collects the mud in a basket
7. Takes out the basket with mud
8. Puts it with the prepared clay

**G. Lubrication:**

1. Finds out the 6 lubrication cups on the mill
2. Takes out the cups one by one
3. Fills grease in the cups one by one
4. Fits the cup back on the machine
5. Puts on the switch
6. Checks whether the cups are turning
7. Switches off when the new grease comes out of the cups

### **III. Work behaviour:**

1. Wears the uniform for work
2. Goes to work in time in the morning
3. Works till the morning tea break as per direction
4. Breaks for morning tea
5. Returns on time after tea
6. Continues work as per direction
7. Goes for lunch
8. Takes rest till 2.00 p.m.
9. Continues work as per direction
10. Breaks for evening tea
11. Continues work till 5.00 p.m.
12. Takes bath
13. Changes dress
14. Cooperates with others during work
15. Communicates properly during work.

### **IV. Work related skills:**

1. Realizes that he can earn
2. Reaches in time
3. Calculates the money
4. Uses pocket money for personal needs
5. Aware of the use of bank
6. Crosses street safely
7. Behaves properly in public places
8. Reads own address
9. Writes own address
10. Writes letter to parents/friends

### **Job requirements:**

During the analysis it was found that there are 5 stages involved in the manufacture of wire cut bricks. Under one supervisor ( a normal skilled/unskilled worker) 5 mentally retarded persons can work. Except a few tasks-arranging the bricks in the kiln, covering the kiln with mud, burning the firewood, cleaning inside the roller the mentally retarded persons can be trained in all other tasks depending on their mental and physical capacities. The essential requirements to perform these jobs are.

1. Eye hand co-ordination
2. Ability to follow instruction
3. Functional academics - UKG to 1st grade level
4. Safety mobility
5. Safety skills

Appropriate social behaviour and attending a task without disturbing others are also essential for successful training and job placement.

**Worksite consideration:**

Worksite for the manufacture of bricks may be in a shed especially designed and built for this purpose. Normally it has enough space to install the machine and to dry the green bricks just after wire cutting. Preparation of clay takes place in the yard outside the shed. The firewood is kept near the kiln and a yard is used for drying the green bricks in the sun before burning. The trainees should be aware of the surroundings and exercise safety skills during working hours.

Special uniform is convenient for the job especially for independent mobility. Since they carry the green bricks, there are chances to stick oil and mud on the dress.

The machine mainly, the trainees have to handle, is the pug mill. Electrical operations will be taken care of by the supervisor and the workers/trainees are expected to operate the handle for slab cutting and wire cutting. Pulling carts are used to transfer the bricks from place to place.

**Training considerations:**

There are many sequential steps involved in each stage. Assess and find out the performance level. They are expected to work for 6 to 7 hours a day. Initially they may be trained during one shift for 3 hours with a break. It can be increased gradually to 7 hours a day. During each shift, to avoid monotony the trainees may be grouped and each group could be given chances to change the task after 1 shift.

The trainer may note down the quality and quantity of their performance.

**Time schedule:**

8.30	to	10.30	am	-	Ist shift
10.30	to	11.00	am	-	Tea break
11.00	to	1.00	pm	-	IInd shift
1.00	to	2.00	pm	-	Lunch and rest
2.00	to	4.00	pm	-	IIIrd shift
4.00	to	4.30	pm	-	Tea break
4.30	to	5.30	pm	-	IVth shift

**Number of working days:**

The industry normally works for 6 days a week. Sundays and other Govt. holidays are applicable to the workers.

Regarding wages, after proper recording of the quality and quantity of performance, a stipend could be paid when they are on-the-job training.

**The areas needing specific training:**

Core work routines are to be analysed into small sequential steps and step by step teaching may be used by giving proper promptings and rewards.

**Reinforcements:**

Stipend will serve as a reinforcement. They may be allowed to spend for their personal needs out of their earnings. Later a bank account also could be opened on their names. They also may be taken to other factories to see their performance.

**Follow ups:**

The persons incharge of training should visit and observe them at the job site to evaluate their performance.

**V. Manufacture of tiles - Job analysis**

The stages involved in the manufacture of tiles are:

1. Preparation of clay
2. Making slabs in the required size
3. Preparation of green tiles using hand press
4. Drying green tiles in the sun
5. Burning green tiles in the kiln
6. Sorting and storing of burnt tiles

These are the core work routines in a tiles industry. The episodic work routines are

1. Cleaning the pug mill and hand press
2. Lubrication
3. Cleaning the surroundings

In addition to the core and episodic work routines the employee should have appropriate work behaviour and work related skills. The detailed job analysis done at Poly Garden is given below:

**I. Core work routines:**

- A. Preparation of clay
- B. Preparation of green slabs in the required size
- C. Preparation of green tiles on hand press
- D. Drying the green tiles in the kiln
- E. Sorting and storing of burnt tiles

**Sequential steps involved in each stage:**

**A. Preparation of clay:**

1. Prepares the yard for mixing clay
2. Sifts the sand
3. Puts 10 baskets of yellow clay in the yard
4. Puts 5 baskets of black clay on the top of the yellow clay.
5. Puts 5 baskets of cleaned sand on the clay
6. Adds water to the clay and sand using the hose pipe
7. Mixes the clay and sand with water
8. Takes out the sand and other materials from prepared clay.

