

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)



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An Internship Report on

Enhancing cold storage efficiency and subsidiary
in Agriculture
(Title of the Internship)

Submitted in accordance with the requirement for the degree of
IIIrd B.A (H.B.P)

Under the Faculty Guideship of

T. pageswara Reddy

(Name of the Faculty Guide)

Department of

History

(Name of the College)

~~S.V.B~~

Submitted by:

P. Ravindra. S.V.B. Govt. Degree college

(Name of the Student)

Reg.No: 2116061015

Department of

History

(Name of the College)

S.V.B. Government. Degree college
K. Kollakunta.

Page No:

Student's Declaration

I, P. Ravindra a student of Internship
Program, Reg. No. 2111061015 of the Department of 3rd B.A. S.V.B. Govt. Degree
College do hereby declare that I have completed the mandatory internship
from 07-08-2023 to 06-10-2023 in Edula siva Reddy cold storage (Name of
the intern organization) under the Faculty Guideship of
T. Nageshwar reddy (Name of the Faculty Guide), Department of
History, S.V.B. Govt degree college,
(Name of the College) Kalukunta

P. Ravindra
(Signature and Date)

Page No:

Official Certification

This is to certify that P. Ravindra (Name of the student) Reg. No. (Internship) 21110041015 has completed his/her Internship in IIIrd B.A H.E.P (Name of the Intern Organization) on Enhancing cold storage efficiency sustenance in agriculture. (Title of the Internship) under my supervision as a part of partial fulfillment of the requirement for the Degree of IIIrd B.A (H.E.P) in the Department of History S.V.P Govt degree (Name of the College).

This is accepted for evaluation.

(Signatory with Date and Seal)

Endorsements

Faculty Guide

Nageshwar Reddy

Head of the Department

History

Principal

M. Ravi Siva
6/11/23

PRINCIPAL

S.V.B. GOVT DEGREE COLLEGE
KOILKUNTALA, NANDYAL (Dt.)

Page No:



Certificate from Intern Organization

This is to certify that short term (Name of the intern)
Reg. No 21110001015 of S.V.B Govt Degree (Name of the
College) underwent internship in Edula siva Reddy Cold Storage (Name of the
Intern Organization) from Kailashnagar to Kailashnagar

The overall performance of the intern during his/her internship is found to be
Edula siva Reddy ^{Cold Storage} (Satisfactory/Not Satisfactory).

Authorized Signatory with Date and Seal

Acknowledgements

Educa sivaReddy could storage

the intership Andrapradesh in "Educa sivaReddy could storage" in location Kizilakunta Read chillys and ardal and chana, whole moong, split moong, moong dal storage Acknowledge ments. hight of building for a chilly bling in room storage. typically, chilly could storage minist of 6 floors ground floor (1,2 ft); +5 floors (9ft each) in export loading in the chilly stock storage in lifet and chillys export Andrapradesh. ex:- Dry chillys local kurnool market in Andrapradesh and chillys red market guntur in Andrapradesh quinta, INR

Market	District	Price
Hindupuram	Anthpury	Quinta 15,000.00
Kurnool	Kurnool	Quinta 11,899.00
Guntur	Guntur	Quinta 19,700.00

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 is a very important and services industry. The temperature is maintained also with the help of precision instruments. Cold storage is used to preserve fruits, daisies and all (potatoes) etc. Once they are kept in the cold storage they do not get spoiled even after many months.

The development of cold storages in the country has an important role. The marketing of cold storage follows the local existing distribution network i.e.

The internship report shall have only a cold storage. objectives and out comes organization.

weight loss of Dry chill and
recommendation to reduce the weight loss

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

Here after once 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 required 4°C and not less than 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 in stored for chilli, stored vacuum packing then just packing.

Maintain the storage temperature : maintain the storage temperature of 4°C 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.

* storage in india

the first problem is that there aren't enough could storage. the government is offering some subsidies to try to perk this up, but it is still rather capital intensive. there are also very different business models at play.

there is a need for godowns.

this need is towards storing grains and selling it at a better price once the harvest season is over. Turmeric for example climbs as high as 3-4 times off 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 chilli.

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

the approximate building length with and high required for a 2,500 MT chamber.

generally for chilly storage of 5,000 MT, customers build two chambers of 2,500 MT each. They build two the cold storage in rectangle shape, and standard size of each 2,500 MT chamber is $110 \times 40 \times 57$ ft (L x W x H) depending on the customers land layout. the building is build storage.

