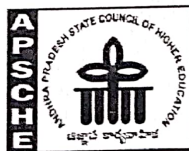


Model Program Book



SHORT-TERM INTERNSHIP (On-Site/Virtual)

Designed & Developed by



**ANDHRA PRADESH
STATE COUNCIL OF HIGHER EDUCATION**

(A STATUTORY BODY OF GOVERNMENT OF ANDHRA PRADESH)

An Internship Report on
Enhancing cold storage efficiency and sustainability in Agriculture

(Title of the Internship)

Submitted in accordance with the requirement for the degree of
IIIrd BA (H.E.P)

Under the Faculty Guideship of

I. Nageswar Reddy

(Name of the Faculty Guide)

Department of

History

(Name of the College)

Submitted by:

kandlavathi Srinivasulu Naik. (S.V.B. Govt Degree College,

(Name of the Student)

Reg.No: 21110001008

Department of

History

(Name of the College)

SVB Govt Degree College

Koilakuntla.

Page No:

Student's Declaration

I, K. Srinivasulu Naik a student of internship
Program, Reg. No. 21100041008 of the Department of History
College do hereby declare that I have completed the mandatory internship
from 7-08-2023 to 6-10-2023 in Educationary Club (Name of
the intern organization) under the Faculty Guideship of
J. Nageswar Reddy (Name of the Faculty Guide), Department of
History, Sri B. Govt Degree College
(Name of the College) Koilakurki.

K. Srinivas Naik
(Signature and Date)

Page No:



Official Certification

This is to certify that ke Sreenivasulu Naidu (Name of the student) Reg. No. 2111000108 has completed his/her Internship in R.A (HEP) (Name of the Intern Organization) on Edula Siva Reddy Cold Storage (Title of the Internship) under my supervision as a part of partial fulfillment of the requirement for the Degree of B.A in the Department of S.V.B Govt College (Name of the College).

This is accepted for evaluation.

(Signatory with Date and Seal)

Endorsements

Faculty Guide

Nageswar Reddy.

Head of the Department

History.

Principal

M. Ram Sub. N
PRINCIPAL
S.V.B. GOVT DEGREE COLLEGE
KOILKUNTALA, NANDYAL (D.T.)

Page No:

Certificate from Intern Organization

This is to certify that Short Term (Name of the intern)
Reg. No 2440041008 of SVB Govt College (Name of the
College) underwent internship in edula Siva Reddy Cold Store (Name of the
Intern Organization) from Kollakuntla to Kollakuntla

The overall performance of the intern during his/her internship is found to be
edula Siva Reddy Cold Store (Satisfactory/Not Satisfactory).

Authorized Signatory with Date and Seal

Acknowledgements

Short term Internship project Work . 2023

Title : Enhancing cold storage efficiency and Subsidy in Agriculture.

Edua Sivarreddy Cold Storage.

local physical Internship opportunity for maintain support position of M/S Edua Sivarreddy in Andhrapradesh.

This Storage founder by Edua Sivarreddy. in Andhrapradesh

This location of loilekutha.

Many Crops coming here kept in Cold Storage.

What are They under those crops.

- * Red Chillies, and
- * Red grams.
- * Mong dal
- * Chana.

Page No:

* Whole moong.

* Black grams are all the it is kept in this cold storage.

Orange Acknowledgments high of Building for a chilly kept in storage room.

Typically, chilly cold storage lifts of 6 + floors then ground floor (1,2) + 5 floors.

(9 tech) in export product

The Redchilly stock loading to truck, Chilly Stock Storage left to chillies and other product export of Andhra Pradesh

Example: Dry chillies local kurnool market in Andhra Pradesh and Drychillies red market of Guntur in Andhra Pradesh.

Quinta INR

Anychillies Selling to Quinta price.