**Note:** 2:1:1 is the proportion of yellow clay, black clay and sand used to prepare the mixture for the manufacture of tiles. Depending on the nature of soil/clay, the proportion will differ. It has to be decided by testing after preparing tiles at different proportions.

**B. Preparation of green slabs in the require size**

1. Fills the prepared clay in the basket
2. Takes the filled basket to the pug mill
3. Puts the clay into the hole where the rollers are fixed
4. Mixes crude oil and kerosene in 1:10 proportion
5. Pours the mixed oil through the mouth of the pug mill
6. Puts on the switch to start the machine
7. Waits till the clay slab reaches the mark on the cutter
8. Operates the handle to cut the clay slab
9. Pushes the clay slab towards the wire cutter
10. Operates the handle of the wire cutter
11. Presses on the top of the cut slabs with a plank

12. Puts the side pieces again into the roller
13. Keeps the green slabs to drain water
14. Removes the grass and other materials from the wire cutter

**Note:** The mouth piece of the pug mill has to be adjusted as per the requirement of the thickness of the green slab to prepare tiles.

**C. Preparation of green tiles using hand press**

1. Dips the cloth in the mixed oil
2. Applies oil with that cloth on the surface where the green slabs are to be beaten
3. Beats the green slabs on the surface turning all the 6 sides of the slab one by one
4. Applies oil inside the die
5. Keeps the beaten slab inside the die
6. Adjusts the handle of the die
7. Turns the wheel from the top by two persons till the two parts of the die joins
8. Turns the wheel the opposite side
9. Takes out the die
10. Keeps the green tile on the wooden pallet
11. Keeps the pallet with green tile on the trimming table
12. Cuts all the four sides of the tile with a knife
13. Keeps the tile on the rack to drain water

**D. Drying green tiles in the kiln:**

1. Takes out the tiles from the rack one by one
2. Stacks the tiles on the cart to take to the yard
3. Pushes the cart to the yard
4. Cleans the yard
5. Takes out the tiles one by one from the cart
6. Keeps one by one in the yard to dry in the sun

**E. Burning green tiles in the kiln:**

1. Stacks the dried tiles in the pulling cart
2. Pulls the cart towards the kiln
3. Gives one by one to the person who loads the tiles in the kiln
4. Loads the tiles inside the kiln
5. Mixes clay with water
6. Gives the mixed clay to the persons who covers the kiln
7. Covers the kiln with clay
8. Bring the firewood from the yard
9. Stacks the firewood into the kiln
10. Lights the firewood
11. Regulates the air
12. Puts off the fire after the bricks are burnt properly

**F. Sorting and storing of burnt tiles:**

1. Takes out the burnt bricks after properly cooling the kiln and the tiles
2. Stacks the tiles outside the kiln
3. Keeps the broken tiles separately
4. Cleans the kiln

**II. Episodic work routines:**

1. Cleaning the pug mill, hand press and dies
2. Lubrication

**G. Cleaning pug mill, hand press and dies:**

1. Wipes the machine parts with cloth
2. Uses brush to the parts where the hands do not reach
3. Gets inside the part of the pug mill where clay is put in
4. Sits on the roller
5. Takes out the mud stuck on the roller with a thin blade
6. Collects the mud in a basket
7. Takes out the basket with mud
8. Puts it with the prepared clay
9. Takes out the mud stuck on the hand press
10. Takes out the mud stuck on the dies
11. Applies oil in the dies

**H. Lubrication**

1. Finds out the 6 lubrication cups on the mill
2. Takes out the cups one by one
3. Fills grease in the cups one by one
4. Fits the cups back on the machine
5. Puts on the switch
6. Checks whether the cups are turning
7. Switches off when the new grease comes out of the cups

**III. Work behaviour**

1. Wears the uniform for work
2. Goes to work in time in the morning
3. Works till the morning tea break as per direction
4. Breaks for morning tea
5. Returns on time after tea
6. Continues work as per direction
7. Goes for lunch
8. Takes rest till 2.00 p.m.
9. Continues work as per direction
10. Breaks for evening tea.
11. Continues work till 5.00 p.m.
12. Takes bath
13. Changes dress
14. Co-operates with others during work
15. Communicates properly during work

**IV. Work related skills:**

1. Realizes that he can earn
2. Reaches in time to attend work
3. Calculates the money upto 10 rupees
4. Uses pocket money for personal needs
5. Aware of the use of bank
6. Crosses street safely
7. Behaves properly in public places
8. Reads own address
9. Writes own address
10. Writes letters to parents/friends



**Machines, Equipments and materials:**

Pug mill, hand press, dies, trimming table, pulling cart, racks, pallets, baskets, kiln, firewood.

Job requirements, work site consideration, training consideration, time schedule, number of working days, the areas needing specific training, reinforcements, and followups are the same as explained in the job analysis of manufacturing bricks.

**VI. METHODS OF TRAINING AND EVALUATION:**

Vocational training for the mentally retarded person can be given at different settings. The trainers can simulate job situation in the training area and also provide actual experiences on-the-job site.

**Training setting:**

To train in manufacturing bricks and tiles, the entire process cannot be simulated in a training set up. Some of the stages - mixing clay, sifting sand, carrying and stacking bricks and tiles - can be trained in a simulated set up. Preparation of slabs using pug mill and burning bricks need the proper equipment and machinery. So the training can be arranged in two settings. 1) A few industries of this kind could be started to train the mentally retarded persons. 2) A few mentally retarded persons may be placed in the existing factories for training and later on-the-job. For job site training several issues such as time for training, duration, frequency, space and specific job responsibilities should be discussed with the employer. It is always better to develop written agreements of the issues discussed with the employer.