Ammonia for chilly cold storage

generally chilly cold storage are above 500 MT capacity in this range ammonia refrigerant is more economical than freon.

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.

could storage - Downthrow product cooler sin ware
fins for fans for high tube test pressure to insure
leak proof cool downward airflow pattern for equal
distribution at air chickpeas, split mung, moong dal,
split green gram moong dal chillis, horse dal, chana whole
moong total item proper cooling extend the shelf life

storage temperature, 5,000 MT could 8°C stored
temperature 2,500 MT chilli storage (BTR)

the internship Andrapradesh in Edula siva Reddy
could storage in location Kollunkota Red chillis and Fasal
and chana, whole moong, split moong, moonga dal storage
Acknowledgements light of building for actively 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 day edula siva Reddy cold storage (koilkuntla)	cold storage - Down throw product cooling	
Day - 2	stack saving storage in Edula siva Reddy cold storage	product stacked in 3 years of 4 years	
Day - 3	sth the floor fan's high efficiency	$3 \times 5 = 15$ fans	
Day - 4	different stack for chili and chana whole mang, chillies	stack is totally stack product cooling	
Day - 5	storage temperature	$+10^{\circ}\text{C}$ temperature	
Day - 6	cold storage packing left price in Inbore	use full loading lift	

WEEKLY REPORT

WEEK - 1 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report:

However if cold storage facilities are used the product may be stored for 4-3 years.

*. cold storage - Downthrow product cooler

*. $3 \times 5 = 15$ fans.

*. sin wave fins for fans for high ef.

*. tube test pressure to ensure leak proof cover.

*. Down ward airflow pattern for equal distribution of air.

*. chick peas, split mung, moong dal, split green gram
moong total item proper cooling extend the shelf life

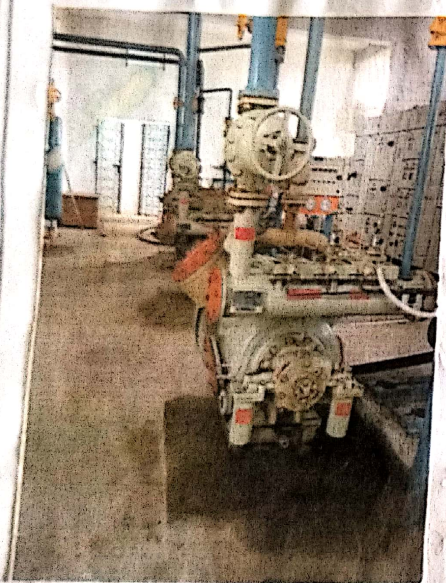
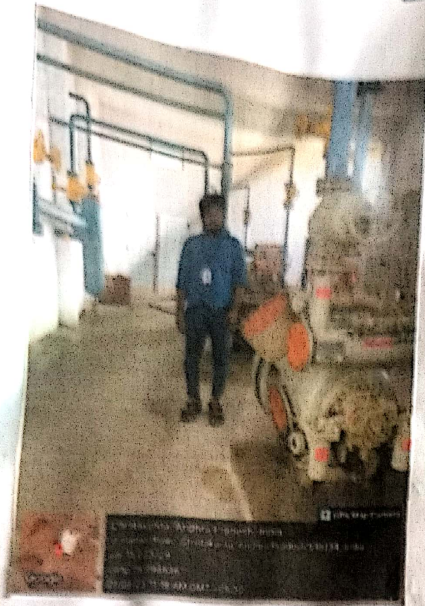
*. storage temperature . $5,000$ MT cold.

*. 8°C stored temperature $2,500$ MT chilli storage (30TR)

*. cold storage loading if its inside with in 5 floors

*. cold storage in a compound, sorghum.

*. Edula Siva Reddy cold storage *.
 100% pure
 100% pure
 100% pure



WEEK-1

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 in 4 day	water discharge pressure KPL :- 10/015	
Day - 2	suction pressure 14.2	Ammonia valve 160 kg	
Day - 3	oil pressure 6.4	A13 supply Ammonia valve	
Day - 4	disposable liquid drain ice cooling ice liquid out door	total 5 room total + 100 temperature cooling	
Day - 5	charging lines 70° (9TRP)	Ammonia-china cooling liquid change	
Day - 6	ammonia (in 4 stage supply) suction pressure down ammonia change	Hours day 7740 (24 hours)	

WEEKLY REPORT

WEEK - 2 (From Dt..... to Dt.....)