MARKET	District	price.
Hindupuram	Ananthapuram	Quinta (23,5300 (18000)
kurnool	kurnool	Quinta (17,000 - 24000)
Guntur	Guntur	Quinta (20000 - 25,000)

CHAPTER 1: EXECUTIVE SUMMARY

The internship report shall have only a one-page executive summary. It shall include five or more Learning Objectives and Outcomes achieved, a brief description of the sector of business and intern organization and summary of all the activities done by the intern during the period.

Introduction:- Cold Storage Industry Industry is Verry Im-
portent and efficiantly Industry. The temperature is
maintained With the help of preision

Instruments Cold storage is order to presurve
-fruits chillys and all potato) Stock once they
are kept in the cold storage.

do not get Spoiled even after many -fruits.
They dovlopments of cold Storages in the Country.
has an important role the marketing of cold storage
-follows the local existing distribtution network. i.e

The dovlopments internship report shall
have city only a cold storage objective and out
comes organization.

Page No:

Weight loss of dry chill and

Recommendation to reduce the weight loss.

Chill is stored before, with proper drying from 65-85% RH to below 10% RH

there after only it can be stored as per the Storage Condition.

Weight loss is caused due to:

Improper storage is not maintained RH-

Cold Storage is not maintained properly as per the requirement and the loss then 95% RH value at the storage period of 6 to 12 months.

Recommendations to reduce weight loss.

* Perfect packing:- Do the perfect packing then only it will reduce the transpiration rate and the weight loss is reduced for chill, stored vacuum packing then just packing. Maintain the storage temperature.

Maintain the storage temperature of 5°C for reduction of weight loss maintain the 12% RH to reduce the weight loss.

CHAPTER 2: OVERVIEW OF THE ORGANIZATION

Suggestive contents

- A. Introduction of the Organization
- B. Vision, Mission, and Values of the Organization
- C. Policy of the Organization, in relation to the intern role
- D. Organizational Structure
- E. Roles and responsibilities of the employees in which the intern is placed.
- F. Performance of the Organization in terms of turnover, profits, market reach and market value.
- G. Future Plans of the Organization.

Cold Storage in India -

The first problem is that there aren't enough cold storage's. The government is affairing some subsidies to try to park this op - but it is still rather capital-intensive. There are also very different business models at play.

This need is towards storing grains and selling it a better price once the harvest season is over. Turmeric for example climbs as high as 3-4 times at season and is very easy to store. Most farmers don't do it because they don't have space to store it.

Chilly Cold Storage of 5,000 MT

Approximately one acre of land is required for a 5000 MT cold storage for chill.

This land required is sufficient for cold storage, machine room, condenser tank and condenser power house, tranche-formers, and also 20 feet free space in all direction for fire and safety guidelines.

The approximate buildings length width and height required for a 2,500 MT chamber.

Generally for chilly storage of 5000 MT, customers build two chambers of 2,500 MT each. They build two cold storage in rectangular shape, and standard size of each 2500 MT chamber is $100 \times 40 \times 57$ FT (L x W x H) depending on the customer's land layout. The buildings is build storage.

Ammonia for Chilly Cold Storage

Generally chilly cold storage are about 500 MT. occupancy in this range ammonia refrigerant is more economical than fossil for this large size storage. Customers as well as instructor have adept and long experience in working with ammonia.

CHAPTER 3: INTERNSHIP PART

Description of the Activities/Responsibilities in the Intern Organization during Internship, which shall include - details of working conditions, weekly work schedule, equipment used, and tasks performed. This part could end by reflecting on what kind of skills the intern acquired.

IIIrd part Internship

Cold Storage - Downward product cover sinusoidal fins for fans for high tube test pressure to ensure leak proof downward air-flow pattern from equal distribution of air. Also Peaker Splitting, mongdal, Channa whole among total item proper - cooling extend the safe line.