**Training:**

Experience in the real work situation alone will not help the trainees to acquire necessary skills. The skills necessary to perform on their particular job should be taught systematically. The trainees are selected on the basis of the achievement of the generic skills. After selection for training they have to be assessed on the specific skills; that is the sequential steps of job analysis (see sample filled in formats). Achievement of the specific skills may differ from trainee to trainee. Training and evaluation should be individualized to accommodate each trainee's strength and weakness, rate of learning and need for adaptive devices.

After selection, the trainees may be allowed to observe the different stages involved in manufacturing bricks and tiles. At the same time the trainer should also observe the trainee's interest and motivate him to join with others. For example, if he likes to join to push the cart with bricks, he should be allowed to do so. Slowly he may be motivated to carry the bricks on a plank and later to operate the handle, for wire cutting. Depending on the interest and capability, start from the simplest step to the difficult one.

During the initial stage, physical and verbal prompting and later modelling will help to learn the task. Appreciation, refreshments, and a stipend system which could be used for personal needs and outings will reinforce the trainees. For generalization they may be given chances to visit and work in similar industries.

**Evaluation:**

Evaluation on the job analysis format should be done once in a month. It helps to assess the number of skills which can be learned by each trainee during a specified period of training period. Depending on the capability of the trainees, the duration of training differ from person to person. The systematic evaluation helps the trainer to decide the duration for each trainee.

## **VII. JOB OPPORTUNITIES:**

Manufacture of bricks and tiles comes under village industries promoted by the Khadi and Village Industries commission. A few industries of this kind could be started to train the mentally retarded persons in different parts of the country depending on the factors explained in the chapter on 'guidelines for planning'. After achieving the required number of skills in the job analysis checklist they can be transferred to other industries to work as per the need of the industrial set up. They should also be paid according to the production rate in comparison to the normal workers of the same industry.

The question of proximity and residential facilities arises here. The mentally retarded adults who are residing within 10 to 15 kilometers can attend the work daily depending on the availability of transport facility.

Another alternative is to start group homes near the factory so that the mentally retarded persons can attend the work staying in group homes. This system would help them in independent living.

Another concept which is coming up is to provide facilities or adopt a few persons by the industry after training so that they can work, earn and contribute to the industry also.

## **VIII. SAMPLE FILLED IN FORMATS**

- *Identification data*
- *Vocational placement checklist*
- *Manufacture of wire cut bricks*
- *Manufacture of tiles*

## IDENTIFICATION DATA

1. Name of the trainee : *Francis*
  
2. Age/Date of birth/Sex : *20 years, 17-5-1971 {Male}*
  
3. Level of Mental Retardation : *Mild Mental Retardation*
  
4. Name & address of the parent/guardian and occupation : *S/o Mr. Joseph  
Kalathi House  
Alwaye - Kerala,  
{Business}*
  
5. Education and training :  
  
Normal school : *IIIrd Class*  
  
Special school : *Not attended*  
  
Vocational training : *Nothing specific - helps parents in domestic works*
  
6. Associated conditions (if any) : *Nil*
  
7. Score on checklist for vocational placement : *86 %*
  
8. Reasons for consideration for admission to the trade manufacture of tiles and bricks :
  1. *Independent in mobility*
  2. *Has - normal hand functioning*
  3. *Is aware of safety*
  4. *Can communicate needs*
  5. *Attends to a task continuously without disturbing*

Date : 2-2-1991

Name of the trainer : Mr. ZION

**NATIONAL INSTITUTE FOR THE MENTALLY HANDICAPPED  
VOCATIONAL PLACEMENT.  
CHECK LIST**

Name : *Francis*

Age : *20 yrs.*

		Periodical Evaluation					Remarks
I. SELF HELP SKILLS :	Date	3-3-1991					
1. Anticipates needs and uses bathroom appropriately		✓					
2. Maintains cleanliness unaided (brushing, bathing, combing)		✓					
3. Eats Properly and observes manners in a family		✓					
4. Manages dressing unaided and maintains a neat appearance		✓					
		4					
<b>II COMMUNICATION:</b>							
1. Can use gestures as an adjunct to verbal communication		✓					
2. Communicates using words		✓					
3. Gesturally or verbally makes himself understood to others		✓					
4. Communicates properly in sentences		✓					
5. Engages in meaningful conversation with two or three persons.		✓					
		5					
<b>III. SOCIAL BEHAVIOUR</b>							
1. Sits properly in a class room situation		✓					
2. Greets peers and elders appropriately		✓					
3. Offers help when needed without prompting		✓					
4. Cooperates in group situations		✓					
5. Behaves acceptably and makes visitors feel welcome		✓					
6. Recognizes and protects his own property appropriately		✓					
7. Asks permission to use the property of others		✓					
8. Maintains discipline demanded in a given situation		✓					
9. Leads peer group in simple activities		✓					
10. Follows routine		✓					
		10					