Objective of the Activity Done:

Detailed Report:

* water supply :-

6 feet cellulose + pad water cooling system
with cooled storage system de-refroidissement
dissipant cellulose once. entreposage frigorifique

* a cooling system utilizing natural energy from diurnal
ambient air temperature difference.

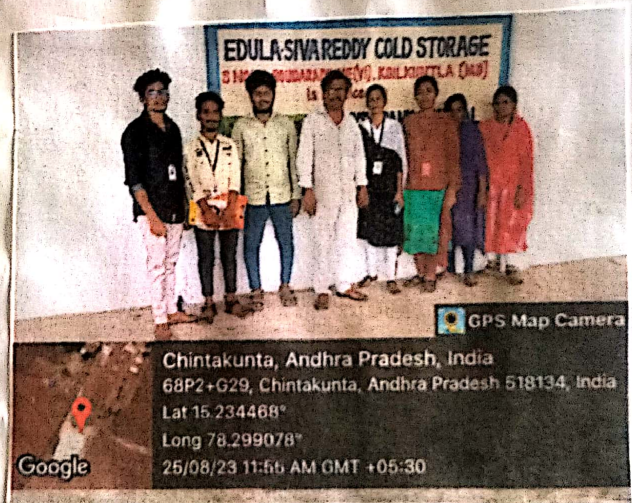
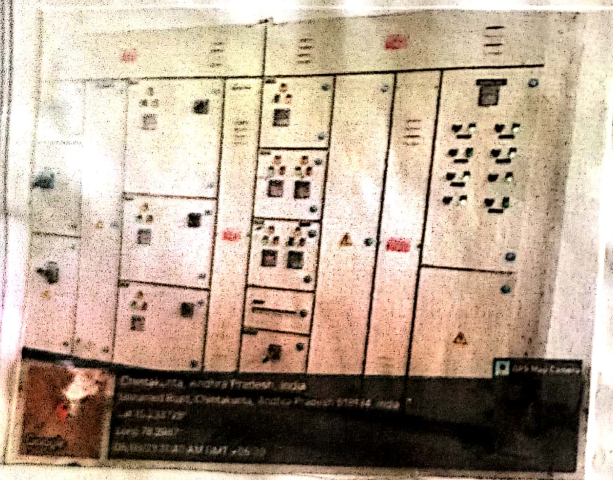
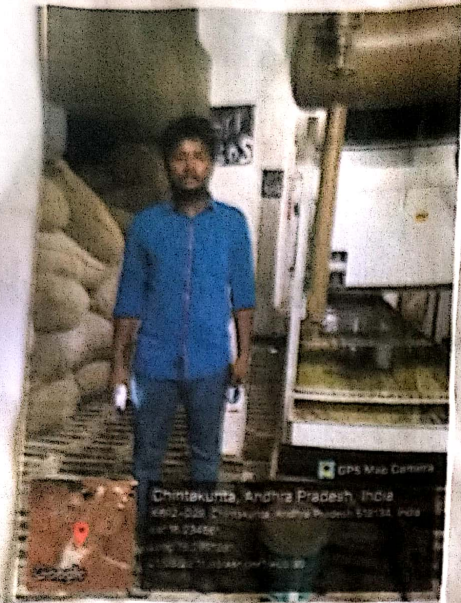
* water is cooled at night by cellulose pad cooling
tower and stored for cooling application at day time.

* over all cop can reach 9.4 for room temperature
higher than 40°C

* feasible for data center loading.

the present study develops a cooling system
using water as the working medium which is cooled
at night by cellulose-pad 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.

*. Edula Siva Reddy cold storage *.



WEEK - 2

ACTIVITY LOG FOR THE THIRD WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	storage (Bayer) that on explore	total Bayer 3x5=15	
Day - 2	white stock chick peas, split-mung, mung dal, split green gram mung dal, Toor dal, chana	total item paper cooling extend the shelf life	
Day - 3	molar presser and high speed (4 Bypass) conveyer passing	→ 100° Dabul → 3 1/2° Level ball-6° TDV	
Day - 4	temperature is storage	15.1 and 16.2 temperature	
Day - 5	chimer change	room cooling	
Day - 6	gas liquefied change that cooling Reactor	storage all cooling	

WEEKLY REPORT

WEEK - 3 (From Dt..... to Dt.....)