Storage temperature, 5,000 MT cold 8°C
Stored Compressor 2,500 MT chill storage (30 TR)
The internship - Andhra Pradesh in equal Chilla - Reddy cold storage in location of Gollacunta Red Chilli and foardal and Channa whole among, Split means Red frames, Black frames also in storage.

acknowledments high of buildings for chillys.
Cooling in room storage.

ACTIVITY LOG FOR THE FIRST WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	first daily going to edula siva reddy cold storage (kolleuntla)	cold storage Own know product cooling	
Day - 2	Stock saving storage in Sivareddy cold storage	Producing stored in 3 years & 4 years	
Day - 3	Different stocks and chana, whole mungs, chick	Stocks PS today Stock product cooling	
Day - 4	5 th floor fans high efficiency	3 x 5 = 15 fans	
Day - 5	In cold storage temperature	+10°C temperature	
Day - 6	cold storage packing left price in indore	useful loading left	

- * However if cold storage facilities are used the product may be stored for 4-3 years
- * Cold storage - Downflow product cooler
- * $3 \times 5 = 15$ Fans
- * Sin were fins for fans for high ef
- * tube test pressure to ensure leak product could
- * Down ward airflow pattern for equal distribution fair.
- * Chickpeas, Split mung, mung dal, split green gram. mung dal total item proper cooling extend the self life.
- * Storage temperature 2,500 mT could.
- * Cold storage. Leading lifts inside with in 5 floors
- * Could storage in a tamarind, sorghum

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ACTIVITY LOG FOR THE SECOND WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Water Supply room - Cooling machine important machine sin u stage	meter Distance Pressure KPEI : 10 to 15.	
Day - 2	Suction Pressure 14.2	ammonia val 160 kg.	
Day - 3	oil pressure 16.4.	-A.B Supply ammonia val	
Day - 4	Dipresor liquid changing cooling ice liquid out door	-total 5 rooms total + 10°C temperature cooling	
Day - 5	Enriching lives 70° [QTRP]	Ammonia - Chirm cooling liquid change	
Day - 6	ammonia (sin u stage running supply) Suction Pressure Down Sumitware	Hours days 7740 (all hours)	

Water Supply:

6 feet cellulose → pad watercooling system
with cold storage de-refrigeration systems disperse
cellulose once. entropage frigorifique

- * A cooling system utilizing natural energy from diurnal ambient air temperature difference.
- * Water is cooled at night by cellulose pad cooling tower and stored for cooling application at day time
- * Overall cap can reach 9.4 from room temperature higher than 40°C .
- * Feasible for data center cooling.

The present study develops a cooling system using water as the working medium which is cooled at night by cellulose pad cooling tower and stored for cooling application at day time

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Storage (Broyer) that one typone	total Broyer $3 \times 5 = 15$	
Day - 2	White stock each pack, splitting moong dal, frame moong dal.	Total item Proper cooling Extend the shelf item	
Day - 3	motor project and high Speed (4 Bypass) conta ge processing.	↳ 100' Dabul ↳ $3\frac{1}{2}$ level ↳ $9\frac{1}{2}$ TDV	
Day - 4	temperature is storage	15% and 16.2 Temperature cooling.	
Day - 5	China change	room cooling	
Day - 6	Gas liqued chang that cooling Reat	Storage all cooling.	

A cooling system was built and tested it is found that the coefficient of performance of (CWCT) for heat dissipation of water at night, COP_{net} , is between 3.8 and 11 and varies linearly with the evaporation.

Temperature difference between cold water temperature in the storage tank and wet bulb temperature in the storage tank and temperature of ambient air)

The COP for room cooling at day-time run with air cooler in a room, COP_{day} , is operation between 8.8 and 12.6 for day cycle operation, the measured overall cooling COP is 5.1 COP , is expected for each 9.4 at room temperature $45^{\circ}C$.