IV. FUNCTIONAL ACADEMICS.	Date	3-3-1991						Remarks
1. Reads his name		✓						
2. Reads his address		✓						
3. Reads survival words (poison, men, women, hot stop, toilet)		✓						
4. Comprehends what is read by him		✓						
5. Reads simple sentences		✓						
6. Writes his name		✓						
7. Writes his address		✓						
8. Copies simple sentences		✓						
9. Writes simple sentences		✓						
10. Counts meaningfully upto 10		✓						
11. Counts upto 100		✓						
12. Identifies and writes the number upto 10		✓						
13. Identifies and writes the numbers upto 100		✓						
14. Does simple single digit addition		✓						
15. Does simple double digit addition		✓						
16. Does simple double digit subtraction		✓						
17. Does simple double digit subtraction		✓						
18. Identifies coins of all denominations		✓						
19. Identifies rupee notes of all denomination		✓						
20. Exchanges coins for one rupee		✓						
21. Makes purchases and gets balance for 1 rupee		✓						
22. Makes purchases and gets balance for 5 rupees		✓						
23. Makes purchases and gets balance for 10 rupees		✓						
24. Answers correctly day or night, morning or afternoon yesterday, today, or tomorrow		✓						
25. Tells the date, month and year		✓						
26. Tells the position of the long and short arm in clock		✓						
27. Tells his date of birth		✓						
28. Tells time to the minute on the clock		✓						
29. Tells hours, 30 mts, 15 mts, 45 mts		✓						
30. Associates time to the work routine		✓						
		21						



<b>V. SAFETY SKILLS</b>		<b>Date</b>	3-3-91						<b>Remarks</b>
1.	Uses stairs and corridors in a safe manner		✓						
2.	Aware of hazards in the environment		✓						
3.	Knows dangers of fire		✓						
4.	Aware of traffic signals		✓						
5.	Crosses streets safely		✓						
6.	Uses sharp objects safely		✓						
7.	Uses household electrical items safely		✓						
			7						
<b>VI DOMESTIC BEHAVIOUR</b>									
1.	Sweeps the floor with a broom, picks up in a dust pan and empties the pan		✓						
2.	Dust the furniture, leaving no dust in flat surface		✓						
3.	Sets a table for lunch		✓						
4.	Washes and dries dishes		✓						
5.	Operates a grinder or mixie		✓						
6.	Washes clothes		✓						
7.	Dries clothes		✓						
8.	Prepares coffee		✓						
9.	Buys necessary things for cooking if listed and given		✓						
10.	Prepares and serves a meal		✓						
11.	Rides a bicycle		✓						
12.	Can retain verbal message and convey to the respective person		✓						
13.	Can attend to telephone call		✓						
			11						
<b>VII. MOTOR SKILLS:</b>									
1.	Walks independently		✓						
2.	Climbs and descends with alternate feet		✓						
3.	Can pour without spilling		✓						
4.	Can cut a drawn rectangle		✓						
5.	Can sand paper a given article		✓						
			15						

VIII. VOCATIONAL SKILLS		Date	3-3-91						Remarks
1.	Attends to an assigned task without disturbing others for one hour		✓						
2.	Goes to an assigned area without reminder in a routine daily programme		✓						
3.	Understands and completes a task in order to receive money.		✓						
4.	Increases speed of work, told to do so		✓						
5.	Rises and leaves from residence so as to reach work or activity		✓						
6.	Travels by bus independently		✓						
			6						

IX Special interest for specific skills/tasks/ Jobs observed in the candidate									
Major areas		Total No. of Skills in each area	3-3-91 Skills achieved						Remarks
I. Self help skills		4	4						
II. Communication		5	5						
III. Social Behaviour		10	10						
IV. Functional Academics		30	21						
V. Safety skills		7	7						
VI. Domestic Behaviour		13	11						
VII. Motor Skill		5	5						
VIII. Vocational skills		6	6						
Total		80	69						

Vocational habilitation level is achievement of 80% of the total 80 skills in all major areas. In case a person does not achieve 80% in academic skills and gets 80% in all other major areas, he can still be considered for placement.

**MANUFACTURE OF BRICKS**

Name: *Francis*

**Job Analysis**

Age: *20 yrs*

I. Core work routines:		Periodical Evaluation					Remarks
		3.3.91	3.9.91	3.5.91			
A. Preparation of clay-sequential tasks		Date:					
1.	Prepares the yard for mixing clay		M	V	I		
2.	Sifts the sand		P	I	V		
3.	Puts 10 baskets of yellow clay in the yard		P	V	V		
4.	Puts 5 baskets of black clay in the yard		P	V	V		
5.	Puts 5 baskets of cleaned sand on the clay		P	V	I		
6.	Adds water to the clay and sand using a hose pipe		P	I	I		
7.	Mixes the clay and sand with water		P	M	I		
8.	Takes out the grass and other materials from the prepared clay		M	I	I		
		<b>Total:</b>	0	3	5		

- Codes:**
- I - Independent - Without any help if the trainee does the task mark 'I'
  - V - Verbal cues - If he has to be told what to do, mark 'V'
  - M - Modelling - If he has to be shown how to do, mark 'M'
  - P - Physical help - If he needs physical help, mark 'P'
  - TD - Totally Dependent - If he has to be totally helped to do, mark 'TD'