Objective of the Activity Done:

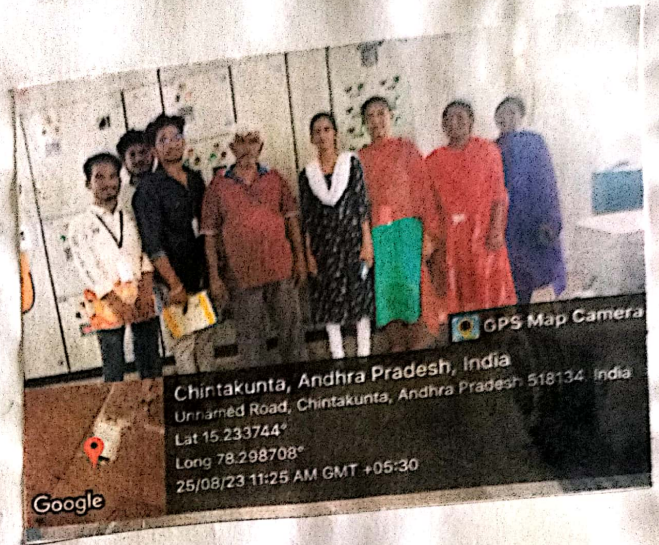
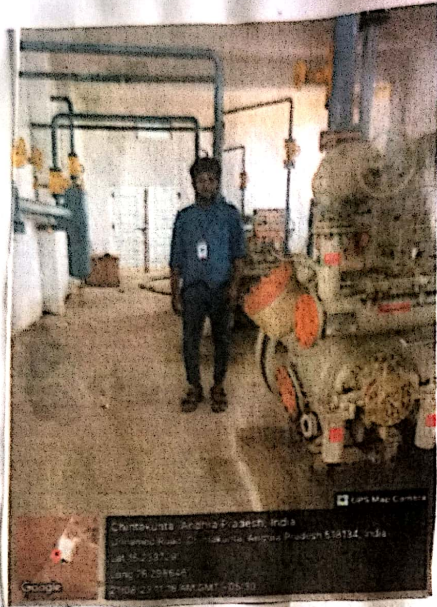
Detailed Report:

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

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

the cop for room cooling at day time run with air cooler in a room, cop_{day} , is between 8.8 and 12.6 for day cycle operation, the measured overall cooling, cop is 5.1 cop is expected for each 1°C at room temperature use

* EDula Siva Reddy cold storage *



WEEK-3

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 works on a reflet refrigeration system which helps	maintain exocloger - atefay posture and environment	
Day - 2	cellulose pad cooling which is cooled at night by air - rose pad cooling power	(cwet)	
Day - 3	Tamasic for example climbs as high as 3-4 times	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 preserve	storage item stock	
Day - 6	Business part-	Business report	

WEEKLY REPORT

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

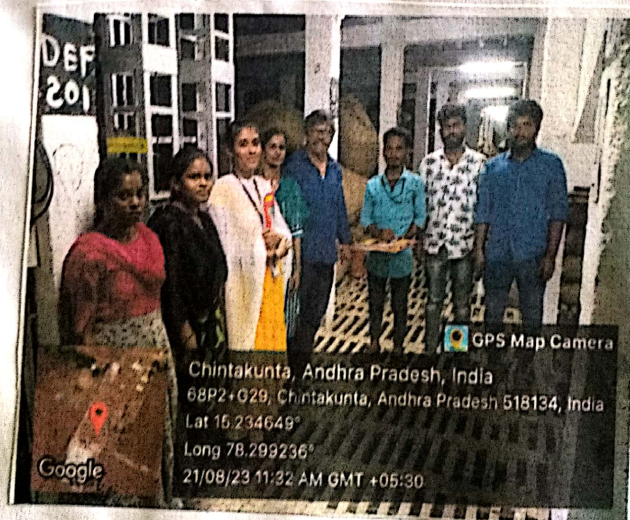
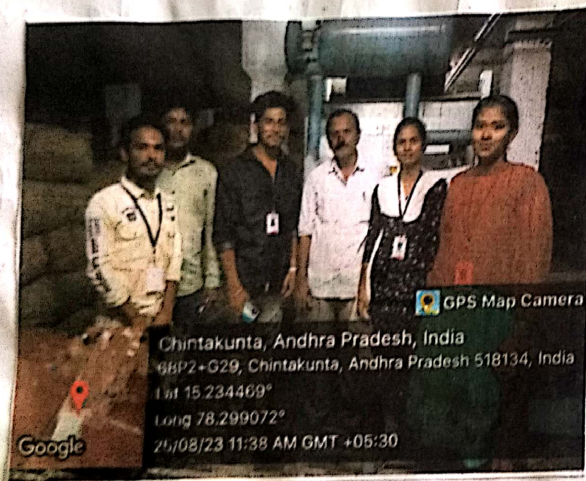
Objective of the Activity Done:

Detailed Report:

- *. overall cop can reach 9.4 for 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 towers (cwct) and stored for cooling application at daytime that is, it utilizes the natural energy drawn from diurnal ambient air temperature difference of (cwct) for heat was built and tested. It is found that the coefficient of performance of (cwct) for heat dissipation of water at night copnt, is between 3.8 and 11 and varies linearly with the evaporation.

*. E Dula siva Reddy cood storage *.

WEEK-4



ACTIVITY LOG FOR THE FIFTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	Blowers :- the cooled air is speed across the room	Room air cooling	
Day - 2	the compressors consumed almost all the power in a cold room	compressor only device	
Day - 3	heat dissipation of water at Night approx	3-8 and pressure is linearly with the evaporation	
Day - 4	feasible for data center cooling	Overall COP can reach 9.4 for room temperature	
Day - 5	temperature difference $\pm 10^{\circ}\text{C}$	cooling system	
Day - 6	reviewed 450 ton	oil ground val one in the shaft.	

WEEKLY REPORT

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

Objective of the Activity Done:

Detailed Report:

* construction of 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 specifications 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 a cold room.

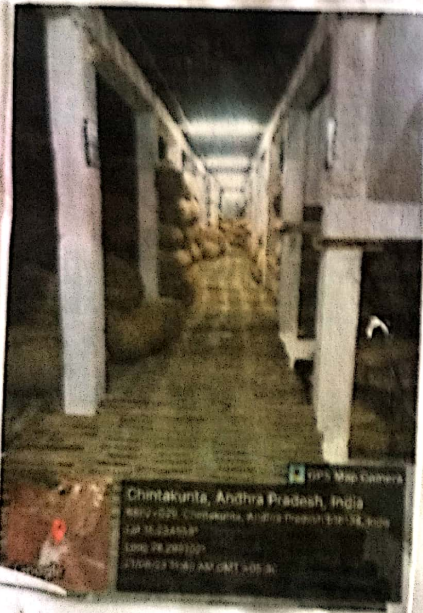
* condenser :- It is required to remove the heat from the refrigerant and the circulating water.

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

* to 10°C temperature.

* EDUCA SAN Andhra Pradesh storage *

Week - 5



Chintakunta, Andhra Pradesh, India
48°12'00" Chintakunta, Andhra Pradesh 15° 58' 00"
LAT 15.966667
LONG 78.200000
27/04/2023 11:00 AM GMT+05:30



ACTIVITY LOG FOR THE SIXTH WEEK

Day & Date	Brief description of the daily activity	Learning Outcome	Person In-Charge Signature
Day - 1	It is required sum pook the turns and room.	It is the centre ssor concul-	
Day - 2	It is required phase chang of the consider	high temporary consider act	
Day - 3	the high pressure level stored here	the Receiver chang the content-	
Day - 4	It reduce the temperature - we used pressure of the soft givlar	the extensive note	
Day - 5	the cyclic process also ass the temperature	evaporator act	
Day - 6	the cooled is save the room again the convection	Blowers as temperature room.	

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 cases

As part of research associated with education sustainability ability at PMU university, sent an invitation to environment professional seeking information about their backgrounds work

the invitations to participate in the survey were distributed using the electronic data bases and networks of organisations such as the centre for sustainability leadership and the environment education and training ecological sustainability mangos project lead, education (Delivering resources - environment colleges).

Cold storage Practices

In a cold store 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 storage.

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

*. technologic 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 equipment.
- *. check computer hardware (HDD, mouses, key boards etc). to ensure functionality.
- *. Install and configure appropriate software and functions according to specifications.

*. Information technology (IT) :

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

- *. (ICT) information communication system technological.
- *. technical skills in future usefull in communication development requized the student future jobs in technologic skills.

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

Describe the managerial.