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ACTIVITY LOG FOR THE FORTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	A cold storage facility workers are a perfect refrigeration system which helps	Maintain	
Day - 2	cellulose pad cooling which is cold at night by cool-tose pad cooling towers	(CWCT)	
Day - 3	Termite for example climbs are right by high tower	Stock 3-4 years	
Day - 4	This item when needed can be taken from the cold storage	Store item stock	
Day - 5	cold storage issued to pressure	Storage item stock.	
Day - 6	Business park	Business Repair.	

WEEKLY REPORT

WEEK - 4 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report:

* Overall crop can reach 9.4 for room temperature higher than 40°C

* possible for data center cooling

The present study develops a cooling system using water as the working medium which is cooled at night by Cellulosepad cooling tower (CWCT) and stored for cooling application at day time that is, it utilizes the natural energy.

drawn from diurnal ambient air temperature difference a cooling system was built and tested it is found that the coefficient of performance of (CWCT) for heat ~~dis~~ dissipation of water at night copent is between 3.8 and 11 and varies linearly with the evaporation.

Page No:

ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Blowers:- The cooling air is spread across the room	Room all cooling	
Day - 2	The compressor consumes almost all the power in a cold room	Compressor only device.	
Day - 3	Heat dissipation of water at night	38 and various lines - with the radiator	
Day - 4	Feasible Fordata Center cooling	Overall drop can reach 9.4 for room temperature	
Day - 5	Temperature difference + 10°C	Cooling System	
Day - 6	liquefied 45° run	oil gradual one in the short.	

Page No:

WEEKLY REPORT

WEEK - 5 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report:

Construction EP working of a cold storage plant

A cold-storage facility works on a refrigeration system which helps maintain an adequate temperature and environment as per the specification of each item being stored. These are the main components of a cold storage room.

* **Compressor:** It is the main component that runs the cold room. It is the only device that needs the energy to run. The compressor consumes almost all the power in the cold room.

* **Condenser:** It is required to remove the heat from the refrigerant and the circulating weather.

* **Blowers:** The cooled air is spread across the room through the convection process, thus, achieving the desired temperature of the room.

* $+10^{\circ}\text{C}$ Temperature.

Page No:

CHAPTER 5: OUTCOMES DESCRIPTION

Describe the work environment you have experienced (in terms of people interactions, facilities available and maintenance, clarity of job roles, protocols, procedures, processes, discipline, time management, harmonious relationships, socialization, mutual support and teamwork, motivation, space and ventilation, etc.)

Environmental Career:

As part of research associated with education for sustainability at RM University, sent an invitation to environment professional seeking information about their backgrounds EP work.

Benefits of a Cold Storage:

The main advantages of using Cold Storage are :-

- * Food product and crops product can be stored when their supply is painful and can be used during the period of short supply.
- * Transformation of food stuff from one place to another place is possible.
- * Due to reduction of food spoiled by the use of cold storages, great saving in cost can be achieved.

Cold Storage practices

In a cold storage the following practices should be adopted.

- * Temperature control
- * Relative humidity control
- * Condensation of water vapour.
- * Condensation of sanitation.
- * Air movement.
- * Stacking and material handling.

Classification based on activities

Based on the activities, cold storage can be classified as.

- * Multipurpose cold house.

Describe the real time technical skills you have acquired (in terms of the job-related skills and hands on experience)

Technological Skills.

- * Develop and maintain local networks in ways that optimize performance.
- * Provide orientation and guidance to users on how to operate new software and computer equipments.
- * Check computer hardware (HDD, mouse, keyboards etc.) to ensure functionality.
- * Install and configure appropriate software and functions according to specification.

Information technology (IT) :

is the use of computer to create, process, store retrieve, and exchange all kinds of data and information. It is typically used within the context of business operations as opposed to personal or entertainment technology.

- * (ICT) Information & Communication system technology.
- * Technology skills in feature useful in communication developments occur. The student returns job in technological skills.

Manager of Edula Siva Reddy Cold Storage.



Group photo with cold storage
manager.