<b>B. Preparation of green bricks-Sequential tasks</b>		Date:	3.3.91	3.5.91	3.7.91				Remarks
1.	Fills the prepared clay in the basket		P	V	I				
2.	Takes the filled basket to the pug mill		V	I	I				
3.	Puts the clay into the hole where the rollers are fixed		P	V	I				
4.	Mixes crude oil and kerosene in 1:10 proportion		TD	TD	TD				
5.	Pours the mixed oil through the mouth of the pug mill		F	V	V				
6.	Puts on the switch to start the machine		TD	TD	V				
7.	Waits till the clay slab reaches the mark on the cutting table		V	I	I				
8.	Operates the handle to cut the slab		P	V	I				
9.	Pushes the clay slab towards the wire cutter		P	V	V				
10.	Operates the handle of the wire cutter		P	V	I				
11.	Presses on the top of the cut bricks with a plank		P	V	V				
12.	Removes the side piece which are not in the required sizes		V	I	I				
13.	Puts those piece again into the roller		V	I	I				
14.	Takes out the green bricks in twos		P	I	I				
15.	Keep in twos on the plank to be kept for drying		P	P	I				
16.	Removes the grass and other materials from the wire cutter		P	P	V				
		Total:	0	5	10				
<b>C. Drying the green bricks-sequential tasks</b>									
1.	Carries the green bricks kept on the plank to the place to be stacked to drain water		V	I	I				
2.	Takes out the green bricks from the plank		V	I	I				
3.	Stacks the bricks (after draining water) on a pushing cart		M	V	M				
4.	Stacks the green brick (after draining water) on a pushing cart		M	V	I				
5.	Pushes the cart towards the yard for drying		I	I	I				
6.	Keeps the bricks vertically one by one		M	I	I				
		Total :	1	4	5				

Note: After wire cutting, the green bricks are kept inside the shed to drain water. Later they are taken to the yard depending on the nature of the slab and temperature outside the shed.

<b>D. Burning green bricks in the kiln-sequential tasks</b>		Date:	3.3.91	3.5.91	3.7.91				Remarks
1.	Stacks the dried green bricks on the pushing cart		M	V	I				
2.	Pushes the cart towards the kiln		I	I	I				
3.	Takes out the bricks one by one from the cart		V	I	I				
4.	Gives to the person who stacks the bricks inside the kiln		V	I	I				
5.	Stacks the bricks inside the kiln		-	-	-				Risky
6.	Mixes clay with water to cover the kiln		-	-	-				
7.	Gives the mixed clay to the person who covers the kiln		V	M	V				
8.	Covers the kiln with clay		V	I	I				
9.	Brings the firewood from the yard		V	I	I				
10.	Gives to the person who stacks the firewood on the kiln		V	I	I				
11.	Lights the firewood		-	-	-				Risky
12.	Regulates the air		-	-	-				Risky
13.	Puts off the fire after the bricks are burnt properly		-	-	-				Risky
		Total :	1	6	7				
<b>I.E. Sorting and storing of burnt bricks Sequential tasks</b>									
1.	Takes out the burnt bricks after properly cooling the kiln and the bricks		-	-	-				Risky
2.	Stores the bricks outside the kiln		V	I	I				
3.	Keeps the broken bricks separately		V	V	V				
4.	Sorts out the good bricks		V	V	V				
5.	Stacks in the storage		M	I	I				
6.	Cleans the kiln		TD	TD	TD				
7.	Cleans the surroundings of the kiln		V	I	I				
		Total:	0	3	3				

<b>II. Episodic work routine: F. Cleaning the pug mill</b>		Date	3.391	3.5.91	3.7.91				Remarks
1.	Wipes the machine parts with cloth		P	M	I				
2.	Uses the brush for the parts where the hands do not reach		TD	P	M				
3.	Gets inside the part of the pug mill where clay is put in		-	-	-				risky
4.	Sits on the roller		-	-	-				risky
5.	Takes out the mud stuck on the roller with a thin blade		-	-	-				risky
6.	Collects the mud in a basket		-	-	-				risky
7.	Takes out the basket with mud		-	-	-				
8.	Puts it in the prepared clay		-	-	-				risky
		Total :	0	0	1				
<b>G. Lubrication</b>									
1.	Finds out the 6 lubrication cups on the mill		M	V	I				
2.	Takes out the cups one by one		P	V	I				
3.	Fills grease in the cups one by one		P	P	I				
4.	Fits the cups back on the machine		P	V	V				
5.	Puts on the switch		V	I	I				
6.	Checks whether the new grease comes out of the cups		V	V	V				
		Total:	0	2	4				
<b>III. Work behaviour</b>									
1.	Wears the uniform for work		I	I	I				
2.	Goes for work on time in the morning		V	V	I				
3.	Works till the morning tea break as per the directions		V	M	I				
4.	Breaks for morning tea		V	M	M				
5.	Returns on time after tea		V	I	I				
6.	Continues work as per directions		V	M	M				
7.	Goes for lunch		V	M	M				
8.	Takes rest - till 2 p.m.		V	I	I				
9.	Continues work till 5 p.m.		V	I	I				
10.	Breaks for evening tea		V	M	I				
11.	Continues work till 5 p.m.		M	M	I				
12.	Takes bath		I	I	I				
13.	Changes dress		I	I	I				
14.	Cooperates with others during work		I	I	I				
15.	Communicates properly during work		I	I	I				
		Total:	5	8	12				