*. Red chillies cold storage private limited supporting and Educa siva Reddy auxiliary transport activities, activities of travel agencies.

*. storage in that 30x 5 years stock 3000 Kilose building 450 rupees in stock is Educa siva Reddy cold storage.

*. building = 180 inches

length = 120

width = 126

*. workers (2) and one alc operate one packing place four number in that Educa siva Reddy cold storage.

ex:- Farmer cold storage stock useful 304 year stock in chillie one person Ramula nageswara 300 and 500 Bastalu store.

*. department alc operate name Gopalvarma.

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.,)

Approximately one acre of land is required for a 500 MT cold storage for chilly. This land required is sufficient for cold storage, machine room, condensers tank, and condensers, power house transformers, and also 20 feet free space in all direction for fire and safety guidelines cold storage technology.

Due to the changes in the surrounding cold storage in most required Refrigerated warehouse is are very costly, but several manu factories opt to outsource for cold storage.

As the demand for transportation of refrigeration goods is increased, it can push the demand for value-added services such as consolidation - for

the five most important factors for considering proper selection of the indoor unit for chilly cold storage are (a) Room temperature, relative humidity (b) cooling capacity (c) Air flow and Air distribution (d) tube volume, and surface area (e) modern design loading.

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

Edup siva Reddy and storage abilities group discussion my name Ravindra write a project work in a group discussion 14 members. students in a group we are participation in a team. All operator is a logaravanna his opinion and storage and guidance the more information

type temperature all stock meeting and change stock lift in andy leading fits 5th floor chillies bar dal, chana, whole mang chick peas, split mung, mung dal mm type storage temperature communiya feed total Brayer 5x5 215 and 16.0" meeting cellulose - pad water cooling system with and storage system refrigerissement dispersant cellulose oncee temperature rising.

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 area place Edula Siva Reddy cold storage. me observed many Activities services otherwise some items kept in cold storage.

there cold storage many crops coming on the Edula Siva Reddy where house. me view to many crops importes.

Example ÷ Moong dal, Red grams, Dry chili, Channa, Black grams, whole moong etc

chilling injury ÷

chilling injury is caused by low temperature and generally affects skins and crops, causing improper rising discolouration, texture change etc.

with a higher recommended storage temperature symptoms of his disorders are decayed.

Thermal insulation of cold storages :

Since heat flows from high temperature areas to lower temperature regions, there is a continuous flow of 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 resistance to the flow of heat through it is called an insulator.

It is necessary to insulate the cold storages to prevent the transfer of heat (through the walls, ceilings and floor of the cold storage) between the ambient air and the cold storage.

Insulation of cold storages is important to reduce the operating cost of the refrigeration plants by reducing heat gain through structure of the cold storage.

chilled water pipelines are also insulated are also insulated to prevent surface condensation on the pipeline.

Student Self Evaluation of the Short-Term Internship

Student Name: <u>P. Ravindra</u>	Registration No:
Term of Internship: From: <u>07-08-2023</u> To: <u>06-10-2023</u>	
Date of Evaluation:	<u>08-09-2023</u>
Organization Name & Address:	<u>Sri Siva Reddy Cold Storage</u> <u>Wolavara</u>

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

P. Ravindra
Signature of the Student

Page No:

Evaluation by the Supervisor of the Intern Organization

Student Name:	P. Ravindra	Registration No:	
Term of Internship:	From: 07-08-2023	To: 06-10-2023	
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: 21-09-2023

E. Herath M.
Signature of the Supervisor

Page No:

For: EDULA SIVA REDDY COLD STORAGE

Proprietor

Vapour Barriers

Properties of insulation materials

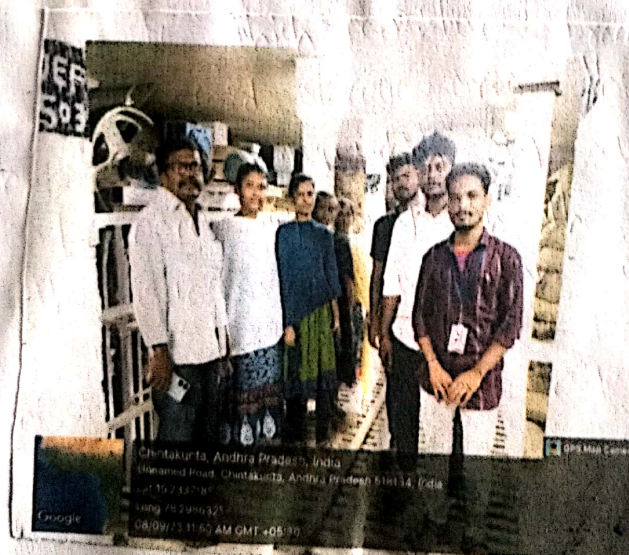
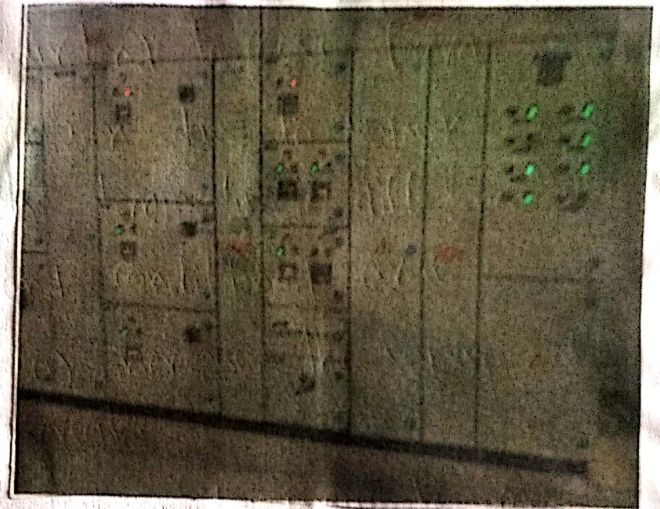
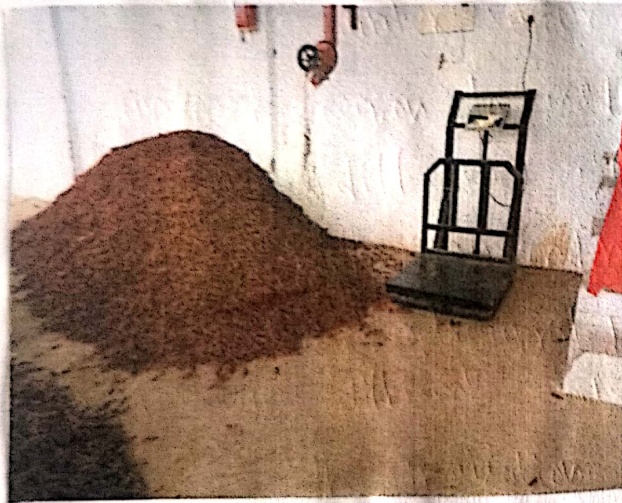
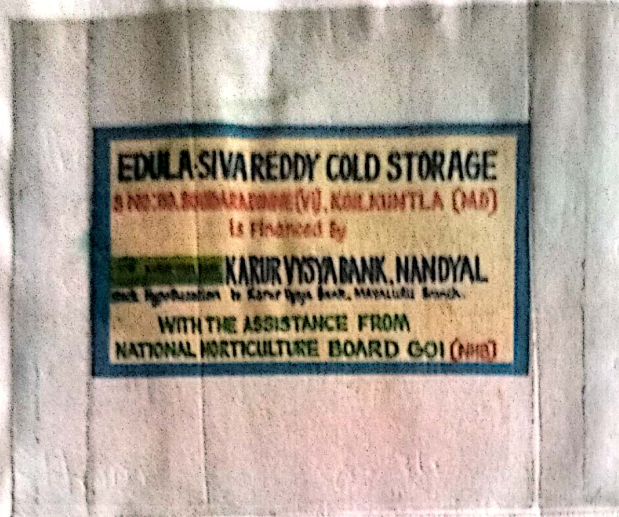
Material	Density (kg/m ³)	Permeability (kg/m ² h)	Temp. range (°C)
Polystyrene	28 - 32	0.05	18 - 28
Acemoxal	15 - 20 kg	0.00001	25 - 30
Wool	120 - 160	0.05	20 - 30
Phenothene	30 - 34	0.016	20 - 30