Describe the managerial skills you have acquired (in terms of planning, leadership, team work, behaviour, workmanship, productive use of time, quality improvement in competencies, goal setting, decision making, performance analysis, etc.)

Details in managerial

- * And chiller cold storage private limited supplying and Edula Siva Reddy auxiliary transport, activities, activities of travel agencies.
- * Storage in that 3011 years 300 kiler loading USD rupees in stock is edula Sivamany cold storage
- * Buildings = 180 inches
length = 120
Breadth = 120
- * Workers (2) or one cooperature one parking place four numbers in that Edula Sivamany cold storage.
- * Former cold storage stock are useful 3-4 years.
Stock in chiller one person formula nlogswar for 300 and 500 stocks store
- * Department. All operator name was fupulavanna.

- Red chillies exported to - furniture market -



- Drychillies -



Page No:

Describe how you could improve your communication skills (in terms of improvement in oral communication, written communication, conversational abilities, confidence levels while communicating, anxiety management, understanding others, getting understood by others, extempore speech, ability to articulate the key points, closing the conversation, maintaining niceties and protocols, greeting, thanking and appreciating others, etc.,)

Market Potential

Cold storage are essential for extending the shelf life. Period of marketing. Avoiding glut, reducing transport bottlenecks during peak period of production and maintenance of quality of produce.

The developments of cold storage industry has therefore an important role to play in reducing the wastage of the perishable commodities and thus providing price to the growers.

Basic and Presumptions:

* The project is based on an average 90 percent capacity utilisation, three shifts working per day and 300 working day per annum.

For economic viability an Ice Block manufacturing unit has also been included in the project.

Page No:

Describe how could you could enhance your abilities in group discussions, participation in teams, contribution as a team member, leading a team/activity.

Edula Siva Reddy cold storage abilities we are may class friends we are all groups discussion for about the cold storage.

My name is Kandlavath Sreenivasulu Naik I am writing internship project work of a group discussion - 14 members students in this group.

We are participation of team in cold storage we are all students one team join otherwise going to edula-Sivareddy cold storage. A/c operator and name Kupalavarma he is explain to cold storage and guidance of more information. me and my friends consults. passing to cold storage.

Other wise mainly information write on project work record.

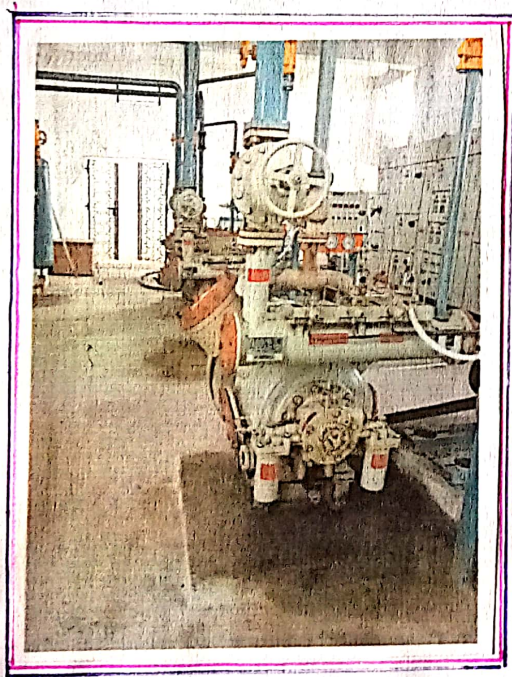
In the cold storage room + 10°C temperature all stock cooling in cold storage, we views to many stacks 1st to upper floor and 5th floor stock 1st in ground floor room.

many stacks left to loading explore to chill some markets

Cold Storage Stock lifting in door loading the 5th Floor -
5th Floor kept to chilles toridal, Chana, whole moong -
Chickpeas, Split moong. moongdal temperature + 10°C.

Storage Temperature ammonia used total
Brayar 3x5 = 15 and 16.0 cooling callus - Pad water for
Spoiled many products this cold storage.