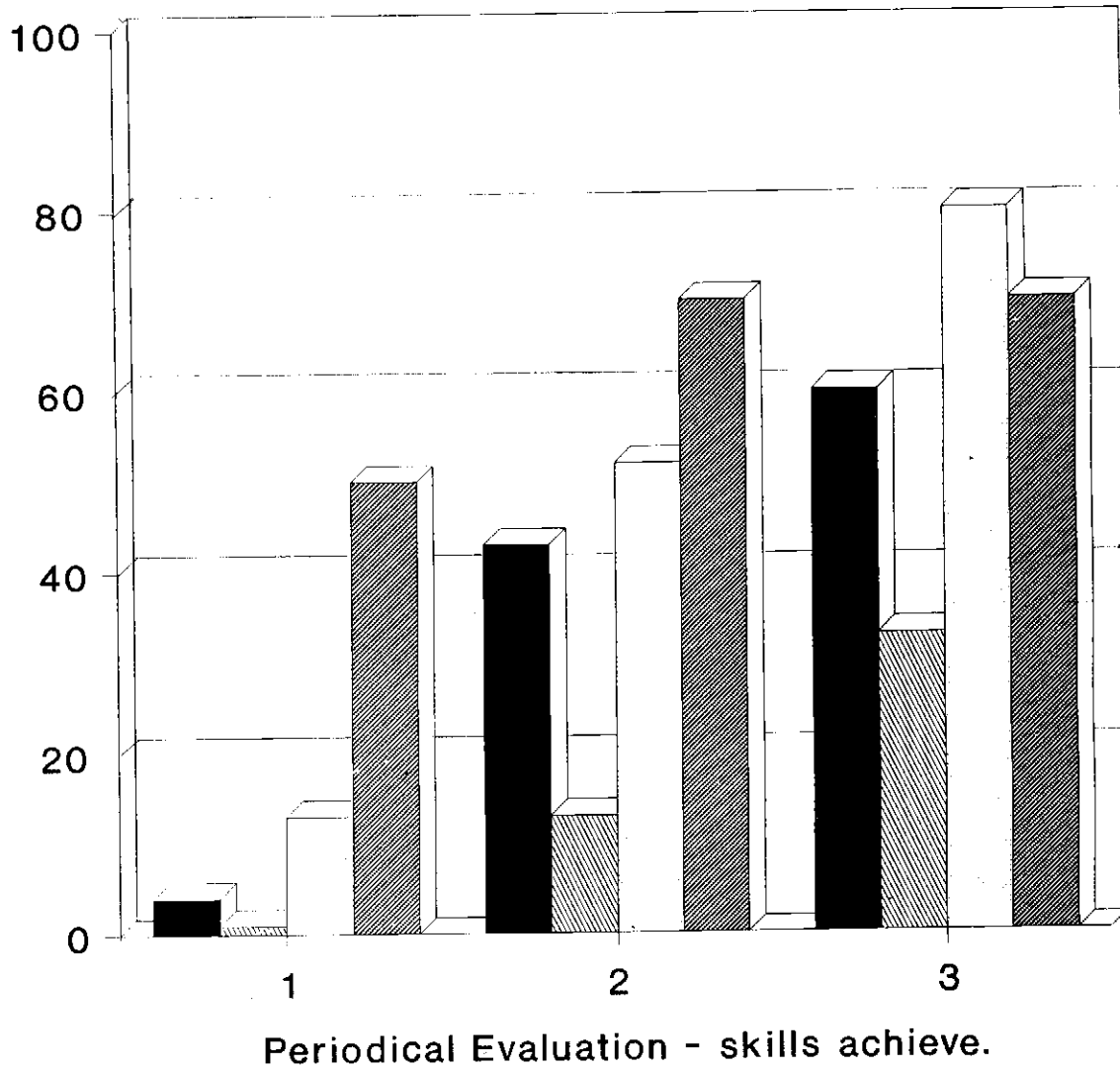


<b>IV Work related skills</b>	Date	3.2.91	3.3.91	3.7.91				Remarks
1. Realizes that he can earn out of work		ID	I	I				
2. Reaches in time		V	I	I				
3. Calculates the money upto 10 rupees		I	I	I				
4. Uses pocket money for personal use		V	V	V				
5. Aware of the use of bank		TD	TD	TD				
6. Crosses street safely		I	I	I				
7. Behaves properly in public places		I	I	I				
8. Reads own address		I	I	I				
9. Writes own address		I	I	I				
10. Writes letter to parents/friends		M	M	M				
	<b>Total</b>	<b>5</b>	<b>7</b>	<b>7</b>				

These are some of the generic skills which can be easily practiced after placing on-the-job

Name : <i>Francis</i> Age: 20 yrs	Total No. of skills	Periodical evaluation					Remarks
		3.3.91	3.5.91	3.7.91			
<b>I. Core work routines:</b>							
A. Preparation of clay	8	0	3	5			
B. Preparation of green bricks	16	0	5	10			
C. Drying the green bricks	6	1	4	5			
D. Burning the green bricks in the kiln	13	1	6	7			
E. Sorting and storing of burnt bricks	7	0	3	3			
<b>II. Episodic work routines:</b>							
F. Cleaning the pug mill	8	0	0	1			
G. Lubrication	7	0	2	4			
<b>III. Work behaviour</b>	15	5	8	12			
<b>IV. Work related skills</b>	10	5	7	7			
	<b>Total :</b>	<b>90</b>	<b>12</b>	<b>38</b>	<b>54</b>		