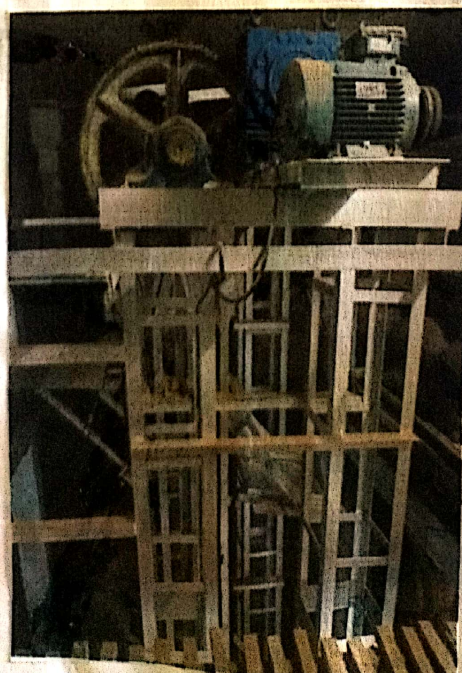
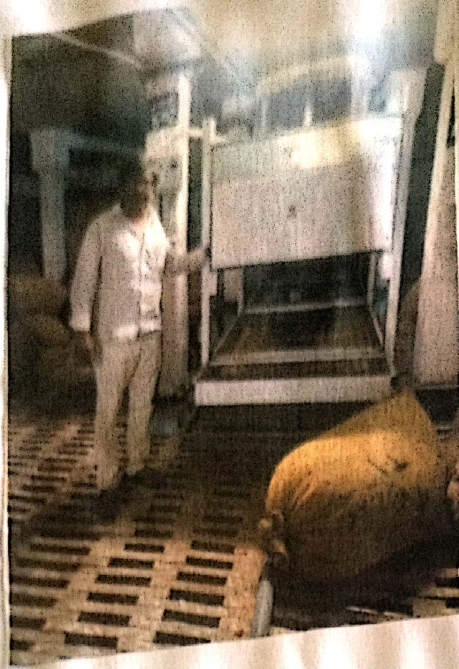
Vapour Barriers

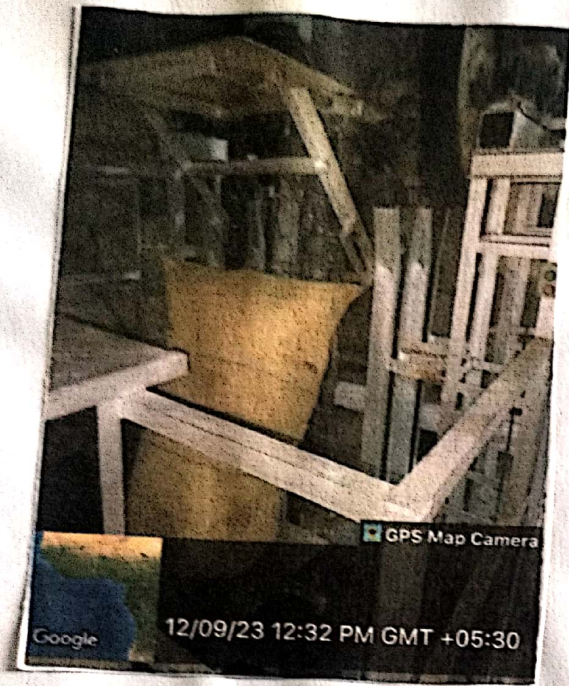
The water vapour in air tends to move from warmer region to colder region due to vapour pressure difference. As the temperature difference between the surrounding and conditioned area (cold storage, refrigerated area) increases, the vapour pressure difference also increases.

The insulation material can be porous to some extent, due to which moisture from outside can migrate into cold storage area. The vapour condense in the structure, insulation and also inside the room. More and more importantly on the exterior in cold stores, the success of insulation work depends entirely upon the vapour barrier provided, to prevent transmission of water vapour inside the cold store.

PHOTOS & VIDEO LINKS







INTERNAL ASSESSMENT STATEMENT

Name Of the Student:

P. Ravindra

Programme of Study:

Year of Study:

2021 - 2024

Group:

B.A. (H.P.)

Register No/H.T. No:

Name of the College:

S.V.B. Govt degree college

University:

Sl.No	Evaluation Criterion	Maximum Marks	Marks Awarded
1.	Activity Log	25	18
2.	Internship Evaluation	50	37
3.	Oral Presentation	25	17
	GRAND TOTAL	100	72

Date:

Signature of the Faculty Guide

Certified by

Date:

Seal:

Signature of the Head of the Department/Principal

M. Ravi S. N.

PRINCIPAL 6/4/23

S.V.B. GOVT DEGREE COLLEGE
KOILKUNTALA, NANDYAL (D.I.)