Many drychilles - exports other marketing.



Describe the technological developments you have observed and relevant to the subject area of training (focus on digital technologies relevant to your job role)

Technological developments may be observed and relevant-

Technological developments have placed edulasivareddy Cold Storage in observed activities services otherwise some items kept in cold storage.

These cold storage many crops coming on the edula siva Reddy were house. in view to many crops in ports

Ex: Moongdal, Red Grams, drychillies, chana, Blackgrams, whole moongs etc.

Chilling injury: Chilling injury is caused by low temperature and generally affects chillies and crops, causing imprecise ripening discoloration, texture change etc. with a higher recommended storage temperature symptoms of this disorder are delayed.

The chilling injury is depends on storage temperature and storage time chilling injury is particularly troubling because symptoms are not visible immediately on the product. That too heaters in the store might have develops symptoms during transportation or marketing. * water ~~potato~~ - 4.4°C * potatoes - 3.3°C * pumpkin - 7.2°C etc.

Thermal Insulation of cold storages.

Since heat flows from high temperature areas to lower temperature region, there is a continuous flow of heat or heat from the surroundings to the refrigerated or conditioned space. thereby increasing the temperature of conditioned space (heat gain) any material that retards or offers resistances to the flow of heat through it is called an insulator.

It is necessary to insulate the cold storages or prevent the transfer of heat between the ambient air and the cold storage.

Insulations of cold storages is important to reduce the operating cost of the refrigeration plant by reducing heat gain through structure of the cold storage. Insulation is also necessary on suction pipes of the refrigeration plant in order to - reduce the super-heating of suction gas.

Chilled water pipelines are also insulated or also insulate to prevent subtrans condensation on the pipelines.

Student Self Evaluation of the Short-Term Internship

Student Name: K. Srinivasulu Naik.

Registration No:

Term of Internship:

From: 7-8-2023

To: 6-10-2023

Date of Evaluation:

Organization Name & Address:

Edula Sivaraj Cold Storage.
- Gopala Varma.

Please rate your performance in the following areas:

Rating Scale:

Letter grade of CGPA calculation to be provided

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Date: 21-09-2023

K. Srinivasulu Naik
Signature of the Student

Page No:



Evaluation by the Supervisor of the Intern Organization

Student Name: k. Srinivasulu Naik.

Registration No:

Term of Internship:

From: 7-08-2023 To: 6-10-2023

Date of Evaluation:

Organization Name & Address: Edula Siva Reddy Cold Storage.

Name & Address of the Supervisor
with Mobile Number

9490402714

Please rate the student's performance in the following areas:

Please note that your evaluation shall be done independent of the Student's self-evaluation

Rating Scale: 1 is lowest and 5 is highest rank

1	Oral communication	1	2	3	4	5
2	Written communication	1	2	3	4	5
3	Proactiveness	1	2	3	4	5
4	Interaction ability with community	1	2	3	4	5
5	Positive Attitude	1	2	3	4	5
6	Self-confidence	1	2	3	4	5
7	Ability to learn	1	2	3	4	5
8	Work Plan and organization	1	2	3	4	5
9	Professionalism	1	2	3	4	5
10	Creativity	1	2	3	4	5
11	Quality of work done	1	2	3	4	5
12	Time Management	1	2	3	4	5
13	Understanding the Community	1	2	3	4	5
14	Achievement of Desired Outcomes	1	2	3	4	5
15	OVERALL PERFORMANCE	1	2	3	4	5

Date:

21/9/2023

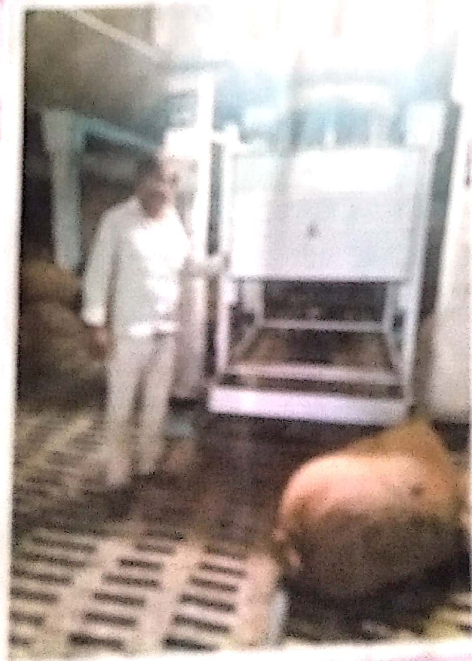
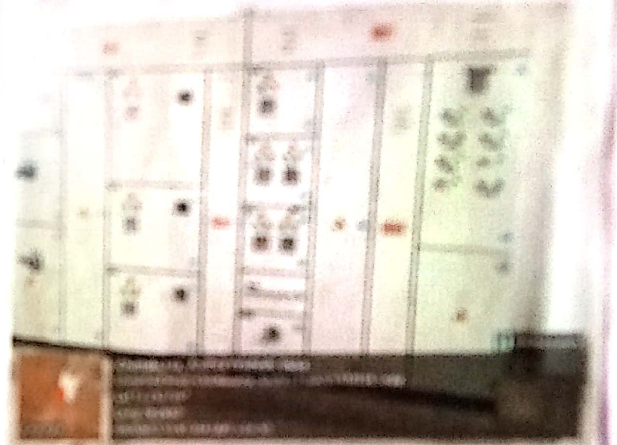
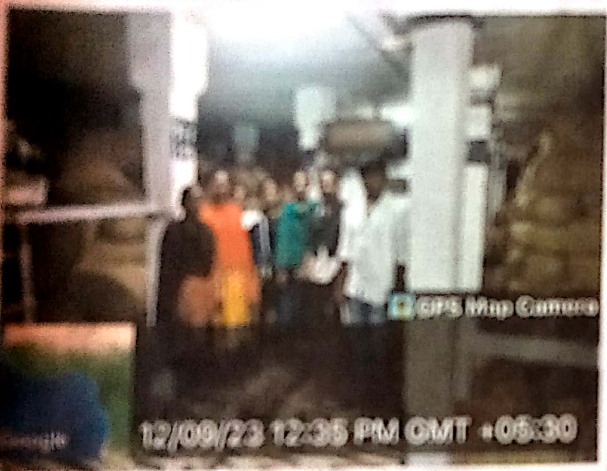
E. H. M.
Signature of the Supervisor