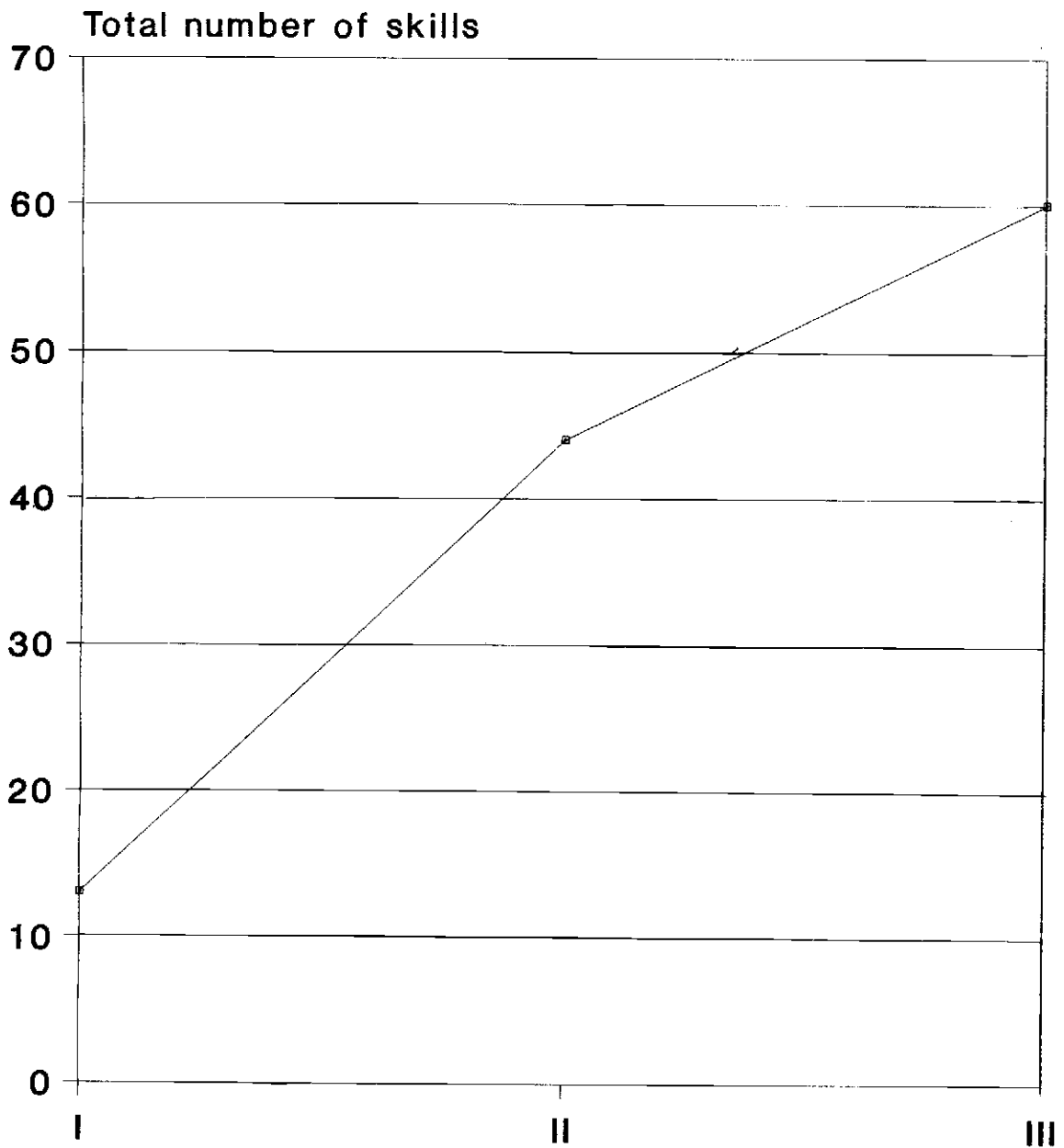
# Distribution of Skill Achievement In Manufacture of Wire-cut Bricks



- Core Work Routine
- Work Behaviour
- Episodic Work Rtn.
- Work Related skills

**Name of the Trainee: Francis**

**Graphical representation of skills achievement  
in the manufacture of wire cut bricks ( in percentage)**



**Periodical Evaluation - skills achieved**

**Name of the Trainee : Francis**

MANUFACTURE OF TILES - JOB ANALYSIS		Name:					
		Age:					
		Periodical Evaluation					
I. Core Work routines : A. Preparation of clay-sequential tasks	Date						Remarks
1. Prepares the yard for mixing clay							
2. Sifts the sand							
3. Puts 10 baskets of yellow clay in the yard							
4. Puts 5 baskets of black clay on the top of the yellow clay							
5. Puts 5 baskets of cleaned sand on the clay							
6. Adds water to the clay and sand using the hose pipe							
7. Mixes the clay and sand with water							
8. Takes out the sand and other materials from prepared clay							
<b>Total:</b>							

**Codes :**

- I - Independent - Without any help if the trainee does the task, mark 'I'
- V - Verbal cues - If he has to be told what to do mark 'V'
- M - Modelling - If he has to be shown how to do mark 'M'
- P - Physical help - If he needs physical help mark 'P'
- TD - Totally Dependent - If he has to be totally helped mark 'TD'

(Method used to fill the format for manufacture of wire cut bricks can be followed).

<b>B. Preparation of green slabs in the required size-sequential tasks</b>		Date:							Remarks
1.	Fills the prepared clay in the basket								
2.	Takes the filled basket to the pug mill								
3.	Puts the clay into the hole where the rollers are fixed								
4.	Mixes crude oil and kerosene in 1:10 proportion								
5.	Pours the mixed oil through the mouth of the pug mill								
6.	Puts on the switch to start the machine								
7.	Waits till the clay slab reaches the mark on the cutter								
8.	Operates the handle to cut the clay slab								
9.	Pushes the clay slab towards the wire cutter								
10.	Operates the handle of the wire cutter								
11.	Presses on the top of the cut slabs with a plank								
12.	Puts the side pieces again into the roller								
13.	Keeps the green slabs to drain water								
14.	Removes the grass and other materials from the wire cutter								
		Total:							

**Note: The mouth piece of the pug mill has to be adjusted as per the requirement of the thickness of the green slab to prepare tiles.**

<b>C. Preparation of green tiles using hand press-sequential tasks</b>		Date:							Remarks
1.	Dips the cloth in the mixed oil								
2.	Applies oil with that cloth on the surface where the green slabs are to be beaten								
3.	Beats the green slab on the surface turning all the 6 sides of the slab one by one								
4.	Applies oil inside the die								
5.	Keeps the beaten slab inside the die								
6.	Adjusts the handle of the die								
7.	Turns the wheel to the opposite side								
9.	Takes out the die								
10.	Keeps the green tile on the wooden pallet								
11.	Keeps the pallet with green tile on the trimming table								
12.	Cuts all the four sides of the tile with a knife								
13.	Keeps the tile on the rack to drain water								
		Total							

<b>D. Drying green tiles in the kiln-sequential tasks</b>	Date							Remarks
1. Takes out the tiles from the rack one by one								
2. Stacks the tiles on the cart to take to the yard								
3. Pushes the cart to the yard								
4. Cleans the yard								
5. Takes out the tiles one by one from the cart								
6. Keeps one by one in the yard to dry in the sun								
Total :								
<b>E. Burning green tiles in the kiln-sequential tasks</b>								
1. Stacks the dried tiles in the pushing cart								
2. Pushes the cart towards the kiln								
3. Gives one by one to the person who loads the tiles in the kiln								
4. Loads the tiles inside the kiln								
5. Mixes clay with water								
6. Gives the mixed clay to the persons who covers the kiln								
7. Covers the kiln with clay								
8. Bring the firewood from the yard								
9. Stacks the firewood into the kiln								
10. Lights the firewood								
11. Regulates the air								
12. Puts off the fire after the bricks are burnt properly								
Total :								
<b>F. Sorting and storing of burnt tiles-sequential tasks</b>								
1. Takes out the burnt bricks after properly cooling the kiln and the tiles								
2. Stacks the tiles outside the kiln								
3. Keeps the broken tiles separately								
4. Cleans the kiln								
Total :								

<b>II. Episodic work routines: G. Cleaning the pug mill hand press &amp; die</b>		Date :								Remarks
1.	Wipes the machine parts with cloth									
2.	Uses brush to the parts where the hands do not reach									
3.	Gets inside the part of the pug mill where clay is put in									
4.	Sits on the roller									
5.	Takes out the mud stuck on the roller with a thin blade									
6.	Takes out the mud in a basket									
7.	Takes out the basket with mud									
8.	Puts it with the prepared clay									
9.	Takes out the mud stuck on the hand press									
10.	Takes out the mud stuck on the dies									
11.	Applies oil in the dies									
		Total :								
<b>H. Lubrication</b>										
1.	Finds out the 6 lubrication cups on the mill									
2.	Takes out the cups one by one									
3.	Fills grease in the cups one by one									
4.	Fits the cups back on the machine									
5.	Puts on the switch									
6.	Checks whether the cups are turning									
7.	Switches off when the new grease comes out of the cups									
		Total :								

<b>III. Work behaviour</b>	<b>Date</b>							<b>Remarks</b>
1. Wears the uniform for work								
2. Goes to work on time in the morning								
3. Works till the morning tea break as per direction								
4. Breaks for morning tea								
5. Returns on time after tea								
6. Continues work as per direction								
7. Goes for lunch								
8. Takes rest till 2.00 p.m.								
9. Continues work as per direction								
10. Breaks for evening tea								
11. Continues work till 5.00 p.m.								
12. Takes bath								
13. Changes dress								
14. Cooperates with others during work								
15. Communicates properly during work								
	<b>Total</b>							

<b>IV. Work related skills</b>	<b>Date:</b>							<b>Remarks</b>
1. Realizes that he can earn out of work								
2. Reaches on time to attend work								
3. Calculates the money upto 10 rupees								
4. Uses pocket money for personal needs								
5. Aware of the use of bank								
6. Crosses street safely								
7. Behaves properly in public places								
8. Reads own address								
9. Writes own address								
10. Writes letters to parents/friends								
	<b>Total:</b>							



NAME: AGE :	Total No. of skills	Periodical Evaluation					Remarks
		No. of skills acheived					
<b>I. Core work routines:</b>							
A. Preparation of clay	8						
B. Preparation of green slabs in the required size	14						
C. Preparation of green tiles using hand press	13						
D. Drying green tiles in the sun	6						
E. Burning green tiles in the kiln	12						
F. Sorting and storing of burnt tiles	4						
<b>II. Episodic work routines:</b>							
G. Cleaning the pug mill, hand press & dies	11						
H. Lubrication	7						
<b>III. Work behaviour</b>	15						
<b>IV. Work related skills</b>	10						
<b>Total :</b>	100						