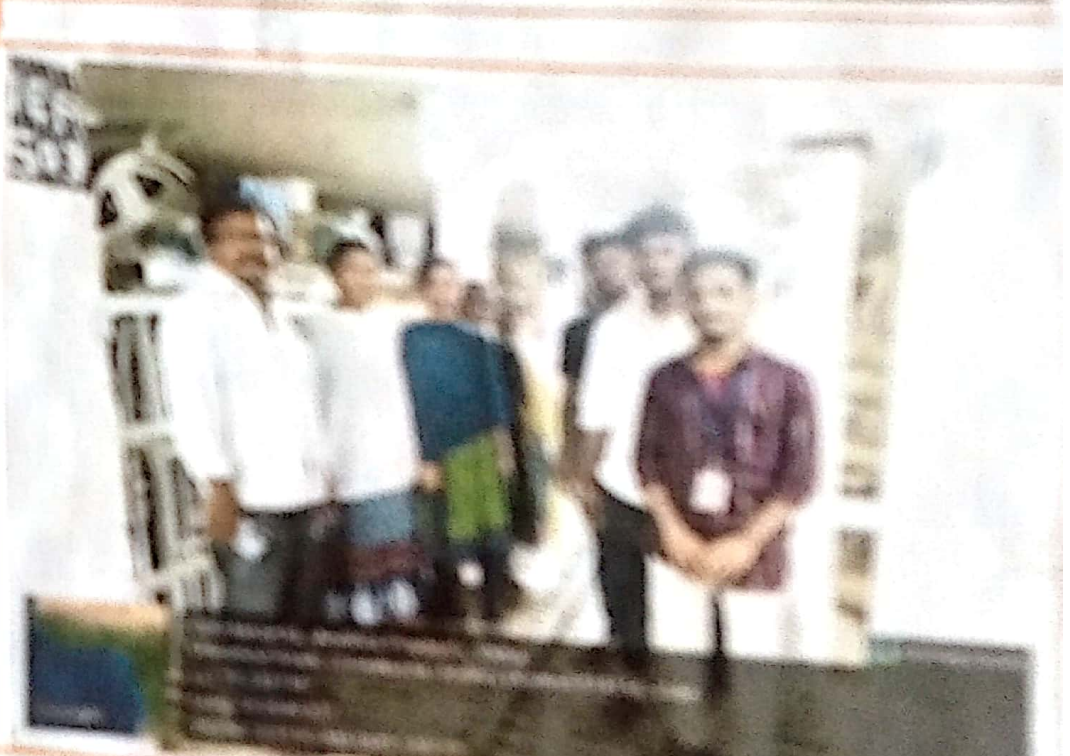
For: EDULA SIVA REDDY COLD STORAGE

Page No:

Proprietor







Vapour Barriers

Property of Insulation materials

material	Density (kg/m^3)	Thermal Conductivity K	Temp. range (°C)
polyurethane	30-32	0.015	110-200
Thermalol	15-30 kg	0.025 to 0.028	75-200
Cork	120-160	0.036	90-180
phenothum	30-34	0.016	130-196

Vapour Barriers:

The water vapour in air tends move from warm region to colder region due to vapour pressure difference. As the temperature difference between the surroundings and conditioned area (cold storage, refrigerated area) increased, the vapour pressure difference also increases.

The insulation material can be porous to some extent due to which moisture from our side can migrate into cold storage area. The vapour condenses in the structure, insulation and also inside the room stored and more importantly on the evaporator in cold storages. The success of insulation work depends

Air movement:

In cold storage, it is very important to provide good air circulation between the boxes and around the product. Adequate air distribution system is required to maintain a uniform temperature throughout the cold storages. Ventilations should be kept at minimum in order to maintain optimum temperature and relative humidity.

Stacking and material handling.

Stacking is one of the important factors in all types of storage and transport it is particularly affected by the packing of chilli products, whether it is by carton tray, wooden, net bag etc.

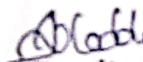
In cold storages according to product the stacking design of products and chana, mungdal in storage 50 kg and 100 kg. For this reason stacking must be proper and stable avoid damage handling storage and transportation.

In storage, important stacks must be used and stack with regard to the direction to the flow from the cooling unit.

INTERNAL ASSESSMENT STATEMENT

Name Of the Student: K. Srinivasulu Naidu
Programme of Study: Precious mining.
Year of Study: 2021-2024
Group: B.A. (HED)
Register No/H.T. No:
Name of the College: S.V.B. Govt College
University:

SLNo	Evaluation Criterion	Maximum Marks	Marks Awarded
1.	Activity Log	25	19
2.	Internship Evaluation	50	38
3.	Oral Presentation	25	20
	GRAND TOTAL	100	77


Signature of the Faculty Guide

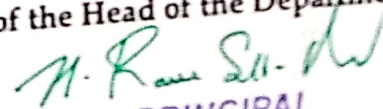
Date:

Certified by

Date:

Seal:

Signature of the Head of the Department/Principal


PRINCIPAL
S.V.B. GOVT DEGREE COLLEGE
KOILKUNTLA, NANDYAL (DL)